Intergovernmental Oceanographic Commission

Reports of Governing and Major Subsidiary Bodies



Forty-third Session of the Executive Council

Paris, 8-16 June 2010

UNESCO

Intergovernmental Oceanographic Commission

Reports of Governing and Major Subsidiary Bodies

Forty-third Session of the Executive Council

Paris, 8-16 June 2010

UNESCO 2010

IOC/EC-XLIII/3 Paris, 16 July 2010 Original: English

TABLE OF CONTENTS

		page	
1.	OPENING	1	
2.	ORGANIZATION OF THE SESSION		
2.1	ADOPTION OF THE AGENDA		
2.2	DESIGNATION OF THE RAPPORTEUR	1	
2.3	ESTABLISHMENT OF INTRASESSIONAL COMMITTEES	1	
2.4	INTRODUCTION OF TIMETABLE AND DOCUMENTATION		
2.5	ROGER REVELLE MEMORIAL LECTURE	2	
3.	DEVELOPMENTS SINCE THE 25TH SESSION OF THE IOC ASSEMBLY		
3.1	REPORT BY THE CHAIRMAN	3	
3.2	REPORT BY THE EXECUTIVE SECRETARY	3	
3.3	CONTRIBUTING TO UNESCO GLOBAL PRIORITIES: GENDER AND AFRICA	4	
4.	GOVERNANCE	5	
4.1	CELEBRATING OUR 50TH ANNIVERSARY	5	
4.2	IOC OPERATING PLAN FOR 2010–2011	6	
4.3	REGIONAL SUBSIDIARY BODIES	7	
4.4	IOC AND THE LAW OF THE SEA	8	
5.	MITIGATION OF AND ADAPTATION TO CLIMATE CHANGE AND VARIABILITY [HLO 2]	9	
5.1	RESEARCH AND OBSERVATIONS FOR CLIMATE	9	
5.2	ORGANIZATION OF THE GLOBAL OCEAN OBSERVING SYSTEM	10	
5.3	COOPERATION WITH WMO	12	
6.	PREVENTION AND REDUCTION OF THE IMPACTS OF NATURAL HAZARDS [HLO 1]	13	
6.1	WARNING AND MITIGATION SYSTEMS FOR OCEAN HAZARDS	13	
6.2	REGIONAL TSUNAMI WARNING SYSTEMS	14	
6.3	SHALLOW-WATER BATHYMETRIC DATA FOR DIGITAL ELEVATION MODELS	15	
7.	SAFEGUARDING THE HEALTH OF OCEAN ECOSYSTEMS [HLO 3]	16	
7.1	THE JOINT IOC-ICES STUDY GROUP ON NUTRIENT STANDARDS	16	
7.2	OCEAN FERTILIZATION	17	
7.3	CAPACITY DEVELOPMENT	18	

8.	MANAGEMENT PROCEDURES AND POLICIES LEADING TO THE SUSTAINABILITY OF COASTAL & OCEAN ENVIRONMENT & RESOURCES [HLO 4]	19
8.1	GLOBAL REPORTING AND ASSESSMENT OF THE STATE OF THE MARINE ENVIRONMENT	19
9.	ADMINISTRATION AND MANAGEMENT	20
9.1	THE FUTURE OF IOC	20
9.2	HIGHER-LEVEL OBJECTIVES FOR 2012–2013	23
9.3	PREPARATION OF THE 26TH SESSION OF THE ASSEMBLY	23
9.4	DATES AND PLACES FOR THE 44TH AND 45TH SESSIONS OF THE EXECUTIVE COUNCIL	24
10.	ADOPTION OF THE SUMMARY REPORT AND RESOLUTIONS	24
11.	CLOSURE	25

ANNEXES

- I. AGENDA
- II. ADOPTED RESOLUTIONS
- III. ADDRESSES
 - A. Statement by Ms Irina Bokova Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO) on the occasion of the 43rd session of the IOC Executive Council and the inauguration of the 50th Anniversary of the Intergovernmental Oceanographic Commission
 - B. Statement by by Lic. Javier A. Valladares, Chairman of the Intergovernmental Oceanographic Commission of UNESCO on the occasion of the 43rd session of the IOC Executive Council and the inauguration of the 50th Anniversary of the Intergovernmental Oceanographic Commission
- IV 8 JUNE 2010: OFFICIAL INAUGURATION OF THE IOC 50th ANNIVERSARY
 - A. PROGRAMME OF THE DAY
 - B. THE OCEAN CALL
 - C. YOUTH DECLARATION FOR THE OCEAN
- V. THE ROGER REVELLE MEMORIAL LECTURE, 2010
- VI. REPORT OF THE CHAIRPERSON OF THE FINANCIAL COMMITTEE
- VII. REPORT OF THE CHAIRMAN OF THE RESOLUTIONS COMMITTEE
- VIII. REPORT OF THE SESSIONAL WORKING GROUP ON IODE/OBIS
- IX. INFORMATIONAL ANNEX
- X. LIST OF DOCUMENTS
- XI. LIST OF PARTICIPANTS
- XII. LIST OF ACRONYMS

1. OPENING

1

The Chairman, Lic. Javier Valladares, opened the 43rd Session of the IOC Executive Council at 09:50 on Tuesday 8 June 2010. He first asked the participants to stand in silence for one minute as a mark of respect to distinguished individuals who have collaborated with the Commission and have passed away during the past year: Alan R. Robinson (USA, 1932– 2009), Thomas Allan (UK, 1931–2010) and Vice-Admiral Orlando Augusto Amaral Affonso (former IOC Vice-Chairman, Brazil, 1924–2009). He then announced two new IOC Member States since the last Assembly: the Democratic Republic of the Congo and Grenada.

2. ORGANIZATION OF THE SESSION

- 2.1 ADOPTION OF THE AGENDA
- 2 The Chairman informed the Executive Council of a change to the Provisional Agenda proposed by the Officers of the Commission at their meeting on Monday 7 June 2010. The title of agenda item 9.1 was changed from "The future of IOC and Secretariat hosting offers" to "The future of IOC."
- 3 **The Executive Council agreed** that the Future of IOC could be dealt with independently of the question of the relocation of the Secretariat.
- 4 The Executive Council adopted the Agenda proposed by the Officers (Annex I).
- 5 The Chairman then suspended the session to allow for IOC's 50th Anniversary commemoration. The programme for these celebrations is presented in <u>Annex IV</u>. He announced that the Executive Council would reconvene on Wednesday 9 June 2010, at 09:30.
 - 2.2 DESIGNATION OF THE RAPPORTEUR
- 6 The Chairman invited the Executive Council to designate a Rapporteur to assist in the preparation of the Draft Summary Report for the present session.
- 7 India proposed Kenya. Kenya accepted and nominated Mr Boniface Wanyama.
- 8 **The Executive Council designated** Mr Boniface Wanyama (Kenya) Rapporteur for its 43rd Session.
 - 2.3 ESTABLISHMENT OF INTRASESSIONAL COMMITTEES
- 9 The Chairman invited the Executive Council to form two statutory sessional committees: the Resolutions Committee and the Financial Committee and invited proposals for sessional working groups.
- 10 **The Executive Council established** the Resolutions Committee, with the following Member States declaring their wish to participate: Argentina, Brazil, Canada, China, Côte d'Ivoire, India, Japan, Mexico, Portugal, Republic of Korea, Russian Federation, Senegal, United Kingdom, and United States of America.
- 11 **The Executive Council designated** Ms Helen Joseph (Canada) Chairperson of the Resolutions Committee. The Secretariat staff members responsible for supporting the work of the Resolutions Committee were Julian Barbière and Nicolas Guerrero.
- 12 **The Executive Council agreed** that this Committee would work in English.

- 13 The Chairman reminded the Executive Council that the document on guidelines for the preparation and consideration of Draft Resolutions (IOC/EC-XLIII/2 Annex 6) would be considered under agenda item 10.
- 14 **The Executive Council established** the Financial Committee, with the following Member States declaring their wish to participate: Argentina, Belgium, Brazil, Canada, China, Côte d'Ivoire, Cuba, Egypt, France, Ghana, India, Japan, Kenya, Portugal, Republic of Korea, Russian Federation, Senegal, South Africa, Turkey, United Kingdom, and United States of America.
- 15 The Chairman announced that this Committee would be chaired by IOC Vice-Chairperson Dr Savithri Narayanan (Canada). The Secretariat staff members responsible for supporting the work of the Financial Committee were Stefano Belfiore and Xenia Yvinec.
- 16 **The Executive Council agreed** that this Committee would work in English and French, with simultaneous interpretation.
- 17 The Executive Council established a sessional Working Group on the Ocean Biogeographic Information System (OBIS), with the following Member States declaring their wish to participate: Argentina, Australia, Belgium, Brazil, China, India, Japan, Kenya, Republic of Korea, Russian Federation, Thailand, United Kingdom, and United States of America.
- 18 **The Executive Council agreed** that this Committee should designate its own Chairperson.
 - 2.4 INTRODUCTION OF TIMETABLE AND DOCUMENTATION
- 19 The Executive Secretary reminded the Executive Council of the most recent changes to the Provisional Timetable (document IOC/EC-XLIII/1 Add. Prov. Rev.2) and of the need to allow sufficient time to listen to the reports of the statutory committees and sessional working group in plenary.
- 20 The Chairman stressed the fact that the Commission was trying new arrangements to streamline the reporting of the session. He informed the Executive Council that those Member States wishing to submit formal statements to be included in the Informational Annex of Individual Member State Interventions to the Summary Report should e-mail them to: ec2010@unesco.org. He reminded the Executive Council that Circular Letter 2332 (of 25 February 2010) explained these new arrangements in detail.
- 21 **The Executive Council agreed** the Provisional Revised Timetable.
 - 2.5 ROGER REVELLE MEMORIAL LECTURE
- 22 The Chairman introduced this item. Dr Manuel Barange, Plymouth Marine Laboratory, U.K., delivered the 2010 IOC Roger Revelle Memorial Lecture.
- Dr Barange's lecture, entitled "Learning to swim: exploring the challenges to marine resource sustainability", discussed the scientific results of the very successful IOC–IGBP– SCOR Global Ocean Ecosystem Dynamics project (GLOBEC) designed to ascertain the impacts of climate variability on, and change in, marine ecosystems, as well as his ongoing work with coupled and uncoupled models linking climate change, marine ecosystems, and economics. An abstract of the lecture is in <u>Annex V</u>.
- 24 The Chairman presented the IOC Roger Revelle Medal to Dr Barange in appreciation of the work undertaken by the IOC–IGBP–SCOR project.

3. DEVELOPMENTS SINCE THE 25TH SESSION OF THE IOC ASSEMBLY

3.1 REPORT BY THE CHAIRMAN

- The Chairman, Lic. Javier Valladares, pursuant to Rule of Procedure 51.2, reported on his and the other Officers' activities since the 25th Session of the IOC Assembly, with particular reference to their official representation of the Commission at International Conferences, including OceanObs'09 (Venice, Italy, 21–25 September 2009), and the OBIS Strategy and Workplan meeting (Ostend, Belgium, 18–20 November 2009). He indicated that the Officers met in January 2010 at UNESCO Headquarters and recommended measures to improve the efficiency of the governing bodies of the Commission and improve communications with Member States.
- 26 The Chairman then recalled recent earthquake and tsunami events and conveyed condolences and sympathy to the people of Haiti and Chile.
- 27 He emphasized *The Ocean Call* which was prepared for the IOC 50th anniversary, 8 June 2010. The Call asks people in general, financial institutions and policy makers, scientists, the media, governments and youth to raise awareness of ocean issues as a means of working towards a global community that understands human dependence on the oceans.
- 28 **The Executive Council took note** of the report of the Chairman and **requested** that the IOC Officers develop a plan to promote *The Ocean Call* (<u>Annex IV-B</u>).
 - 3.2 REPORT BY THE EXECUTIVE SECRETARY
- 29 Pursuant to Rule of Procedure 49.1, the Executive Secretary reported on work accomplished since the 25th Session of the Assembly. She informed the Executive Council that her presentation would be organized in terms of the IOC High-Level Objectives (HLO).
- 30 Under Policy, she briefly reviewed the highlights of the Ministerial Round Table on Oceans (Paris, 12–13 October 2009), progress on Regional Subsidiary Bodies (RSB) and IOC/ABE-LOS.
- 31 Under HLO 1, she reported the visibility and support that the tsunami programme has at UNESCO and the UN General Assembly, concluding with the message from the third meeting of the IOC Working Group on Tsunamis and Other Ocean Hazards Warning and Mitigation System (Lisbon, Portugal, 5–6 May 2010) on free data exchange. Under HLO 2, she highlighted actions related to climate change, the GOOS coastal module and the importance of the partnership with WMO. Under HLO 3, she mentioned progress on publishing the International Thermodynamic Equation of Seawater (TEOS 10), Harmful Algal Blooms (HAB), Nutrient Standards, and Ocean Fertilization. She concluded with HLO 4, reporting on the transfer of OBIS to IOC, and other administrative matters. The Report of the Sessional Working Group on IODE/OBIS is in <u>Annex VIII</u> to the present summary report.
- 32 **The Executive Council welcomed** the new Executive Secretary and **appreciated** the new presentation format.
- 33 Under Policy, **the Executive Council recognized** the need for stronger, more proactive coupling between science and marine policy and **encouraged** improved communication with all levels of policy makers and IOC involvement in the technical secretariat for the UN Regular Process.
- 34 **The Executive Council emphasized** the importance of Regional Subsidiary Bodies as platforms for implementation of IOC programmes, and the importance of involving African scientists in large-scale global programmes. Australia and Brazil announced their willingness

to continue their long-term support, in conformity with UNESCO and IOC guidelines, for regional offices in Perth and Rio, respectively; and China announced it has established a UNESCO/IOC Regional Training and Research Centre on Oceanography, in China.

- 35 **The Executive Council recognized** the importance of assessing emerging issues and technologies by IOC/ABE-LOS. In this context, **the Executive Council agreed** that assessment of IOC/ABE-LOS would be conducted by Member States, and not through the Internal Oversight Services of UNESCO.
- 36 Under HLO 1, the Executive Council appreciated the impact and recognition that tsunami was receiving within the UN system, encouraged free data exchange for all ocean matters, and emphasized the importance of sea-level measurements. The Executive Council welcomed the proposed WCRP–IOC workshop on sea level, as well as the German offer to support it.
- 37 Under HLO 2, **the Executive Council appreciated** the progress reported in implementation of GOOS, including enhanced advocacy efforts, and **encouraged** greater emphasis on climate change issues, with closer involvement in the work of the IPCC.
- 38 Under HLO 3, **the Executive Council supported** HAB global and regional actions, especially in light of the inevitability of HAB incidents occurring more frequently as coastal areas are developed. **The Executive Council agreed** that the issue should be brought to the attention of the IPHAB-X session in 2011.
- 39 Under HLO 4, the **Executive Council stressed** that re-structuring of the secretariat should not affect future cross-cutting, capacity-development work, given its importance as a Strategic Programme Objective of UNESCO. **The Executive Council appreciated** Member State support for this activity. **The Executive Council**, while welcoming the announcement of a high-level post in Africa to coordinate IOC programmes, including GOOS-Africa, **restated** the need to also maintain a post for Africa in headquarters.
- 40 Several long-term partner agencies of IOC welcomed the work presented by the Executive Secretary and expressed their strong support through renewed collaboration in areas of mutual interest.
- 41 The following delegations chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the report of the present session: Japan, Republic of Korea, Senegal, United Kingdom, United States of America, International Hydrographic Organization.
 - 3.3 CONTRIBUTING TO UNESCO GLOBAL PRIORITIES: GENDER AND AFRICA
- 42 The Assembly, at its 25th Session (Paris, 2009), by Resolution XXV-14, requested the Executive Secretary reflect the priorities given to Africa, Small Island Developing States, and Gender Equality by allocating sufficient resources in the Work Plans of the Secretariat for 2010–2011, and to report on these measures to the 43rd Session of the Executive Council. The Deputy Executive Secretary, Dr Ehrlich Desa, presented the agenda item.
- 43 IOC has continued to work on programmes that focus on Small Island Developing States, as well as actively involving them in its global and regional programmes, such as GOOS, Tsunami and Capacity-development. The IODE Programme is implementing a project on the Caribbean Marine Atlas, as well as a Marine Information Management project for the Pacific Islands.
- 44 Gender focal points for raising awareness, monitoring and reporting gender-relevant considerations were established in all the sections in the Secretariat. The average attendance of women at IOC-sponsored functions in the 2008–2009 biennium was higher

than the target of 10 % of invitees committed in the Gender Equality Action Plan. IOC intends to exceed the 20 % target set for 2008–2013 in all regions and programmes.

45 Activities implemented in Africa included: (i) installation of tide gauges and launching of drifting buoys; (ii) organization of training courses on a wide range of topics and provision of equipment; (iii) formulation and implementation of projects addressing use of decisionsupport tools for coastal management, climate and coastal change, and development of data and information products for coastal management. The resources allocated to activities in Africa increased by about 137 % from US\$ 289,000 in 34 C/5 to US\$ 686,200 in 35 C/5, while the extrabudgetary resources available increased by 62 % from US\$ 1,967,000 to US\$ 3,191,976.

- 46 **The Executive Council welcomed** the progress made in addressing Priority Africa, Small Island Developing States, and Gender Equality.
- 47 **The Executive Council noted** the contributions of numerous bilateral and regional programmes in these priority areas including, for example, those implemented by the Republic of Korea on climate change and natural disasters, and the United Kingdom in collaboration with the UNESCO Science programme in East Africa and China in supporting qualified experts and young scientists from Africa and Small Island Developing States to attend a UNESCO/IOC training course on Ocean Dynamics and Climate Change.
- 48 **The Executive Council recommended** that a higher target of 25 % be set for participation of women in IOC activities in the period 2008–2013, and **urged** Member States to take gender equality into consideration when nominating participants in IOC activities.
- 49 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>Mauritius</u>.

Decision 3.3:

The Executive Council requested that the Executive Secretary explore ways of strengthening the IOC's presence in Africa, including the possibility of establishing a regional office for coordination of IOC's activities in Africa.

4. GOVERNANCE

4.1 CELEBRATING OUR 50TH ANNIVERSARY

- 50 By Resolutions XXIV-4 and EC-XLI.2 the IOC decided to commemorate its 50th anniversary. The coordinator of the 50th anniversary celebrations, Mr I. Oliounine, introduced this item.
- 51 He focused the attention of the Executive Council on the implementation of the Anniversary Plan of Action which was adopted by the 41st Session of the IOC Executive Council in 2008, and the contributions of the IOC Member States and partners to anniversary-related activities. He emphasized that only through the joint efforts of Member States and partners, including generous financial and in-kind contributions, had it been possible to implement the Plan.
- 52 Mr Oliounine reminded the Council that this Executive Council was being held at the very beginning of the anniversary year and that there remained many actions to be implemented and a few questions to be answered. Among these he included the need: to identify the theme of the scientific conference planned for the end of the commemorative

year; for continued implementation of the Plan of Action; and for new financial commitments to support anniversary activities.

- 53 **The Executive Council thanked** all those who had supported and contributed to the anniversary celebration and congratulated the IOC Executive Secretary, the coordinator of the anniversary and the IOC secretariat staff who had made the inauguration day and the celebration activities possible.
- 54 **The Executive Council recognized** the success of the June 8 celebrations and **appreciated** Member State and partner contributions to the objectives of the 50th anniversary including dedicated activities such as conferences, research cruises and publications, the full list of which is available on the IOC 50th Anniversary website (<u>http://www.unesco.org/en/ioc-50anniversary</u>).
- 55 **The Executive Council noted** the many relevant activities that had been held over the past year and **encouraged** Member States planning new initiatives to provide relevant information to the coordinator of the anniversary for inclusion in the anniversary web page.
- 56 **The Executive Council noted** that France had plans to hold an oceanographic conference in 2011 that might provide one possible venue for an anniversary closing.
- 57 **The Executive Council stressed** that anniversary events should be used to highlight the importance and vulnerability of the ocean and promote the role of the IOC in relevant research and protection measures.
- 58 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>Canada</u>, <u>China</u>, <u>Japan</u>, <u>United Kingdom</u>.

Decision 4.1:

The Executive Council requested:

- the Executive Secretary to reinforce contact with the European Commission during the period of the Belgian presidency starting July this year with a view to enhancing cooperation and joint activities of mutual interest;
- (ii) that the Executive Secretary post *The Ocean Call* and *Youth Declarations for the Ocean,* which were delivered during the Inauguration Day (8 June 2010) (<u>Annex IV-B</u> & <u>IV-C</u>), on the anniversary web page and to consider additional methods for promoting these materials widely.
- 4.2 IOC OPERATING PLAN FOR 2010–2011
- 59 Resolution XXV-14 authorized the Executive Council at its 43rd Session to review the approved Work Plan and Budget of the Secretariat for 2010–2011. The Resolution instructed the Executive Secretary to reflect in the Work Plan UNESCO's priority for Africa, SIDS, and Gender Equality. The Executive Secretary introduced this agenda item.
- 60 The Executive Secretary presented the concept and structure of the IOC Work Plan for 2010–2011 in the context of the approved UNESCO Work Plan (35 C/5). This established for IOC a total allocation of US\$ 9,493,430, of which US\$ 3,456,000 is for activities, including programme support costs and US\$ 6,037,300 for staff. In addition, the extrabudgetary contributions for 2010 to date amount to US\$ 7,540,000. The Work Plan translates the Highlevel Objectives of the IOC Medium-term Strategy 2008–2013 and the expected results of the Biennial Strategy 2010–2011 into a limited number of activities, supported by both regular and extrabudgetary funding, and concrete, achievable outputs for the biennium.

- 61 The Work Plan for 2010–2011 was reviewed by the Financial Committee. The Committee noted that consistency among the priorities approved by the Assembly and the Work Plan should be maintained. Furthermore, expected results and performance indicators need to be better articulated. The Committee appreciated the initiative of the Secretariat in preparing and submitting outlines for extrabudgetary contributions, but recommended that the Intersessional Advisory Group on Finance work with the Secretariat to ensure that concrete proposals in priority areas are developed. Specific comments included the need to: (i) elaborate on activities in polar region; (ii) enhance interagency collaboration to address issues of mutual interest, namely coastal inundation related hazards; and (iii) articulate the regional breakdowns of the global programmes. The Committee emphasized the need to define expected results that are measurable and reported on through performance indicators.
 - The report of the Chairperson of the Financial Committee is in Annex VI.

Decision 4.2:

62

The Executive Council adopted the adjustments to the Work Plan for 2010–2011 suggested by the Financial Committee with the understanding that further improvements will be made in consultation with the Intersessional Advisory Group on Finance.

4.3 REGIONAL SUBSIDIARY BODIES

- 63 The Assembly at its 25th Session (Paris, 2009), by Resolution XXV-2, requested that the Executive Secretary: (i) ensure that a meeting on IOC Regional Subsidiary Bodies and other regional activities be held in conjunction with IOC Assembly sessions; and (ii) reactivate IOCINDIO and IOCEA, giving consideration to the activities of existing IOC and other relevant regional bodies. The IOC Vice-Chairperson dealing with Regional Subsidiary Bodies, Mr Julián Reyna Moreno, introduced this item with a summary of the meeting of the Chairpersons of Regional Subsidiary Bodies (UNESCO, Paris, 7 June 2010, IOC/EC-XLIII/Inf.8) which reviewed the main activities of the Regional Subsidiary Bodies during 2008–2010, identified some of the challenges in implementing their work plans, discussed common problems, and identified synergies between IOC's global and regional efforts.
- 64 The Chairman of the IOC Regional Committee for the Central Eastern Atlantic (IOCEA), Mr Jean Folack, presented the major outcomes of the 6th Session of the Regional Committee (Accra, Ghana, 28–30 March 2010). He highlighted the activities implemented in IOCEA during the intersessional period. Though reasonable progress has been made, inadequate resources continue to hamper the implementation of planned activities. The IOCEA Project Office, established at the Nigerian Institute of Oceanography and Marine Research in 2002, was closed after two years. At the meeting it was decided that assistance would be sought from IOC in establishing the Central East Atlantic Marine Science Association (CEAMSA) to promote the activities of IOC in the subregion.
- 65 Dr Zhanghai Zhang, Chairman of IOC Sub-Commission for the Western Pacific (WESTPAC) reported on the major outcomes of the 8th Session of WESTPAC (Bali, Indonesia, 10–13 May 2010). The Sub-Commission highlighted the substantial progress made over the last intersessional period, despite limited financial support from the IOC regular budget, thanks to the joint efforts of Member States and the WESTPAC Secretariat. The Sub-Commission expressed its concern over the shortage of technical staff at the WESTPAC Secretariat as activities rapidly expanded and expressed the need to improve communications between IOC Headquarters and the WESTPAC Secretariat. Dr Zhang concluded by listing the five recommendations adopted by the Sub-Commission and contained in the Executive Summary of the 8th Session of WESTPAC (IOC/SC-WESTPAC-VIII/3s).

- 66 Due to time restrictions, no guidance from Member States on the improvement of Regional Subsidiary Bodies' role in IOC Global Programmes and on the work of IOCEA and WESTPAC was possible during the session. **The Executive Council expressed concern** over the lack of time allocated for this agenda item.
- 67 **The Executive Council noted** the report of IOCEA-VI (IOCEA-VI/3) and the Executive Summary of WESTPAC-VIII (IOC/SC-WESTPAC-VIII/3s) and **encouraged** the Member States to carry out the programme of work therein. **The Executive Council requested** that the Executive Secretary provide secretariat support within the framework of the existing IOC Programme and Budget (Res. XXV-14).
- 68 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>China</u>, <u>Malaysia</u>, <u>Thailand</u>.

Decision 4.3:

The Executive Council:

- decided that an agenda item on Regional Subsidiary Bodies should be included in the Agenda of the 26th Assembly and requested the Executive Secretary to allocate sufficient time in the timetable to ensure a full Member State debate is possible;
- (ii) **adopted** Resolutions <u>EC-XLIII.1</u>, <u>EC-XLIII.2</u> and <u>EC-XLIII.3</u>.
- 4.4 IOC AND THE LAW OF THE SEA
- 69 The Assembly at its 25th Session (Paris, 2009), by Resolution XXV-1, invited the Executive Council to discuss the review of IOC/ABE-LOS and to agree on its future mandate and means of operation. The Executive Secretary introduced the item, reporting on secretariat activities to date in compliance with Resolution XXV-1.
- 70 The Chairman of IOC/ABE-LOS, Mr Elie Jarmache, then informed the Executive Council of IOC/ABE-LOS intersessional activities, in particular in relation to the document *Marine Scientific Research: A Guide to the Implementation of the Relevant Provisions of the United Nations Convention on the Law of the Sea* (UN/OLA/DOALOS, 1991; revisions forthcoming in 2010) and questionnaire No. 3 on the practice of States in the field of Marine Scientific Research and Transfer of Marine Technology.
- 71 Mr Jarmache stated that the review of IOC/ABE-LOS should follow the procedure established for the evaluation of a body similarly composed of scientists, diplomats and decision makers, namely the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (ICP), in which an open-ended working group of Member States with a review mandate was created.
- 72 The Chairman of IOC indicated that he considered IOC/ABE-LOS to be a tool that Member States had created to examine, from a legal perspective, issues submitted to it and it is for Member States to consider how to review it.
- 73 In response to the concerns expressed by the Chairperson of IOC/ABE-LOS regarding lack of secretariat support, the Executive Secretary informed the Council that a new staff member had been hired temporarily to support IOC/ABE-LOS.
- 74 **The Executive Council expressed** its support for IOC/ABE-LOS work, stressing its unique combination of marine scientists, and experts in law of the sea, and thus considering it as a valuable IOC body.

- 75 **The Executive Council discussed** various ways of reinforcing IOC/ABE-LOS work, including through looking at the value of holding meetings in Paris as well as regions, through proactive referral of its work to the UNGA for its consideration, through an interaction with DOALOS, and by enhancing the resources available for support.
- 76 **The Executive Council discussed** various topics that might be considered for IOC/ABE-LOS examination including: ocean fertilization; implementation of GOOS; and the regular process of assessment of the state of the marine environment. However, **the Council did not achieve consensus** on any specific topic.
- 77 **The Executive Council agreed** that any future work of IOC/ABE-LOS or any other advisory body should address proposals submitted by Member States and agreed upon by IOC's Governing Bodies. Along these lines, **the Executive Council reaffirmed** that such guidance should include a clear statement of need, specific instructions, and a description of the expected products and their intended application.
- 78 **The Executive Council established** a sessional working group to prepare, during the Executive Council's session, a questionnaire for Member States to review IOC/ABE-LOS. Tunisia was nominated to chair the working group. Due to time constraints, such a questionnaire could not be completed and the task was referred to an intersessional working group which would conduct its business by electronic means.
- 79 The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: <u>China</u>, <u>Germany</u>, <u>India</u>, <u>Japan</u>, <u>United Kingdom</u>, <u>United States of America</u>.

Decision 4.4:

The Executive Council:

- (i) **decided** that a review of IOC/ABE-LOS should be carried out by IOC Member States;
- (ii) adopted <u>Resolution EC-XLIII.4</u>.

5. MITIGATION OF AND ADAPTATION TO CLIMATE CHANGE AND VARIABILITY [HLO 2]

- 5.1 RESEARCH AND OBSERVATIONS FOR CLIMATE
- 80 The Chairperson of the WMO–IOC–UNEP–ICSU Global Climate Observing System (GCOS) Steering Committee, Dr Adrian Simmons, introduced this item, which was included at the request of the IOC Officers, pursuant to Rule of Procedure 21.2.
- 81 The WMO–IOC–ICSU World Climate Research Programme (WCRP) is developing its post-2015 strategy to meet the global and local information needs of society, integrating ocean climate research, and developing capacity.
- 82 The open-ocean component of GOOS is the ocean component of GCOS and receives scientific advice from the Ocean Observations Panel for Climate (OOPC). An updated implementation plan for climate observations will be delivered to UNFCCC COP-16 (Cancún, Mexico, December 2010). The Global Ocean Ship-based Hydrographic Investigations Programme (GO-SHIP) is pursuing a strategy for a globally coordinated network of sustained hydrographic sections. OOPC will work to improve ocean climate indices and identify and communicate the societal relevance of ocean climate observations.
- 83 The Executive Council thanked Dr Simmons for his presentation.

- 84 Regarding research for climate, **the Executive Council supported** the WCRP Implementation Plan 2010–2015 (WMO/TD-No. 1503). **The Executive Council noted** that IOC's financial contribution was relatively small compared to WCRP's value to Member States and **emphasized** the importance of continuing to study the full depth of the ocean, not just the near-surface.
- 85 Regarding ocean observations for climate, the **Executive Council highlighted** the necessity of sustained observations for both climate research and services, and for national climate adaptation strategies in the coastal zone. **The Executive Council commended** Member States for their efforts in implementation, while **expressing concern** with the slowing of progress and with the fragility of the arrangements that support sustained observations.
- 86 Focusing on ways to improve the sustainability of observations, the Executive Council:
 - (i) **discussed** the possibility of future binding rules or a convention making basic ocean climate observations mandatory;
 - (ii) **encouraged** Member States and the Executive Secretary in cooperation with UNESCO Education Sector to explore actions to educate the public; and
 - (iii) **recognized** the need for additional effort in capacity-building.
- 87 **The Executive Council noted** the importance of GO-SHIP for climate monitoring and prediction, and **encouraged** IOCCP, OOPC, and WCRP to ensure this was part of a comprehensive strategy for deep-ocean observations.
- 88 **The Executive Council welcomed** OOPC's efforts to improve its real-time ocean climate indices in the framework of regional climate impacts.
 - The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>Germany</u>, <u>Japan</u>, <u>United Kingdom</u>, <u>United States of America</u>, <u>Venezuela</u>.

Decision 5.1:

The Executive Council:

- (i) **encouraged** Member States to support the execution of the WCRP Implementation Plan 2010–2015 through the participation of their scientists;
- (ii) **requested** the Executive Secretary, in consultation with the WCRP Joint Planning Staff and its CLIVAR Project, to identify and carry out actions to highlight to WCRP scientists the IOC sponsorship;
- (iii) noting the GCOS Progress Report, **urged** Member States to address identified priorities and gaps, and to ensure the sustained long-term operation of essential in situ and space-based ocean observing networks;
- (iv) **supported** the GO-SHIP initiative; and
- (v) called on Member States to provide the IOC Secretariat with examples of the use of ocean climate indices in national or local decision-making and for other purposes, for inclusion in the OOPC State of the Ocean website.
- 5.2 ORGANIZATION OF THE GLOBAL OCEAN OBSERVING SYSTEM
- Pursuant to Rule of Procedure 48.3, the Chairperson of the Intergovernmental Committee for GOOS, Dr Shaohua Lin, introduced this item.

90

89

- 91 Dr Lin's presentation covered the following topics: (i) The development and existing organizational framework for coordination, governance and implementation of GOOS; (ii) The outcome and follow-up of the OceanObs'09 Conference (Venice, Italy, 21–25 September 2009; <u>http://www.oceanobs09.net/</u>); (iii) Outcomes of the GSSC meeting (8–12 March 2010, London; GOOS Report, 183); (iv) Challenges facing GOOS; and (v) Actions and recommendations from the I-GOOS Board meetings (27 April 2009; and 9 June 2010) on the future planning, implementation and governance of the GOOS.
- 92 The Executive Council thanked Dr Lin for the presentation.
- 93 **The Executive Council noted** the OceanObs'09 Conference Statement (IOC/EC-XLIII/Inf.4) and the subsequent formation of a post-OceanObs working group of limited duration charged with proposing an integrated framework for sustained ocean observations by 1 October 2010.
- 94 **The Executive Council noted** the important role GOOS plays in hazard monitoring, including storm surges, tsunamis and oil spills. It also expressed concern with development of the regional component of GOOS in the Caribbean region in light of the recent oil spill where ocean observations are particularly useful. The Executive Council emphasized the direct relevance of the coastal component of GOOS for management purposes and to the economies of many coastal nations and recognized that partnership with UNEP should be further enhanced with a view to developing and updating the coastal module of GOOS.
- 95 **The Executive Council encouraged** Member States to develop educational courses in operational oceanography at universities and educational institutes, and **recognized** that many countries could benefit from relevant capacity-development activities in coastal observations and training.
- 96 **The Executive Council stressed** the vital importance of GOOS in supporting the UN Regular Process for the Global Reporting and Assessment of the State of the Marine Environment, including Socio-economic Aspects.
- 97 **The Executive Council further stressed** the need to reinforce observations in the polar regions, given the current dearth of existing information.
- 98 **The Executive Council stressed** the need for continual intergovernmental oversight of GOOS while acknowledging the need to optimize governance structures in order to concentrate on implementation. In this regard **it welcomed** the proposals by the I-GOOS Board to review GOOS organization and governance with a view to providing a background document for consideration by the Assembly at its 26th Session.
- *The Executive Council noted with concern* the decline in the IOC Regular Programme budget for GOOS and **emphasized** the importance of the GOOS.
- 100 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>Brazil</u>, <u>Japan</u>, <u>United Kingdom</u>, <u>United States of America</u>.

Decision 5.2:

The Executive Council decided that:

- (i) the I-GOOS Board should discuss future organization of GOOS with a view to producing a proposal for consideration by the IOC Assembly at its 26th Session;
- (ii) the report from the OceanObs'09 working group on an integrated framework for sustained ocean observations should be made available to Member States for review

and comment well in advance of the 26th Session of the Assembly;

- (iii) a meeting of I-GOOS should be held the day before the 26th Session of the Assembly;
- (iv) a half-day session should be devoted to GOOS at the 26th Session of the Assembly.

5.3 COOPERATION WITH WMO

- 101 The JCOMM Co-President for Oceanography, Dr Alexander Frolov (Russian Federation), pursuant to Rule of Procedure 48.3, reported on the results of the 3rd Session of the Joint WMO–IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM-III, Marrakesh, Morocco, 4–11 November 2009). Dr Frolov introduced the priority activities adopted at JCOMM-III, noting that they were fully aligned with both the IOC High-level Objectives and WMO Expected Results.
- *102* **The Executive Council thanked** Dr Frolov for his comprehensive report.
- 103 The Executive Council noted the progress in the JCOMM's Observations, Services, and Data Management Programme Areas. The Executive Council acknowledged the progress in the ocean observing system for climate (the open-ocean component of GOOS). It expressed concern however with regard to the decreasing rate of implementation in recent years. The Executive Council stressed that the initial in situ global ocean observing system for climate should be fully implemented and sustained by 2015, as called for at OceanObs'09, and that the continuity of remote-sensing observations should also be ensured.
- 104 **The Executive Council noted** that JCOMM has made efforts on the issue of coastal disasters and was developing relevant ocean service products, which is one of its priorities.
- 105 **The Executive Council agreed** that JCOMM should continue to work on storm surges and ocean modelling in cooperation with relevant partners while taking into account regional issues and concerns.
- 106 The Executive Council recognized the value of JCOMM's work on setting standards and procedures, including on data management in collaboration with the IODE. It also noted new standard-setting initiatives for ocean observations, such as WMO–IOC Regional Marine Instrument Centres (RMIC). The Executive Council noted with appreciation China's offer to host an RMIC for Asia at its National Centre of Ocean Standards and Metrology (NCOSM).
- 107 **The Executive Council thanked** the Republic of Korea for offering to host the 4th Session of the JCOMM in conjunction with the International Exposition planned in Yeosu, Korea, in 2012, and **urged** IOC Member States to actively participate in the session.
- 108 **The Executive Council noted** the ongoing development of a Global Framework for Climate Services (GFCS) catalysed by the World Climate Conference 3 (WCC-3, Geneva, Switzerland, 31 August–4 September 2009), led by WMO, with broad interagency participation. **The Executive Council emphasized** the role of IOC in this process, given the importance of ocean processes in climate.
- 109 The Executive Council noted that the Joint IOC–WMO officers meeting (UNESCO, Paris, 27 January 2010) had agreed to consider a new overarching Memorandum of Understanding between the two organizations. The Executive Council agreed on the timeliness of a review of existing memoranda, and noted that a new general agreement could be underpinned by letters of agreement regarding specific cooperative activities as required.

- 110 **The Executive Council discussed** progress in implementing the JCOMM Review following the request by the Executive Council at its 41st Session (Paris, 2008), as well as the Recommendation by the JCOMM-III (Marrakesh, 2009). In response to the debate, the Executive Secretary confirmed that a Joint Circular Letter from IOC and WMO requesting Member States' participation and extrabudgetary contributions was about to be issued.
- 111 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>Canada</u>, <u>Germany</u>, <u>Japan</u>, <u>United Kingdom</u>.

Decision 5.3:

The Executive Council:

- (i) **requested** that the Executive Secretary review existing legal agreements with WMO and work with the WMO Secretariat to develop a new global framework agreement;
- (ii) requested that the Executive Secretary ensure continued engagement of IOC, including its subsidiary bodies, in the development of a Global Framework for Climate Services; and decided that a report on this topic be presented to the Assembly at its 26th Session, in 2011.

The Executive Council adopted <u>Resolution EC-XLIII.5</u>.

6. PREVENTION AND REDUCTION OF THE IMPACTS OF NATURAL HAZARDS [HLO 1]

- 112 The Chairman invited the former Head of the Tsunami Unit, Mr Peter Koltermann, to address the Executive Council. Mr Koltermann summarized the genesis of the IOC Tsunami Programme and its achievements. He gave a brief synopsis of its benefits and underscored some of the challenges resulting from the recent tsunami events in Chile, Haiti, Samoa and Solomon Islands.
- 113 He stressed that the IOC Tsunami Programme is now well established and is protecting lives and assets on the coasts. The Tsunami Warning Systems (TWSs) are based on equal ownership and participation of all Member States. They are strengthening regional cooperation along the coast and across ocean basins through international mechanisms supported by national legislation. Their success has been due to the active involvement of emergency-management teams, civil defence and protection authorities, as users.
- 114 He recalled that the Intergovernmental Coordination Groups (ICGs) are responsible for the performance of their TWSs, which require continued and adequate support. He concluded that it had been an honour to serve IOC and a great experience to be part of the IOC Secretariat.
- 115 The Chairman thanked Mr Kolterman on behalf of IOC for his devotion and invaluable contribution to the Tsunami Programme.
 - 6.1 WARNING AND MITIGATION SYSTEMS FOR OCEAN HAZARDS
- 116 Pursuant to Rule of Procedure 48.3, the Chairman of TOWS-WG, Dr Sang-Kyung Byun, introduced this item. He reported on the conclusions of the 3rd Meeting of the Working Group (Lisbon, Portugal, 5–6 May 2010) which reviewed progress in implementing actions and decisions contained in Resolution XXV-13.

IOC/EC-XLIII/3 page 14

- 117 Dr Byun referred to the IOC Technical Series 91 (IOC/2010/TS/91, "Compendium of Definitions and Terminology on Hazards, Disasters, Vulnerability and Risks in a Coastal Context" which was presented, as an advance copy, to the Executive Council as Annex II of the Report of the Third Meeting of the TOWS-WG (IOC/TOWS-WG-III/3). He reported on the editorial process suggested by TOWS-WG to finalize the Compendium before the 26th IOC Assembly.
- 118 On behalf of TOWS-WG, Dr Byun suggested that IOC should raise to the highest level of priority the need for free data exchange for tsunami warning purposes. He noted that the Inter-ICG Task Teams had proposed to hold a joint meeting in the second half of 2010.
- 119 **The Executive Council thanked** Dr Byun for his report and **congratulated** the TOWS-WG for the work accomplished.
- 120 The United States of America indicated that it hopes to support and host the meeting of the inter-ICG Task Teams scheduled in the second half of 2010.
- 121 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>Germany</u>, <u>Greece</u>, <u>Japan</u>, <u>Turkey</u>, <u>United Kingdom</u>, <u>United States of America</u>, <u>Venezuela</u>.
 - 6.2 REGIONAL TSUNAMI WARNING SYSTEMS
- 122 Pursuant to Rule of Procedure 48.3, the Chairman of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS), Dr François Schindelé, reported on the 6th Session of the ICG/NEAMTWS (Istanbul, Turkey, 11–13 November 2009). He referred in particular to the regional architecture and candidate watch centres of the tsunami warning and mitigation system and the progress achieved to date.
- 123 Pursuant to Rule of Procedure 48.3, the Vice-Chairperson of the Intergovernmental Coordination Group for Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS), Dr Frédérique Martini, reported on the 5th Session of the ICG/CARIBE-EWS (Managua, Nicaragua, 15–17 March 2010). She reported on the performance assessment of the CARIBE-EWS in response to the Haiti earthquake and tsunami on 12 January 2010 and requested the support of IOC for the scheduled CARIBE-EWS exercise planned for 23 March 2011. She indicated that the Pacific Tsunami Warning Center (PTWC) continues to provide interim tsunami warning service and guidance to the region, while Venezuela and Nicaragua have made efforts and technical advances towards the establishment of a Caribbean Tsunami Warning Centre (CTWC). Dr Martini also noted that on 1 February 2010 the National Oceanic and Atmospheric Administration (NOAA) established the Caribbean Tsunami Warning Program, jointly located at the Puerto Rico Seismic Network and the University of Puerto Rico at Mayagüez, as a first step in the phased USA contribution to the establishment of a CTWC.
- 124 Pursuant to Rule of Procedure 48.3, the Chairman of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS), Dr Jan Sopaheluwakan, reported on intersessional activities, milestones and achievements, in particular the success of the Indian Ocean Wave'09 exercise, which was held on 14 October 2009. He reported on the outcomes of the 7th Session of the ICG/IOTWS (Banda Aceh, Indonesia, 14–16 April 2010) with particular reference to the work plan and timetable for the transition from the Interim Advisory Service provided by the Japan Meteorological Agency and PTWC to the regional service to be operated by the Regional Tsunami Watch Providers (RTWPs) in 2011. He reported that the ICG/IOTWS had restructured its working groups and called on Member States of the ICG/IOTWS to nominate members to the new working groups as soon as possible.

- 125 **The Executive Council thanked** Turkey, Nicaragua and Indonesia for hosting the meetings of ICG/NEAMTWS, ICG/CARIBE-EWS and ICG/IOTWS, respectively.
- 126 **The Executive Council thanked** the presenters of the reports and **congratulated** the ICGs for the progress accomplished, in particular in the transition towards regionally owned and operated tsunami warning services.
- 127 The Executive Council recognized that for some regions a multi-hazard approach may lead to more rapid development of tsunami warning and mitigation systems. This is due to the need for other sea-level related risks, such as storm surges, to be addressed and to take advantage of existing coastal protection infrastructure. The Executive Council encouraged further use of the multi-hazard framework, where appropriate.
- 128 **The Executive Council extended** its condolences to the people of Haiti and Chile who were affected by the earthquakes and tsunamis of 12 January and 27 February 2010, respectively.
- 129 Turkey objected to the definition of the areas of responsibility of the Regional Tsunami Watch Centres (RTWCs) as presented by the ICG/NEAMTWS Chairman and reiterated its determination to establish a RTWC covering the eastern Mediterranean, Aegean Sea, Marmara Sea and Black Sea.
- 130 Greece commented on the issue of the jurisdictions of the Regional Tsunami Watch Centres in the north-eastern Atlantic, the Mediterranean and connected seas and confirmed that these jurisdictions have not yet been determined. Moreover, Greece reiterated that it has submitted an application for the establishment of a regional tsunami watch centre which will include the Ionian Sea, the Aegean Sea and the eastern Mediterranean Sea.
- 131 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>United Kingdom, United States of America</u>.

Decision 6.2:

The Executive Council adopted <u>Resolution EC-XLIII.6</u>.

- 6.3 SHALLOW WATER BATHYMETRIC DATA FOR DIGITAL ELEVATION MODELS
- 132 The Assembly at its 25th Session (Paris, 2009) by Resolution XXV-13 requested that the Guiding Committee for the General Bathymetric Chart of the Oceans (GEBCO) give priority to the development of high-resolution bathymetric data in coastal areas and digital elevation models and to report progress to the IOC Executive Council at its 43rd Session. The Chairman of the Joint IOC–IHO Guiding Committee for GEBCO, Dr Robin Falconer, introduced this item.
- 133 Dr Falconer described the Guiding Committee's actions to meet the Assembly's request and referred to GEBCO's datasets and products. He described developments in shallow-water bathymetry, including the incorporation of Electronic Navigation Chart (ENC) data into GEBCO grids. He reported on the training of a new generation of scientists and hydrographers in ocean bathymetry through a 12-month international training programme funded by the Nippon Foundation, open to participants from the developing countries.
- 134 Captain Hugo Gorziglia, Director of the International Hydrographic Bureau (IHB) continued the presentation. He referred to the progress achieved by Member States of the International Hydrographic Organization (IHO) and IOC on coastal bathymetry. He recalled

the Memorandum of Understanding between IOC and IHO, which was signed in 1984, updated in 2000, and remains in force.

- 135 He noted joint actions by IOC and IHO, including: strengthening the GEBCO programme; strengthening capacity-building cooperation; and execution of the COAST-MAP-IO project, funded by the Italy, for developing high-resolution bathymetric datasets in risk-prone coastal areas. He noted that these datasets are an essential input to tsunami inundation modelling and that the COAST-MAP-IO project has developed capacity in countries affected by the Indian Ocean Tsunami of 26 December 2004 to produce shallow-water bathymetric maps.
- 136 **The Executive Council thanked** Dr Falconer and Capt. Gorziglia for their presentations.
- 137 **The Executive Council recognized** the importance of bathymetric data and digital elevation models for the development of inundation models and evacuation maps for mitigating the impact of natural coastal hazards and **noted** that access to such data is sometimes restricted in nationally sensitive coastal zones on security and commercial grounds.
- 138 **The Executive Council supported** capacity-development in bathymetric mapping techniques and **thanked** the Italian Government and the Nippon Foundation for their support for hydrographic training through the COAST-MAP-IO project and the GEBCO programme.
- 139 **The Executive Council expressed** its concern that only three candidates from African countries had met the selection criteria for participating in the Nippon Foundationfunded GEBCO training course and **recommended** that GEBCO consider training teachers to conduct multilingual training in non-English speaking countries.
- 140 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>Brazil</u>, <u>Germany</u>, <u>India</u>.

7. SAFEGUARDING THE HEALTH OF OCEAN ECOSYSTEMS [HLO 3]

- 7.1 THE JOINT IOC-ICES STUDY GROUP ON NUTRIENT STANDARDS
- 141 The Assembly at its 25th Session (Paris, 2009), by Resolution XXV-8, invited the Executive Council, at its 43rd Session to discuss the results of the Joint IOC–ICES Study Group on Nutrient Standards (SGONS). The Chairman of the Study Group, Dr Michio Aoyama, introduced the item.
- 142 SGONS began stability testing of Reference Materials for Nutrients in Seawater (RMNS) among ten laboratories in April 2009 and completed testing in April 2010. Additionally, Dr Aoyama visited Scripps Institution of Oceanography in October 2009 and provided about 400 bottles of RMNS for use during the 2009–2010 P6 revisited cruise in the South Pacific Ocean, as well as the previous P6 cruise in 2003 by JAMSTEC.
- 143 The IOC–ICES SGONS, at its 1st Session (UNESCO, Paris, 23–24 March 2010), developed an International Nutrients Scale System (INSS) using RMNS solutions.
- 144 **The Executive Council noted** the report of the Study Group (IOC-ICES/SGONS-I/3) and expressed appreciation for the remarkable achievements thus far. **It also recognized** the importance of improving comparability and traceability of RMNS and their importance in improving our understanding of global climate change.

- 145 **The Executive Council encouraged** the Study Group to continue the development of nutrient standards and inter-comparison experiments.
- 146 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>Japan</u>.

7.2 OCEAN FERTILIZATION

- 147 The Assembly at its 25th Session (Paris, 2009) decided to include ocean fertilization as an agenda item for the 43rd Session of the Executive Council, with a view to considering in more depth the future role of IOC in: (i) providing scientific advice and expertise on ocean fertilization; and (ii) the possible involvement of IOC/ABE-LOS in assessing the potential link between UNCLOS and ocean-fertilization issues. The item was introduced by the IOC Technical Secretary responsible for the Ocean Fertilization activity, Mr Henrik Enevoldsen.
- 148 The United Nations General Assembly, through Resolution 62/215 on "Oceans and the Law of the Sea" (2007), encouraged States to support the further study and enhance understanding of ocean iron fertilization.
- 149 The Parties to the Convention on Biological Diversity have, through Decision IX/16 (2008), requested the Parties, and urged non-Party governments, to ensure, in accordance with the precautionary approach, that ocean fertilization does not take place until there is an adequate scientific basis on which to justify such action, including assessing associated risks, and until a global, transparent and effective control and regulatory mechanism is in place for this purpose, with the exception of small-scale scientific research within coastal waters.
- 150 The International Maritime Organization (IMO) serves as the Secretariat for the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1972), and its 1996 Protocol (LC-LP). The Parties have, through Resolution LC-LP.1 (2008) on the regulation of ocean fertilization decided that, given the present state of knowledge, ocean fertilization activities other than legitimate scientific research should not be allowed. The Parties also agreed to consider, in 2010, a potentially legally binding resolution or amendment to the London Protocol on ocean fertilization, and to develop a framework for assessing the compatibility of ocean fertilization experiments with the LC-LP.
- 151 By invitation of the Parties to the LC-LP, the IOC is contributing to the process with up-to-date summaries on the state of knowledge of ocean fertilization and its effects, including a 'Scientific Summary for Policy Makers: Ocean Fertilization' (IOC/BRO/2010/2) and a more comprehensive review article for scientific publication (in press). These documents were prepared with the assistance of the Surface Ocean Lower Atmosphere Study (SOLAS), an international research programme focused on air–sea interactions and processes, sponsored by the International Geosphere–Biosphere Programme (IGBP), the Scientific Committee on Oceanic Research (SCOR), the World Climate Research Programme (WCRP) and the International Commission on Atmospheric Chemistry and Global Pollution (ICACGP). The drafting of the Summary benefitted from discussions with the Secretariat of the IMO and with the 2009 Intersessional Technical Working Group on Ocean Fertilization, of the LC-LP.
- 152 The Scientific Groups of LC-LP will examine the scientific summaries of the CBD and IOC to determine their suitability for the purposes of the LC-LP, identify any gaps and, where appropriate, make recommendations on how these gaps might be filled.
- 153 **The Executive Council welcomed** the responsiveness of the IOC Secretariat to requests for scientific or technical information.

- **The Executive Council agreed** that the precautionary principle is fundamental to the regulation of ocean fertilization.
- 155 **The Executive Council was divided** over whether and how the IOC should address issues in relation to legal aspects of ocean fertilization and deferred the consideration of this until the future of IOC/ABE-LOS has been decided.
- 156 **The Executive Council reasserted** that the role of the Commission in ocean fertilization issues is to respond to requests for scientific or technical information and advice from relevant bodies or Member States.
- 157 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>India</u>, <u>United Kingdom</u>, <u>United States of America</u>.

Decision 7.2:

The Executive Council requested that the Executive Secretary report on ocean-fertilization-related activities at the 26th Session of the IOC Assembly.

7.3 CAPACITY DEVELOPMENT

- 158 Resolution XXV-11 requested the Executive Secretary to take steps to identify new sources of financial support, enhance harmonization of IOC capacity-development activities, ensure that national and regional priorities drive capacity development, and train local experts to address national priorities. Vice-Chairman Mr Julián Reyna Moreno introduced the item.
- 159 The Vice-Chairman reported on progress in capacity-development achieved by IOC programmes at global and regional levels. He pointed out that the restructuring of the Secretariat will improve the harmonization of regional capacity-development activities and coordination of regional subsidiary bodies, though there will be no resources to develop national capacities for achieving national priorities. Loss of this type of capacity-development will affect countries in Africa and Latin America, as developed capacities are best sustained when in line with national priorities and nationally supported. He suggested that augmenting the human and extrabudgetary resources was an option.
- 160 **The Executive Council thanked** the Vice-Chairman for his presentation.
- 161 **The Executive Council noted** the need to find innovative solutions to the shortage of resources, and **expressed** concern regarding the elimination of the capacity-development post.
- 162 **The Executive Council welcomed** the successful capacity-development activities, while calling for further activities relating to leadership and institutional strengthening, since directors of national institutions have an important role in effectively communicating with their decision-makers. The **Executive Council appreciated** the support provided by many Member States, notably Sweden and Italy, for this work.
- 163 **The Executive Council appreciated** that finite resources limited the range of actions that IOC could undertake, but **considered** that coordination at headquarters would be an important resource in assisting Member States source extrabudgetary funds.
- 164 The Executive Secretary informed the Council that as capacity-development is a cross-cutting action, it is the responsibility of every member of the Secretariat. She noted that part of the Deputy Executive Secretary's duties include harmonizing, coordinating and

reporting on capacity-development activities, but called upon Member States for innovative suggestions for addressing the current lack of a full-time capacity-development coordinator.

165 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>India</u>, <u>Japan</u>, <u>Mauritius</u>, <u>United Kingdom</u>, <u>Venezuela</u>.

8. MANAGEMENT PROCEDURES AND POLICIES LEADING TO THE SUSTAINABILITY OF COASTAL & OCEAN ENVIRONMENT & RESOURCES [HLO 4]

- 8.1 GLOBAL REPORTING AND ASSESSMENT OF THE STATE OF THE MARINE ENVIRONMENT
- 166 The Assembly at its 25th Session (Paris, 2009) instructed the IOC Executive Secretary and Officers to ensure that the Commission continues to play a leading role in the Regular Process. Mr Julian Barbière, Technical Secretary introduced this item by recalling the outcomes of the start-up phase of the 'Regular Process': the 'Assessment of Assessments' (AoA) launched through UNGA Resolution 60/30 and led by IOC and UNEP from 2005 to 2009. The results of the AoA were transmitted to the meeting of the ad hoc Working Group of the Whole (New York, USA, 31 August–4 September 2009) that was established by the UN General Assembly to recommend a course of action.
- 167 Whilst the ad hoc Working Group endorsed the overall objective, scope and principles of the Regular Process, an approach to capacity-building and technology transfer, and a first cycle from 2010 to 2014, they decided that additional time was needed to agree on the modalities for the implementation of the Regular Process, including the key features, institutional arrangements, such as the establishment of a Secretariat, and financing. In addition, UN/DOALOS was requested to provide support to the Regular Process, in the context of UNGA Resolution 64/71, and with relevant UN Agencies and programmes. Further discussion will take place during a second meeting of the ad hoc Working Group (New York, USA, 30 August–3 September 2010). He also recalled that UN-OCEANS met in May 2010 and discussed the role that it could play, if requested by UNGA, in developing a proposal for establishing an inter-agency secretariat to support the Regular Process.
- 168 **The Executive Council expressed satisfaction** with the way the IOC and UNEP Secretariats facilitated the AoA phase of the Regular Process, leading to the publication of the AoA report.
- 169 **The Executive Council recalled** the importance of the Regular Process as a mechanism to keep the state of the world's oceans and seas under continuing review by providing regular assessments at global and supra-regional levels.
- 170 **The Executive Council welcomed** the engagement of relevant UN organizations and programmes in the establishment of the Regular Process.
- 171 The Republic of Korea offered to support a regional workshop on capacitydevelopment and networking as a Regular Process preparatory activity in the WESTPAC region.
- 172 **The Executive Council stressed** the importance of advocating the initiation of the Regular Process in 2010 and of seeking the support of the competent national institutions in the preparations for the discussions of the 2nd meeting of the Ad Hoc Working Group of the Whole.

- 173 **The Executive Council recommended** that IOC programmes on ocean sciences, GOOS, IODE, including ODINs, Capacity-Development, and its Regional Subsidiary Bodies, fully participate in activities relating to the establishment and operationalization of the Regular Process.
- 174 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>Brazil</u>, <u>Canada</u>, <u>Japan</u>, <u>United Kingdom</u>.

Decision 8.1:

The Executive Council requested that the IOC Executive Secretary develop a detailed analysis of IOC's current capacity to continue to contribute to the Regular Process, highlighting its strengths and weaknesses.

9. ADMINISTRATION AND MANAGEMENT

9.1 THE FUTURE OF IOC

- 175 The Chairman, Lic. Javier Valladares, recalled that the Executive Council at its 41st Session, through Resolution EC-XLI.1 (The Future of IOC), requested that the Member States, Chairman, Officers, Executive Secretary and Director-General of UNESCO undertake several actions and report progress at the 25th Session of the Assembly. In this context, the Assembly discussed at length the need to increase the level of resources available in order to enhance the effectiveness of IOC in meeting its current and emerging challenges. In this same context, the 25th Assembly also discussed the question of potential relocation of the IOC Secretariat in response to the offer made by Portugal (IOC-XXV/3, Annex III-E) to host the IOC Secretariat in Lisbon. The 41st Executive Council had stressed the need for transparency and full consultation regarding this matter. Finally, the 35th General Conference of UNESCO adopted, through 35 C/Resolution 19, Biennial Sectoral Priority 2 (relevant to the MLA 4 of IOC) asking for strengthening of the IOC and broadening the scope of its activities for the benefit of all Member States.
- **The Executive Council noted** the reports provided during the 42nd Executive Council and 25th Assembly and **requested** that the Executive Secretary prepare a report on the actions undertaken to implement the recommendations made by the Working Group on the Future of IOC and present it to the IOC Assembly at its 26th Session, with a view to finalizing the implementation of Resolution EC-XLI.1.
- 177 The full statement of <u>Portugal</u> as well as the <u>formal offer</u> to host the IOC Secretariat in Lisbon, Portugal, is in the Information Annex.
- 178 As a contribution to strengthening the delivery of IOC programmes at the regional level, India and the Republic of Korea expressed interest in hosting decentralized IOC offices.
- 179 **The Executive Council cautioned** against repeating discussions on the "Future of IOC", taking into consideration the wealth of documentation prepared during the past decade, and **emphasized** the need to put the recommendations of past initiatives into practice.
- 180 **The Executive Council called for** an open-minded approach to dealing with the IOC priorities, through more active cooperation both with other programmes within UNESCO as well as with relevant external partners, in particular UN programmes and agencies cooperating with the Commission.

- 181 The Executive Council, considering the celebration of the IOC 50th anniversary this year, called for an analysis of its successful programmes, such as the tsunami warning and mitigation programme, the ocean observation programmes, IODE, etc., in order to identify reasons for their success with a view to applying "lessons learned" to current and future IOC activities. In this regard, the Executive Council called for regular performance assessment of all IOC programmes in order to reinforce them or to apply corrective measures.
- 182 **The Executive Council further noted** the continuing evolution of the IOC from a mainly science-oriented organization towards operational services and operational oceanography and **concluded** that this evolution required appropriate adaptation at both national and international levels.
- 183 **The Executive Council stressed** the need for improved communication across all levels of society and government, as well as across all regions, on the activities and benefits of IOC to Member States, noting that this could enhance stronger financial commitment by governments and donors.
- 184 The Chairman informed the Executive Council that two Draft Resolutions (9.1 and 9.1b) had been submitted for consideration. **The Executive Council requested** that the sponsors of the two Draft Resolutions meet to try to combine the two texts into one for the consideration of the Executive Council.
- 185 South Africa, as Chair of the ad hoc drafting group to attempt the proposed combination, reported that a consensus on consolidation of the two Draft Resolutions had not been achieved.
- 186 Portugal expressed regret that IOC Member States were not able to discuss and decide on this crucial issue by consensus. Portugal observed that the Commission is faced with a chronic deficit in resources preventing it from fully addressing the increasing challenges that planet Earth and its oceans face. Portugal reported that it had submitted a proposal that could significantly improve the situation. Portugal recalled that its initiative in respect of the future of the Commission was undertaken in response to a specific request by the former Director-General of UNESCO and the former IOC Executive Secretary. It was made in total transparency and was never intended to be exclusive. Portugal expressed its gratitude to those countries that co-sponsored the Draft Resolution with Portugal. However, in agreement with the co-sponsors of the Draft Resolution, and with the view to preserving an atmosphere of constructive engagement, Portugal withdrew the Draft Resolution. The full statement by <u>Portugal</u> is in the Information Annex.
- 187 **The Executive Council expressed** its great appreciation to Portugal for its spirit of compromise and its generosity and **thanked** South Africa for facilitating the discussions in the working group.
- 188 Germany clarified that all the Executive Council Member States were in agreement that the extrabudgetary funds sought from the private sector (by <u>Resolution EC-XLII.7</u>) should only be accepted if they are in line with the goals of IOC and do not interfere with IOC's neutrality or independence.
- 189 Brazil paid homage to the Chairman's leadership, impartiality and great patience and recalled that the Commission is celebrating its 50th anniversary and all its achievements, of which there are many, but that it was now discussing the next 50 years. Brazil recalled that, in 2008, the Working Group on the Future of IOC delivered its report (IOC/FUTURE-I/3). It observed that the Working Group's recommendations were clear and have not all been implemented. Brazil suggested that the IOC Executive Secretary provide the Assembly at its 26th Session with information on the implementation of the recommendations of the Working Group on the Future of IOC and expressed its readiness to work with other Member States to

realize the immense potential of the Commission. <u>Brazil</u>'s full statement is in the Informational Annex.

- 190 The United Kingdom expressed disappointment that agreement could not be reached on combining the two Draft Resolutions. It noted that there were still issues arising from the Working Group on the Future of IOC report that needed follow-up and that operational oceanography provided new opportunities and challenges that will require IOC to work in a more innovative manner. The UK expressed disappointment that such suggestions had been eliminated when the Draft Resolution reverted to its original form.
- 191 Egypt agreed to the adoption of <u>Resolution EC-XLIII.7</u> by consensus provided that Member States' comments and observations were recorded in the Summary Report of the present session.
- 192 Canada expressed its concern that <u>Resolution EC-XLIII.7</u>, as adopted, did not reflect the purpose of the corresponding agenda item nor the spirit of many of the interventions made during the plenary or during the drafting group's meetings. Nevertheless Canada accepted the Executive Council's decision to adopt the Resolution based on the understanding that Member State discussions would be captured in the report. Furthermore, Canada requested that the Executive Secretary prepare a report on the actions undertaken to implement the recommendations made by the Working Group on the Future of IOC and present it to the IOC Assembly at its 26th Session.
- Argentina supported the Canadian proposal.
- 194 Australia expressed concerns regarding the process followed in drafting, distributing, reviewing and adopting <u>Resolution EC-XLII.7</u> and suggested that Draft Resolutions be available prior to the sessions of Governing Bodies. Australia also supported the comments from Canada and the UK regarding the preparation of a report on the follow-up to the recommendations from the Working Group on the Future of IOC, and the need to address and accommodate the various new challenges facing IOC when considering its future directions and role.
- 195 After extensive debate, the **Executive Council agreed** by consensus to adopt the resolution as a whole without discussion paragraph by paragraph.
- 196 The UK noted that it would not block this consensus but was not satisfied with the procedure of adoption of <u>Resolution EC-XLII.7</u>, and stressed that in the future Member States should continue to be able to make modifications to Draft Resolutions in Plenary as a part of the process of building consensus.
- 197 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>Brazil</u>, <u>Canada</u>, <u>Germany</u>, <u>India</u>, <u>Japan</u>, <u>Malaysia</u>, <u>Portugal</u>, <u>Sweden</u>, <u>United Kingdom</u>.

Decision 9.1:

The Executive Council adopted <u>Resolution EC-XLIII.7</u>.

198 After adoption Portugal expressed its regret that the efforts made by the informal drafting group did not succeed, and stated its reserve on the resolution adopted by consensus.

9.2 HIGHER LEVEL OBJECTIVES FOR 2012–2013

- 199 In accordance with Resolution XXV-14, the Executive Council was requested to identify biennial priorities and preliminary programme orientations with a view to guiding the preparation of the Programme and Budget for 2012–2013.
- 200 While the key actions under the four High-level Objectives of the Medium-term Strategy 2008–2013 remain the reference for the definition of biennial priorities, objectives and expected results for the Commission, **the Executive Council agreed** on: (i) programmatic continuity, based on the recommendations of the IOC governing and subsidiary bodies and the results of programme evaluations; (ii) balance between global and regional/subregional activities and between intergovernmental coordination, standard-setting, and operational activities; (iii) an interdisciplinary approach; (iv) UNESCO's global priorities for Africa, Gender Equality, and Small Island Developing States; and (v) a result-based approach and measurable performance indicators.
- 201 The Draft Biennial Priorities and Implementation Strategy for 2012–2013 prepared by the Secretariat were reviewed by the Financial Committee. The Committee complimented the Secretariat for the accomplished work and noted that actions and expected results require further refinements. In particular, expected results for some key priorities were missing in the document. In some cases, the Committee added high-level statements while in some others further strategy discussions will be required. The Committee recommended that capacitydevelopment be included as a cross-cutting activity under each High-Level Objective. With these points and changes, the Committee approved the Draft Biennial Priorities and Implementation Strategy for 2012–2013 and agreed that the Intersessional Advisory Group on Finance should continue the prioritization exercise intersessionally.
- 202 The report of the Chairperson of the Financial Committee is in <u>Annex VI</u>.

Decision 9.2:

The Executive Council adopted Resolutions <u>EC-XLIII.8</u> and <u>EC-XLIII.9</u>.

- 203 In adopting Resolution <u>EC-XLIII.8</u>, Portugal noted that Sub-Commissions are established around ocean basins and that another term, for example 'platform' or 'forum', might be more appropriate for the continent of Africa.
 - 9.3 PREPARATION OF THE 26TH SESSION OF THE ASSEMBLY
- 204 The Executive Secretary informed the Executive Council that conference and secretariat rooms had been reserved in UNESCO for the 26th Session of the Assembly from Wednesday 22 June 2011 to Wednesday 6 July 2011.
- 205 **The Executive Council recognized** that the format of the report of the present session of the Executive Council goes in the right direction, but needs further coordination in order to better reflect the trends of discussion.
- 206 **The Executive Council agreed** to allow one whole day for meetings of the Regional Subsidiary Body (RSB) Chairpersons and the I-GOOS immediately prior to the 26th Session of the Assembly.
- 207 Regarding the Executive Secretary's proposal on possible items for the agenda of the Assembly at its 26th Session, **the Executive Council stressed** the need to cover the full range of IOC programmes and activities requiring consideration by the Assembly, as well as the statutory agenda items.

208 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>Japan</u>, <u>Portugal</u>, <u>Venezuela</u>.

Decision 9.3:

The Executive Council:

- (i) **decided** to set aside sufficient time in the timetable of the Assembly to allow proper consideration of the report of each Chairperson of an IOC Regional Subsidiary Body, as well as of an Executive Summary Report of the RSB Chairpersons' meeting;
- (ii) **instructed** each RSB Chairperson to include in their progress report to the 26th Session of the Assembly a summary of co-operative activities with other subsidiary bodies;
- (iii) **requested** the Executive Secretary to report to the 26th Session of the Assembly on the execution of joint activities agreed in Memoranda of Understanding between the IOC and co-operating regional bodies in fields of common interest.
- 9.4 DATES AND PLACES FOR THE 44TH AND 45TH SESSIONS OF THE EXECUTIVE COUNCIL

Decision 9.4:

The Executive Council decided to hold:

- (i) its 44th Session on Tuesday 21 June 2011, the day preceding the opening of the 26th Session of the Assembly, at UNESCO headquarters in Paris, France. Pursuant to Rule of Procedure 19.2, the Executive Council will act as the Steering Committee of the 26th Session of the Assembly;
- (ii) its 45th Session from Tuesday 19 June 2012 through Wednesday 27 June 2012, at UNESCO headquarters in Paris, France, with the possibility of an extension until Friday 29 June 2012.

10. ADOPTION OF THE SUMMARY REPORT AND RESOLUTIONS

- 209 The Chairperson of the Resolutions Committee, Ms Helen Joseph, presented her report on the work of the Resolutions Committee to the Executive Council (<u>Annex VII</u>).
- 210 Ms Joseph highlighted some of the challenges the Committee faced in reviewing Draft Resolutions submitted by Member States. She also informed the Executive Council that the Resolutions Committee was asked to provide comments on the 'Third Draft Guidelines for the Preparation and Consideration of Draft Resolutions' (Document IOC/EC-XLIII/2 Annex 6) pursuant to a decision of the Executive Council, at its 39th Session, which was re-affirmed by the Assembly at its 25th Session (IOC-XXV/3, para. 586-587), to improve the preparation and processing of Draft Resolutions.
- 211 **The Executive Council thanked** the Chairperson for her report and the work of the Resolutions Committee and **reaffirmed** the need to finalize the Draft Guidelines at the 26th Session of the Assembly.
- 212 **The Executive Council restated** the importance of submitting Draft Resolutions to the secretariat in advance of the Governing Body sessions in order to allow, as far as

possible, time for inclusion in the Action Paper so as to facilitate their early consideration and review by Member States.

- 213 The following Member States chose to provide records of their plenary intervention on this agenda item for the Informational Annex to the meeting report: <u>Senegal</u>, <u>United Kingdom</u>.
- 214 **The Executive Council adopted** the Summary Report and Resolutions of its 43rd Session.

Decision 10:

The Executive Council requested that the Executive Secretary:

- (i) in consultation with present and past Chairpersons of the Resolutions Committee, prepare a revised version of the Draft Guidelines, taking into account comments received at the Executive Council;
- (ii) include a dedicated agenda item in the session of the 26th Session of the Assembly with a view to discussing and adopting the final version of the Draft Guidelines.

11. CLOSURE

- 215 The Rapporteur for the present session thanked the Executive Secretary and her staff for their cooperation. He welcomed the new format for the Summary Report and thanked the Chairman for his efficiency and guidance in the search for consensus.
- 216 The Executive Secretary thanked the Member States for their welcome and the Executive Council for its active debate. She thanked the Rapporteur for his kind words and the Officers and staff for their hard work, referring particularly to Dr Youri Oliounine for his coordination of the IOC 50th Anniversary celebrations.
- 217 Senegal congratulated the Chairman and the Executive Secretary for their spirit of consensus and successful conduct of the present session. Senegal also particularly thanked the Chairpersons of the Resolutions and the Financial Committees for their good work.
- 218 The Chairman stressed the importance of giving priority to science over the legal and political aspects of the work of the Commission. He welcomed UNESCO's strong support for the Commission and thanked the Executive Secretary and the Secretariat, particularly Ehrlich Desa, Keith Alverson and Patrice Boned, for their hard work, and the consulting editor.
- 219 The Chairman declared the 43rd Session of the Executive Council closed at 15:45 on 16 June 2010.

ANNEX I

AGENDA

1. OPENING

2. ORGANIZATION OF THE SESSION

- 2.1 ADOPTION OF THE AGENDA
- 2.2 DESIGNATION OF THE RAPPORTEUR
- 2.3 ESTABLISHMENT OF INTRASESSIONAL COMMITTEES
- 2.4 INTRODUCTION OF TIMETABLE AND DOCUMENTATION
- 2.5 ROGER REVELLE MEMORIAL LECTURE

3. DEVELOPMENTS SINCE THE 25th SESSION OF THE IOC ASSEMBLY

- 3.1 REPORT BY THE CHAIRMAN [Rule of Procedure 21.2c]
- 3.2 REPORT BY THE EXECUTIVE SECRETARY [Rule of Procedure 49.1]
- 3.3 CONTRIBUTING TO UNESCO GLOBAL PRIORITIES: GENDER AND AFRICA [35 C/5, para. 02010; Res. XXV-14]

4 GOVERNANCE

- 4.1 CELEBRATING OUR 50TH ANNIVERSARY [Res. XXIV-4; Res. EC-XLI.2; Res. EC-XLI.1; IOC-XXV, item 4.1.1 para. 107 & 112]
- 4.2 IOC OPERATING PLAN FOR 2010–2011 [Res. XXV-14]
- 4.3 REGIONAL SUBSIDIARY BODIES [Rule of Procedure No. 48.3]
- 4.4 IOC AND THE LAW OF THE SEA [Res. XXV-1]

5. MITIGATION OF AND ADAPTATION TO CLIMATE CHANGE AND VARIABILITY [HLO 2]

- 5.1 RESEARCH AND OBSERVATIONS FOR CLIMATE [Rule of Procedure 21.2c]
- 5.2 ORGANIZATION OF THE GLOBAL OCEAN OBSERVING SYSTEM [IOC-XXV, item 4.4.2, para. 357]
- 5.3 COOPERATION WITH WMO [Rule of Procedure 48.3]
- 6. PREVENTION AND REDUCTION OF THE IMPACTS OF NATURAL HAZARDS [HLO 1]
 - 6.1 WARNING AND MITIGATION SYSTEMS FOR OCEAN HAZARDS [IOC-XXV, item 4.5.1, para. 417]
 - 6.2 REGIONAL TSUNAMI WARNING SYSTEMS [Rule of Procedure 48.3]

6.3 SHALLOW WATER BATHYMETRIC DATA FOR DIGITAL ELEVATION MODELS [IOC-XXV, item 4.5.1, para. 413]

7. SAFEGUARDING THE HEALTH OF OCEAN ECOSYSTEMS [HLO 3]

- 7.1 THE JOINT IOC-ICES STUDY GROUP ON NUTRIENT STANDARDS [Res. XXV-8]
- 7.2 OCEAN FERTILIZATION [IOC-XXV, item 4.4.4, para. 395]
- 7.3 CAPACITY DEVELOPMENT [Res- XXV-11]

8. MANAGEMENT PROCEDURES AND POLICIES LEADING TO THE SUSTAINABILITY OF COASTAL & OCEAN ENVIRONMENT & RESOURCES [HLO 4]

8.1 GLOBAL REPORTING AND ASSESSMENT OF THE STATE OF THE MARINE ENVIRONMENT [Rule of Procedure 21.2(c)]

9. ADMINISTRATION AND MANAGEMENT

- 9.1 THE FUTURE OF IOC [IOC-XXV, item 6.1, para.561]
- 9.2 HIGHER LEVEL OBJECTIVES FOR 2012–2013 [Res. XXV-14; Statutes Art. 6B.4, 7B.6]
- 9.3 PREPARATION OF THE TWENTY-SIXTH SESSION OF THE ASSEMBLY [Statutes Art. 7.C.8; Rule of Procedure 8.3 & 21.2(c)]
- 9.4 DATES AND PLACES FOR THE FORTY-FOURTH AND FORTY-FIFTH SESSIONS OF THE EXECUTIVE COUNCIL [Rule of Procedure 19.2]

10. ADOPTION OF THE SUMMARY REPORT AND RESOLUTIONS

11. CLOSURE

ANNEX II

ADOPTED RESOLUTIONS

No.	Agenda Item	Title	Page
1	4.3	IOC Regional Committee for the Central Eastern Atlantic (IOCEA)	2
2	4.3	Eighth Session of the IOC Sub-Commission for the Western Pacific (WESTPAC)	3
3	4.3	Regional Subsidiary Bodies	5
4	4.4	Review of the IOC Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS)	6
5	5.3	Third Session of the Joint WMO–IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM-III)	7
6	6	Global Coordination of Early Warning and Mitigation Systems for Tsunamis and Other Sea-level-related Hazards	10
7	9.1	The Future of IOC	12
8	9.2	Draft Biennial Priorities and Implementation Strategy 2012–2013	13
9	9.2	Biennial Priorities and Implementation Strategy and Preparation of the IOC Draft Programme and Budget for 2012–2013	13

Resolution EC-XLIII.1

IOC REGIONAL COMMITTEE FOR THE CENTRAL EASTERN ATLANTIC

The Executive Council,

Recalling IOC Resolution XXIV-3 on "The Past, Present and Future of Africa within the IOC programmes", and IOC Resolution XXV-2, on "IOC Regional Subsidiary Bodies", which called for the reactivation of the IOC Regional Committee for the Central Eastern Atlantic (IOCEA),

Bearing in mind that the IOCEA region faces various challenges currently limiting the capacity of marine scientists to assist communities and policy-makers in the field of marine and coastal management,

Acknowledging the progress made by Member States in the development of capacitydevelopment and oceanographic programmes, and IOC in the implementation of various projects in the region, including the ODINAFRICA Project funded by the Government of Flanders, Belgium, the first phase of the Capacity-Development programme supported by the Swedish International Development Cooperation Agency, and the Global Environment Facility project on Adaptation to Climate Change in Coastal Zones (ACCC) of West Africa,

Welcoming the efforts that have been made to revitalize the IOCEA Committee,

Thanking the Government of Ghana for having hosted the Sixth Session of the IOCEA Committee, in Accra, 28–30 March 2010,

Takes note of the Summary Report of the Sixth Session of the IOCEA (IOCEA-VI/3) and the recommendations contained therein;

Recommends that, in accordance with the IOC Guidelines for the establishment of decentralized offices (IOC/INF-1193), a needs assessment and detailed estimation of the costs with a view to re-establishing the IOCEA Project Office, be prepared by the IOCEA Chair with the assistance of the IOC Secretariat, and presented at the Twenty-sixth Session of the Assembly for its consideration;

Requests the IOC Executive Secretary to:

- (i) incorporate the IOCEA-VI Work Plan activities into the current Programme and Budget (35 C/5), and within the available resources in the Regular Programme and the extrabudgetary resources identified for this purpose;
- (ii) include IOCEA priorities in the discussions leading to the development of the next draft Programme and Budget for 2012–2013 (Draft 36 C/5);
- (iii) invite offers from the IOCEA Member States to host and support the IOCEA Project Office in accordance with the IOC Guidelines for the establishment of decentralized offices (IOC/INF-1193);
- (iv) follow the Guidelines in supporting the head and supporting staff of the IOCEA Project Office, through available means, including through Associate Expert and Young Professional programmes, and national secondments;
- (v) provide guidance for the establishment of a Central Eastern Atlantic Marine Science Association (CEAMSA), based on the experience and interactions with the Western Indian Ocean Marine Science Association (WIOMSA);

Calls upon IOCEA Member States to strengthen their existing National Oceanographic Committees, or to create one where none exists, that fully participate in the IOCEA activities;

Invites IOC Member States to provide financial support, staff and expertise for the IOCEA Project Office and Work Plan activities.

Resolution EC-XLIII.2

EIGHTH SESSION OF THE IOC SUB-COMMISSION FOR THE WESTERN PACIFIC (WESTPAC-VIII)

The Executive Council,

Considering that:

- the IOC Sub-Commission for the Western Pacific (WESTPAC) has been instrumental in fostering regional cooperation on marine scientific research, observations and services, and capacity-development in the western Pacific region, in order to assist its Member States in the study, protection and management of their coasts and oceans,
- (ii) the dramatically declining capacity of IOC to support its regional activities through its Regular Budget has negatively impacted the Sub-Commission for many years,

Recognizing the unremitting effort in recent years by the Member States and the IOC Regional Secretariat for WESTPAC in revitalizing the Sub-Commission, by defining a WESTPAC Strategy and Programme Structure, rectifying the deficiencies in WESTPAC activities, forging as well as initiating new regionally specific activities, and regaining the confidence of the Member States in the future of the Sub-Commission,

Welcoming the establishment of the first Regional Training and Research Centre on Oceanography at the First Institute of Oceanography, State Oceanic Administration of China, within the framework of the "UNESCO/IOC Regional Network of Training and Research Centres on Oceanography in the Western Pacific",

Noting with satisfaction that WESTPAC now has a systematic mechanism for Member States to coordinate their efforts, has been strategically planning the future of the Sub-Commission, has put in place advisory and implementing mechanisms to ensure the timely response of the Sub-Commission to the emerging marine-related regional/international issues, and has taken a significant step forward from programme conceptualization to operation,

Noting with concern that, despite the significant progress made, the Sub-Commission's further development will be hampered by the shortage of technical staff in its Secretariat as WESTPAC activities rapidly expand,

Expressing its appreciation to:

- (i) the Government of Thailand for having hosted, since 1994, the WESTPAC Secretariat and for having provided a research vessel and ship time in support of WESTPAC activities,
- the Government of China for its increasing financial contribution through the IOC Special Account, and for the provision of research vessel, ship time and equipment for WESTPAC projects,

- (iii) the Government of Japan for its continuing support for WESTPAC activities through the Japan Fund-in-Trust,
- (iv) the Government of the Republic of Korea for its annual contribution to WESTPAC since 2009,
- (v) the Government of Malaysia for the provision of a research vessel and ship time for WESTPAC projects,
- (vi) the Government of Indonesia for having hosted the Eighth Session of the Sub-Commission for WESTPAC (WESTPAC-VIII) in Bali, Indonesia, 10–13 May 2010,
- (vii) the Government of the Republic of Korea for official confirmation of its offer to host the 8th International Scientific Symposium of WESTPAC, in Pusan, 28–31 March 2011, and the next intergovernmental session of the WESTPAC, in the second quarter of 2012,
- (viii) other Member States and partner organizations for their various in-kind contributions to WESTPAC activities,

Having considered the Executive Summary Report of the Eighth Session of the WESTPAC (IOC/SC-WESTPAC-VIII/3s) and the Recommendations therein:

•	Recommendation SC-WESTPAC-VIII.1	WESTPAC International Scientific Symposium
•	Recommendation SC-WESTPAC-VIII.2	UNESCO/IOC Regional Network of Training and Research Centres on Oceanography
•	Recommendation SC-WESTPAC-VIII.3	WESTPAC Working Groups
•	Recommendation SC-WESTPAC-VIII.4	WESTPAC Programme and Budget for May 2010–May 2012
•	Recommendation SC-WESTPAC-VIII.5	Date and Place of the Next Session,

Accepts the Executive Summary of WESTPAC-VIII and the Recommendations therein;

Requests the IOC Executive Secretary to:

- (i) implement the WESTPAC-VIII Recommendations in the light of the present and future budgetary possibilities of the Commission;
- (ii) enhance the involvement of WESTPAC in IOC global programmes, initially through improving the communication between IOC Headquarters and WESTPAC and clearly identifying the overall resource position of WESTPAC within IOC global programmes;

Invites donor agencies and other international and regional organizations, programmes and projects to:

- (i) provide extrabudgetary funds and other means of support in order to implement the WESTPAC activities;
- (ii) continue and/or renew their commitments to, and partnerships with, the WESTPAC;

Urges Member States to:

(i) provide additional resources and second technical staff to the WESTPAC Secretariat in order to reinforce its operations and maintain the current momentum of WESTPAC;
(ii) support and strengthen, through financial and other means, the regional capacitybuilding initiative of the "UNESCO/IOC Regional Network of Training and Research Centres on Oceanography in the Western Pacific".

Resolution EC-XLIII.3

REGIONAL SUBSIDIARY BODIES

The Executive Council,

Recalling IOC Resolution XXV-2 on IOC Regional Subsidiary Bodies (RSBs),

Highlighting the fact that IOC Resolution XXV-2 also requested the IOC Executive Secretary to: (i) ensure that a meeting on IOC RSBs and other regional activities be held in conjunction with IOC Assembly sessions; and (ii) re-activate IOCINDIO and IOCEA, giving consideration to the activities of existing IOC and other relevant regional bodies,

Welcoming the progress that has been made in implementation of programmes and activities in the regions,

Bearing in mind that the previous resolutions of the IOC governing bodies related to the strengthening of the RSBs should be fully implemented,

Stressing the importance of clarifying the role of the RSBs as a tool for achieving the objectives of IOC, as well as their status within IOC's legal framework,

Reaffirming the need to reinforce the IOC Capacity Development Programme, since it provides a mechanism for addressing challenges at national level,

Reaffirming also the need to reinforce the existing IOC Secretariats of RSBs,

Requests the IOC Executive Secretary to: (i) allocate resources for implementation of activities in the regions, providing an indication of the proportion of budgets of global programmes that goes towards implementing activities in each region; (ii) improve communications between IOC and its RSBs, and between regional and global programmes; (iii) explore, in consultation with Member States, the establishment, where needed, of supporting facilities in those regions;

Encourages the RSBs to work with other UN agencies and NGOs (working in the regions), to raise awareness of, and address, coastal and marine issues.

Resolution EC-XLIII.4

REVIEW OF IOC ADVISORY BODY OF EXPERTS ON THE LAW OF THE SEA (IOC/ABE-LOS)

The Executive Council,

Acknowledging the valuable role of the IOC Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS) and the progress made by IOC/ABE-LOS at its Ninth Meeting (UNESCO Headquarters, Paris, 30 March–3 April 2009),

Recalling the United Nations General Assembly Resolutions A/RES/61/222, paragraph 110, A/RES/62/215, paragraph 123, A/RES/63/111, paragraph 144, and A/RES/64/71, paragraph 166, which acknowledge the work done by IOC through its IOC/ABE-LOS,

Recalling IOC Resolutions XXII-12, XXIII-8 and XXIII-9, and XXIV-12, EC-XXXVII.8 and EC-XXXIX.7, which specified the mandate of IOC/ABE-LOS with respect to its work on:

- (i) the practice of Member States with respect to Parts XIII and XIV of the United Nations Convention on the Law of the Sea (UNCLOS),
- (ii) the dissemination and implementation of the "Criteria and Guidelines on the Transfer of Marine Technology",
- (iii) the procedure for the application of Article 247 of UNCLOS by IOC,
- (iv) the IOC legal framework that is applicable to the collection of oceanographic data within the context of UNCLOS,

Recalling IOC Resolution XXV-1 on the "Ninth Meeting of the IOC Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS IX)",

Bearing in mind the views expressed by Member States at Agenda Items 3.2 and 4.4 of the present Session of the Executive Council,

Instructs IOC/ABE-LOS to continue its work on the Questionnaire N° 3 on "The practices of Member States in the field of Marine Scientific Research (MSR) and Transfer of Marine Technology (TMT)" within the framework of UNCLOS in close cooperation with the United Nations Division for Oceans Affairs and Law of the Sea (UN/DOALOS);

Establishes an intersessionnal open-ended working group made up of representatives of Member States to:

- (i) prepare a questionnaire on the achievements of the IOC/ABE-LOS and opportunities for future activities where the advice of an expert body may be necessary;
- (ii) suggest a mechanism to identify and prioritize issues of interest to the Commission;

Requests the IOC Executive Secretary to distribute the questionnaire among Member States via Circular Letter inviting their comments;

Tasks the open-ended working group with collating and analysing the responses of the Member States and, on the basis of this analysis, prepare a report as a review of IOC/ABE-LOS to be presented for consideration by the Executive Council at its Forty-fourth Session and the Assembly at its Twenty-sixth Session. The open-ended working group will conduct its business by electronic means;

Encourages Member States to provide experts to serve on the open-ended working group and to complete the questionnaire.

Resolution EC-XLIII.5

THIRD SESSION OF THE JOINT WMO–IOC TECHNICAL COMMISSION FOR OCEANOGRAPHY AND MARINE METEOROLOGY (JCOMM-III)

The Executive Council,

Having considered the Abridged Final Report (WMO-IOC/JCOMM-III/3s), with Resolutions and Recommendations, of the Third Session of the Joint WMO–IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM-III), Marrakech, Morocco, 4–11 November 2009,

Notes the Abridged Final Report and the Recommendations and Resolutions therein;

Recognizes that Recommendations 7, 10, 11, 12, 14 and 16 of JCOMM-III refer to actions required by WMO Member States (national meteorological and hydrological services);

Adopts the reformatted Terms of Reference of JCOMM in the Annex of this Resolution, pending their adoption by the WMO Congress;

Approves and decides to take action on the following Recommendations:

<u>Recommendation 1 (JCOMM-III) – Establishment of WMO–IOC Regional Marine Instrument</u> <u>Centres (RMIC)</u>

- (i) **Invites** Member States to consider taking advantage of the RMIC resources offered by the US National Data Buoy Center, and proposing new RMICs as they see fit;
- (ii) **Requests** the IOC Executive Secretary to facilitate implementation of this recommendation and provide appropriate technical advisory assistance to Member States concerned, as required, in the operations of RMICs;

<u>Recommendation 2 (JCOMM-III) – New Terms of Reference for the JCOMM in situ</u> <u>Observing Platform Support Centre (JCOMMOPS)</u>

- Invites France, through its national institution, as the JCOMMOPS host country, inter alia, to consider increasing its support to JCOMMOPS through review and revision of the host agreement;
- (ii) **Encourages** other Member States to commit the resources required to support JCOMMOPS;

<u>Recommendation 3 (JCOMM-III) – Provision of Ocean Data Acquisition System (ODAS) and</u> <u>Water Temperature Metadata</u>

Requests the IOC Executive Secretary to assist Member States, as necessary, in the submission of metadata to the ODAS Metadata Centres in China and the United States;

Recommendation 4 (JCOMM-III) – Development of Data Management Standards

(i) **Urges** Member States to submit their proposals for standards related to ocean data management and exchange to the IODE–JCOMM Ocean Data Standards Pilot

Project for wide community adoption, and to implement the recommended standards in agencies in their own countries at the earliest possible date;

(ii) **Requests** the IOC Executive Secretary to assist Member States in the implementation of this recommendation;

Recommendation 5 (JCOMM-III) – Guide to Operational Ocean Forecasting Systems

Requests:

- (i) the Expert Team on Operational Ocean Forecasting Systems (ETOOFS) to coordinate and provide technical advice and guidance in the preparation of the Guide;
- (ii) the IOC Executive Secretary to:
 - (a) arrange for the preparation of the guide, in consultation with the co-presidents of JCOMM, the presidents of the WMO Commission for Basic Systems (CBS) and the Commission for Atmospheric Sciences (CAS), the chairpersons of the Global Ocean Data Assimilation Experiment (GODAE) OceanView Science Team, other bodies and organizations, as appropriate;
 - (b) coordinate with the Secretary-General of WMO and publish the guide in the WMO and IOC Manuals and Guides series;

Recommendation 6 (JCOMM-III) – Integrated Storm Surge Watch Scheme (ISSWS)

Urges Member States to support the development and implementation of projects concerning storm surges, including the UNESCO project on Enhancing Regional Capabilities for Coastal Hazards Forecasting and Data Portal Systems, as well as related projects led by the JCOMM Expert Team on Wind Waves and Storm Surges (ETWS), by providing extrabudgetary contributions;

<u>Recommendation 8 (JCOMM-III) – Implementation of Quality Management Systems for Met-</u> <u>Ocean Data, Products and Services by Members/Member States</u>

Urges Member states to:

- propose and implement quality-management systems for meteorologicaloceanographic data, products and services, based on the IODE–JCOMM Standards Process, the WMO Quality Management Framework and the principles of ISO or other relevant quality-management standards, as appropriate; and
- (ii) submit information on their common practices in collecting, managing and exchanging oceanographic and marine meteorological data through the IODE– JCOMM Standards Process;

<u>Recommendation 13 (JCOMM-III) – Amendments to the Marine Accident Emergency</u> <u>Support</u>

Requests the IOC Executive Secretary to:

 bring this recommendation to the attention of the United Nations Environment Programme, International Maritime Organization, other organizations or concerned bodies, and to invite them to collaborate with JCOMM in the further development and operation of the Marine Pollution Emergency Response Support System (MPERSS); provide appropriate technical advisory assistance to Member States concerned, as required, in the implementation of the Marine Pollution Emergency Response Support System;

<u>Recommendation 15 (JCOMM-III) – Terms of Reference for an End-to-End External Review</u> of the JCOMM

- (i) **Adopts** the terms of reference for the JCOMM external review team, as given in Annex to Recommendation 15 (JCOMM-III);
- (ii) **Request** the Member States to:
 - (a) provide in-kind or budgetary contributions to coordinate and implement the review process in an efficient and expedient matter;
 - (b) prepare the final external review report; and
 - (c) nominate experts to establish an external review team.

Annex to Resolution EC-XLIII.5

TERMS OF REFERENCE FOR THE JOINT WMO–IOC TECHNICAL COMMISSION FOR OCEANOGRAPHY AND MARINE METEOROLOGY

The Joint WMO–IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) shall:

- (a) coordinate, develop and recommend standards and procedures for the work of Members/Member States in the overall collection, exchange, access, understanding, application and delivery of marine meteorological and oceanographic data, information, forecasts and warnings upon which marine meteorological and oceanographic services and marine-related decision-making processes are based;
- (b) coordinate, develop and recommend standards and procedures for the work of Members/Member States in the overall collection, management, exchange and archival of high-quality marine meteorological and oceanographic data, information and products, on which climate studies, predictions and services, as well as impact and adaptation strategies, are based;
- (c) promote and facilitate the international sharing of implementing experience, transfer of technology and research uptake, and support relevant education and training to meet the capacity-development needs of national agencies and of other organizations that play a role in the provision of marine meteorological and oceanographic services.

In this regard, the Commission will give special attention to education and training, technology transfer initiatives, on marine meteorological and oceanographic data, products and services that respond to the needs of, and build capacity in, the developing countries with particular emphasis on the Least Developed Countries and Small Island Developing States. Additionally, the Commission will support cooperation among WMO, IOC and other United Nations agencies that are members of UN-Oceans, the International Hydrographic Organization (IHO), the International Council for Science (ICSU) and other governmental and non-governmental organizations, the private sector as well as user organizations, on matters related to marine meteorology and oceanography.

Within its terms of responsibility as defined above, and consistent with the IOC Statutes, the Joint WMO–IOC Technical Commission for Oceanography and Marine Meteorology shall

IOC/EC-XLIII/3 Annex II – page 10

have responsibilities common to all WMO Technical Commissions as defined in WMO General Regulation 179, and shall structure its work to address societal outcomes as envisaged by the planning documents of the parent organizations, by creating an operating plan focusing on the areas identified within its specific terms of reference and addressing appropriate (or applicable) strategic thrusts and expected results.

Resolution EC-XLIII.6

GLOBAL COORDINATION OF EARLY WARNING AND MITIGATION SYSTEMS FOR TSUNAMIS AND OTHER SEA-LEVEL-RELATED HAZARDS

The Executive Council,

Recalling:

- (i) IOC Resolution XXV-13 on Global Coordination of Early Warning and Mitigation Systems for Tsunamis and Other Sea-Level Related Hazards, which established three Inter-ICG Task Teams on: Sea Level for Tsunami Purposes; Disaster Management and Preparedness; and Tsunami Watch Operations, which called for a report and recommendations on the problem of intentional or unintentional damage to ocean observing platforms globally,
- (ii) IOC Resolution XXV-12 on the Programme of Actions for GOOS 2010–2011, which "urged IOC Member States to commit themselves to stepwise global implementation of a reduced, priority set of coastal variables",

Having considered:

- the Executive Summary Report of the Fifth Session of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS-V), Managua, Nicaragua, 15–17 March 2010,
- the Executive Summary Report of the Sixth Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the Northeastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS-VI), Istanbul, Turkey, 11–13 November 2009,
- (iii) The Executive Summary Report of the Seventh Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS-VII), Banda Aceh, Indonesia, 14–16 April 2010,
- (iv) The summary report of the Third Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG III), Lisbon, Portugal, 5–6 May 2010,

Being concerned by the impact of the recent earthquake and tsunami in Chile, Haiti, Indonesia, Samoa, and American Samoa, inter alia,

Being encouraged that its Member States are conducting post-event assessments to identify measures to improve the regional and national warning and preparedness systems to better protect lives and community infrastructure, including pre-event preparedness, community education and outreach, enhanced communications and exercises to test the warning system, and enhanced real-time data exchange to improve tsunami detection and forecasting,

Emphasizing the fact that delayed access to real-time data delays timely detection and forecasting of tsunamis and undermines national preparedness to save lives,

Underlining the need for high-resolution bathymetric data in coastal areas and digital elevation models for tsunami warning and forecast operations,

Recalling the recent UN General Assembly Resolutions 64/71 and 64/72, which expressed concern about the impact of intentional or unintentional damage to platforms used for ocean observation and marine scientific research, and which called on Member States, UN bodies, and Regional Fishery Management Organizations to take appropriate action to protect such platforms,

Acknowledging the recent action by the Western and Central Pacific Fisheries Commission to prohibit fishing within one nautical mile of, or interacting with, a data buoy in the high seas of the Area under UNCLOS,

Welcoming the increased UNESCO regular budget support to the IOC Tsunami Programme, and increased extrabudgetary contribution from Member States to implement tsunami warning systems in four regions to help achieve the required intergovernmental coordination,

Being concerned with the long-term implementation, operation and maintenance of a global tsunami warning and other ocean hazards warning system coordinated by the IOC Secretariat,

Reaffirms the potential value of an integrated multi-hazard approach, coordinated with the World Meteorological Organization, the UN International Strategy for Disaster Reduction, other UN bodies and international programmes, as vital to a tsunami warning system at local, national and regional levels;

Requests the TOWS-WG to prepare a report and recommendations to the Twenty-sixth Session of the Assembly, on Sea Level for Tsunami Purposes, on Disaster Management and Preparedness and on Tsunami Watch Operations, pursuant to the Inter-ICG Task Team mandates;

Endorses the TOWS-WG's proposed process to complete the Compendium of Terms and Definitions in Coastal Disaster Risk Reduction, and **requests** TOWS-WG to finalize the Compendium before the Twenty-sixth Session of the Assembly;

Urges Member States to accord priority to free and unrestricted exchange of real-time data essential for tsunami detection and forecast, in agreement with the IOC Oceanographic Data Exchange Policy (2003);

Requests:

- ICGs for IOC Tsunami Warning Systems to provide TOWS-WG as soon as possible the results of an analysis of the impact of data gaps on the tsunami detection and forecast timeliness and accuracy;
- (ii) IODE, in cooperation with CTBTO (the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization) to provide a report on the implementation of their respective data exchange policies specifically with regard to the adequacy of the exchange of tsunami-related data types;
- (iii) TOWS-WG to conduct an analysis of the impact of data gaps on the timeliness and accuracy of tsunami detection and forecast, based on the results from ICGs;

 (iv) the International Tsunameter Partnership and the Data Buoy Cooperation Panel, in coordination with JCOMM, to complete their report on intentional and unintentional damage to ocean observing platforms, for consideration at their next meeting, Oban, U.K., 27–30 September 2010;

Urges concerned IOC Member States that have not yet done so to nominate a 24/7 Tsunami Warning Focal Point (TWFP);

Encourages Member States to increase their extrabudgetary contributions to the IOC to support the work of Intergovernmental Coordination Groups addressing Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems, including through secondment of professional staff to the Tsunami Unit.

Resolution EC-XLIII.7

THE FUTURE OF IOC

The Executive Council,

Recalling Resolution EC-XLI.1 on "The Future of IOC",

Stressing the need for greater synergy between IOC and the scientific programmes of UNESCO,

Recalling the results of the Working Group on the Future of IOC and the importance of implementing its recommendations,

Underscoring the importance of strengthening the future role of IOC in terms of intersectoral cooperation within UNESCO and the UN system,

Stressing that the follow-up of the IOC actions by Member States requires full permanent and increasing contact between the Permanent Delegations to UNESCO and the IOC Secretariat in Paris,

Reiterates the relevance of having the IOC Secretariat, representing UNESCO's most important flagship programme, at the Headquarters in Paris;

Requests the IOC Executive Secretary, under the guidance of the Director-General, to present to the Assembly at its Twenty-Sixth Session, a Plan of Action for the strengthening of the administrative support for the IOC Secretariat in Paris;

Requests the IOC Executive Secretary to:

- (i) identify extrabudgetary funds to support IOC actions;
- (ii) take appropriate measures to facilitate, together with the Member States, the raising of funds, both from governments and from private-sector donors;
- (iii) present to the Assembly, at its Twenty-sixth Session, a detailed plan for raising extrabudgetary resources;

Calls upon UNESCO Member States to ensure an adequate level of funding for the IOC in the UNESCO regular budget and to maintain, in the 36 C/5, the provision of a specific financial allocation to the Commission that cannot be decreased by transfers of funds to other parts of the budget.

Resolution EC-XLIII.8

DRAFT BIENNIAL PRIORITIES AND IMPLEMENTATION STRATEGY 2012–2013

The Executive Council,

Recalling the priority given to Africa in the IOC Medium-Term Strategy 2008–2013,

Also recalling the resolutions adopted by the IOC Assembly, at its previous sessions, especially Resolution XXIV-3 on "Past, present and future of Africa within the IOC programmes", calling for the priority given to Africa to be translated into specific activities and outcomes in Africa,

Welcoming the many instances of support provided in the last few years to the IOC by African countries, in the form of financial contributions and in kind, with a view to the promotion of its activities in Africa,

Bearing in mind the option in favour of decentralization taken by UNESCO to raise its effectiveness,

Being convinced that, through decentralization, the IOC can sustainably increase the effectiveness of its action for Africa,

Welcomes the IOC Executive Secretary's stated desire to strengthen the IOC's presence in Africa in order to give more concrete effect to the priority accorded to Africa;

Requests the IOC Executive Secretary to include in the Agenda of the Twenty-Sixth Session of the Assembly a proposal for the establishment of an IOC Sub-Commission for Africa, building on IOCEA and IOCWIO, and in accordance with IOC Guidelines for the establishment of decentralized offices;

Requests also the IOCEA and IOCWIO Chairpersons to prepare such a proposal, with the support of the IOC Secretariat, and to present it to the Assembly, at its Twenty-Sixth Session, for its consideration;

Further requests the IOC Executive Secretary to include, in the draft Programme and Budget for 2012–2013, a feasibility study of the establishment of an IOC Regional Office in Africa.

Resolution EC-XLIII.9

BIENNIAL PRIORITIES AND IMPLEMENTATION STRATEGY AND PREPARATION OF THE IOC DRAFT PROGRAMME AND BUDGET FOR 2012–2013

The Executive Council,

Noting: Articles 1.2, 10.1 and 10.4 of the IOC Statutes relating to financial and other resources,

Stressing: the unique role of the IOC as the competent intergovernmental organization dealing with ocean science, services and capacity-building at global and regional levels, and also as the ocean arm of UNESCO,

IOC/EC-XLIII/3 Annex II – page 14

Recalling:

- (i) the emphasis placed by the United Nations General Assembly Resolution 64/71 on Oceans and the Law of the Sea on the role of IOC in ocean affairs, especially concerning increasing the scientific understanding of the ocean–atmosphere interface, including through ocean observing programmes, the establishment of a Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-economic Aspects, the establishment of regional and national tsunami warning and mitigation systems and global coordination of early warning and mitigation systems for tsunamis and other sea-level-related hazards, and the implementation of Parts XIII and XIV of the United Nations Convention on the Law of the Sea, concerning, respectively, Marine Scientific Research and the Development and Transfer of Marine Technology,
- (ii) the Ministerial Round Table on "Building Stewardship for the Ocean: The Contribution of UNESCO to Responsible Ocean Governance" (UNESCO, Paris, 12–13 October 2009), held in conjunction with the 35th General Conference of UNESCO, which emphasized the role of IOC in supporting global governance of the oceans through marine science, monitoring of the state of the marine environment and its ecological services, and capacity-building,
- (iii) IOC Resolution XXV-14 "IOC Programme and Budget for 2010–2011" and the IOC Biennial Strategy 2010–2011 (Annex 1) and the budget allocation table (Annex 2) contained therein,
- (iv) the framework provided by the IOC Medium-term Strategy 2008–2013,

Having examined the Report on Budget Execution 2008–2009 and Anticipated Funding for 2010 (document IOC/EC-XLIII/2 Annex 2), the Draft IOC Work Plan for 2010–2011 (document IOC/EC-XLIII/2 Annex 3), and the Draft Biennial Priorities and Implementation Strategy for 2012–2013 (document IOC/EC-XLIII/2 Annex 4),

Noting:

- (i) that the 35th General Conference of UNESCO approved a total appropriation of US\$ 653 million for the Programme and Budget 2010–2011 (35 C/5), with a reduction of US\$ 18 million compared to the initial proposal by the Director-General, which was examined by the Twenty-Fifth IOC Assembly prior to the 35th General Conference,
- (ii) in the Draft Work Plan 2010–2011, the proposed budget allocations for the Sub-Commissions and the Regional Committees adopted by the Assembly as Annex 2 to Resolution XXV-14 under Actions 2d and 4a have been included under Governance,

Confirms that the budget for 2008–2009 has been executed in accordance with the approved Programme and Budget 2008–2009 as reviewed by the Assembly at its Twenty-fifth session (UNESCO, Paris, 16–25 June 2009);

Expresses its appreciation of the work accomplished by the Secretariat in translating the IOC Biennial Strategy 2010–2011 into the Work Plans;

Instructs the Intersessional Advisory Group on Finance, established by the Executive Council at its Forty-First Session, to consider ways in which the presentation of budgetary information might be further improved regarding extrabudgetary outlines and also expected results;

Requests that the programme structure approved by the Governing Body resolutions on programme and budget be adhered to by the Secretariat in preparing the Work Plans;

Takes note that the budget allocation for Action 2d 'Climate change adaptation for Africa and SIDS' was not reflected in the Work Plans approved by the Assembly at its Twenty-Fifth Session through Resolution XXV-14;

Requests the IOC Executive Secretary to reinforce Action 2d 'Climate change adaptation for Africa and SIDS' through partially re-orientating the Work Plans for Capacity-development (Action 3c) and IOCEA (Governance);

Urges:

- Member States to continue to advocate to the Director-General and the Governing Bodies of UNESCO the importance of IOC, focusing in particular on the value that IOC provides to UNESCO and to the sustainable development of coastal areas and islands;
- (ii) support the reinforcement of the IOC in the consultation process for the UNESCO Draft 36 C/5;

Invites the Director-General of UNESCO to:

- (i) request the Governing Bodies of UNESCO to ensure that resources allocated to the IOC in the Draft 36 C/5 be clearly identified in the appropriation resolution;
- maintain all IOC activities in a single Main Line of Action in the Draft 36 C/5 entitled "UNESCO Intergovernmental Oceanographic Commission (IOC): improving governance and fostering intergovernmental cooperation to manage and protect oceans and coastal zones for the benefit of its Member States";
- (iii) consider further reinforcement of IOC in order to address current and emerging priorities;

Requests the IOC Executive Secretary to prepare a draft Programme and Budget for 2012–2013 to be submitted to the Assembly at its Twenty-Sixth Session, based on the Biennial Priorities and Implementation Strategy annexed to this Resolution;

Requests the Chairperson of the IOC to forward to the Director-General of UNESCO this Resolution.

Annex to Resolution EC-XLIII.9

Draft Biennial Priorities and Implementation Strategy 2012–2013

IOC Resolution EC-XXXIX.1 and the text annexed to that Resolution provided the basis for the IOC Medium-term Strategy 2008–2013.

The Strategic Programme Objectives of the Medium-term Strategy of UNESCO 2008–2013 give full consideration to the IOC Medium-term Strategy and High-level Objectives, in particular through Biennial sectoral priority 1: Promoting research and technical capacity-building for the sound management of natural resources and for disaster preparedness and mitigation.

The Biennial Priorities and Implementation Strategy 2012–2013 are developed in adherence to UNESCO's role and functions and its global priorities for Africa, Gender Equality, and Small Island Developing States and based on indications already provided by IOC Governing

Bodies and recommendations from Subsidiary Bodies, and taking into account emerging issues and programme continuity.

High-level objective 1 – Prevention and reduction of the impacts of natural hazards

Recognizing the IOC's role, for over four decades, of effectively coordinating the Pacific Tsunami Warning System (PTWS), the United Nations General Assembly has mandated the IOC as the lead agency for coordinating the planning and implementation of tsunami early warning and mitigation systems. Increasing vulnerability to natural disasters in the coastal zone poses a major threat to sustainable development and affects lives and livelihoods. The United Nations system-wide implementation of the Hyogo Framework for Action on Disaster Resilience 2005-2015 guides IOC in defining crucial partners and objectives in the end-toend tsunami early warning systems it coordinates. Awareness of natural hazards, preparing for minimizing the risks and involving all relevant national entities are part of any fast warning systems. Following the rapid progress in installing the Indian Ocean Tsunami Early Warning and Mitigation System (IOTWS), the IOC has established under its mandate tsunami early warning and mitigation systems in other regions (North-eastern Atlantic, Mediterranean and Connected Seas [NEAMTWS]; Caribbean [CARIBE-EWS]) and is contributing with other UN agencies to the development of a global cover in addressing multiple marine hazards, thus supporting the overall objective of contributing to disaster preparedness, mitigation and recovery.

Actions	Biennial priorities	Expected results
1a. Promote integrated and sustained monitoring and warning systems for coastal and oceanic natural hazards, in close coordination with other relevant intergovernmental organizations, where appropriate, using enhanced coastal and ocean networks, including education and training activities.	Continue to promote integrated and sustained monitoring and warning systems. <u>Guidance</u> : Res. XXV-13 <u>Programmes</u> : Tsunami, GEBCO, JCOMM/Storm Surge activities	 Risks from tsunami and other ocean and coastal- related hazards reduced through functioning Regional Tsunami Watch Centres/Providers and National Tsunami Warning Centres (Pacific, Indian Ocean, Caribbean and Mediterranean). Enhanced use and availability of seismic data based on the MoU between UNESCO/IOC and CTBTO. Raised synergy effects by incorporating storm surge inundation modelling and application of high-resolution bathymetric data.
	Strengthen advice and consultancy to IOC Member States on developing and sustaining national early warning systems for coastal hazards.	 Enhanced regional and national assessment missions to offer IOC expertise and experience in tsunami and coastal hazards end-to-end early warning systems.
	Support the global sea level observing system and associated data	 Enhanced and adequately designed sea level monitoring for

Actions	Biennial priorities	Expected results
	management and dissemination infrastructure. <u>Guidance</u> : Res. XXV-3 <u>Programmes</u> : GLOSS, IODE, Tsunami	climate and tsunamis and other sea-level related hazards (Pacific, Indian Ocean, Caribbean and Mediterranean).
	Integrated preparedness and adaptation to sea level hazard-driven coastal flooding (tsunamis, large waves, storm surges). <u>Guidance</u> : GOHWMS, TOWS-WG, ICG recommendations <u>Programmes</u> : Tsunami, GLOSS, GEBCO, Storm Surge activities, IODE, ICAM	 Established framework for improved links between communities that contribute to improve coastal flooding modelling (coastal bathymetry, observation, modelling, hydrology, land topography, coastal zone planning, and socioeconomics). Enhanced sustainability of tsunami warning systems in multi-hazard early warning systems. Streamlined support to the four ICGs by the IOC Tsunami Unit. Further publication of Guides and Manuals for specific aspects of Tsunami Early Warning
		 Systems: Revision of post- tsunami field guide; Guidelines for Standard Operations Procedures.
1b. Educate communities at risk with respect to natural hazards impact prevention, preparedness and mitigation measures.	Continue the development of awareness, educational and training products and services for communities at risk with respect to natural hazards impact prevention, preparedness and mitigation measures. <u>Guidance</u> : TOWS-WG <u>Programme</u> : Tsunami	 Enhanced awareness and capacities to plan coastal activities against hazards including coastal erosion. Enhanced systematic outreach material on coastal natural hazards produced, and adapted through regional and national consultation, culturally and language adapted.
	Launch or consolidate Tsunami Information Centres (TICs) for all ICG regions. <u>Guidance</u> : TOWS-WG <u>Programme</u> : Tsunami	 Four Tsunami Information Centres operating in support of ICG information and educational activities.

High-level objective 2 – *Mitigation of the impacts of and adaptation to climate change and variability*

IOC will continue its role as an intergovernmental advocate, coordinator and partner in international scientific research to improve the understanding of the Earth System, by contributing to the improvement of prediction of climate and its effects on marine ecosystems and resources through sustained ocean observation and process studies at regional and global scales and by contributing to the development of science applications to mitigate the effects of climate change, including sea-level rise.

Actions	Biennial priorities	Expected results
2a. Increase the understanding of the ocean's role in climate variability and climate change.	Sustain and enhance the Open Ocean Module of GOOS.	 Increased number of coupled climate models in IPCC AR5 that are verified with Argo information. Initial tracking of selected biogeochemical observations in the Open Ocean Module of GOOS.
	Facilitate, promote and catalyse the participation of the ocean research community in international climate research.	 Cutting-edge results from ocean research integrated into international climate research. Reduced uncertainties associated with sea level rise projections, particularly at the regional level.
	Improve research and observation, programme coordination, and data sharing on the role of ocean as sink for anthropogenic CO ₂ . <u>Programme</u> : IOCCP	 Contribution to reducing uncertainty in the global estimates of the efficiency and functioning of the ocean sink for anthropogenic CO₂.
2b. Contribute to the better prediction of climate through ocean observations and process studies, at regional and global scales.	Provide Secretariat support to GOOS, JCOMM and GLOSS subsidiary bodies and Regional Subsidiary Bodies.	 Complete and publish Action Plan for implementation of Coastal Module of GOOS. Support to GOOS Regional Alliances and GOOS Regional Offices strengthened. Support to Regional Subsidiary Bodies Sustained support of science coordination and multilateral ocean- observing systems in the Arctic and Southern

Actions	Biennial priorities	Expected results
		Oceans as regional contributions to GOOS. – Fourth session of
		JCOMM convened.
	Support JCOMM observation programmes and expert teams.	 JCOMMOPS Service expanded.
	Continue the support to IODE Ocean Data Portal as well as its linkage to WMO's WIS (IODE, JCOMM).	 Improved access to oceanographic data (in terms of number of observations and geographical distribution)
	<u>Guidance</u> : Res. XXV-3; Rec. IODE XX.3 <u>Programme</u> : IODE	[global].
	Promote the development of standards for ocean data and information (IODE, JCOMM).	 Improved development, adoption and implementation by Member States of ocean
	<u>Guidance</u> : Res. XXV-3; Rec. IODE XX.2 <u>Programme</u> : IODE	data and information standards leading to improved quality of data [global].
	Implement international meetings of experts on ocean observations and process studies for climate prediction.	 Joint global and basin- scale field programme implementation plans established.
	<u>Cooperation</u> : IGBP, SCOR, SC/BES, SC/EES, WCRP <u>Programme</u> : IOCCP	
2c. Increase the understanding of the impacts of climate change and variability on marine ecosystems and their living resources.	Sponsor and implement "The Ocean in a High-CO ₂ World" 2012 symposium and publish most recent findings.	 Contribute to improved understanding of and access to information about the potential ecological impacts of ocean acidification on the marine ecosystem.
	International Symposium on the Effects of Climate Change on the World's Ocean (Rep. of Korea, 2012) convened.	 Understanding the structure and functioning of the global ocean ecosystem, its major subsystems, and its response to physical
	<u>Cooperation</u> : IGBP, ICES, PICES <u>Programmes</u> : IOCCP, GLOBEC, Regional Subsidiary Bodies	forcing to forecast the responses of the marine ecosystem and living resources to global change

Actions	Biennial priorities	Expected results
	Organize the first UNESCO workshop on Geoengineering, together with the Royal Society (United Kingdom) and TWAS.	 Initial policy summary provided on possible benefits and adverse consequences of Geoengineering interventions discussed.
2d. Climate change adaptation for Africa and SIDS.	Supporting the development of national coastal adaptation strategies for coastal areas. <u>Cooperation</u> : UNFCCC, IOCEA, IOCWIO <u>Programme</u> : ICAM	 Enhanced support to countries in developing national adaptation strategies and enhanced regional participation in climate-related activities.

IOC High-level objective 3 – Safeguarding the health of ocean ecosystems

IOC will leverage the science and capacity to monitor and safeguard the health of ocean ecosystems and services, by addressing the conservation and sustainable management of coastal resources and marine biodiversity. In this regard, IOC will continue harmonizing its capacity-development activities according to long-term capacity-development principles that improve the ability of Member States to apply sound scientific methods to the sustainable management of their resources.

Actions	Biennial priorities	Expected results
3a. Actively contribute to the "Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including	Contribute to the Regular Process for assessing the state of the marine environment.	 Progress towards the completion of the first integrated global ocean assessment by 2015.
Socio-economic Aspects".	<u>Cooperation</u> : UNGA; UNEP, GEF, UN-Oceans	 Process organized for achieving international, global consensus on a robust set of indicators of status and trends in marine ecosystems and the goods and services they support, including socio-economic aspects.
3b. Further develop the research and monitoring required for the prevention of marine environment degradation, and the maintenance of biodiversity and the sustainable use of marine habitats.	Continue the development of products for the management of harmful algal events. <u>Guidance/cooperation</u> : IPHAB; UNEP, IMO, GESAMP <u>Programme</u> : HAB	 Improved tools for forecasting and management of harmful algal events.
	Provide authoritative, objective, interdisciplinary scientific advice to organizations and Member States to support the protection and sustainable	 Scientific advice provided that feeds into policy-making. Number of advisory actions requested by Member States

Actions	Biennial priorities	Expected results
	use of the marine environment.	undertaken depending on available resources to enhance government capacity in managing marine environmental resources.
3c. Identify and develop the capacity-development necessary for maintenance of healthy ocean ecosystems, focusing on the regional needs.	Enhancing harmonization of Capacity-development activities across programmes and sections, through allocation of specific resources for this purpose and encouraging increased involvement of Member States. Identify new sources of funds to augment present level of Capacity-development activities in developing Member States, in particular in Africa, SIDS and LDCs. <u>Guidance/cooperation</u> : Res. XXV-11; IOCEA, IOWIO <u>Programme</u> : CD	 To be developed for all the HLOs in accordance with the strategy laid out in Draft Resolution 9.2.
	Continue to provide capacity development opportunities in the area of management of harmful algal events. <u>Guidance/cooperation</u> : IPHAB, IAEA <u>Programme</u> : HAB	 Enhanced capacity of Member States to manage harmful algal events.
3d. Maintain an ocean biogeographic information system in support of marine assessments and ecosystem research.	Continue the development of the OBIS database. <u>Guidance</u> : Res. XXV-4, Rec. IODE-XX.3 <u>Programme</u> : IODE	 OBIS database applied to society-relevant issues [global, regional].

IOC High-level objective 4 – Management procedures and policies leading to the sustainability of coastal and ocean environment and resources

IOC will assist Member States, at their request, in the management of their marine and coastal environment, focusing on regional needs and developing national capabilities, by translating research results into management approaches and wise practices, through spatial and other planning approaches demonstrated through pilot projects in target regions, by providing the necessary training and assistance to implement them and by strengthening IOC Regional Subsidiary Bodies to fully ensure the regional implementation of the IOC Medium-term Strategy 2008–2013. A number of specific actions arising from the consideration of the Future of IOC and the celebration of the 50th anniversary of IOC will be

undertaken to strengthen the operation of the IOC and its governance and to raise awareness of, and involvement in, IOC's programme of action.

Actions	Biennial priorities	Expected results
4a. Enhance regional cooperation and involvement of the Member States through capacity- building and transfer of technology and measures to strengthen the capabilities of the IOC Regional Subsidiary Bodies and IOC decentralized offices.	Emphasize the regional approach to climate change awareness of regional activities, and through sub- regional consultations. <u>Guidance</u> : Res. XXV-11, IOCEA <u>Programmes</u> : CD, IODE, GOOS, GLOSS	 Existing activities (ODINAFRICA, GOOS Africa, GOOS/GLOSS) to be reinforced through technical assistance; training in sea level rise; and coastal erosion.
	Establishment of a Network of World Sampling Sites and marine centres of reference under the supervision of IOC.	 To be developed intersessionally.
4b. Facilitate science related to ocean and coastal resource management.	Continue the implementation of the NEWS2USE project. <u>Guidance/cooperation</u> : UNEP <u>Programme</u> : NEWS2USE	 Improved capacity to project impacts on coastal ecosystems of nutrient loading to the marine environment.
	Support the development of ocean information management products (IODE OceanDocs and OceanExpert). <u>Guidance</u> : Res. XXV-3; Rec. IODE XIX.11 <u>Programme</u> : IODE	 Improved access to ocean research publications as well as expertise [global].
4c. Enhance development and implementation of decision-support tools that improve integrated ocean and coastal management.	Promote the application of tools and techniques for ecosystem-based management and spatial planning of coasts and oceans. <u>Guidance/cooperation</u> : IOC- XXV, UNGA; WESTPAC, IOCARIBE, IOCEA; UNEP RS <u>Programme</u> : ICAM	 Enhanced support to countries implementing marine spatial planning approaches.
	Continue the development and strengthen the Ocean Data and Information Networks (ODINs). <u>Guidance</u> : Res. XXV-3; Rec. IODE XIX.5-10 <u>Programme</u> : IODE	 Improved data and information management as well as product and service development capacity of developing countries (IODE) [regional].

Actions	Biennial priorities	Expected results
4d. Facilitate the development and adoption of standards.	Organize international meetings of experts to establish agreements on standards, methods and criteria. <u>Guidance/cooperation</u> : Res. XXV-3; Rec. IODE XX.2; UN- Oceans, UNEP, CBD, ISA, Joint IOC-ICES Study Group on Nutrient Standards, IOCCP, GOBI – Global Ocean Biodiversity Initiative, European Science Foundation – Marine Board <u>Programmes</u> : IODE, JCOMM, OSS	 International standards for nutrients to establish comparability and traceability of nutrient data in the world oceans (see also Action 4b). Scientific support provided on the criteria to define marine areas in need of protection. Policy briefing to be published by the end of 2010. Two meetings on Marine Protected Areas to be organized.

ANNEX III

ADDRESSES

A. Director General's Statement

by Ms Irina Bokova Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO) on the occasion of the 43rd session of the IOC Executive Council and the inauguration of the 50th Anniversary of the Intergovernmental Oceanographic Commission

8 June 2010

Your Excellencies,

Ladies and Gentlemen,

It is a pleasure and honour for me to be with you today, celebrating the 50th anniversary of the Intergovernmental Oceanographic Commission on this World Ocean Day.

I am very pleased to see the representatives of so many Member States and international organizations with us for this milestone occasion. You are all of fundamental importance to the viability, vitality and visibility of the IOC. I extend my special congratulations to the present and past officers of the IOC and to the staff of its Secretariat, and thank them all for their efforts in maintaining the renown of this Programme.

The IOC is a standard-bearer for UNESCO. Indeed, it is integral to my vision of our Organization's role in the 21st century: providing essential continuity while responding to the changing needs of today's and tomorrow's world.

The IOC's work in promoting inter-governmental cooperation and coordinating international marine research, observation and management is vital, as we increasingly confront challenges of a global nature.

We have to address the world's most pressing problems collectively and the IOC offers a model of best practice in this respect. Its contribution to climate science is a good example. The challenge posed by climate change is a main focus of my mandate and I recognize the vital role the IOC must and will play in that regard – not only with our natural science sector, but also with the other sectors in the Secretariat.

The IOC's contribution to climate science is not new. I think, for example, of its management of the Global Ocean Observing Systems (GOOS). This ocean component of the Global Climate Observing System helps to support the observing needs of the UN Framework Convention on Climate Change.

The pioneer role of the Commission in the coordination of tsunami early warning systems is a source of great pride to our Organization, and I am pleased that the Commission is working on integrating the system it helped put in place in the Pacific with other regional coastal hazard and tsunami warning systems currently under development.

The Commission has done much to foster the free flow and exchange of information that these systems are wholly reliant on, in order to effectively serve their life-saving purpose.

With its work in sea-level monitoring and management of coastal zones and marine ecosystems, the IOC continues to be at the forefront of efforts to address some of the most critical global challenges.

All of these efforts show how IOC, over 50 years marked by far-reaching and rapid change, has remained fully engaged, developing cutting-edge responses to newly-emerging challenges.

In the words of India's great poet, Rabindranath Tagore:

"You cannot cross the sea merely by standing and staring at the water."

Much has changed in the half century that the IOC has been serving its Member States. 50 years ago, when the programme came into being, the oceans themselves were not the focus of great attention – indeed they were essentially an unexplored world.

Today – thanks in no small degree to the wealth of scientific exchange the IOC has facilitated - we know a great deal more about the oceans, and the vital role they play in sustaining life on Earth.

We know the oceans are home to extraordinary biodiversity: a biodiversity that is being adversely affected by factors including greenhouse gasses, pollution and over-fishing. This is at the forefront of our minds in this International Year of Biodiversity.

The IOC fosters the responsible and sustainable use of marine resources. This is of crucial importance for all of us, but first and the most, for the vulnerable coastal populations in some of the poorest parts of the world.

The IOC's work in resource management capacity-building to help these marginalized populations goes, once again, to the very heart of another of UNESCO' goals — to empower through education and the sharing of scientific knowledge.

As was stressed at the Global Ocean Conference hosted here last month, working together to integrate policy management of the marine resources we all rely on is critical to the success of marine ecosystem sustainability.

It is a key priority of mine to enhance UNESCO's leadership within the United Nations, through the IOC, on issues related to the sustainable management of oceans and coastal zones.

Greater awareness of the need to better understand and properly manage the precious resource that our oceans represent is reflected in the growth of IOC's membership.

From 40 nations when it first came into being, it counts 138 today. These include a number of landlocked countries.

This solid membership, the IOC's partnerships with other bodies, and its broad remit, give it unparalleled legitimacy in its field. They also make it uniquely qualified to be an effective promoter, within the U.N. system, of a cross-cutting approach to sustainable governance of the world's oceans.

Mesdames et Messieurs,

Alors que je m'adresse à vous pour la première fois, je souhaite vous dire la très grande importance que j'attache à la Commission océanographique intergouvernementale, programme phare de l'UNESCO. Je suis prête à soutenir la Commission dans sa détermination à intégrer ses activités à celles des autres Secteurs de notre Organisation.

Vous le savez, l'UNESCO soutient aussi pleinement les efforts de la Commission océanographique intergouvernementale qui veut bâtir une véritable gouvernance des océans. Cela a été souligné l'an dernier, durant la première Table ronde ministérielle de la Conférence générale de l'UNESCO, spécifiquement consacrée aux océans.

C'est en effet ensemble que nous devons rechercher des solutions aux problèmes qui pèsent sur les océans. Ce qui advient dans une région donnée a des répercutions sur toutes les côtes du monde, comme nous le constatons avec les tsunamis et la pollution marine.

Le programme d'échange international des données et de l'information océanographiques (IODE), qui est presque aussi ancien que la Commission océanographique intergouvernementale, offre, quant à lui, un système intégré pour le libre échange de données et d'information océanographiques entre Etats membres. Cela permet de renforcer la recherche, l'exploitation et le développement des océans. La Commission travaille actuellement avec le Programme des Nations Unies pour l'environnement, ainsi que d'autres agences, afin d'établir un Processus régulier de communication des données et d'évaluation de l'environnement marin mondial. Cette question a été mise à l'ordre du jour de l'Assemblée générale des Nations Unies, lors de sa prochaine session, en septembre prochain.

Je suis heureuse de constater qu'un cycle de conférences de très haut niveau a été planifié pour 2010-2011 par la Commission océanographique intergouvernementale et ses Etats membres, en célébration de son cinquantième anniversaire. Je suis convaincue que ces activités vont stimuler et porter plus loin la réflexion concernant la recherche sur les océans et leur protection.

J'appelle tous les Etats membres de la Commission océanographique intergouvernementale à apporter leur soutien total à ce programme de très grande valeur, et à soutenir les efforts de l'UNESCO pour renforcer son potentiel et son efficacité.

En tant que Directrice générale de l'UNESCO, je mettrai tout en œuvre pour que la Commission océanographique intergouvernementale soit pleinement reconnue comme un Programme majeur de l'UNESCO : à la fois par nos Etats membres, qui soutiennent déjà largement nos efforts, par les différentes agences des Nations Unies, ainsi que par la société civile et la jeunesse. Je prends également l'engagement de soutenir vigoureusement le développement de la Commission océanographique intergouvernementale, afin qu'elle acquière la visibilité qu'elle mérite, et dont elle a besoin pour être encore plus efficace.

Mesdames et Messieurs,

Comme l'a très bien exprimé le Commandant Cousteau, immense explorateur des océans et environnementaliste visionnaire : « Les gens ne peuvent être heureux qu'en s'émerveillant de la nature, en s'émerveillant de la création et de ce qui les entoure. Ce qu'ils aiment, ils veulent le protéger. » Fin de citation.

Merci de votre attention, et bon anniversaire!

B. Chairman's Statement

by Lic. Javier A. Valladares, Chairman of the Intergovernmental Oceanographic Commission of UNESCO on the occasion of the 43rd session of the IOC Executive Council and the inauguration of the 50th Anniversary of the Intergovernmental Oceanographic Commission

8 June 2010

After our last Assembly came the final stage in the selection of our current Executive Secretary.

It was not a simple task with such excellent candidates with capabilities that reflected the strengths of our diversity. But finally the UNESCO system ended by appointing Dr Wendy Watson-Wright to be today our Executive Secretary (with the addition of the restored position of Deputy Executive Secretary which fell to our well known colleague Dr Ehrlich Desa).

At the same time, UNESCO has also changed its officers, and Dr Irina Bokova is now our Director-General.

But while this was going on, ocean issues continued to accumulate on our agenda.

Last September, Venice hosted OceanObs'09, which tried to link ocean information to the needs of communities, describing, understanding and forecasting marine, climate and marine living resources variability, as well as assessing their trends. It showed once again the need to maintain an interdisciplinary, interagency coordination and approach to the sea.

In November 2009 we had the OBIS Strategy and Workplan meeting (Ostend, Belgium, 18–20 November 2009), starting a task now in progress with the Ocean Biogeography Information System, of which we shall hear a report during this session of the Council.

On June 2010, World Oceans Day 2010, we formally initiated the celebration of our 50th anniversary. On 8 June 2010, World Ocean Day, we sadly started with two terrible events.

The earthquake of Haiti devastated its capital and, with it, its coastal facilities, shortly before the arrival of our support mission through the IOCARIBE Sub-Commission, which rescheduled its visit to the country and is in the process of implementing lines of support and cooperation.

The almost simultaneous earthquake and tsunami in Chile, one of the most intense in recorded history, left us with a demand for more coordination and greater efficiency in the reaction.

I take the opportunity, on behalf of all IOC Member States, to restate our condolences for the families and friends of the deceased and our commitment to the future, seeking to optimize the procedures and warning and prevention mechanisms for such phenomena.

In late January, we had our Officers' meeting here in Paris. It was a very productive meeting where topics related to improving the efficiency of the governing bodies of our organization and forms of communication with Member States was a common denominator.

We hope you will see many of the ideas raised at that meeting reflected in a more efficient management of this Executive Council, and especially in more user-friendly documents as a guide to the introduction of the items, as well as summaries and resolutions more focused on the expected results.

We have had extensive discussions aimed at how to support, increase participation in and evaluate our Regional Subsidiary Bodies (RSB). To this end, during the meeting of the Chairpersons of the Regional Subsidiary Bodies, which took place last Monday, and relying on their respective focal points, we have asked them for their two-year action plans with a clear identification of expected results and their contribution to the High-level Objectives (HLO) established by IOC in order to present a performance evaluation at the next Assembly.

Another issue that deserved special attention is the Assessment of Assessments under the *Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-Economic Aspects*, regarding which, as was stated at our last Assembly and subsequently ratified at the Ministerial Round Table on the Oceans convened in late 2009 by UNESCO, we should, at least as the IOC contribution, ensure that it retains a scientific approach.

Regarding the request for a descriptive note on the joint IOC–WMO activities in Africa, Priority Africa was addressed, as well as SIDS and gender equality. We expect to identify at this Executive Council those new actions in all these areas that will allow the realization of a more sustainable support.

A highly sensitive issue discussed during the Officer's meeting was the proposal by a Member State, during the Ministerial Round Table in 2009 and, restated in recent notes, to accommodate the IOC in its capital. In response, the Officers agreed to request the Secretariat to undertake an analysis without identifying or making any commitment in respect of place, of the pros and cons, very generally, of an eventual relocation of all or part of the IOC, and always maintaining the functional premise to remain an organization within the UNESCO system.

And obviously the subject of the celebrations of the 50th Anniversary, within the agreed framework of absolute austerity, merited close monitoring.

Consecutively with this meeting, at the request of our peers in the WMO, we had our third meeting of the Officers of both organizations. As in previous opportunities we exchanged ideas in a framework of full cooperation and mutual professional interests that will allow us to improve the supervision and performance of JCOMM, and we began discussing the need to collaborate in the creation of a system for climate monitoring and forecasting and in the implementation of the WMO Information System (WIS).

Since late 2009 and the elapsed months of this year, events began to take place in several countries to commemorate our 50th anniversary. In this regard:

- I have represented IOC with a presentation at the opening of the XIIIth Latin American Congress on Marine Sciences (COLACMAR) and the VIIIth Congress of Marine Sciences (MARCUBA) in Havana, Cuba, which included the active participation of the local community, as well as representatives of many countries in the region and renowned guest speakers.
- I have personally acted as co-organizer, in Buenos Aires, of a Week of Oceanography which included a symposium celebrating our 50th anniversary, and the annual meeting of the Regional Alliance for the Upper Southwestern and Tropical Atlantic Ocean (OCEATLAN), with the participation and contribution of the IEEE (Institute of Electrical and Electronics Engineers) with an interesting technology approach.
- I could not attend the IVth Brazilian Congress of Oceanography because of overlap with other commitments. I apologize to Brazil, but I have no doubt that IOC was well represented by many Brazilian colleagues and friends, including the Rio GOOS Office.

• I was invited to the First International Maritime Fair in Cartagena, Colombia, an event in which I had the privilege of representing IOC and of giving the opening conference speech. Among the many presentations and exhibitions covering the different aspects of the maritime activity our Sub-Commission for IOCARIBE was also present and recognized as an important stimulus for regional marine scientific activity.

During the Fair I had the opportunity to meet again with our dear friend and WMO President, Dr Alexandre Vedrinsky, with whom I again exchanged ideas to support the creation, within WMO, of a system capable of addressing climate problems, and we agreed to invite our Secretariats to consider how to proceed in implementing it.

I want to share with you the fact that during this conversation I found a similarity, but in, on opposite sense, between WMO problems when dealing with climate and IOC problems when we try to evaluate the quite different problem of what has hitherto been called ocean observations or operational oceanography with the criteria of marine scientific research.

More recently, in UNESCO, Paris, the "Fifth Global Conference on Oceans, Coasts and Islands" took place, celebrating both the International Year of Biodiversity and the 50th Anniversary of the IOC. The Conference took a very international approach to issues related to the health of the oceans, the protection of marine life and improvements to governance using an ecosystem approach, in particular in areas beyond national jurisdiction.

Finally, I want to join *The Ocean Call*, to the general public, to financial and policy decisionmakers, scientists, the media, governments and especially the youth to place ocean issues on their agendas, so as to work towards a global community that understands that the future of all of us has a deep relationship and interdependence with the attention that we give to the sea on a daily basis.

ANNEX IV

8 JUNE 2010: OFFICIAL INAUGURATION OF THE IOC 50TH ANNIVERSARY

A. Programme of the day

- 11:00 11:10 Official Opening by the Chairperson of IOC
- 11:10 11:30 Welcome Addresses
- 11:30 11:35 Break
- 11:35 12:00 Welcome Addresses (continued)
- 12:00 12:30 Presentation on the IOC History: 50 Years on the Services to the Humankind (Executive Secretary of IOC)
- 12:30 13:00 Inauguration of the Exhibitions by the Representatives of IOC, Total Foundation, European Space Agency and International Ocean Institute
- 13:00 14:30 Lunch Break
- 14:30 15:30Medals Giving Ceremony to the former Chairs
and Executive Secretaries of the IOC
- 15:30 16:00 Presentation of the Book "Troubled Waters: ocean science and governance" by the Book Co-editors
- 16:00 16:15 Coffee Break
- 16:15 16:40 Welcome and Message from the Youth
- 16:40 17:10 Introduction of the film "Oceans" and demonstration of a short version
- 17:10 17:30 Introduction of a Call on Peoples of the World and Nations by the Former Chair of IOC
- 17:30 18:00 Official Closure by the IOC Chairperson
- 18:00 + Reception

B. The Ocean Call

TO the peoples of the world, we ask for recognition that the oceans and their resources are a necessary element of life on the planet. We also ask that you respect the ocean and understand that actions and activities even deep within continents can impact the marine environment. Governmental responses can be ponderous but ultimately they must reflect the will and priorities of their constituencies. The ocean deserves your support.

TO those who finance and undertake capacity building programs, we ask that increased priority be given to programs in coastal and ocean management, ocean sciences and ocean technologies in order to provide safe, healthy and sustainable environments and reduce poverty through the promotion of effective and efficient marine stewardship.

TO the scientists in all ocean disciplines, we ask that you continue your dedication to gather and interpret marine data, to inform the public and decision-makers of the results of your studies and to maintain a collegiate and multidisciplinary community.

TO the extensive framework of learned professionals and environmental lobbyists in academia, industry, politics and law and to all those who have achieved leading positions and authoritative voices in our society, we ask that you will use your position and influence to further the support and attention needed to sustain and preserve our ocean environment.

TO the media, whose role it is to inform our largely terrestrial society of the news and events of interest and importance, we ask that you recognise the ocean as an integral part of our environment and of our society. From tourism to trade, from energy to food, from high finance to indigenous fisheries and from megacities to mangrove habitats, there is a story with an ocean connection that needs telling.

TO governments, we ask that you address the present deficiencies in the support of the marine environment. Nationally, to ensure that ocean research is adequately funded, that the infrastructure to distribute ocean information is in place, that sustainable marine management practices are fostered and that terrestrial and atmospheric policies take account of potential impacts on the ocean. Internationally, we ask you to adopt as a premise that sustaining the global environment remains the ultimate priority and that national differences must be overcome in working collectively for the future.

TO the youth, we make the final and perhaps the most important request. We ask that you listen and learn, that you profit from the advances that we have achieved and avoid the mistakes that we have committed. You are the future. The ocean needs your enthusiasm, creativity and ability as scientists, managers, lawyers and politicians to champion its cause and to sustain its splendour and resources for generations to come.

C. Youth Declaration for the Ocean

Elements of Youth Declarations for the Ocean

In 1998, in the framework of the International Year of the Ocean, young people issued a declaration referring to the UNESCO Ocean Charter on the occasion of the « Sea Your Future » event in Lisbon Expo98.

Since then close to 800 young people have taken part in national, regional and international Youth Forums and Parliaments, organised with help of World Ocean Network and by World Ocean Network.

In the last years, the First International Youth Ocean Parliament was organised with International Ocean Institute at the Malta House of Parliament in 2007, and regional groups of young people gathered in Europe, Indian Ocean French speaking islands and East Asia.

Other Youth Forums are already planned in 2011 and 2012, in the French Caribbean Islands and in South Africa.

The text below is a collection of extracts from declarations by Youth Forums that World Ocean Network organised or helped to organise.

Reference texts:

- From Youth Ocean Parliament Final Declaration "Sato-Umi Our Link with the Ocean Our Pledge to the Ocean" Pacem in Maribus XXXII, La Valette, Malta, November 2007
- From the European Youth Oceans Forum Final Declaration
 Blue Planet Forum at the European Union Committee of the Regions, Brussels, Belgium, November 2007
- From the "Sea Your Future" Project European Youth Commitment European Science Week, Expo 98, Lisbon, Portugal, August 1998
- From the First French Overseas Youth Parliament, Summary report, La Réunion Island, Indian Ocean, May 2009
- From the Second East Asian Seas Youth Forum Youth Statement
 2nd East Asian Seas Congress, Manila, Philippines, November 2009

OUR DECLARATION

We are in agreement that the ocean has gone well beyond its operating capacity.

We deem that unless multilateral action is taken, not only will there be no progress, but that the state of the ocean and the marine environment shall deteriorate further.

We believe in the rights of the future generations, and that it is our duty to protect and ensure these rights.

We also think that it's very important to create:

- Links between different groups of people: scientists, policy makers and citizens;
- Links between inland and coastline people: make people aware that the pollution in the big cities has an impact on the ocean environment; it is not always because of the fisherman or the seaman;
- Links between countries living by the same seas.

OUR RECOMMENDATIONS

Recommendations to develop education

We ask for:

- An access to education and formative experiences in learning, targeted towards raising awareness about the global and local issues of sustainable development;
- A true commitment by governments and education policy makers to develop and enhance programs for formal and informal citizenship education, with a special focus on the protection of the natural environment

Especially through:

- Basic education programs about the oceans for all children and citizens,
- Direct contact with the ocean through swimming lessons for children and field projects,
- Use of the World Wide Web to promote communication between schools in coastal regions and schools inland.

Recommendations to support research

- More resources should be allocated to support both fundamental and applied research;
- > More research programs should be implemented to find solutions:
 - To save and treat water,
 - To use alternative energies,
 - To reduce and treat pollutions, and,
 - To define new means of using the Ocean resources in a sustainable way for the future of humanity.

Recommendations to face climate change

- Concerned by the effect of climate change on our environment, we ask the international community to live up to its commitments, specifically by:
- Enforcing its decisions and holding itself accountable for them,
- Providing a strong educational tool to prevent further degradation of the environment, in all parts of the world.

Recommendations to foster sustainable use of ocean resources

We state our commitment to development that 'meets the needs of the present generation without compromising the ability of future generations to meet their own needs".

We recommend:

- The application of stricter measures to fisheries organizations
- The establishment of a seasonal fishing action plan
- The establishment of more and more diverse Marine Protected Areas

Recommendations to promote a better Ocean Governance

Deeply troubled by the rapid degradation of the oceans and seas, and in support of the recognition of the ocean as a public good for all humanity, we ask for the establishment of a global ethics board, which we propose to name the United Oceans.

It would be based on the preservation of the ocean environment, and that would, through the use of its legal framework, compel governments to comply to this preservation

The constitution of this board would comprise governments as well as civil society actors - specifically those involved in scientific, education and social issues.

Our commitments

"De petits changements peuvent engendrer de grandes différences."

- > Nos engagements face au changement climatique :
 - Nous nous engageons à réduire nos émissions de CO₂.

Combattre le changement climatique suppose que nous modifions notre mode de vie.

- Nous nous engageons à informer puis à sensibiliser notre entourage sur les bonnes pratiques éco-citoyennes au quotidien.
- Nos engagements en lien avec les ressources halieutiques :
- Nous irons à la rencontre des pêcheurs pour recueillir leurs témoignages et leurs problèmes, et communiquer ces informations,
- Nous voulons réaliser des vidéos afin de sensibiliser le public sur la pénurie des ressources halieutiques,
- We have agreed to step up and take on the challenge in protecting our environment through
 - Informing,

- Inspiring and,
- Involving other young people.
- For the next three years, we promise to educate and create awareness, among our generation on :
 - Climate change,
 - Marine biodiversity and
 - Natural resources conservation.
- Also, we will be involved in several activities including tree planting, clean-up drives, environmental youth camps, and we will practice 3R's: reduce, reuse, recycle.

We commit ourselves... to teach, to care, to conserve, to protect, to involve, to empower, and to ACT....

OUR CALL

As youth living on a planet of which almost 70 % is covered in water, we have come together to appeal to all stakeholders involved to protect this large segment of our planet – to protect the use of the life and resources it gives, to recognize its importance, and to enforce the decisions taken; decisions that will not only affect us, but that will have a long term effect on the future generations.

This is our commitment - is it yours?



ANNEX V

THE ROGER REVELLE LECTURE, 2010 10 June 2010

Manuel Barange GLOBEC IPO, Plymouth Marine Laboratory, Prospect Place Plymouth PL1 3DH, UK

Learning to swim: exploring the challenges to marine resource sustainability

Manuel Barange¹, William Cheung², Gorka Merino¹, Ian Perry³

- ^{1.} Plymouth Marine Laboratory, Plymouth, UK. <u>M.barange@pml.ac.uk</u>
- ^{2.} University of East Anglia, Norwich, UK
- ³ Department of Fisheries and Oceans, Nanaimo, Canada

Summary— The IOC-IGBP-SCOR international core project GLOBEC (Global Ocean Ecosystem Dynamics) conducted coordinated investigations in 29 countries over the last decade to ascertain the impacts of climate variability and change on marine ecosystems. While both climate and humans are known to be capable of causing major change in marine ecosystems, one of the most significant lessons learned in GLOBEC is that both forcing factors interact to such an extent that their individual impacts cannot be disentangled. Surprisingly, marine ecosystems under intense human influence tend to have greater sensitivity to climate forcing, and strong feedbacks develop between ecosystems and human communities at many scales.

These realisations limit our capacity to predict the impacts of climate change on marine ecosystems, and thus our ability to protect the sustainability of marine resources. In recent years we have made some excellent progress in developing coupled and uncoupled models that investigate the bottom up processes linking atmospheric climate, ocean climate and marine ecosystem dynamics, include fish resources. As a result, and despite the large uncertainties associated with climate change predictive models, we have initiated the exploration of the 'ocean of tomorrow' with some degree of confidence. We know that the distribution and abundance of fish will change, and we can estimate the direction and extent of such changes. But if the impacts of climate on marine resources interact with human responses to influence the outcome, what is the role that humans will play in accelerating or slowing down ecosystem change, through our capacity to adapt? Do we even have the tools to answer this question?

To illustrate this challenge we will use a global but geographically-explicit productionconsumption model of fishmeal and fish oil to investigate a number of interactive processes: the links between local and global environmental change, the connection between marine resources and the markets for such resources, the feedback loops between humans and ecosystems. Ultimately, we will explore the double exposure of marine resources to climate and human activity, a requirement to understand the past and a necessity in our quest to identify pathways of sustainability and collapse.

Dr Manuel Barange is Director of Science at the Plymouth Marine Laboratory, in Plymouth, UK. He is also Chair of the Scientific Committee of the International Council for the Exploration of the Sea (ICES). Until recently he was Director of the International Project Office of the IOC-SCOR-IGBP core project GLOBEC (Global Ocean Ecosystem Dynamics).

Dr Barange was born and educated in Spain, and conducted his Ph.D. on the ecological dynamics of the Benguela upwelling off Namibia. After conducting post-doctoral research on Antarctic krill he specialised in the ecology and assessment of pelagic fish populations off

IOC/EC-XLIII/3 Annex V – page 2

South Africa, where he was based until 1999. In recent years he has increasingly focused his research on the assessment of climate and anthropogenic impacts on marine ecosystems and their services, and on the interactions between natural and social sciences in fisheries, ecosystems and climate change. Dr Barange has published over 70 peer-reviewed papers, sits on a number of national and international advisory boards, and is a founding member of the Global Partnership for Climate, Fisheries and Aquaculture (PaCFA).

ANNEX VI

REPORT OF THE CHAIRPERSON OF THE FINANCIAL COMMITTEE

Dr Savi Narayanan (IOC Vice-Chairperson, Canada)

The Financial Committee held six meetings during the 43rd Session of the IOC Executive Council. The following countries participated in the Financial Committee: Argentina, Brazil, Belgium, Canada, People's Republic of China, Cuba, Côte d'Ivoire, Egypt, France, Ghana, India, Japan, Kenya, Republic of Korea, Malaysia, Peru, Portugal, Russian Federation, Senegal, South Africa, Turkey, United Kingdom, United States of America, plus one observer (WCRP).

The Chair of the sessional Financial Committee, Dr Savi Narayanan, IOC Vice-Chair in charge of financial matters and Chair of the Intersessional Advisory Group on Finance, reported on the work of the sessional Financial Committee.

Execution of the 2008–2009 Budget

The Committee reviewed document IOC/EC-XLIII/2 Annex 2, Report on Budget Execution 2008–2009 and Anticipated Funding for 2010, and concluded that the 2008–2009 budget was developed and implemented consistently with the Governing Body recommendations.

It noted that Part II of the document, Anticipated Funding for 2010, could be better formulated so as to clearly indicate that it compares the proposed budget vs. what was approved. It was explained that this situation arose because the IOC meeting takes place before UNESCO's General Conference, where the final overall budget of UNESCO, including the allocation for IOC, is approved. Furthermore, the Committee considered that it will be helpful to include a short introductory note to clearly articulate the three modalities for providing extrabudgetary support: contributions to the IOC Special Account, to UNESCO Funds-in-Trust and to regular budget, as additional appropriations.

The Committee recommended that the presentation of the report be further modified to: (a) link the expenditures to how well the objectives of each activity were met using the performance indicators in the work plan; and (b) to present the results in graphical form (in addition to the tables) to highlight the investments from the regular programme and extrabudgetary contributions regionally and for each High-level Objective.

The Committee recommended that the Intersessional Advisory Group on Finance, with support from the Secretariat, develop a clearer document format for the next Assembly that may be used to better demonstrate the achievements of the Commission, the gaps and the challenges to delivery on its priorities.

Work Plans for 2010–2011

The Committee considered that it is the role of IOC Member States through the IOC Governing Bodies to define the Commission's programme priorities. Therefore, it is important that IOC develop its priorities taking into account the UNESCO priorities and emerging issues and implement these through the work plan, as well as include these in the outlines, as appropriate.

The Committee expressed its appreciation of the SISTER follow-up report and agreed that in order to avoid duplication of reporting duties, this format can be preserved so as to be consistent with UNESCO's approach. Further improvement of this report could be achieved through better results analysis based on refined performance indicators. In that sense, the Intersessional Advisory Group on Finance can assist the Secretariat in further improving its reporting to IOC Governing Bodies.

The Committee noted that the programme structure approved in the Governing Body resolutions on programme and budget must be adhered to by the Secretariat in preparing the actual work plans. Any substantial modification to the approved structure needs to be fully justified and documented.

IOC/EC-XLI/3 Annex VI – page 2

It noted that the expected results listed in the document quite often are a repeat of the activities listed, and quite often the performance indicators are activities. We should ask each programme manager to review these for the next biennium and make adjustments, as necessary.

With respect to the extrabudgetary outlines, the Committee appreciated the Secretariat's effort to take advantage of the UNESCO process related to extrabudgetary opportunities (Complementary Additional Programme of extrabudgetary resources – CAP). However, it noted that, now that the Intersessional Advisory Group on Finance is established, it is important that this Group work with the Secretariat to ensure that concrete proposals in priority areas are developed and incorporated in the outlines, showing different possible scenarios of outputs and results for different contribution volumes.

Further, the Committee suggested that it will be useful to articulate the trends in the extrabudgetary funding levels in the outlines table; in other words, make it a multi-year table listing of what was received in the previous years and what is proposed.

The Committee noted the need to better reflect IOC participation in common activities with other UN agencies. This was considered particularly important for priority geographical areas, as a small investment in such areas may have brought to the IOC programmes large investments from the national programmes.

The Committee noted that the budget allocation for Action 2d 'Climate change adaptation for Africa and SIDS' was not reflected in the work plans as approved by the 25th Session of the Assembly in Resolution XXV-14. As limited funds became available due to the support of the Government of Ghana in hosting the 6th Session of IOCEA, the Committee recommended that Action 2d 'Climate change adaptation for Africa and SIDS' be reinforced through partial reorientation of the work plans of Capacity-development (Action 3c) and IOCEA (Governance).

The Committee made some specific comments on the work plans concerning the need to elaborate on the activities in the Arctic region and to focus on interagency collaboration to address sea-level-related natural hazards.

Further comments on each individual HLO were carefully noted by the Secretariat and will be reflected in the revised version of the work plans.

With these suggestions the Committee approved the work plans of the Secretariat for 2010–2011.

Review of Draft Resolutions

The Committee reviewed the following Draft Resolutions that will be presented to the Executive Council for adoption:

DR.4.3a (IOCEA)	DR.6 (Tsunami)
DR.4.3b (WESTPAC)	DR.9.1a (Future of IOC)
DR.4.3c (Regional Subsidiary Bodies)	DR.9.1b (Future of IOC)
DR.4.4 (ABE-LOS)	DR.9.2a (Biennial Priorities for Africa)
DR.5.3 (JCOMM)	DR.9.2b (Programme and Budget)

The Committee noted that several Draft Resolutions called for intersessional discussions through electronic media and was concerned about the level of participation from the non-English-speaking countries.

Draft Biennial Priorities and Implementation Strategy for 2012–2013

The Committee agreed on the guiding principles to be followed by the Secretariat in preparing the draft Programme and Budget within the 36 C/5 adoption process:

- Programmatic continuity, taking into account the recommendations of the IOC governing and subsidiary bodies and the results of programme evaluations;
- Balance between global and regional/subregional activities and between intergovernmental coordination, standard-setting, and operational activities;
- Opportunities of an interdisciplinary approach both within IOC and within UNESCO

- UNESCO's global priorities for Africa, Gender Equality, and Small Island Developing States
- IOC role within the United Nations system
- Guidance by the United Nations General Assembly, WSSD and MDGs
- Cooperation with partners in the United Nations system, other multilateral and bilateral partners, including funding agencies, the civil society and the private sector

The Committee complimented the Secretariat for the draft of the Biennial Priorities and Implementation Strategy for 2012–2013 and noted that Priorities and Actions and Expected results require further refinements. In particular, expected results for some key priorities are missing in the document; high-level statements are added only in some cases.

The Committee recommended that capacity-development actions be included under each of the HLOs. Concerning Action 3c, on the basis Draft Resolution 9.2, the Committee noted that coordination of programmes and activities in Africa could be enhanced by developing a specific strategy and action plan leading to an implementation strategy

Further refinements will be made by the Intersessional Advisory Group on Finance working with the Secretariat through correspondence.

Draft Resolution

The Committee prepared Draft Resolution IOC/EC-XLIII.(9.2) and its Annex containing the Draft Biennial Priorities and Implementation Strategy for 2012–2013.

The Draft Resolution urges IOC Member States to support the reinforcement of the IOC in the consultation process for the UNESCO Draft 36 C/5 – as per the calendar presented in the introduction to agenda item 9.2 by the Executive Secretary.

Deadline	Action
12 July 2010	Deadline for submission of written comments on questionnaire
Mid-August 2010	Preliminary proposals by the Director-General for document 35 C/5
5–21 October 2010	185th session of the Executive Board adopts decision concerning 36 C/5
End October 2010	Publication of Director-General's ivory note on preparation of draft document 36 C/5
Mid–March 2011	Dispatch of draft document 36 C/5
26 April–12 May 2011	186th session of Executive Board adopts decision with recommendations on draft document 36 C/5
October–November 2011	Adoption of 36 C/5 by 36th session of General Conference of UNESCO
ANNEX VII

REPORT OF THE CHAIRPERSON OF THE RESOLUTIONS COMMITTEE

Helen Joseph (Canada)

The Resolutions Committee met nine times during this Council session to review the Draft Resolutions that were submitted. The time schedule of the Council meeting has been challenging, but it has been particularly so for the work of the Resolutions Committee.

I would like to thank the many delegates who contributed their time and expertise to this Committee. I would like to express my sincere appreciation for the support of the IOC Secretariat staff in assisting with the amendments, formatting, and translating of the Draft Resolutions. They are exceptional staff. I would like to highlight the excellent work of Mr Julian Barbière, whose knowledge and assistance was invaluable to this Committee's work.

The issue of timing has been critical in our proceeding. Unfortunately, most of the DRs that were reviewed by our Committee had not been discussed in plenary, therefore it was difficult to assess if these DRs were reflecting the general opinion of the Council Member States. One DR was also submitted after the deadline.

One solution, Mr Chairman, would be revert to our past practice and to encourage Member States to submit DRs ahead of the session to the extent possible, and those could be included in the Action Paper of the session, hence facilitating their review and allowing the Resolutions Committee to start its work earlier in the schedule of the session.

In addition to the review of the individual Draft Resolutions of this 43rd Session of the Executive Council, the Resolutions Committee was also tasked this year with the review of the "Third Draft Revised Guidelines for the Preparation and Consideration of Draft Resolutions".

By way of background, I would like to recall that, at its 25th Session, the IOC Assembly decided to improve the preparation and processing of Draft Resolutions. The Executive Secretary acted upon this decision by initiating the revision of the existing Guidelines for Preparation and Consideration of Draft Resolutions. The revised Guidelines document was sent to IOC Member States via Circular Letter No. 2338 requesting input.

Therefore with this mandate to review the Guidelines assigned to us, the Resolutions Committee first reviewed input provided by Member States. The Guidelines were then further examined based on our experience in the preparation of the Draft Resolutions.

There are two areas within the Guidelines, which I would wish to bring to the attention of this Council:

1) Section V: Deadline for submission

The current Guidelines state that Draft Resolutions are to be delivered to the Executive Secretary at least two working days before the adoption of the resolutions. In recognition of the time required to review the Draft Resolution (ranging from 1 to 2 hours per Resolution), as well as time to format, translate, and print, we feel strongly that two days is <u>the minimum</u>.

However, we would encourage Member States to submit DRs in <u>advance</u> of the Session to the extent possible, and these could then be included in the Action Paper of the session.

2) Section VII: Structure of the Resolution

The Resolutions Committee recommends that the Guidelines state that a paragraph is required in each Draft Resolution that outlines the financial implications of the Resolution (e.g. what funds are requested, when funds would be needed, for how long). This additional information would be beneficial for the discussion of each Draft Resolution by the Financial Committee.

The Resolutions Committee recommends that these revisions be made to the document "Guidelines for the Preparation and Consideration of Draft Resolutions" and that the Guidelines be brought before the

IOC Assembly at its 26th Session, in 2011 for discussion and adoption. *Perhaps as a Draft Resolution, that could be submitted in advance of the Assembly meeting?*?

In conclusion -- thank you for giving me the opportunity to chair this Resolutions Committee.

ANNEX VIII

REPORT OF THE SESSIONAL WORKING GROUP ON IODE/OBIS 9 June 2010

The report of the sessional working group for OBIS was introduced by Dr Ned Cyr, Chair of the group. He recalled that this working group was established with the objective of identifying financial contributions that will be provided by IOC Member States to support OBIS as from January 2011. It was recalled further that IOC Circular Letter 2333 had been issued on 16 February 2010 regarding the establishment of a multi-source Trust Fund for the support of OBIS and addressed to the IOC Member States. It was noted that to date no financial contributions had been received.

The Working Group was attended by delegates from Argentina, Belgium, Brazil, Canada, Japan, Turkey, United Kingdom and United States of America. Additional information was received from Australia shortly after the meeting.

The outcome of the working group was as summarized follows: (i) the United States of America will provide US\$ 200,000 (US\$ 100,000 in 2010, and US\$ 100,000 in 2011); (ii) Australia will provide financial support but the precise amount could not yet been identified at this time; (iii) Belgium (Government of Flanders) will provide support for meetings, workshops, training courses or other relevant OBIS activities through the small-scale activities allocation of the Flanders-UNESCO Trust Fund for Science (FUST) (US\$ 10,000-30,000 per small scale activity); and (iv) Brazil will provide support through the hosting of meetings, workshops, or training courses related to OBIS.

The working group noted that the financial requirements in 2011 and 2012 were mainly to cover the cost of a Programme Specialist. This cost was estimated to be approx. US\$ 160,000/year. Taking into consideration the financial requirements of approx. US\$ 160,000 in 2011 and a similar amount in 2012, the working group noted that, in addition to the pledged contribution by the USA of US\$ 100,000/year, the amount of US\$ 60,000 needs to be mobilized for 2011 and for 2012.

ANNEX IX

INFORMATIONAL ANNEX¹

3.2 Report by the Executive Secretary

Japan

First of all, Japan delegation welcomes and congratulates the new Executive Secretary Dr Watson-Wright for her outstanding leadership based on the rich expertise in both marine science and international marine policy.

As in the past 50 years since its inauguration, Japan strongly supports the IOC's leading role in coordination of ocean observation, data management, and capacity building for realizing the sustainable well-being of the world community. Japan acknowledges IOC is the only place to realize those objectives within UNESCO under the United Nations framework.

As summarized succinctly by the Secretary General in regard to the yesterday's ceremony, the role of IOC is becoming even more important than it was 50 years ago because of the deteriorating marine conditions and the serious impact of climate change and variability on humankind. In particular, we believe that intersectoral activities within UNESCO need to be strengthened under the leadership of IOC. In this sense, we are very happy to observe beautiful Japanese carp streamers in the UNESCO garden to welcome IOC executive member states. Since the carp is a fresh water fish, it nicely suggests the importance of close interaction between IOC and IHP.

Japan, as one of major ocean states, appreciates the responsibility to enhance global as well as regional ocean observations by full use of its science and technology to understand our unique habitable planet under the anthropogenic as well as natural stresses. We will actively contribute to development of suitable measures for mitigation and reduction of those stresses in a transparent as well as harmonious way with member states. One of major reasons we introduced "Basic Ocean Act" in 2007 is along this spirit to realize the world sustainability.

We wish IOC gains further momentum to establish its leading role in promoting marine science and policy to exploit its fruit on this particular occasion of the 50th anniversary under the strong leadership of new Executive Secretary Dr Watson-Wright.

Japan has been supporting Global HAB program and also WESTPAC-HAB programs. We notice that problem caused by HAB becomes serious in terms of case numbers and geographical areas. Japan pointed out that careless development of aquaculture made coastal water eutrophic, and then such condition causes massive occurrence of HAB which often associate with fish mass mortality and human poisonings. But at the same time we notice it is important to develop aquaculture to support growing population and societies. It means that HAB is inevitable in the developing stage of coastal area utilization. Importance exists how to decrease impacts of HABs. In this context, HAB has strong relation not only to High Level Objectives 3 in observing health of ocean, but also to High Level Objectives 4, provision of indicative tools for management of coast environment and resources. Japan expects IOC will continue global HAB program as one of the major activities and develop more its outreach components in future. Japan wish to support global HAB program directly and also indirectly through WESTPAC-HAB.

Republic of Korea

The Republic of Korea would like to congratulate Dr. Watson-Wright for her successful conduct during the first 6 months, in spite of unusual challenges and emerging issues for IOC in this recent

¹ Plenary interventions received by the Secretariat in written form. For the record those texts are published in their original form without editing and translation on the part of the Secretariat.

period. We are convinced that the IOC is with your outstanding leadership, which will ensure successful programme X-X-IMPLEMENTATION in coming years.

Korea is deeply committed for successful X-X-IMPLEMENTATION of the IOC work plan.

The Korean government has paid special attention to the climate change issues the Korea Hydrographic and Oceanographic Administration recently launched the long term project for national monitoring network for ocean and coastal climate, which expect to be the regional contribution to IOC's climate monitoring work.

In this context, I would like to share this information with my distingushed colleagues, that the 32nd Session of the IPCC will be held in Busan, Korea, from 11 to 14 October this year. We wishes that the IOC and its Member States will actively participate in this important meeting, and demonstrate IOC's capability in pursuing the climate agenda.

The Republic of Korea continues to extend its efforts for regional cooperation. We strongly believe that the successful X-X-IMPLEMENTATION of IOC programmes relies on active participation of Member States, and on close regional collaboration in order to address the regional issues within the IOC framework. In this context, I would like to reaffirm Korea's continuing commitment to the WESTPAC and other regional IOC projects, and contributing to raise IOC's profile by promoting IOC activities in the Asia Pacific region.

Senegal

Le Sénégal voudrait faire les observations, ci-après, au sujet de la création d'un poste de la COI en Afrique :

1. Le Sénégal n'est pas opposé au principe de la création d'un tel poste car il a toujours plaidé pour le renforcement des moyens de la COI, y compris humains, en direction de l'Afrique afin de traduire concrètement la priorité qui est accordée à ce Continent, du moins dans les textes formellement adoptés par les Organes directeurs de la COI et de l'UNESCO ; de même le Sénégal est favorable à tout ce qui peut améliorer la décentralisation pour rendre la COI plus efficace sur le terrain ;

2. toutefois, la création du poste, tel que présenté par la Secrétaire exécutive, pose une question de forme et une question de fond dont il convient de tenir compte dans le traitement de cette affaire ;

3. Sur la forme, la création de ce poste semble être conditionnée par la suppression de celui de GOOS Afrique, un poste temporaire logé au niveau de la Section des Observations de l'Océan, que le Directeur général a été autorisé à faire évoluer en poste permanent dans le cadre du 35 C/5 approuvé par la Conférence générale de l'UNESCO ;

4. en clair, ce qui est prévu dans le 35 C/5 c'est bien de consolider le poste GOOS Afrique en procédant à la régularisation de la situation précaire du personnel titulaire de ce poste en même temps que celle d'autres agents occupant des postes temporaires depuis de longues années ;

5. il est difficilement concevable que la création d'un nouveau poste, non prévu, se fasse en supprimant un poste dont la régularisation est déjà prise en compte dans le 35 C/5 approuvé par la Conférence générale ;

6. Quant au fond, créer un nouveau poste pour l'Afrique en supprimant un poste déjà existant dédié à l'Afrique ne nous paraît pas être une avancée ; bien au contraire c'est comme si on donnait à l'Afrique de la main gauche ce qu'on lui a retiré de la main droite ;

7. l'Afrique, en tant que priorité globale pour l'UNESCO et pour la COI, mérite bien davantage que deux postes lui soient consacrés ; par conséquent, la création d'un nouveau poste en Afrique ne devrait pas exclure le maintien de celui de GOOS Afrique, qui est un acquis dont la remise en question ne serait pas un signal positif en direction de l'Afrique ;

8. mieux, davantage qu'un poste en Afrique, ce qu'il faudrait plutôt à la COI c'est de mettre en place un Bureau régional de coordination de ses activités en Afrique afin de convaincre les africains de son ambition et de la sincérité de son engagement solidaire en faveur de ce Continent ;

9. ce Bureau, s'il doit être créé, devrait être dirigé par un Responsable de haut niveau pouvant être un interlocuteur respecté des décideurs politiques et capable de mobiliser ces derniers en faveur de la réalisation des objectifs de la COI en Afrique ; il devrait aussi être un manager dirigeant avec intelligence une équipe d'experts capables de proposer des projets suffisamment pertinents et ambitieux pour répondre aux besoins exprimés par les Etats africains eux-mêmes ;

10. en définitive, sans vouloir instaurer une polémique inutile, le Sénégal voudrait inviter la Secrétaire exécutive à :

1- reprendre et conclure le processus interrompu de régularisation du poste temporaire existant de GOOS Afrique, pour le faire évoluer en poste permanent, conformément à la décision du Directeur général et aux prévisions du 35 C/5 approuvé ;

2- élaborer et soumettre aux organes directeurs, pour inscription dans le 36 C/5, une proposition de création d'un bureau régional de coordination des activités de la COI, tel qu'indiqué ci-dessus.

United Kingdom

The UK wishes to draw attention to the issue of the interface between marine science and ocean policy. This lies at the heart of several of the topics which we are going to discuss. For example, the links between GOOS and Global Reporting and Assessment of State of the Marine Environment, and how this projects into the wider policy arena.

We believe it is important for IOC not only to continue its traditional role of coordinating and promoting marine science and providing scientific advice to other bodies as required but also to develop and maintain fora where policy, legal and marine science experts can meet to discuss topics

United States of America

We support Argentina's intervention with regard to the proposal to hire an independent contractor to evaluate ABE-LOS achievements and formulate proposals for future work. This is beyond the scope of IOC Resolution XXV-1, and does not reflect the intent of the 2009 Assembly. In our view, the consensus opinion of Member States should determine the value and future tasking of ABE-LOS. We will be prepared to engage in this discussion at the appropriate time on the agenda.

International Hydrographic Organization

The IHO would like to offer the following comment on Document IOC/EC-XLIII/2 Annex 1)

FIRST Comment: HIGH LEVEL OBJECTIVE 1

Both parent organizations, IHO and IOC participated very actively in the 26th meeting of the GEBCO Guiding Committee that took place in Brest, France, in October 2009. Both organizations reported and instructed GGC accordingly and the IOC referred particularly to the Resolution XXV-13 through which the XXV Assembly requested GEBCO to give priority to the development of high-resolution coastal bathymetry. It is the IHO feeling that this is an important IOC/IHO joint activity that should have been reflected in the Report, as a follow up of the mentioned Resolution.

SECOND comment: HIGH LEVEL OBJECTIVE 3

The second bullet of paragraph 40, page 8, indicates that "The Capacity Development section is working closely with the ocean-mapping group in the Italian funded COAST-MAP-IO Project, conducting joint workshops and networking their different communities on shallow-water bathymetry, inundation mapping and risk assessment."

We have nothing against this text, but we would like to report that the IHO has also been working and continues to work closely with IOC in the development of this project, nevertheless, there is no mention of it. (Example, the technical visit to Kenya and Comoros in May/June 2010)

THIRD Comment: HIGH LEVEL OBJECTIVE 3

The third version of the coordination meeting of the capacity building officers was held at the IMO headquarters in October 2009 where IOC, IHO, IMO and the WMO met to exchange CB/CD programs and experiences, and to coordinate common actions aiming at avoiding duplication and at improving effectiveness and efficiency on the use of resources allocated to CB/CD initiatives. For the IHO this is an important IOC/IHO coordination activity that it will be good to have it recorded in the Report.

3.3 Contributing to UNESCO Global Priorities: Gender and Africa

Mauritius

In terms of capacity building in the African region, Mauritius would like to inform this council of the start of a new project in the region: The African Monitoring of the Environment for Sustainable Development (AMESD). This three-years project is funded by the European Union to the tune of 1.5 million Euros and coordinated by the African Union. Mauritius is the focal point of the component entitled "Ocean and Coastal Areas". Through this project, Mauritius will provide full-fledged satellite receiving stations (hardware, software and training) to the following countries: Kenya, Tanzania, Mozambique, Madagascar, Seychelles and Comoros. All the stations will be set up within the next three months. The Steering Committee of the project, during its last meeting in Gaborone, has recommended that all the participating countries join IOGOOS as their integration in a recognised network will provide additional value to the project.

4.1 Celebrating the Commission's Fiftieth Anniversary

Canada

Projet d'intervention du Québec sur l'annonce de la création de la première chaire UNESCO au Canada en matière océanique dans le cadre du 50e anniversaire de la COI de l'UNESCO

Mr Chairman - Thank you for allowing me to take the floor.

First of all I would like to congratulate all the member states of IOC and the IOC secretariat and all those who contributed for making this 50th anniversary a very memorable event, and more importantly for making IOC's first 50 years a great success.

Looking ahead, I have the great pleasure to inform you on this occasion of the 50th Anniversary of IOC, that the Director General of UNESCO and the Rector of the University of Quebec at Rimouski have established a UNESCO chair at Rimouski on integrated analysis of marine systems.

Cette chaire, établie à l'Université du Québec à Rimouski (UQAR) à l'initiative du gouvernement du Québec et appuyée par le Ministere de Peches et Oceans du Canada, a pour objectifs de promouvoir un système intégré d'activités de recherche, de formation et de documentation dans le domaine de l'analyse intégrée des systèmes marins. Elle facilitera la collaboration entre les chercheurs et les professeurs de renommée internationale de l'UQAR, des institutions d'enseignements supérieur du Canada, d'Afrique et d'autres régions du monde, dans une dynamique de cooperation Nord-Sud et Nord-Sud-

Merci monsieur le Président

China

China appreciates the works of the Secretariat in initiating and coordinating the activities of celebrating the 50th Anniversary of IOC. We are glad to note that so many member states are actively participating in and contributing to the commemorative event. We are quite confident that the through these activities, the global visibility of the IOC will be highly increased.

And China will make its due contributions to celebrate the 50th Anniversary of IOC. By taking the opportunity of PACEM IN MARIBUS XXXIII ("Peace in Oceans 33rd" in English) and the 50th Anniversary of the IOC, the State Oceanic Administration of China cooperates with the IOI and IOC in co-sponsoring a high level International Conference on Oceans, Climate Change and Sustainable Development with the theme of Challenges to Oceans and Coastal Cities. The conference is designed to provide a forum for intergovernmental organizations, NGOs, governments at all levels and scientists and specialists. Participants will focus on three themes, Oceans and Climate Change, the Role of Oceans in Sustainable Development, and Challenges to Coastal Cities, and jointly explore the challenges confronting the oceans and coastal cities, improve scientific understanding of ocean and climate change and their impacts, develop the policies for sustainable ocean development and conservation and for adaptive responses to ocean and climate change and to co-share lessons and best practices from sustainable development of coastal cities. We wish to make contribution by this conference for better understanding of oceans and climate change and sustainable development as well as better response to the new challenges to oceans and coastal zones. The conference will be held in Beijing, China, from 2-4 September 2010. For more detailed information of the conference, please read the brochure of the first announcement of the conference, which could be found on the document desk outside of the meeting room. And upon your agreement. Mr. Chair, I would also request to show a promotion film of the Conference in the coffee break. On behalf of the China delegation, I welcome all the colleagues and friends here to the conference, and welcome to Beijing in September.

With regard to the shortage of funds for IOC 50th Anniversary, China would like to encourage the Executive Secretary and IOC officers, to take all opportunities to strengthen the communication with government of the Member States, raise their awareness and understanding of the importance of IOC, so that to promote the supports of Member States to the activities of IOC 50th anniversary.

Thank you.

Japan

Mr. Chairman, Japan delegation thanks louri's ceaseless efforts to lead the the 50th anniversary to success and is pleased to inform member states of the new progress to celebrate the anniversary. In addition to conferences, research cruises with the IOC anniversary flag and publication of a book for children, we will report new introduction of two international meetings.

One workshop is planned in November this year under the leadership of WESTPAC HAB project coordinator, Dr. Yasuwo Fukuyo, to discuss future of HAB science in the WESTPAC region. Since coastal environment is changing very quickly owing to rapid development of coastal area utilization including aquaculture industry and tourism, it is very important to develop HAB science to prevent frequent occurrence and expansion of harmful algal blooms, and also to deliver scientific information to society in an easily understandable manner. Detailed venue will be announced soon.

On December 2 and 3, we will hold another international symposium at the United Nations University in Tokyo to celebrate the 50th anniversary of IOC. The title of the symposium is "Roles of the Indo-Pacific Oceans in Climate Change and Variability." As mentioned yesterday by the Secretary General, IOC inauguration is closely related to the International Indian Ocean Expedition from 1959 to 1965. There are three major thrusts in this memorial symposium; those are a) the deep scientific involvement of renowned physical oceanographer Prof. Koji Hidaka of Tokyo Univ. in the prehistory of IOC, b) Tokyo University President Seiji Kaya's memorable proposal of IOC at the General Assembly of UNESCO held at Copenhagen in 1960, and c) our recent discovery of a brother of El Niño called Indian Ocean Dipole. Ocean-related climate variability in the Indo-Pacific

region is becoming more and more important because of its vast impact on the heavily populated region through abnormal weather and extreme events. We now have urgent needs to develop efficient measures for adaptation to ongoing climate change and variations by improving climate services by use of climate predictions. We will assess the present state of ocean climate science and discuss roles of IOC in the particular region of the world oceans.

The outcome of all those activities will be delivered to member states through various mechanisms.

United Kingdom

The UK emphasised that the celebrations of the 50th anniversary of IOC must be used to tell the world about the importance and vulnerability of the oceans. Material available on the innovative anniversary web site, and in the briefing documents in the delegate packs can be useful for this.

4.3 Regional Subsidiary Bodies

China

The Delegation of China noted with concern the limited progress has been made so far on the implementation of previous resolutions concerning strengthening the role of Regional Subsidiary Bodies in IOC global programme although the importance of RSBs have been recognized many times at the governing bodies of IOC.

While expressing great appreciation to all hosting countries, China believes the current network of IOC RSBs and decentralized offices, if they will be coordinated well, could generate more positive impacts for IOC, rather than posing a big problem for IOC. Taking into full account the significance of this issue, China would suggest RSBs meeting prior to the ordinary sessions of IOC Governing Bodies be more efficiently organized, and the agenda on RSBs at the ordinary sessions of IOC Governing Bodies be appropriately scheduled in terms of time allocation, allowing minimally enough time for member states to make their intervention. Furthermore, the Delegation of China encourages IOC to take immediate action to improve the communications between IOC HQs and RSBs, identify the overall resources position of RSBs within IOC Global Programmes. Finally China expects the Intersessional Working Group could conduct their work as soon as possible in order to provide objective, and practical suggestions to the 26th Session of IOC Assembly next year. And China would like to make its own contribution to this working group.

Malaysia

Mr. Chairman,

My Delegation wishes to thank Dr. Zhanhai Zhang for the comprehensive report. Malaysia is pleased to note the efforts made by IOC WESTPAC in mobilizing their resources focusing on operation and implementation of programmes. A lot had been done and much more to do.

On the question of strengthening IOC in the region, we believe that IOC through WESTPAC Secretariat, needs to deepens your engagement with WESTPAC Member States in fostering closer intergovernmental cooperation and in addressing the challenges that lie before us.

When we talk about engagement, we cannot deny the underlying question on financing. As allocations from IOC is uncertain, we need more country commitments, national and other international resources to add value to IOC's presence in the region thus making Main Line of Action No. 4 a success.

Malaysia, in this regard, would certainly continue to support actively the IOC programmes and WESTPAC regional activities, particularly on those adopted recommendations made in Bali and

the WESTPAC programme and budget for 2010–2012 and especially on the Coral Triangle Initiative.

Thank you Mr. Chairman.

Thailand

"Thailand would like to appreciate the work of WESTPAC Secretariat under the leadership of Dr Zhanhai Zhang, the Chairman of the IOC/WESTPAC during last two years in organizing and coordinating the work in the region. Much progress has been made; many projects and programmes have been implemented. It could be seen that WESTPAC's activities have been fully supported by all its member countries in the past two years. Nonetheless, Thailand is concerned over the role of Regional Subsidiary Body, like WESTPAC, in IOC global programmes. IOC should play its role and provide more support/guidance to WESTPAC Secretariat, including strengthening their communication in order to keep the current momentum of WESTPAC."

4.4 IOC and the Law of the Sea

China

ABE-LOS has provided a unique platform for scientists and legal experts to intensively discuss the issues regarding to the legal regimes for marine scientific research. It is very important and necessary for the scientists and legal experts to work together and consult with each other to reach common understanding and universal agreement. Besides, ABE-LOS has achieved great progress in promoting the coastal states to carry out marine scientific research and exercise their jurisdiction over research activities according to the UNCLOS or the widely recognized measures.

With the development of marine technology, there will be more problems on which no specific clauses are provided in the UNCLOS. There is no mechanism other than ABE-LOS that is competent for discussing these kinds of issues. Considering the above-mentioned reasons, we strongly support ABE-LOS to continue its work.

With regard to any kind of possible evaluation of ABE-LOS, no matter how the evaluation will be conducted, we hope the evaluation will be carried out openly and justly and shall embody the concerns and stands of all member states. And we would like to insist that the purpose of such an evaluation is how ABE-LOS should be improved to better sever the Member States instead of whether ABE-LOS should be concluded.

Germany

Germany has stressed repeatedly that it sees ABE-LOS as a valuable forum for the exchange of views on technically difficult matters of the law of the sea. It is indeed the only body that brings together scientists and legal experts on questions of the law of the sea. In doing so it uniquely enables a discussion that is based on all the relevant scientific facts as well as on the best available legal expertise.

The sustained long-term collection of oceanographic data is an area of utmost importance to this Organization and its members. In particular semi automatic and automatic data sampling will present significant technological, logistical, but also legal challenges. The IOC must retain its capacity to engage with legal matters that such activities raise. It should be actively involved in specifying a legal framework that facilitates routine and sustained observation instead of impeding it.

This will be extremely difficult without a body such as ABE-LOS. Without ABE-LOS the view of the IOC can not be directly expressed within the UN System.

The German delegation wishes to recall Assembly Resolution XXV-1 which requests the Executive Secretary to organize a review which should have been completed by the beginning of the 43rd Session of the Council and thus enable the Council to discuss the future mandate and means of operation of ABELOS.

Germany would like to see the originally intended process to be initiated as soon as possible.

India

The Advisory Body of Experts on the Law of the Sea was established by IOC 10 years ago with a specific mandate particularly to address issues to development of products on (i) - Implementation of the "Criteria and Guidelines of transfer of Marine Technology"(ii) - Implementation of the "Procedure for the implementation of Article 247 by the IOC"

The ABELOS is an open-ended intergovernmental body, composed of national authoritative and representative experts designated by the IOC Member States. The ABELOS had successfully conducted 8 meetings under the leadership of Mr. Elie Jarmache and accomplished most of the targets entrusted to this group. The future mandate of ABELOS was discussed abundantly during last Meeting of ABELOS held in UNESCO in 2008. Any further work of ABELOS needs wider consultation among the Member on the ocean related aspects which are complex and highly multidisciplinary often requires expertise of in various branches of ocean science viz., Geology, Biology, Physics, Chemical. It is probably difficult to address them with one expert for Marine Science and Legal background. It is probably important to address under the comprehensive framework UNCLOS which is universally recognized. Our delegation is of the view that there is need to identify the issues to be addressed by ABELOS and prioritize them for placing before the Assembly for consideration.

Japan

UNCLOS, in its Article 238 affirms that all States have the right to conduct marine scientific research. As a marine scientific research implementing country, Japan believes it important that effective implementation of MSR activities under appropriate rules and procedures should be ensured in wide range. In this regard, we recognize that the ABELOS composed with scientists, lawyers and administrators demonstrated and publicized its results of discussion at past sessions that were well accepted internationally in particular at the United Nations General Assembly. We feel that the ABELOS session is a very unique opportunity for participants from different disciplines to exchange views on how the best to implement MSR within the framework of UNCLOS, and hope such an opportunity should be maintained in the IOC system. At the same time, Japan feels that stable secretariat support to ABELOS is no doubt essential to keep its activities sustainably, and recognizes the importance of seamless cooperation between IOC secretariat and DOALOS of the United Nations.

United Kingdom

[1] In response to the Executive Secretary's presentation of her report at Agenda item 3.2 and in particular her comments on the Advisory Body of Experts on the Law of the Sea. The UK was one of the eight countries that provided a response to CL2340. In fact it was the UK that highlighted the at any requests for Member States view on whether additional work was necessary with respect to the Division of Ocean Affairs and the Law of the Sea publication on 'Marine Scientific Research – A Guide for the Implementation of Relevant Provisions of UNCLOS' would best be delayed until the publication of the revised guide at the end of 2010. The UK takes this opportunity to reiterate this view.

[2] The UK fully supports the continuation of the work by ABE LOS on the practice of Member States related to MSR and TMT within the frame work of UNCLOS. The UK would like to record its appreciation of the dedicated and extensive work already undertake on Q3 by Miss Liz Tirpak of the United States..

[3] With respect to the matter of the request in Resolution XXV-1 for the Executive Secretary to:

(iii) organise, in conjunction with the Officers, a review of IOC/ABE LOS, taking account of its achievements and opportunities for future activities.

The UK supports the many and similar views on this matter already expressed in this meeting by other member states.

Based on the views expressed the UK suggests that the review should be undertaken through the establishment of an intercessional open-ended working group made up of representatives from Member States which will prepare a guide and questionnaire on the achievements and opportunities for future activities of the IOC/ABE-LOS.

That the Executive Secretary then be invited to distribute the guide and questionnaire among Member States via circular letter

That the open-ended working group is further tasked with collating and analyzing the responses of the Member States and, on the basis of this analysis, prepare a report as a review of ABE-LOS to be presented for consideration of the Assembly at its 26th session.

The open-ended working group will conduct its business by electronic means.

The UK is willing to work with other Member States to draft a resolution on these matters should one be required.

United States of America

It has come to our attention through comments from some of our colleagues in the room, that the U.S. intervention made yesterday may have been misinterpreted and, in fact, contrary to our intended position regarding ABE-LOS. So let me please clarify our position on three points:

First, in our view, the Secretariat proposal to hire a contractor to prepare an independent evaluation of ABE-LOS achievements and to formulate proposals for its future work, is beyond the scope of IOC Resolution XXV-1 and <u>does not</u> reflect the intent of the 2009 Assembly. Furthermore, we have reservations about the funding of such study in light of the severe financial realities facing this organization.

Second, the United States views ABE-LOS as a unique, productive, and valuable body that has delivered excellent work on behalf of the IOC. It could be worthwhile for the Executive Council to collectively evaluate ABE-LOS' products and achievements to date and how those can be used to improve the performance of IOC programs. This review, however, does not require outside assistance – this Commission should be able to complete this exercise on its own.

Lastly, a point about the future of ABELOS. This has nothing to do with ocean sciences or law; instead, it follows a healthy administration and management principle. ABELOS' purpose is to provide advice to the IOC when requested; therefore, it should convene <u>only</u> when the IOC determines there is work for it to do. ABELOS is not an open-ended group and should meet again only if IOC agrees that ABELOS advice is necessary. Any future ABE-LOS' work should address proposals submitted by Member States and agreed upon by the Executive Council. Such discussions should include a clear statement of need, specific instructions to ABE-LOS, and a description of the expected products and their intended application. All these elements <u>must</u> invariably come from this Executive Council.

5.1 Research and Observations for Climate

Germany

I want to underline the necessity of long term observations. As I said yesterday, the collection of data, the provision of long term observation systems and measurements in and around the oceans are the basis for both, research and services.

For future work in ocean sciences, particularly in the field of climate research and the estimation of the impacts of climate change it is essential to have an adequate network of observations and measurements, which are working on a long term, at least for decades or even centuries, so that our generation as well as future generations can make use of the information like the meteorologists already have done. The results of the climate modelling are based on the data, which have been collected for more than hundred years now. These data collections and exchange should be independent from current interests and should not be focussed on temporary scientific fields. To provide long term data sets and operational services a basic operational international and harmonised observation network should be mandatory. The way meteorological data is collected by and exchanged between the member states of WMO could be an example for well working observation systems and data exchange.

Therefore I think, one point for the future work of IOC should be, to develop binding rules or if possible even an international convention which obliges member states to contribute to such networks.

As examples:

Germany has fully implemented a coastal network for the observation of essential climatic variables and participates with a sustained contribution in the global Argo programme.

Besides its coastal observations Germany participates in the global Argo programme since 2008 with a long-term budget. This comprises the deployment of about 50 floats annually, surveillance of the grid and data handling. The main area of operation is the North Atlantic Ocean. It includes also some support of German research activities in the Southern Ocean, and in the Nordic and Mediterranean Seas.

Germany actively participates in an R&D infrastructure project called EURO ARGO which is financed by the EU. Under the lead of France (Ifremer) and with the participation of all major European oceanographic institutions, national agencies as well as Universities it is considered to ensure Argo budgets in European states and, to consolidate these national efforts in the legal form of a European Research Infrastructure Consortium which aims on a sustainable European contribution to the Argo programme. EURO ARGO could become an oceanographic core service within the GMES initiative, too.

Planned pilot project to optimise the access to high quality oceanographic and meteorological data from German research vessels:

Research vessels make unique contributions to marine data collection using automated oceanic and atmospheric monitoring systems. According to IOC rules, Germany has committed to grant access to the oceanographic data gained on its research vessels. Following this commitment a pilot project is planned to improve the access and quality of the oceanographic and meteorological observations from German research vessels. It targets to develop and test a concept to optimise the use of the observation facilities of the ships from the automatic measuring, across high quality control to real-time distribution and archival within existing databases. For the beginning, it is restricted to the basic oceanographic (ADCP, TSG) and meteorological parameters. Later inclusion of other parameters and the transition to an operational phase is envisaged.

Japan

Japan believes that GCOS implementation plan provides a important landmark to establish integrated ocean observing system for climate. However, as stated in the GCOS Progress Report 2004-2008, Japan also has concerns about the fragility of the present efforts made by GCOS in ocean component, and some components are seen slow down on its progress of ocean observation. Japan would like to point that we can see the weak point on open sea, especially on ship-based observation, and that we should make more efforts to strengthen relevant activities within the GCOS framework.

Japan considers that GO-SHIP (the Global Ocean Ship-based Hydrographic Investigations Program) is an important program for monitoring climate changes and presenting uncertainty of climate prediction. Japan welcomes that GO-SHIP becomes a part of comprehensive strategy for deep sea observation. Japan also notices that some Japanese scientists are very actively participating in GO-SHIP. Currently a Japanese scientist is working as a committee member, and moreover, a number of our scientists are contributing to formulate the strategy. In addition, our active participation in GO-SHIP could be illustrated by our recent effort that, Japanese scientist community organized a national corresponding group among relating scientists and held the first Kick-off meeting in February 2010 to respond GO-SHIP, considering the importance of GO-SHIP strategy planning.

Japan welcomes the decision of the OOPC at the 14th meeting concerning the OOPC State of the Ocean (Climate) website. Japan recognizes the importance to provide additional useful information about ocean climate indices, in view of regional characteristics and local impacts. We also recognize that Japanese researchers are active members of CLIVAR panels such as CLIVAR Pacific Implementation Panel and CLIVAR/GOOS Indian Ocean Panel, and are contributing to update the information.

United Kingdom

The UK welcomes the inclusion of oceans in the next phase of WCRP but has some concerns at giving undue emphasis to ocean-atmosphere interaction. We would emphasise that the interior of the ocean, including the deep sea, must be covered – not just the near surface layers.

From an IOC perspective, CLIVAR is clearly of crucial importance. The UK is pleased to continue hosting the International CLIVAR Project Office at Southampton and to note that, following the imminent retirement of its present director, Dr Howard Cattle, a successor has recently been appointed.

United States of America

The United States wishes to commend Member States for the progress toward global coverage of the ocean by moored and drifting buoys, Argo floats, tide gauge stations, and ship-based systems. As was pointed out in the presentation, implementation progress has slowed and we urge a major effort to sustain and fully implement the initial physical and carbon global ocean observing system.

The United States supports the GO-SHIP initiative and is encouraged by the commitment of the International Ocean Carbon Coordination Project (IOCCP) and the GCOS–GOOS–WCRP Ocean Observations Panel for Climate (OOPC) to work to ensure that GO-SHIP is part of the Global Ocean Observing system comprehensive strategy for deep-ocean observations.

Venezuela

Gracias Sr. Presidente.

La Delegación de la República Bolivariana de Venezuela desea señalar, que en el 4to trimestre del presente año se iniciará su programa de observación del Caribe Oriental, programa de gran

interés para nuestro país y que contribuirá al desarrollo de capacidades de jóvenes científicos, propios y de la región del Caribe al ser estos últimos, invitados a tomar parte en nuestros cruceros.

La Delegación de la República Bolivariana de Venezuela desea comunicar a esta 43a Reunión del Consejo Ejecutivo, a solicitud de la República de Guatemala, miembro de la COI desde 1964, que:

"En Guatemala se cuenta con una estación Oceanográfica en el Océano Pacífico (Estación Puerto Quetzal) y otra en el Mar Caribe (Estación Santo Tomás de Castilla). Estas Estaciones necesitan fortalecerse y equiparse pues tienen varios años de operación, también es necesario realizar talleres y seminarios de capacitación a nivel técnico y operativo que incluya desde los registros de campo hasta los sistemas de procesamiento e interpretación de datos muy especialmente en la generación de avisos y alertas a la población.

En Guatemala es necesario instalar por lo menos otra estación océano - meteorológica en cada una de sus costas (océano Pacífico y Mar caribe), igualmente es conveniente colocar otra boya oceánica en cada una de sus costas.".

Señor Presidente, Señora Secretaria y estimados delegados, la Delegación de la República Bolivariana de Venezuela solicita se tome nota de lo antes mencionado. Muchas gracias.

5.2 Organization of the Global Ocean Observing System

Brazil

Brazil reiterates its commitment to the GOOS Programme and continues to pledge its support of the Office in Rio de Janeiro, today financially maintained by the Brazilian Navy.

Therefore, Brazil stresses the importance of signing, as soon as possible, the Memorandum of Understanding regarding the governing conditions of the GOOS Office in Rio de Janeiro."

Japan

First of all, Delegation of Japan would like to extend our appreciation to I-GOOS chairs and its members for their dedicated works to promote global ocean observation.

Japan welcomes recent efforts of GOOS to improve its function. It is our expectation that GOOS will contribute to further development and advancement of ocean observation and research as a more effective global observing system.

Concerning the OceanObs'09, a number of Japanese researchers participated in this important conference and actively contributed to produce Community White Papers, Plenary Papers, and so on. We expect that future ocean observation and research activities will be carried out according to the conference outcomes, and more social and scientific contribution on a global scale will be realized.

Japan welcomes present members of the Integrated Framework for Sustained Ocean Observations Task Team (IFSOO-TT). Japan supports the decision to organize the Task Team by members not only nominated by sponsor organizations but also other organizations according to its important mandate.

However, Japan notices that it is presently planned to report their recommendations on 1 October after the final meeting from 1 to 3 September this year. It might be better for the Task Team to consider extending the finalizing date of the recommendations, taking into consideration that sufficient time is needed for review in public.

United Kingdom

We believe that the proposed review of GOOS organisation and governance should take place in the context of a similar review of JCOMM in order to avoid duplication of effort and waste of resources across these two bodies. The UK has indicated its willingness to participate in such a process with a view to improving both the scope and cost-effectiveness of ocean observations.

United States of America

The United States embraces the OceanObs'09 Conference Statement and the Goals of the OceanObs'09 conference. The United States will work not only to progress implementation of the initial global ocean observing system for climate and carbon by 2015 but will also seek ways to further integrate its physical, chemical and biological sustained observing activities and analyses.

5.3 Cooperation with WMO

Canada

Thank you Mr. Chair,

Canada would like to express its appreciation to JCOMM Co-President Dr. Alexander Frolov for his excellent presentation, and to his meteorology counterpart Dr. Peter Dexter for his ongoing contributions to JCOMM.

Canada continues to strongly support JCOMM in all 3 programme areas of observations, data management and services, and with respect to future cooperation between IOC and WMO in the development of a Global Framework for Climate Services.

IOC cooperation with WMO, as exemplified through the activities of the Joint Commission for Oceanography and Marine Meteorology (JCOMM), provides clear mutual benefit to both the oceanographic and atmospheric communities.

In particular, cooperation between JCOMM and IODE is a good example of joint efforts of observations and data management; which has even intensified in recent years.

Canada would like to emphasize the need to maintain the elements of the ocean observing system which have reached their targets, such as Argo, and to complete those elements which are still short of their goal, in particular with respect to observations in polar regions. Canada has assumed responsibilities for two new Arctic METAREAS.

Canada supports the work plan and recommendations from JCOMM-III as realistic and achievable, focused on key priority areas such as the observing system, contributions to WIS/WIGOS, ocean forecasting, disaster risk reduction, and coastal ocean observations and services, especially for the Small Island Developing States (SIDS) and Least Developed Countries (LDCs).

In particular we support the directive to implement the recommendations from the JCOMM Storm Surge Symposium held in Seoul Korea, which were previously endorsed by both the WMO EC and IOC EC and Assembly. This is a good example of the "joint" in JCOMM, where IOC and WMO and subsidiary bodies both contribute to elements of a multi-hazard marine warning system, including the essential Capacity Building components, as reflected in the Storm Surge Watch Scheme identified in JCOMM-III Recommendation #6. We encourage the cooperation and coordination between the storm surge and tsunami communities necessary for the development of effective and efficient systems.

In summary, Canada supports the resolutions and recommendations adopted at JCOMM III and congratulates the Co-Presidents for their efforts.

Germany

Germany would like to express its appreciation of JCOMM, especially JCOMM's engagement in the development of ocean observing systems which are an essential basis for many kinds of services around ocean and shipping. Standardised rules and procedures issued by JCOMM working groups are substantial contributions for the harmonisation of measurements, data processing or quality control. Especially developing countries are in need of of support in order to implement and operate observing systems.

With its participation in expert teams and panels, Germany actively supports the JCOMM tasks.

Thus, it was noticed with concern that the international engagement for JCOMM seems to have subsided. Only 30 IOC/WMO member states joined the JCOMM III in Marrakech in November 2009 which meant a quorum could not be constituted per se. Therefore, Germany urges all member states to further support JCOMM and its programmes and to take the efforts more seriously.

Japan

Regarding Global Framework for Climate Services, Japan also would like to stress the importance of ocean, on making reliable climate products and services, and believes that IOC should take a key role to materialize GFCS, in follow up to WCC3. In that context, Japan appreciates the efforts of IOC to support High Level Task Force on GFCS through participating the network of experts.

United Kingdom

We particularly wish to draw attention to the need to implement the review of JCOMM, an activity already agreed some time ago and one which would allow Member States to comment on its effectiveness and suggest changes for the future. Terms of Reference were agreed and a request was made for a Joint Circular Letter to be issued by IOC and WMO. This JCL would encourage participation in the review by Member States and particularly to provide financial contributions to enable the review to be conducted. Indeed the UK is one of the Member States that indicated it may be able to provide such assistance. As yet, the JCL still has not been circulated. The UK would appreciate an update on its status. We would hope that it is not being held up by the separate need to assess the various agreements between WMO and IOC.

6.1 Warning and Mitigation Systems for Ocean Hazards & 6.2 Regional Tsunami Warning Systems

Germany

As mentioned, Germany has contributed to the Indonesian early Warning System over the last five years with more than 50 million Euro in total. The testing phase and operation of the Warning System was launched in Jakarta in November 2008 by the Indonesian president. Since then, the system has performed very well during the recent earthquakes and all components could be harmonized with each other.

For the end of this year, an official handover ceremony of the German system components to Indonesia is planned. In order to assess the functionality of the whole system an international peer review of the German installation is intended. Indonesia and Germany have agreed upon the international peers – IOC will be involved.

Sustainable maintenance and service of the system shall be guaranteed in the future by an Indonesian service company that acts in behalf of BMKG as the responsible organization. Germany supports Indonesia in establishing a business plan for that Indonesian company. The launch of the company is planned together with the handover ceremony at the end of 2010.

Germany congratulates IOC for its impressive effort in establishing Tsunami Early Warning Systems on a global scale. This challenge was achieved in the last five years by a strong Tsunami Unit within the IOC. Special thanks go to Peter Koltermann and we wish him all the best for his retirement. Our best wishes also go to the new Executive Secretary of the IOC. Therefore Germany intends to prolong a secondment of one German expert to the Tsunami Unit and will support this with the respective financial means for at least one year.

Greece

« Nous voudrions intervenir à propos du sujet des régions de compétences des centres régionaux de veille aux tsunamis dans l'Atlantique du Nord-est, la Méditerranée et les mers adjacentes et confirmer que ces régions de compétences ne sont pas encore déterminées. En plus, la Grèce voudrait répéter qu'elle a soumis sa candidature pour la création d'un centre régional de veille aux tsunamis qui comprendra la Mer Ionienne, la Mer Egée et la Mer Méditerranée de l'Est. »

We would like to comment on the issue of the jurisdictions of the Regional Tsunami Watch Centres in the North-Eastern Atlantic, the Mediterranean and Connected Seas and to confirm that these jurisdictions have not yet been determined. Moreover, Greece wishes to reiterate that it has submitted its application for the establishment of a regional tsunami watch centre which will include the Ionian Sea, the Aegean Sea and the Eastern Mediterranean Sea.

Japan

With regard to the report on the TOWS-WG, I would like to stress that the IOC tsunami warning and mitigation system in the Pacific did contribute to disaster mitigation procedures in the countries around the region at the devastating earthquake which struck Chile on 27th February. In Japan, for instance, JMA utilized tide gauge data as well as information from PTWC such as source parameters of the earthquake to confirm its estimation of tsunami height and arrival times along the coast of Japan.

Concerning the proposal for asking ICGs to provide the result of sensitivity studies and establishing new Task Team which synthesizes the result of the studies, we fully agree with the importance of data exchange in a timely manner. However, the impact of one station varies from region to region and it takes time for ICGs which has not conducted the study yet. So, encouraging ICGs to promote/initiate such studies should be greatly helpful but it would be premature to establish new TT for compiling/synthesizing the result from ICGs.

With regard to the report of the report of ICG/PTWS, Japan would like to congratulate the progress in the Indian Ocean where the completion of transition to the Indian Ocean RTWP service has come within sight. We welcome the target that the Interim Advisory Service which has been provided by JMA and PTWC since 2005 will be replaced by the regional system operated by RTWPs by the 2nd quarter of 2011 and assure you that JMA together with PTWC will continue its support to the IOC for the development of the regional system in the Indian Ocean.

Turkey

As you know Turkey hosted the 6th ICG/NEAMTWS meeting in Istanbul in last November. We are honored to contribute the NEAMTWS activities.

We are also pleased to see Prof. Ahmet Cevdet YALCINER from Turkey elected as Vice-Chairperson of the NEAMTWS.

However, we feel obliged to state our objection on the area of responsibility for Turkish Regional Tsunami Watch Center (RTWC) which was shown in the first presentation made by François Schindele.

The areas of responsibility for the candidate RTWCs have not been resolved yet in the NEAMTWS region.

On this issue, Turkey reiterates its determination to establish a RTWC covering the Eastern Mediterranean, Aegean Sea, Marmara Sea and Black Sea.

We kindly request that our clarification be reflected on the records of this Executive Council meeting.

United Kingdom (6.1)

The UK regards the multi-hazard approach as being especially relevant to the perspective of the national "user" community, whether Civil Protection/Civil Defence authorities or other national organisations which have a remit for natural hazard forecasting, planning and mitigation. The remits of such organisations are, in most cases, not hazard-specific; aspects of planning, public awareness and operating procedures being common to sea-level related hazards in general.

We also support the aims of TOWS in seeking harmonisation, e.g. in the meanings of specific terms, clarity of messaging and the provision of advice to countries within the various TWSs. A common approach by TWSs is favoured, building on existing experience and focusing on those aspects of hazard impact and risk management for which marine science can help

United Kingdom (6.2)

We draw attention to the need for the NEAMTWS to expand its activity to encompass multihazards so that the interest of northern European countries, who view tsunamis as low risk, is captured and catered for. For such countries the risk of storm surge impact and inundation is much greater.

United States of America (6.1)

The United States is pleased to see the TOWS reaffirm the value of a multi-hazard approach which is embedded in its terms of reference, is implemented through the ICGs and other elements of IOC's programs.

We recognize the importance of the Inter-ICG teams on Sea level for Tsunami Purposes, Disaster management and preparedness, and Tsunami Watch Operations., preparedness. The United States will explore hosting a meeting of the teams to help them coordinate and complete their reports in the next six months.

TOWS recommendations on real time data exchange should provide a global wake-up call that tsunami forecasts can be substantially improved by removing any impediments to data exchange. The United States requests that the IOC develop the products that have been identified by TOWS and elevate the dialogue on data exchange to save lives.

As we look forward to the next 5-10 years, the coordination costs of staffing these networks which provide life saving warnings cannot not be dependent on extra-budgetary funding.

United States of America (6.2)

The United States thanks the presenters for their reports. The reports from the regions demonstrate that important progress has been made at international, regional and local levels, but we still have much to learn from each event to improve regional, national and local preparedness. The United States hopes that through the IOC, we can contribute to ensuring the future preparedness of those affected communities.

Some lessons we have learned include:

- That communications tests are an essential component of preparedness and all regions should consider raising the frequency of such tests.
- Limited access to real time data will degrade the quality of forecasts/warnings and thus impact the ability to save lives.
- Limited access to bathymetric and topographic data impedes the capability to produce accurate and timely tsunami forecasts that result in lives saved.

Thus it is critical that Member States enable the working groups of each ICG to continue their efforts to address essential services of TWSs. To this end, the United States hopes to contribute to supporting the first meeting of the TOWS inter-ICG task teams to maximize collaboration on these important issues as well as hosting a meeting of the Pacific ICG steering committee this summer.

In the Caribbean, the United States is pleased to be working with the ICG and member states in implementing the first Caribbean-wide tsunami exercise, March 23, 2011.

Venezuela

Gracias Sr. Presidente y muchas gracias por las exposiciones presentadas por los ponentes.

La República Bolivariana de Venezuela expresa su pesar por las tragedias acaecidas en las hermanas repúblicas de Haití y Chile, producto de los terremotos ocurridos.

Sr. Presidente, nuestra Delegación desea expresar su oferta de albergar el Centro Regional de Alerta contra tsunamis, sobre la base de un liderazgo regional sustentado por::

- * Una efectiva red sismológica nacional,
- * Un sistema de alerta temprana, establecido en la región,

* Una plena colaboración con los centros nacionales encarados de dar respuesta a las situaciones de desastres,

* Asimismo y no menos importante, su total compenetración con en el ejercicio conjunto ICE/CARIBE EWS.

La República Bolivariana de Venezuela, solicita, se tome nota de lo señalado y ratifica nuevamente su ofrecimiento.

Muchas gracias

6.3 Shallow-Water Bathymetric Data for Digital Elevation Models

Brazil

Brazil presents its recognition about the importance of the bathymetric data for ocean models. We recognize the importance in developing ocean-mapping capacity in order to allow each country dealing with the management of their coastal and ocean resources more effectively and in a sustainable way. Furthermore, Brazilian Hydrographic Service (Directorate of Hydrography and Navigation - DHN) works in close collaboration with IHO in this matter. In fact, Brazil does not object the releasing of such data within some restrictions and for non commercial purposes.

However, We still have some concerns regarding making available all high resolution bathymetric data on shallow waters."

Germany

Germany would like to emphasise the need of bathymetric charts as digital elevation models for ocean modelling on global and regional scales.

Germany points out that GEBCO (IOC/IHO General Bathymetric Chart of the Ocean) is the responsible project to putting this into practice.

We would like to stress that the global and regional ocean mapping programme GEBCO will only be successful under the joint guidance of IOC and IHO both, and thus we support the proposals under item 6.3 and acknowledge the statements given by the Chairman of GEBCO and the Director of IHB.

In particular Germany supports:

1. The intensification of capacity building in hydrography and technical support to developing countries for shallow water surveying to create marine geodata bases as for Coastal Zone Management Systems, nautical charting, and inundation mapping.

2. Training and education. Current training and educational programmes like the courses for effective protection against tsunami waves and storm surges under the COAST-MAP-IO programme for countries around the Indian Ocean, should be continued.

3. The proposals submitted by the GEBCO Guiding Committee, to include coastal bathymetry (0 to 200 m depth) into GEBCO, and the preparation of near coastal bathymetric charts, and to enhance the co-operation between the IOC Ocean Mapping Programme and the new GEBCO Interim Sub-Committee for Regional Undersea Mapping (ISCRUM).

Germany has contributed to ocean mapping programmes like the International Bathymetric Chart of the Southern Ocean (IBCSO) and supports capacity building for example through training courses at the Training and Education Centre of the Alfred-Wegener-Institute, in the past as well as in the future we will continue these programmes.

India

India noted the progress made by ICG-TOWS in establishing tsunami and multi hazard warning systems in different ocean basins. However, India expressed concern on lack of efforts from the secretariat in making in the information on national contacts and focal points. It was reminded that this issue was discussed during the 25th Assembly.

7.1 The Joint IOC-ICES Study Group on Nutrient Standards

Japan

Delegation of Japan would like to express our appreciation to IOC for supporting the first meeting of IOC/ICES Study Group On Nutrients Standards (SGONS), held at UNESCO Headquarters in Paris in March, 2010.

Also, Japan would like to express our compliments to chairman and members of the study group on their remarkable achievements during the past year. Particularly, we are pleased to be informed that International Nutrients Scale System, so-called INSS, was successfully developed because INSS would be considered to be essential standards for measuring nutrients in seawater. Japan expects that INSS will be broadly utilized in as many countries as possible so that it will contribute to further development of Oceanography and improvement of global monitoring of climate change and marine environments.

Finally, delegation of Japan fully supports the promotion of INSS as the international standard on nutrients in seawater to improve comparability of nutrients data in the world ocean.

7.2 Ocean Fertilization

India

Considering the potential risks associated with ocean fertilization leading to ocean acidification IOC should play a major role in providing scientific adivise for possible development of regulatory mechanism. Secondly, it is important to address challenges to minimize the scientific uncertainty before the involvement of IOC/ABELOS in assessing the potential link between UNCLOS and Ocean fertilizing issues. Recognizing the potential impacts on the ocean fertilization on marine ecological sensitive areas, there is a need to make comprehensive environmental impacts assessment as per the London Convention and London Protocol for conducting large scale ocean fertilization experiments.

United Kingdom

The UK welcomes the draft IOC-SOLAS Scientific Summary for Policy Makers on Ocean Fertilization. This document provides a very useful account of our current understanding of this topic, recognising that the potential benefits and impacts of ocean fertilization are still uncertain. To reduce these uncertainties, further experiments are needed. However, the 2008 decision of the Convention on Biological Diversity (CBD), based on the precautionary principle, does not allow new studies in the open ocean until an international regulatory framework is in place. The UK recognises the London Convention/London Protocol (LC/LP) as the competent body to develop such a legal framework. Furthermore, the UK considers that the IOC should continue to actively engage in legal aspects related to ocean fertilization through the provision of scientific evidence and

United States of America

The United States continues to believe that the governing bodies of the London Convention and Protocol should continue as the principal international bodies addressing the issue of ocean fertilization with respect to protecting the marine environment.

The United States continues to believe that States should carefully evaluate the purposes and circumstances of any ocean fertilization activities, including scientific research, to ensure that these activities are consistent with the aims of the London Convention and London Protocol, which focus on preventing harm to the marine environment.

The United States supports the continued development under the London Convention and London Protocol of an assessment framework that identifies key considerations for characterizing and managing risk associated with ocean fertilization. The IOC should continue its engagement, through the provision of technical experts, to the development of this assessment framework.

However, the United States opposes the IOC becoming involved in the legal aspects of ocean fertilization, and believes that the IMO/LC-LP should continue as the principal international forum for addressing the legal aspects of ocean fertilization. It is not clear what advice from the Advisory Body of Experts on the Law of the Sea (ABE-LOS) is required on this matter, what ABE-LOS would produce, or how ABE-LOS's work would be used. In the absence of any articulated problems, we cannot support tasking ABE-LOS on this matter.

7.3 Capacity Development

India

Indian delegation noted the achievements in capacity building and appreciated the efforts of IOC in capacity building. India also informed the executive about its contributions to capacity building by way of organizing the training programmes in the areas of tsunami modeling and coastal inundation mapping and in LOGFRAME works. India further reiterated its willingness in further help in capacity building. India also informed the executive about the plans to establish an international training centre for 'Operational Oceanography' in Hyderabad.

Japan

First of all, Japan would like to express our appreciation to the Secretariat in demonstrating remarkable progress in capacity building programme under many difficulties. We are fully aware heavy financial and manpower constraints in this progaramme, and request further efforts of the technical secretary and his colleagues to adopt effectively financial and human resources. We feel it appropriate to implement capacity building activities particularly training courses in regional basis. In this regard, we feel that a regional center, when established, would be a suitable platform for region. At the same time, we feel also that such a center becomes more effective and useful if it would be operated with multi-disciplinal spirits.

Japan has organized various training course with particular attention to coastal oceanography for the benefit of the Southeast Asian countries over 20 years. Celebrating the 50th Anniversary of IOC, we plans to organize in 2010/11 through cooperation with WESTPAC member states some training courses and workshops in Japan and in the region. One workshop is specially designed to exchange views and opinions on strategic plan to promote marine scientific research and related technology transfer.

Mauritius

Mauritius would like to thank the IOC for the initiatives taken in capacity building especially from extra-budgetary sources. Mauritius would also like to take this opportunity to thank the Swedish Government for supporting the capacity building activities of the IOC through the Swedish International Development Agency (SIDA) and the Western Indian Ocean Marine Science Association. We would like to request SIDA to maintain and reinforce capacity building funding for IOC activities.

United Kingdom

The UK supports the Decision 7.3 contained in the Action Paper IOC/EC-XLIII/2.

The UK will forward this Decision along with a note of the discussion held by Member States at this meeting to the appropriate UK Government Departments for their consideration.

The UK will also forward the same material to the Institute of Marine Engineers, Scientists and Technoogists for consideration by it Technical Policy Committee. The Institute provides an international professional recognition scheme for both new entry marine scientists and marine technicians by the award of Chartered Marine Scientist and Chartered Marine Technicians.

We must not forget that the training of the marine technicians is of equal importance to the success of any planned capacity building activity as the raining of marine scientists.

The UK FCO has recently asked the UK National Oceanography Centre to provide details of efforts by the Centre with respect to capacity building. Once this information is collected it is hoped that it will provide a better understanding of the mechanisms used by the different funders of marine

science capacity building within the UK and thus allow a more focused effort by the UK in this important area.

Venezuela

Muchas gracias Señor Presidente.

La Delegación de la República Bolivariana de Venezuela desea expresar su apoyo a la propuesta expresada por la Federación de Rusia. Creemos que en la práctica, esta significaría un foro de de muchísima importancia para compartir experiencias y poner a tono técnicas para la formación académica y preparación de nuestros jóvenes científicos.

Por tanto, es muy conveniente que el Secretariado Ejecutivo de la COI apoye esta iniciativa. Asimismo, deseamos expresar nuestros elogios a Estados Unidos por el programa conjunto (Venezuela - EEUU) que se desarrolla en la Fosa de Cariaco desde hace más de 16 años y que ha permitido la formación de jóvenes científicos.

Gracias Señor Presidente.

8.1 Global Reporting and Assessment of the State of the Marine Environment

Brazil

To be introduced after paragraph 107 of the Draft Summary Report, Part 2: "Brazil favors, in accordance with the recommendations of the Ad Hoc Working Group of the Whole, convened pursuant to paragraph 57 of the General Assembly resolution 63/111, that the Secretariat of the Regular Process be hosted by the Division of Oceans and Law of the Sea (DOALOS) of the Office of Legal Affairs of the UN, with the support of other UN agencies and programs. The strengthening of the capacity of DOALOS is a requirement for this option to be implemented."

Canada

Canada has been active and committed to ensuring a successful outcome of the AoA (Dr. Jake Rice, a Canadian expert, was closely involved in the development of the AoA as a member of the Group of Experts) and Canada continues to be a proponent of the Regular Process. Canada is grateful for the role played so far by the IOC with respect to this important initiative and we would like to see IOC's involvement continue.

Canada would encourage the Executive Secretary to put forward the arguments for having the IOC as the lead Agency and suggests that a business plan for a Secretariat, either housed in Paris or out-posted to a willing government, with the necessary financial, administrative and personnel resources be prepared to aid discussions.

Japan

Japan appreciates the IOC initiative in developing AoA and also the new approach Regular Process. Japan supports this approach and wishes the Regular Process to have smooth development under collaboration with other international organization, but hopes it to avoid overlapping their activities with other program implemented in similar objectives and mechanisms.

United Kingdom

The UK welcomes the Assessment of Assessments report and is pleased to see the key role of IOC in its successful completion. Regarding the Regular process we note that there was a dynamic session on this topic at the UNESCO Ministerial Round Table on Oceans and much support for IOC to continue its key role in the process. The UK generally supports the concept of the Regular process. We would like to see such assessments based wherever possible on existing regional

rather than national assessments. The UK wishes to see costs kept to a minimum, e.g. by limiting the size of the Secretariat.

Within the UK we are just about to publish the second integrated assessment of our seas. The process involved has highlighted the need for more marine data; this is acting as a major driver in addressing the fundamental issue of how to sustain long-term observations and is raising the profile of this topic to high levels in our government. As already suggested by Portugal and the USA, we would therefore stress the need to link the Regular Process with GOOS as one of its major drivers. With its particular responsibilities and expertise, IOC is best placed to strengthen this linkage.

9.1 Future of IOC

Brazil

Thank you, Mr. Chairman,

I would like to begin by paying homage to our Chairman. His leadership, impartiality and great patience has been a great asset for our work. I would like to, on behalf of my country, to express our recognition and our pride of having such a distinguished person of our region performing such a outstanding job.

It is with great pleasure that I take the floor to discuss the future of IOC. I want to stress this word: future. We are celebrating here the 50th anniversary of IOC and all its achievements. They are many and we must be proud of it. But the task that is thrust upon us today is to discuss the next 50 years, and what will be celebrating here in Paris, when IOC completes its 100th anniversary.

I would like to recall a more recent history. In 2008, the Working Group on the Future of IOC delivered its report, which was discussed by the Executive Council that same year. Their recommendations were clear, they have not all been implemented, and that is the task ahead to us.

Because so much work and effort was employed in the Working Group on the Future of IOC, we believe that we should avoid the temptation of engaging in new and costly exercises of reflection. The Member States have sat together and pointed the direction to where we want to go. There is much to do, and we need to walk fast, because the future is catching up with us. The time for groups of reflection, of experts' consultations, of external or internal evaluations has passed.

In this sense, we believe that some fundamental issues that were identified by the Working Group must be urgently addressed. IOC still needs to further efforts in extra-budgetary fund raising. Member States must keep its vigilance to ensure the regular budget reflects the priority we give to this Commission.

Of course, there is more to be done. The next Assembly would provide a good moment for the Executive-Secretary to provide us with information on the status of recommendations of the Working Group on the Future of IOC. We are also open to discuss with other Member States on a possible resolution that gives practical and concise directions to the Secretariat work.

Last week, alongside with the IOC's anniversary, we celebrated the World Oceans Day. At the occasion, in New York, the UN Secretary-General stated [and I quote]:"I urge Governments and citizens everywhere to acknowledge the enormous value of the world's oceans – and do their part in ensuring their health and vitality".

Brazil is ready to do its part. So is IOC, I am sure. Let's work together to realize the immense potential of the Commission and concentrate in the future labors ahead of us. That's the real future of IOC: to fulfill its mandate and to help the Member States to ensure the future of the oceans.

Thank you very much,

Canada

Canada was concerned that the resolution adopted yesterday did not reflect the purpose of this agenda item and did not reflect the spirit of many of the interventions made during the plenary or during the drafting sessions. Canada is of the opinion that a short summary of the key points raised at these sessional meetings should be included in the report. Furthermore, Canada noted that the Future of IOC WG had made several valuable recommendations that needed follow-up. Canada and several other MS requested the ES to prepare a report on the actions undertaken to implement these recommendations and send it to the MS for further input to advance the discussions on the Future of IOC and how IOC may meet the current and emerging challenges. Canada recommends that the MS responses be consolidated by the Secretariat in consultation with the Officers of IOC and presented to the 2011 IOC Assembly. Canada accepted the EC's decision to support the resolution based on the understanding that the sessional group discussions will be captured in the report and the action proposed above will be undertaken during the next intersessional period.

Germany

Germany understands that all delegations are in agreement that private funds will only be accepted if they are in line with the goals of IOC and not interfering with IOCs neutrality or independence.

India

India recalled the recent Ministerial Round Table conference on oceans held in October 2009, where thirty-two ministers and twenty five national delegations gathered and deliberated the importance on the role of oceans in understanding climate change, and the role of UNESCO and its Intergovernmental Oceanographic Commission (IOC) in supporting global governance of the oceans. Oceans and seas are highly impacted by human activities and the ecosystems are degraded, especially in the coastal regions; many fishery practices may be unsustainable and climate change is expected to compound the problems. Management of these issues require international cooperation under a law-based regime regulating the use of the oceans and their resources.

IOC had developed and launched a number global and regional programmes towards improve understanding of the ocean process. There are still lots more challenges need to be addressed by IOC particularly to ensure healthy ocean environment for sustained benefit of our successive generations through a sustained and systematic observation and information of world oceans. An integrated observing system, including remote sensing and in situ, is very crucial. Collection of such data would require large investments in satellites, research vessels, moored buoys and autonomous vehicles for observing and sampling of water column. An effective communication with various stake-holders including policy-makers is essential. Scope and objective relevant to society and Implementation strategy including Institutional mechanism, financing, etc. should be specified and agreed upon.

The success of ecosystem based approach depends not only on technology and infrastructure but on people, an education system that produce the scientists and managers needed for implementing such approach. There is a need to enhance the capability for capacity building and education at a regional, national, institutional and individual level.

The intergovernmental coordination through IOC for exchange of knowledge and providing services needs to be improved. The role of regional agencies should be enhanced for focusing and developing location-based approach.

IOC will have major challenges future include (i) demonstration of utility and benefits of information for developing ocean services and coastal zone management at local to national level to ensure support of governments. (ii) capacity building and transfer of technology to developing countries as a part of the regular process. UN should consider setting up centres in developing countries for

training in the field of operational oceanography. India is willing to host such centre in INCOIS, Hyderabad.

Considering the future challenges of IOC and its role in Ocean Governance, there is a need to strengthen role of IOC in UNESCO. IOC requires more support in the UNESCO, including the budgetary support. At this crucial juncture, the proposal of relocating secretariat of IOC would not be appropriate proposition for the progress of IOC.

Japan

Japan expressed its support to the idea of Executive Secretary that the IOC's future work should be focused in the area which IOC can add value because the financial and human resource of IOC is limited. Japan pointed out that the IOC doesn't have any concrete mechanism of evaluating the results of each programme and abolishing the programmes which are not expected to produce any tangible achievement or which are to be organized more efficiently by the other international frameworks, and so that such evaluation mechanism should be discussed in the future.

Malaysia

Mr. Chairman,

As a new reinstated member in the IOC Executive Council, Malaysia pledges to continue and increase our support to IOC programmes and activities to address current and emerging issues on the ocean.

We anticipated the IOC Assembly would continue to provide the platforms for focusing on the discussion to strengthen the IOC and its programme delivery mechanisms. The established Central Office at UNESCO Paris and the Subsidiary Bodies in carrying regional programmes has proven this mechanism has worked well as we celebrate the success in the commemoration of 50th Anniversary of IOC. We need to leverage the existing strength and resources and to overcome problems through promotion of strategies that would be acceptable to majority of Member States and empowering the Regional Subsidiary Bodies with appropriate support and funding.

Malaysia take note of the interest and offer from Portugal at the 41st Session of the Executive Council, hereby stress that there is a need for transparency and full consultation regarding this matter.

The future of IOC needs to galvanize cooperation from Member States to continue to carry the mandate and work towards overcoming key issues through consensus, increasing visibility and networking thus establishing sustainable financing mechanism to benefit all especially those under developed and countries vulnerable to the threats of Climate Change.

Thank you Mr. Chairman.

Portugal

Monsieur le Président,

Mesdames et Messieurs les Délégués,

Madame la Secrétaire Exécutive

Depuis de longues années, les Organes Directeurs de la COI sont engagés dans une démarche visant à trouver une réponse à la préoccupation et à la volonté manifestées par les membres de la Commission de renforcer l'action de la COI dans le cadre de la mission qui lui a été assignée par ses Etats membres.

Nos pays ont reconnu la nécessité de soutenir la Commission, en renforçant son mandat et son rôle au sein de l'UNESCO. Cela implique d'augmenter le budget de la Commission, -dont le

montant régulier pour le bienium en cours s'élève à 9,4 millions de dollars. Cette somme n'est pas suffisante pour financer un Programme ayant la capacité et la puissance de répondre, au niveau mondial et régional, aux grands défis du temps présent et aux besoins croissants des Etats Membres en matière océanographique.

Lors des longues discussions qui ont eu lieu dans un passé récent, il a été aussi question de la disparité existante entre la part du budget régulier allouée aux activités du Programme – actuellement 3,4 millions de dollars –, et celle, bien plus élevée, allouée au personnel – 6 millions.

Par ailleurs, il a aussi été démontré qu'il existait un déséquilibre entre le budget régulier, prévisible mais limité, et l'extrabudgétaire traditionnel, plus conséquent mais sans garantie aucune de stabilité, et de surcroit presque toujours « earmarked » par les donateurs.

L'ensemble de ces préoccupations a fait l'objet de la réflexion du « Groupe de travail sur l'avenir de la COI », et ses recommandations ont servi de base à la rédaction de la Résolution EC 41.1. C'est dans ce contexte que le précédent Secrétaire Exécutif, Monsieur Bernal a approché quelques pays (je cite)

« afin de sonder la volonté des Etats Membres d'accueillir, intégralement ou en partie, le Secrétariat de la COI, en lui apportant d'importantes ressources nouvelles ».

C'est dans cet esprit aussi que le Portugal a proposé une contribution visant à soutenir l'UNESCO et la COI, qui a été communiquée lors de la 25^{ème} Assemblée en juin 2009, et rappelée dans le *memorandum* que les Etats du Conseil Exécutif ont récemment reçu.

Nous avons par ailleurs procédé à quelques études sommaires pour évaluer les bénéfices financiers indirects qui découleraient de notre proposition d'accueillir le Secrétariat de la COI à Lisbonne, ce qui a été rendu difficile par le manque de réponse de l'UNESCO. Mais ce fait ne nous a pas empêché de vérifier que, outre l'apport par le Portugal de 3 millions d'euros par biennium, la COI pourrait disposer pour son programme d'un million de dollars supplémentaires par biennium, et il s'agit là d'une estimation *a minima*. Il est évident qu'une étude objective et indépendante permettrait une évaluation plus précise, de mieux peser le pour et le contre, et d'avoir des recommandations pour dépasser les difficultés identifiées. L'étude des offres qui pourraient être reçues pour une délocalisation totale ou partielle du Secrétariat aurait en outre une grande utilité: celle de nous permettre de prendre une décision fondée, à partir d'informations vérifiées, c'est-à-dire en connaissance de cause. De plus, elle nous permettrait de rassembler des informations précises sur les besoins de fonctionnement du secrétariat de la COI ici même à l'UNESCO.

Monsieur le Président, Chers Collègues, Madame la Secrétaire Exécutive,

Nous avons besoin de réfléchir davantage sur notre situation, de manière objective et dans le dialogue. En effet, il est nécessaire de dépasser l'impasse dans laquelle nous nous trouvons depuis des années, sans pour autant réussir à en sortir.

Dans ce cadre, il nous semble souhaitable de réactiver le Groupe de travail sur l'avenir de la COI, afin d'explorer des possibilités, concrètes, viables et tournées vers l'avenir, de renforcer effectivement la Commission Intergouvernementale, dans un esprit de convergence et de consensus.

Mon pays considère que ce Conseil a des obligations envers les 138 Etats qui composent l'Assemblée de la COI, organe suprême de notre Commission. À ce titre, il est de notre devoir de fournir à l'Assemblée tous les éléments d'analyse nécessaires afin d'évaluer les possibilités qui s'offrent à nous, pour que chacun des Etats de notre communauté puisse prendre la responsabilité de décider de l'avenir que nous pouvons, et souhaitons, assurer à la COI, En ce moment charnière de notre action symbolisée par la célébration de son 50^{ème} anniversaire, c'est le moment de faire preuve de la même créativité que celle qu'ont eue les pères fondateurs, en nous tournant résolument vers l'avenir et en répondant aux défis du 21^{ème} siècle.

Pour terminer, dans l'esprit constructif qui oriente le projet de Résolution DR 9.1b, et en tenant compte du projet de résolution DR 9.1, nous nous permettons d'attirer votre attention sur le fait que, malgré quelques différences dans les préambules, ces deux projets sont, à notre avis, à la fois convergents et complémentaires quant à leur finalité.

Nous sommes donc disposés à contribuer à ce que l'on puisse trouver une solution consensuelle dans l'esprit de dialogue et de coopération qui ont toujours marqué nos travaux.

Je vous saurais gré, Monsieur le Président, de bien vouloir verser, *in extenso,* la déclaration dont je viens de vous donner lecture au rapport du présent Conseil Exécutif, et d'y ajouter aussi, *pour mémoire*, le *mémorandum* sur l'offre faite par le Portugal.

Proposal for the relocation to Lisbon of the Secretariat of the Intergovernmental Oceanographic Commission- IOC

The Intergovernmental Oceanographic Commission (IOC) is an organ of UNESCO that enjoys functional autonomy. It is the main international organ dedicated to ocean research and monitoring, already enjoying a prominent role in the study of global warming and its impacts on marine life, as well as in the implementation of strategies of adaptation to this phenomenon.

The IOC has been struggling for several years with lack of resources. This circumstance has prevented its growth and the development of its activities at a time when the effects of climate change have made them particularly relevant.

In 1998, a transfer of the IOC secretariat, as a means of addressing the material limitations to its growth, was discussed for the first time. The then Director General of UNESCO Federico Mayor Zaragoza proposed to the Portuguese authorities its relocation to Lisbon.

In 2009, after more than ten years and persisting resource difficulties, the previous IOC Executive-Secretary informally sounded some countries to assess their willingness to host the IOC Secretariat.

There have already been precedents of relocations within UNESCO. The Institute for Statistics went to Montreal, Canada, and the secretariat of the World Water Assessment Program was relocated to Perugia, Italy.

Portugal has consistently played a very active role in the activities of the Commission. The Sea has had a very high significance in our history and cultural identity. We have developed important scientific expertise in the field of oceanography. We already host the European Maritime Safety Agency and the Maritime Analysis Operational Centre-Narcotics and this underlines Lisbon's qualification as an international cluster on issues relating to sea. Therefore we have decided, as a means of supporting UNESCO through its Oceanographic Commission activities, to submit a proposal for the transferral of the IOC Secretariat to Lisbon.

The proposal consists on the provision of a dully equipped building, including water, electricity and local communications expenses, as well as on a non-earmarked annual contribution of 1,5 million **Euros** to the IOC budget. The IOC's Assembly meetings would continue to take place in Paris, thus maintaining the proximity to UNESCO and allowing for an easier coverage of its work by countries with smaller diplomatic networks.

Bearing in mind that the IOC's regular biannual budget amounts to 9,48 million **USD**, we believe that our voluntary contribution would allow a very significant improvement of the IOC's financial situation (a budgetary biennual increase of about 40% at the present euro exchange rate) which would also benefit from reduction in costs when located in Lisbon.

During the ministerial roundtable on the Sea, which took place at UNESCO's last General Conference in October, the Secretary of State for Foreign Affairs and Cooperation announced the Portuguese Government's proposal. He has also recently sent letters to the Director-General of UNESCO, the President of the IOC and the IOC's Executive-Secretary, formalising our proposal and requesting, in order to proceed with the utmost transparency, that the Secretariat prepares a document with all the requirements and implications of a transfer, thus allowing Member States to make an informed decision.

The possible relocation of COI's Secretariat to which our proposal is referred, will be considered by the Executive Council of this organism, which will take place between the 8th and the 16th of June. We would like to count on your country's support for a solution that we are convinced will considerably enhance the Commission's work in the future.

Proposition de délocalisation du Secrétariat de la Commission Océanographique Intergouvernementale (COI) à Lisbonne

La Commission Océanographique Intergouvernementale est un organe pourvu d'autonomie fonctionnelle au sein de l'UNESCO. Il s'agit du principal organe international dédié à la recherche et à la monitorisation des Océans, jouant déjà un rôle important dans l'étude du réchauffement global dans le milieu marin et de ses effets, ainsi que dans la définition de stratégies d'adaptation a ce phénomène.

La COI se débat depuis longtemps avec un manque de ressources. Cette situation ne lui a pas permit de croitre et de développer ses activités, à un moment où, en raison des changements climatiques, ces activités sont devenu particulièrement importantes.

Un transfert du Secretariat de la COI, comme moyen de résoudre le manque de ressources matérielles nécessaires a son développement, a été pondéré pour la première fois en 1998, ayant le alors Directeur General de l'UNESCO, Federico Mayor Zaragoza, proposé aux autorités portugaises d'étudier la possibilité de sa délocalisation à Lisbonne.

Dix ans sont passés, et les contraintes de ressources se maintiennent, ce qui a motivé le précédant Secretaire Exécutif de la COI a effectuer en 2009 des sondages auprès de quelques pays visant à afférer leur disponibilité pour accueillir son Secretariat.

Il existe des précédents de délocalisations à l'UNESCO. L'Institut de Statistiques a été installé à Montréal, au Canada, et le Programme Mondial d'Evaluation des Ressources en Eau (WWAP) à Perugia, en Italie.

Le Gouvernement portugais souhaite soutenir l'UNESCO par l'intermédiaire des activités de sa Commission, dans laquelle le Portugal a toujours eu un rôle très actif, en tenant compte de l'importance de la mer dans l'Histoire et la culture de notre pays, et de notre expertise scientifique dans le domaine de l'océanographie. Par ailleurs, il se trouve déjà à Lisbonne le siège de l'Agence Européenne de Sécurité Maritime et le MAOC-N (Maritime Analysis Operational Centre-Narcotics), ce qui rend Lisbonne une ville avec vocation pour constituer un cluster international dans le domaine des océans.

Face à ce qui précède, le Gouvernement portugais a décidé de présenter une proposition d'accueillir à Lisbonne le Secretariat de la COI Cette proposition consiste en mettre à disposition des installations adéquatement équipées pour l'installation du Secretariat, et à prendre en charge les dépenses courantes d'eau, électricité et communications locales ainsi que dans le payement, en tant que contribution volontaire annuelle non earmarked, d'un million et demi d'**euros**.

Les réunions de l'Assemblée de la COI continueraient à avoir lieu a Paris, permettant ainsi le maintient d'une liaison étroite avec l'UNESCO, et le suivi des travaux par les Etats membres disposant de réseaux diplomatiques plus réduits.

Ayant en considération que le budget régulier de la COI ce biennium est de 9.48 millions d'**USD**, nous sommes convaincus que notre contribution volontaire permettrait d'améliorer très significativement sa situation financière (elle représenterait une croissance budgétaire de environ 40% par biennium au taux actuel de l'euro).

Le Secretaire d'Etat aux Affaires Etrangères et à la Coopération a annoncé la proposition du Gouvernement portugais lors de la table ronde ministérielle sur la Mer, qui eu lieu pendant la dernière Conférence Générale de l'UNESCO, en Octobre 2009. Il a aussi envoyé récemment des lettres à la Directrice Générale de l'UNESCO, Mme Bokova, au Président de la COI, Mr. Valladares, et à la Secrétaire Exécutive de la COI, Mme Watson-Wright, formalisant notre offre et demandant, dans le souci de procéder avec totale transparence, que le Secretariat élabore un rapport sur les requis et les implications d'un transfert, permettant ainsi aux Etats Membres de décider de façon informée.

La possible délocalisation du Secrétariat de la COI, dans laquelle s'encadrera notre offre d'accueillir son Secretariat, sera analysée par le Conseil Exécutif de cette Commission, qui se tiendra du 8 au 16 juin 2010. Nous aimerions compter sur le soutien de votre pays pour une solution dont nous sommes convaincus qu'elle permettrait de renforcer significativement l'action de la Commission à l'avenir.

Adoption of Resolutions Item 9.1 Afternoon session of June 14, 2010 Statement of Portugal

Mr Chairman and Dear Colleagues

Before passing to a vote I'd like to share some comments with all Member states.

First of all, in spite of efforts undertaken by the informal drafting group, we are sad that member states of IOC were not able to discuss and decide on a crucial issue of the Commission's life by consensus and that we are obliged to make use of a voting procedure.

Mr. Chairman, we are surprised to listen – as we did several times this morning – that we should be concerned with the future of the Commission, and at the same time, we are preparing to vote a draft resolution -9.1 – which only reiterates past ideas or states the obvious.

It is with great tranquility that Portugal faces the voting a resolution on the item 9.1 on the future of IOC. We all acknowledge this Commission is challenged with a chronicle deficit in resources that prevent it from addressing fully the increasing threats that our planet and its oceans face. We reflected and mobilized means to present a proposal that would improve significantly the situation, namely on the operational field ant that would increase UNESCO's relevance.

We recall that our initiative was undertaken in response to a specific request by the former Executive Secretary of the IOC. It was made in total transparency and we never saw it as exclusive. We have always shown total openness to discuss other proposals that would address IOC's serious resource deficit.

No other proposal was made. No other player put forward a concrete mechanism to increase IOC's regular budget.

My country, as always, makes itself available to give a new impetus to the IOC, and hopes that, like my Cuban colleague and others mentioned this morning, we don't find ourselves in ten years in a situation where we look at our present discussions and regret that nothing has changed for the better with IOC.

Lastly we wish to very sincerely express our gratitude to those countries that subscribed the draft resolution presented by Portugal. We are grateful for your courage and your wisdom.

I wish to finish by saying that, with the view of preserving an atmosphere of constructive engagement, Portugal, and the other co-sponsors – Republic of Korea, Spain, Tunisia, Ukraine and the United Kingdom- withdraw their draft resolution.

I request this declaration to be included in this Executive Council Report.

Sweden

The Swedish Delegation followed the debate on the agenda item 9.1 with great interest but also with great concern. In the discussion several issues were mentioned repeatedly, one of them being the possibility of having the IOC Secretariat located away from Paris. However, the discussion did not focus on this issue and no consensus was reached.

In reading the Draft Resolution IOC/EC-XLIII/DR.(9.1) a the Swedish Delegation noted several issues that were not well suited for the subject The Future of IOC. However, the Swedish Delegation, like several other Delegations, chose to agree to the adoption of the draft resolution in order not to block the important process of planning for the future of IOC.

The Chairman of IOC invited Delegations who had deviating views on the draft resolution to express them in writing for the inclusion in the final report from the 43rd Session.

The Swedish delegation has no disagreement to the paragraphs 1-4 of the resolution as they merely focus on intersectoral cooperation in UNESCO and the UN system.

However, the paragraphs 5-7 are controversial as they uniquely refer to having the IOC Secretariat in Paris. As there was no consensus on the location and possible re-location, of the Secretariat the text has jumped to conclusions in the paragraphs 5-7.

The Swedish Delegation refers to the evaluation of UNESCO and its activities. In that process all programmes, including IOC, may be looked at and their relevance for UNESCO will be assessed. The links between IOC and UNESCO, as well as the location of the IOC Secretariat, must be looked at from the standpoint of what is the best solution for IOC.

It is, therefore, premature to take a firm standpoint on the location of the IOC Secretariat.

Yours sincerely Stig Carlberg Head of the Swedish Delegation to IOC

United Kingdom

The UK believes that the work in past years by the WG on the Future of IOC has helped to crystallize some of the issues. However, it was in our opinion only a start. Since then the profile of the oceans, especially IOC's role, has increased. This includes activities related to the 50th anniversary and the Ministerial Round Table on Oceans. There are also new opportunities for IOC, e.g. the Regular Process for Global Marine Assessments.

We wish to raise two points about IOC within UNESCO. Firstly, are we fully exploiting the opportunity this provides, e.g. interaction with the other UNESCO international science programme, especially in relation to climate change? Unless real resources are committed, achievement will be limited. Secondly, does our UNESCO home sit comfortably with the increasing activities of IOC in relation to operational oceanography?

9.3 Preparation of the 26th IOC Assembly

Japan

Japan proposed that all the Regional Subsidiary Bodies should submit short reports on their activities and progress made during the inter-sessional period to each Session of the Assembly and Executive Council for review and evaluation by the Governing Bodies. Japan also suggested the Council to include an agenda item on report and review of the Regional Subsidiary Bodies at the 26th Session of the Assembly.

Portugal

Portugal stated that the format and methodology followed should be the object of consultation with Member States during the intersessional period and that a document with the proposed guidelines should be submitted at the 44th Executive Council directly preceding the 26th Assembly.

Venezuela

Titulo de la Agenda Item: 9.3 PREPARACIÓN DE LA 26ª REUNIÓN DE LA ASAMBLEA DE LA COI

Gracias Sr. Presidente.

La Delegación de la República Bolivariana de Venezuela REITERA su deseo de realizar la ponencia sobre el proyecto Cariaco: "Retención de Carbono en un océano de colores", en el ciclo de la conferencias conmemorativas de la XXVI Asamblea de la COI.

Esta propuesta se realizó en la XXIII Asamblea y ratificadas en las Asamblea XXIV y XXV (IOC-XXV/3-pág. 75 párrafo 543 "Venezuela recordó a la Asamblea que en la 23a reunión de la Asamblea ya había propuesto una conferencia conmemorativa acerca del proyecto Cariaco, sobre "Retención de carbono en un océano de colores", que desde hace mas de 15 años se ejecuta en la costa venezolana del Caribe. Además, Venezuela reiteró su propuesta en la 24a reunión de la Asamblea.".

Este programa como es conocido por muchos, se realiza desde hace más de 16 años en una cuenca anóxica de cerca de 1500 mts de profundidad situada en la plataforma continental venezolana en el mar Caribe. El programa se realiza con la cooperación de instituciones de Venezuela y EEUU.

Para nuestro país y la región del Caribe, este programa tiene un gran significado y representa todo un logro. Ha propiciado entre otros: tal vez la serie de observación marina más larga de la zona preecuatorial, la preparación de jóvenes científicos, la evaluación paleoclimática de la zona tropical, etc.

Sr. Presidente solicitamos se tome nota de esta propuesta. Muchas gracias

10 Adoption of the Summary Report and Resolutions

Senegal

Le Conseil Executif a suggere l'organisation de reunion d'information avec les delegations permanentes afin de preparer les sessions des organes directeurs de la COI et de permettre au Secretariat de s'accorder avec les Etats membres sur les delais souhaitables pour recevoir les projets de resolution.

United Kingdom

The UK congratulates the Resolutions Committee on its hard work and expresses its appreciation to its Chair. It is clear that adopting resolutions is a vital part of the meetings of our Governing Bodies. We would like to support points made in her statement about the timing and submission of resolutions. In order to improve the quality of our resolutions and to facilitate the work of the Resolutions Committee the UK suggests that in future every effort is made to include Draft Resolutions in the Action Paper. This should certainly be possible in the case of resolutions arising from meetings of subsidiary bodies and inter-sessional working groups. Such draft versions can then be modified in the light of debate during the meeting so that when they are submitted to the Resolutions Committee they are at a greater stage of maturity.

Finally, with reference to the 3rd draft revised guidelines para. 15, we would be opposed to any reduction in the time period between the deadline for submission of draft resolutions and when resolutions are considered for adoption – for reasons already given.

ANNEX X

LIST OF DOCUMENTS

Document Code	Title	Agenda Items	Languages available		
WORKING DOCUMENTS					
IOC/EC-XLIII/1	Agenda	2.1	EFRS		
IOC/EC-XLIII/1 Add. Prov. Rev.6	Sixth Revised Provisional Timetable	2.4	E only		
IOC/EC-XLIII/2 + Corr.	Action Paper + Corrigendum	All items	EFRS		
IOC/EC-XLIII/2 Annex 1	Report by the IOC Executive Secretary on Programme Implementation	3.2	EFRS		
IOC/EC-XLIII/2 Annex 1 Add.1	Implementation of IOC Governing Body Resolutions	3.2	E only		
IOC/EC-XLIII/2 Annex 1 Add.2	SISTER Follow-up Qualitative Report for the IOC	3.2	E only		
IOC/EC-XLIII/2 Annex 2	Report on Budget Execution 2008-2009 and Anticipated Funding for 2010	3.2	EFRS		
IOC/EC-XLIII/2 Annex 3	Draft IOC Work Plan for 2010–2011	4.2	EFRS		
IOC/EC-XLIII/2 Annex 4	Draft Biennial Priorities and Implementation Strategy for 2012–2013	9.2	EFRS		
IOC/EC-XLIII/2 Annex 5	Preliminary Draft Provisional Agenda for the Twenty-sixth Session of the IOC Assembly	9.3	EFRS		
IOC/EC-XLIII/2 Annex 6	Third Draft Revised Guidelines for the Preparation and Consideration of Draft Resolutions	10	EFRS		
IOC/EC-XLIII/4 Prov. Rev.	Revised Provisional List of Documents	2.4	EFRS		
IOC/EC-XLIII/5 prov.	Provisional List of Participants (as of 14 June 2010)		E/F/R/S		
REPORTS OF IOC AND COOPERATIVE BODIES REQUIRING ACTION					
IOC-XXV/3	Summary Report of the Twenty-fifth Session of the IOC Assembly, Paris, 16–25 June 2009	All items	EFRS		
IOC Annual Report no.16	IOC Annual Report 2009	3.2	E only		
IOCEA-VI/3	Summary Report of the Sixth Session of the IOC Regional Committee for the Central and Eastern Atlantic Ocean, Accra, Ghana, 28–30 March 2010	4.3	E (Ex. Sum. In E F R S)		
IOC/SC-WESTPAC-VIII/3s	Executive Summary of the Eighth Session of the IOC Sub-Commission for the Western Pacific (WESTPAC-VIII), Bali, Indonesia, 10– 13 May 2010	4.3	EFRS		

Document Code	Title	Agenda Items	Languages available
WMO-IOC/JCOMM-III/3 ² (OMM-N° 1049)	Third Session of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (4–11 November 2009, Marrakesh, Morocco)— Abridged final report with resolutions and recommendations	5.3	EFRS
WMO-IOC/JCOMM-III/3s	Third Session of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (4-11 November 2009, Marrakesh, Morocco)—Summary of results	5.3	EFRS
IOC/TOWS-WG-III/3	Report of the Third Meeting of the Working Group on Tsunamis and Other Ocean Hazards Related to Sea Level Warning and Mitigation Systems (TOWS-WG); Lisbon, Portugal, 5–6 May 2010	6.1	E (Ex. Sum. In E F R S)
ICG/NEAMTWS-VI/3s	Executive Summary of the Sixth Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North Eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS-VI), Istanbul, Turkey, 11–13 November 2009	6.2	EFRS
ICG/CARIBE-EWS-V/3	Summary Report of the Fifth Session of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS-V), Managua, Nicaragua, 15–17 March 2010	6.2	E (Ex. Sum. In E F R S)
ICG/IOTWS-VII/3s	Executive Summary of the Seventh Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS-VII), Banda Aceh, Indonesia, 14–16 April 2010	6.2	EFRS
IOC-ICES/SGONS-I/3	Summary Report of the First Session of the Joint IOC–ICES Study Group on Nutrient Standards (SGONS), UNESCO, Paris, 23–24 March 2010	7.1	E (Ex. Sum. In E F R S)
IOC/EC-XLII/3	Summary Report of the Forty-second Session of the IOC Executive Council, Paris, 15 June 2009	9.4	EFRS
INFORMATION DOCUMENT	S		
IOC/EC-XLIII/Inf.1*	Information and Guidelines for Participants*	2.4	E only
IOC/EC-XLIII/Inf.2	Presentation and Abstracts of the R. Revelle Memorial Lecture, 2010	2.5	E only
IOC/INF-1274	IOC contribution to UNESCO Priority Africa Overarching Objective 2: Mobilizing science knowledge and policy for sustainable development for the Biennium 2008–2009	3.3 7.3	E only

² e-copy available on the <u>EC website</u>.

		_	1.1.0
Document Code	Title	Agenda Items	Languages available
IOC/INF-1257 Part II	Summary of Progress in the Implementation of the 50 th Anniversary (June 2010)	4.1	E only
IOC/INF-1275	Ship-based Repeat Hydrography: A Strategy for a Sustained Global Programme	5.1	E only
UNFCCC decision 9/CP.15*	Systematic climate observations (Copenhagen, December 2009)	5.1	E only
IOC/EC-XLIII/Inf.3*	WCRP: update on programme execution and budget	5.1	E only
<u>WMO/TD-No. 1499</u> *	The World Climate Research Programme Achievements— Scientific Knowledge for Climate Adaptation, Mitigation and Risk Management	5.1	E only
WMO/TD-No. 1503*	WCRP Implementation Plan 2010–2015	5.1	E only
<u>WMO/TD-No. 1514</u> (GCOS 136)*	GCOS Annual Report 2008–2009	5.1	E only
WMO/TD-No. 1489* (GCOS-129, GOOS-173, GTOS-70)	Progress Report on the Implementation of the Global Observing System for Climate in Support of the UNFCCC 2004–2008	5.1	E only
IOC/INF-1273	Planning and Implementation for GOOS	5.2	E only
IOC-WMO-UNEP/I-GOOS- IX/3 (GOOS report, 176)*	Ninth session of the Intergovernmental Committee for the Global Ocean Observing System (I-GOOS), Paris, France, 10-12 June 2009: executive summary report	5.2	E only
IOC/EC-XLIII/Inf.4*	OceanObs'09—Ocean Information for Society: sustaining the benefits, realizing the potential, Venice, Italy, 21–25 September 2009. Conference Statement	5.2	E only
IOC/EC-XLIII/Inf.5*	World Climate Conference–3 High Level Declaration and Brief Note on Global Framework for Climate Services	5.3	E only
IOC/EC-XLIII/Inf.6*	Summary of IOC-WMO Agreements for Joint Activities	5.3	E only
IOC Technical Series, 90	12 January 2010 Haiti Earthquake and Tsunami Event Post-Event Assessment of CARIBE EWS Performance	6.2	E (Ex. Sum. In Ar Ch E F R S)
IOC/2010/BRO/2* (Draft copy)	Ocean Fertilization: A Summary for Policy Makers	7.2	E only
IOC/INF-1276	Empowering Developing Countries to sustainably use their coastal resources (Self- driven capacity-building)—Closure report on the SIDA funded project	7.3	E only
IOC/INF-1256	An Assessment of Assessments – Finding of the Group of Experts	8.1	Ar Ch E F R S
A/64/347*	Report on the Work of the Ad Hoc Working Group of the Whole to Recommend a Course of Action to the General Assembly on the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, Including Socio-economic Aspects -	8.1	Ar Ch E F R S
Document Code	Title	Agenda Items	Languages available
-----------------------------------	--	-----------------	------------------------
IOC/CL-2332 (Information note)	Invitation to the Forty-third Session of the IOC Executive Council—Improved Reporting for the IOC 43rd Executive Council	10	EFRS
IOC/EC-XLIII/Inf.7	Member State Statement template	10	E/F
REFERENCE DOCUMENTS			
IOC/EC-XLI/3*	Report of the Forty-first Session of the IOC Executive Council, Paris, 24 June–1 July 2008	2.1	EFRS
BSP.2009/WS/7 REV.*	Priority gender equality: action plan 2008- 2013	3.3	E only
IMO/LC/SG-CO2 3/5*	Report of the First Meeting of the Intersessional Technical Working Group on Ocean Fertilization	7.2	E only
IMO/LP/CO2 2/5*	Report of the 1st Meeting of the LP Intersessional Legal and Related Issues Working Group on Ocean Fertilization	7.2	English
IMO/LC 31/4*	Ocean Fertilization, Interim report on Ocean Fertilization Science Overviews	7.2	English
IMO/LC 31/15*	Report of the Thirty-First Consultative Meeting and the Fourth Meeting of Contracting Parties	7.2	English
Resolution LC-LP.1(2008)*	The Regulation Of Ocean Fertilization	7.2	English
IOC/CL/2339*	Follow-up of the Resolution XXV-11 on "Enhancing IOC Capacity-development"	7.3	EFRS
A/RES/64/71*	UNGA Resolution on Oceans and the Law of the Sea (2010)	8.1	EFRS
A/RES/63/111*	UNGA Resolution on Oceans and the Law of the Sea (2009)	8.1	EFRS
A/RES/60/30*	UNGA Resolution on Oceans and the Law of the Sea (2006)	8.1	EFRS
159 EX/36*	Report by the Director-General on the choice of the location of the UNESCO Institute for Statistics (UIS)	9.1	EFRS

ANNEX XI

LIST OF PARTICIPANTS

I. OFFICERS OF THE COMMISSION/ BUREAU DE LA COI/MESA DE LA COI

Chairperson

Sr. Javier Armando VALLADARES Licenciado en Oceanografía Física Asesor Científico en Ciencias del Mar Dirección de Relaciones Internacionales Secretaria de Ciencias, Tecnología e Innovación Productiva Av. Córdoba 831 4to. Piso (C1054AAH) Buenos Aires ARGENTINA Tel: +54 11 5113 9820 Fax: +54 11 4312 7203 E-mail: javieravalladares09@gmail.com

Vice-Chairperson

Dr Savithri (Savi) NARAYANAN Dominion Hydrographer/Director-General Ocean Sciences–Canadian Hydrographic Service Fisheries & Oceans 615, Booth St., Suite 311 Ottawa, Ontario, K1A OE6 CANADA Tel: +1 613 995 4413 Fax: +1 613 947 4369 E-mail: savithri.narayanan@dfo-mpo.gc.ca

Vice-Chairperson

Sr. Julián Augusto REYNA MORENO Capitán de Navío, Secretario Ejecutivo Comisión Colombiana del Océano Transversal 41, No. 27-50 Piso 4º - CAN Bogotá, D.C. COLOMBIA Tel: +57 1 222 0421/36/49 Fax: +57 1 222 0416 E-mail: seco@cco.gov.co

Vice-Chairperson

Prof. Chérif SAMMARI Chef, Laboratoire du Milieu Marin Institut National des Sciences et Technologies de la Mer (INSTM) 28, rue 2 mars 1934^{°°} 2025 Salammbô TUNISIA Tel: +216 71 730 420/71 277 735 Fax: +216 71 732 622 E-mail: cherif.sammari@instm.rnrt.tnViceVice-Chairperson

Dr Sang-Kyung BYUN Principal Research Scientist Climate Change & Coastal Disaster Research Dept. Korea Ocean Research & Development Institute (KORDI) Ansan, P.O. Box 29 425-600 Seoul REPUBLIC OF KOREA Tel: +82 31 400 6127 Fax: +81 31 408 5829 E-mail: <u>skbyun@kordi.re.kr</u>Vice-Chairperson

Vice-Chairperson

Mr Nicolai N. MIKHAILOV Head, Oceanographic Data Centre Russian Federal Service for Hydrometeorology & Environmental Monitoring All-Russia Research Institute of Hydrometeorological Information – WDC 6, Korolev St., Obninsk Kaluga Region 249020 RUSSIAN FEDERATION Tel: +7 084 397 4907 Fax: +7 095 255 2225 E-mail: nodc@meteo.ru

Past Chairperson

Prof. David T. PUGH Marine Science Advisor 3, Deeside Court, Dee Hills Park Chester CH3 5AU UNITED KINGDOM Tel: +44 23 8059 6611; (0)12 4434 6454 Fax: +44 1703 596 395 E-mail: d.pugh@mac.com

II. MEMBER STATES OF THE IOC EXECUTIVE COUNCIL/ETATS MEMBRES DU CONSEIL EXECUTIF DE LA COI/ESTADOS MIEMBROS DEL CONSEJO EJECUTIVO DE LA COI

Argentina/Argentine/Argentina

Head of Delegation

H.E. Mr Miguel Angel ESTRELLA Ambassador & Permanent Delegate Permanent Delegation of Argentina to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 45 68 34 38 Fax: +33 1 43 06 60 35 E-mail: <u>dl.argentina@unesco-delegations.org</u>

Alternate

Sr. Javier Armando VALLADARES Ministry of Science & Technology Av. Córdoba 831, 4to. Piso 1054 Buenos Aires Tel: +54 15 5113 9820 Fax: +54 11 4312 7203 E-mail: javieravalladares@gmail.com (*Also IOC Chairperson*)

Representatives

Mr Ariel Hernán TROISI Head, Oceanography Dept. Navy Hydrographic Service Av. Montes de Oca 2124 C1270ABV Buenos Aires Tel/Fax: +54 11 301 3091 E-mail: <u>atroisi@hidro.gov.ar</u>

Mr José Luís FERNÁNDEZ VALONI Advisor, Permanent Delegation of Argentina to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 45 68 34 37/38 Fax: +33 1 43 06 60 35 E-mail: j.fernandez-valoni.ar@unescodelegations.org

Ms Erica Silvina LUCERO Legal Advisor Ministry of Foreign Affairs, International Commerce & Culture Esmeralda 1212, 15th Floor Buenos Aires 1007 Tel: +54 11 4819 8008 Fax: 54 11 4819 8009 E-mail: <u>eel@mrecic.gov.ar</u>

Australia/Australie/Australia

Head of Delegation

Dr Peter DEXTER International Oceans Policy Advisor Bureau of Meteorology G.P.O. Box 1289, Melbourne, VIC 3001 Tel: +61 3 9669 4870; Cell: 0417 353 459 Fax: +61 3 9669 4725 E-mail: <u>p.dexter@bom.gov.au</u>

Representative

Ms Anne SIWICKI Policy Officer Permanent Delegation of Australia to UNESCO 4, rue Jean Rey, 75015 Paris, FRANCE Tel: +33 1 4059 3344 Fax: +33 1 4059 3353 E-mail: <u>anne.siwicki@dfat.gov.au</u>

Belgium/Belgique/Bélgica

Head of Delegation

Mr Rudy L. HERMAN Senior Researcher IOC/UNESCO Representative for Belgium Member of Flanders UNESCO Commission Dept. of Economy, Science & Innovation Policy Support & Academic Policy Koning Albert II-Iaan 35 bus 10 1030 Brussels Tel: +32 2 553 6001 Fax: +32 2 553 6007 E-mail: <u>rudy.herman@ewi.vlaanderen.be</u>

Alternate

Mr David COX Programme Manager Belgian Science Policy Office Avenue Louise, 231, 1050 Brussels Tel: +32 2 238 3403 Fax: +32 2 238 3700 E-mail: <u>david.cox@belspo.be</u>

Brazil/Brésil/Brasil

Head of Delegation

H.E. Mr João Carlos DE SOUZA-GOMES Ambassador & Permanent Delegate Permanent Delegation of Brazil to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 2838 Fax: +33 1 4783 2840 E-mail: j.souza-gomes.br@unesco-delegations.org

Alternate

Mr Luiz Fernando PALMER FONSECA Vice-Admiral Director, Directorate of Hydrography & Navigation (DHN) Rua Barão de Jaceguai, s/nr Ponta da Armação, Niteroi CEP 24048-900 Rio de Janeiro Tel: +55 21 2189 3003 Fax: +55 21 2189 3063 E-mail: <u>palmer@dhn.mar.mil.br</u>

Representatives

Ms Maria Cordélia SOARES MACHADO Coordinator for Ocean & Antarctic Affairs Ministry of Sciences & Technology Esplanada dos Ministerios, Bloco E, Sla 230 Brasilia D.F. 70067 900 Tel: + 55 61 3317 7854 Fax: +55 61 3317 7854 E-mail: mmachado@mct.gov.br

Ms Marcia DONNER Deputy Permanent Delegate Permanent Delegation of Brazil to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 2838 E-mail: <u>m.donner.br@unesco-delegations.org</u>

Advisors

Mr Eron de Oliveira PESSANHA Interministerial Commission for the Resources of the Sea – SECIRM Esplanada dos Ministerios, Bloco N, Anexo B Brasilia, D.F. CEP 70055-900 Tel: +55 61 3429 1323 Fax: +55 61 3429 1338 E-mail: <u>eron.pessanha@gmail.com</u>

Mr Flavio Luis GIACOMAZZI Interministerial Commission for the Resources of the Sea – SECIRM Esplanada dos Ministerios, Bloco N, Anexo B Brasilia, DF CEP 70055-900 Tel: +55 61 3429 1337 Fax: +55 61 3429 1338 E-mail: <u>flgiacomazzi@yahoo.combr</u>

Ms Marcia Helena CARVALHO RAMOS Advisor of External Relations Directorate of Hydrography & Navigation – DHN Rua Barão de Jaceguai, s/nr – Ponta da Armação Niteroi, Rio de Janeiro CEP 24048-900 Tel: +55 21 2189 3578 Fax: +55 21 2189 3088 E-mail: marcia@dhn.mar.mil.br Mr Frederico Antonio SARAIVA NOGUEIRA Advisor of External Relations Directorate of Hydrography & Navigation – DHN Rua Barão de Jaceguai, s/nr – Ponta da Armação Niteroi, Rio de Janeiro CEP 24048-900 Tel: +55 21 2189 3380 Fax: +55 21 2189 3088 E-mail: frederico.asn@gmail.com

Mr Alexandre BRASIL DA SILVA First Secretary Permanent Delegation of Brazil to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 2838 E-mail: <u>a.brasil-da-silva.br@unesco-</u> <u>delegations.org</u> Alexandre.brasil@itamaraty.gov.br

Canada/Canada/Canadá

Head of Delegation

Dr Savithri (Savi) NARAYANAN Dominion Hydrographer Director-General, Ocean Sciences Canadian Hydrographic Service Fisheries & Oceans, Canada 615 Booth St., Suite 311 Ottawa, Ontario K1A 0E6 Tel: +1 613 995 4413 Fax: +1 613 947 4369 E-mail: <u>savithri.narayanan@dfo-mpo.gc.ca</u> (Also IOC Vice-Chairperson)

Representatives

Ms Helen C. JOSEPH Director, Oceanography & Climate Branch Canadian Sciences–Canadian Hydrographic Service Fisheries & Oceans, Canada 615, Booth St., Room 336A Ottawa, Ontario K1A 0E6 Tel: +1 613 990 6930 Fax: +1 613 990 6131 E-mail: helen.joseph@dfo-mpo.gc.ca

Mr Val SWAIL Manager, Climate Data & Analysis Environment Canada 4905 Dufferin St., Downsview Ontario M5H 5T4 Tel: +1 416 739 4347 Fax: +1 416 739 5700 E-mail: <u>val.swail@ec.gc.ca</u>

Ms Dominique LEVASSEUR Senior Programme Officer Permanent Delegation of Canada to UNESCO 5, rue de Constantine, Paris 75007, FRANCE Tel: +33 1 4443 2571 Fax: +33 1 4443 2579 E-mail: dominique.levasseur@international.gc.ca

Advisors

Mr Geoffrey L. HOLLAND Senior Advisor to Fisheries & Oceans Canada 2WE Associates Consulting Ltd. 1267, Gabriola Drive Parksville B.C., V9P 2T5 Tel/Fax: +1 250 954 1343 E-mail: <u>hollandg@telus.net</u>

Dr Jean-Claude BRETHES Directeur du Comité des programmes en Océanographie Institut des Sciences de la Mer de Rimouski Université du Quebec à Rimouski 300, allée des Ursulines Rimousi, Quebec G5L 3A1 Tel: +1 418 723 1986, Poste 1779 Fax: +1 418 724 1842 E-mail: jean-claude brethes@ugar.ca

Chile/Chili/Chile

Head of Delegation

Mr Juan Carlos CUNEO ARENALDI Deputy-Director Hydrographic & Oceanographic Service of the Chilean Navy Errazuriz 254 Playa Ancha 2360167 Valparaíso Tel: +56 32 226 6501 Fax: +56 32 226 6542 E-mail: jcuneo@shoa.cl

Advisor

Mr Jorge Andres GAETE VILCHES Head, Tides Section, Oceanography Dept. Hydrographic & Oceanographic Service of the Chilean Navy Errazuriz 254 Playa Ancha 2360167 Valparaíso Tel: +56 32 226 6677 Fax: +56 32 226 6542 E-mail: jgaete@shoa.cl

China/Chine/China

Head of Delegation

Mr Zhanhai ZHANG Director-General Dept. of International Cooperation State Oceanic Administration 1, Fuxingmenwai Ave., Beijing 100860 Tel: +86 10 6804 8051 Fax: +86 10 6804 8061 E-mail: zhangzhanhai@pric.gov.cn

Representatives

Ms Shao Hua LIN Honorary Director National Marine Data & Information Service 93, Liuwei Rd., Hedong District, Tianjin 300171 Tel: +86 22 2401 0821 Fax: +86 22 2401 0926 E-mail: <u>shlin@mail.nmdis.gov.cn</u>

Mr Ya Feng YANG Project Officer Dept. of International Cooperation State Oceanic Administration 1, Fuxingmenwai Ave., Beijing 100860 Tel: +86 10 6804 8051 Fax: +86 10 6804 8051 E-mail: <u>yyf@soa.gov.cn</u>

Prof. Juying WANG National Marine Environment Monitoring Center 42, Linghe St., Dalian 116023 Tel: +86 411 8478 2526 Fax: +86 411 8478 2586 E-mail: jywang@nmemc.gov.cn

Prof. Jilan SU Second Institute of Oceanography, SOA 36, Baoshubel Rd., Hangzhou, Zhejiang 310012 Tel: +86 571 8883 0507 Fax: +86 571 8807 1539 E-mail: sjl@sio.org.cn

Prof. Xianyao CHEN First Institute of Oceanography, SOA 6, Xianxiajing Rd., Qingdao, Shandong 266081 Tel: +86 532 8896 1709 Fax: +86 532 8896 1307 E-mail: <u>chenxy@fio.org.cn</u>

Mr Jilu WU Associate Professor China Institute for Marine Affairs, SOA 1, Fuxingmenwai Ave., Beijing 100860 Tel: +86 10 6804 7761 Fax: +86 532 8896 6803 0767 E-mail: jilwu@cima.gov.cn

Colombia/Colombie/Colombia

Head of Delegation

Mr Julián Augusto REYNA MORENO Capitán de Navío Comisión Colombiana del Océano Carrera 54 No. 26-50, Piso 4 CAN, Bogotá D.C. Tel: +57 1 222 0449/36/21 Fax: +57 1 222 0416 E-mail: <u>oceano@cco.gov.co</u> (Also IOC Vice-Chairperson)

Congo/ Not Represented

Côte d'Ivoire/Côte d'Ivoire/Côte d'Ivoire

Head of Delegation

Dr Siaka Barthélémy BAMBA Directeur, Centre de Recherches Océanologiques 29, rue des Pêcheurs, Treichville, B.P.V. 18 Abidjan Tel: +255 2135 6448 Fax: +225 2135 1155 E-mail: <u>bambasb@hotmail.com</u>

Representative

Mr Aka Marcel KOUASSI Deputy-Director Centre for Oceanographic Research 29, rue des Pêcheurs, B.P.V. 18 Abidjan Tel: +225 2135 6448 Fax: +225 2135 1155 E-mail: kouassi12@hotmail.com

Prof. Kouadio AFFIAN Directeur du CURAT Remote Sensing Center for Applied Research Université de Cocody 22 BP 582 Abidjan 22 Tel: 225 2244 5270 Fax: 225 2244 5270 E-mail: <u>k affian@yahoo.fr</u> (Also representing I-GOOS)

Cuba/Cuba/Cuba

Head of Delegation

Mr Guillermo GARCIA MONTERO Director, Acuario Nacional de Cuba Presidente, Comité Nacional Oceanográfico Avenida 1ra y calle 60, Miramar Playa, Habana Tel: +537 203 6401–06 Fax: +537 209 2737 E-mail: guillermog@acuarionacional.cu

Ecuador/Equateur/Ecuador

Head of Delegation

Mr Jorge Alejandro CARDENAS AMORES INOCAR Director Oceanographic Institute of the Ecuadorian Navy Av. 25 de Julio, via Al Puerto Marítimo Base Naval Sur, Guayaquil 593 Tel: +593 42 480 033 Fax: +593 42 485 166 E-mail: sudireccion@inocar.mil.ec

Advisor

Mr Edwin Belisario PINTO USCOCOVICH Head, Marine Sciences Dept. Oceanographic Institute of the Ecuadorian Navy Av. 25 de Julio, via Al Puerto Marítimo Base Naval Sur, Guayaquil 593 Tel: +593 42 481 300, Ext. 1201 Fax: +593 42 485 166 E-mail: <u>ccmar@inocar.mil.ec</u>

Egypt/Egypte/Egipto

Head of Delegation

Prof. Aida Botros TADROS Acting Head of Marine Environmental Division National Institute of Oceanography & Fisheries Qayed Bay, Anfoushy, Alexandria Tel: +203 480 1553 Fax: +203 480 1174 E-mail: <u>bt_aida@yahoo.com</u>

Representative

Prof. Mohamed SAID National Institute of Oceanography & Fisheries (NIOF) Kayet Bey, Alexandria Tel: +20 12 377 9117 Fax: +20 3 480 1174 E-mail: mamsaid2@hotmail.com

France/France/Francia

Head of Delegation

Mr François GÉRARD Président du CN-COI Tour Pascal B, 92055 La Défense Cedex Tel: +33 1 4081 2388 Fax: +33 1 4081 6888 E-mail: <u>francois.gerard@developpement-</u> <u>durable.gouv.fr</u>

Alternate

Mme Inès DE SOUZA LUMMAUX Délégation de France auprès de l'UNESCO 1, rue Miollis, 75732 Paris Cedex 15 Tel: +33 1 4568 3503 E-mail: <u>dl.france@unesco.org</u>

Representatives

Mme Frederique MARTINI Chef, Bureau des Risques Météorologiques Direction Générale de la prévention des Risques Arche Nord, 92055 La Defense Cedex Tel: +33 1 4081 8858 Fax: + 33 1 4081 8983 E-mail: <u>frederique.martini@developpement-</u> durable.gouv.fr

Mme Stephanie BELNA Ministère de l'Écologie, de l'Énergie, du Développement durable et de la Mer (MEEDDM) 246, <u>blvd. St. Germain</u>, 75006 Paris

Mr Gilles BESSERO Directeur Général Service Hydrographique et Océanographique de la Marine (SHOM) 2, av. Pasteur, 94160 St. Mandé Tel: +33 1 5366 9776 Fax: +33 1 4174 9425 E-mail: gilles.bessero@shom.fr

Mme Claudiane CHEVALIER Institut Français de Recherche pour l'Exploitation de la Mer (IFREMER) 155, rue Jean-Jacques Rousseau 92138 Issy-les-Moulineaux Cedex Tel: +33 1 4648 2182 Fax: +33 1 4648 2188 E-mail: claudiane.chevalier@ifremer.fr

Mr Bernard FRONTERO Commission Nationale Française pour l'UNESCO (CNFU) 57, blvd. des Invalides 75007 Paris Tel: +33 1 5369 3996 Fax: +33 1 5369 3223 E-mail: <u>bernard.frontero@diplomatie.gouv.fr</u>

Mr Elie JARMACHE Secrétariat Général de la Mer (SG-MER) 16, blvd. Raspail 75007 Paris Tel: +33 1 4275 6658 Fax: +33 1 4275 6678 E-mail: <u>elie.jamarche@pm.gouv.fr</u>

Mme Aline KUSTER-MENAGER Ministère de l'Écologie, de l'Énergie, du Développement durable et de la Mer (MEEDDM) 246, blvd. St. Germain 75006 Paris

Mme. Laurence PETITGUILLAUME Ministère de l'Écologie, de l'Énergie, du Développement durable et de la Mer (MEEDDM) 246, blvd. St. Germain 75006 Paris

Mr François SCHINDELE Commissariat à l'Energie Atomique (CEA) B.P. 12 91680 Bruyère Le Châtel Tel: +33 1 6926 5063 Fax: +33 1 6926 7023 E-mail: <u>francois.schindele@cea.fr</u> Mme Gwladys THEUILLON Service Hydrographique et Océanographique de la Marine (SHOM) Direction de la Stratégie, de la Planification et des Relations Extérieures 2, av. Pasteur 94160 St. Mandé Tel: +33 1 5366 9781 Fax: +33 1 4174 9424 E-mail: gwladys.theuillon@shom.fr

Germany/Allemagne/Alemania

Head of Delegation

Ms Monika BREUCH-MORITZ President, Federal Maritime and Hydrographic Agency (BSH) Bernhard-Nocht-Str. 78 20359 Hamburg Tel: +49 40 3190 1000 Fax: +49 40 3190 1004 E-mail: monika.breuch-moritz@bsh.de

Alternate

Dr Anna von GYLDENFELDT Federal Maritime and Hydrographic Agency (BSH) Bernhard-Nocht-Str. 78 20359 Hamburg Tel: +49 40 3190 3111 Fax: +49 40 3190 5032 E-mail: anna.gyldenfeldt@bsh.de

Representatives

Mr Reinhold OLLIG Ministerialrat, Bundesministerium für Bildung und Forschung Heinemannstr. 2 53175 Bonn Tel: +49 228 9957 3469 Fax: +49 228 9957 83469 E-mail: <u>reinhold.ollig@bmbf.bund.de</u>

Dr Ulrich WOLF Bundesministerium für Bildung und Forschung Heinemannstr. 2 53175 Bonn Tel: +49 228 9957 3594 Fax: +49 228 9957 83594 E-mail: <u>ulrich.wolf@bmbf.bund.de</u>

Ms Gudrun ROSENHAGEN Deutscher Wetterdienst (DWD) Bernhard-Nocht-Str. 76 20359 Hamburg Tel: +49 40 6690 1850 Fax: +49 40 6690 1952 E-mail: <u>gudrun.rosenhagen@dwd.de</u> Ms Jana RICHTER Permanent Delegate German Embassy 13/15, av. Franklin D. Roosevelt 75008 Paris, FRANCE Tel: +33 1 5383 4629 Fax: +33 1 5383 4667 E-mail: janarichter82@gmail.com

Ghana/Ghana/Ghana

Head of Delegation

Mr Ayaa K. ARMAH University of Ghana Dept. of Oceanography & Fisheries P.O. Box LG 99, Legon Tel: +233 21 514 614 Fax: +233 24 477 1707 E-mail: <u>akarmah@yahoo.com</u>

Greece/Grèce/Grecia

Head of Delegation

Dr Evangelos PAPATHANASIOU Director of Research Hellenic Centre for Marine Research 46,7 km Athens–Sounio, Mavro Lithari P.O. Box 712, 19013 Anavissos, Attica Tel: +30 22 9107 6381 Fax: +30 22 9107 6347 E-mail: vpapath@ath.hcmr.gr

Representatives

Dr Aristomenis P. KARAGEORGIS Research Director, Geologist-Oceanographer Hellenic Centre for Marine Research Institute of Oceanography Ministry of Development General Secretariat for Research & Technology 46.7-km, Athens–Sounio, Marvo Lithari P.O. Box 712, 119013 Anavissos, Attica Tel: +30 22 9107 6369 Fax: +30 22 9107 6347 E-mail: ak@ath.hcmr.gr

Mrs Eleni LEIVADITOU Deputy Permanent Delegate Permanent Delegation of Greece to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 3013 Fax: + 33 1 4306 0030 E-mail: e.leivaditou.gr@unesco-delegations.org

Mrs. Maria LEVANTI Counsellor, Permanent Delegation of Greece to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 2985 Fax: + 33 1 4306 0030 E-mail: <u>m.levanti.gr@unesco-delegations.org</u> Mr Aris LEFAKIS Intern, Permanent Delegation of Greece to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 2982 Fax: +33 1 4306 0030 E-mail: lefakisaris@hotmail.com

Ms Despoina BITZIOU Intern, Permanent Delegation of Greece to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 2982 Fax: +33 1 4306 0030 E-mail: despoinabitziou@hotmail.com

India/Inde/India

Head of Delegation

Dr Shailesh NAYAK Secretary, Ministry of Earth Sciences Govt. of India CGO Complex, Block 12, Lodhi Rd. New Delhi 110003 Tel: +91 11 2436 0874/2436 2548 Fax: +91 11 2436 2644/2432 0336 E-mail: secretary@moes.gov.in

Alternate

Mr B. S. YADAV Counsellor, Permanent Delegation of India to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 2960 E-mail: <u>b.yadar.in@unesco-delegations.org</u>

Representatives

Dr Satheesh Chandra SHENOI Director, Indian National Centre for Ocean Information Services (INCOIS) 500055 Hyderabad Tel: +91 40 2389 5000 Fax: +91 40 2389 5001 E-mail: <u>shenoi@incois.gov.in</u>

Dr K. SOMASUNDAR Director, Ministry of Earth Sciences Govt. of India Mahasagar Bhawan, Block 12, Lodhi Rd. New Delhi 10003 Tel: +91 11 2430 6831 Fax: +91 11 2436 0336 E-mail: somadod@gmail.com

H.E. Mr Tresna Dermawan KUNAEFI Ambassador & Permanent Delegate Permanent Delegation of the Republic of Indonesia to UNESCO 1 rue Miollis, 75732 Paris Cedex 15, FRANCE Tel: +33 1 4568 2972 Fax: +33 1 4566 0237 E-mail: <u>dl.indonesia@unesco-delegations.org</u>

Japan/Japon/Japón

Head of Delegation

Dr Toshio YAMAGATA Dean, School of Science, University of Tokyo Chairman, National Committee for IOC 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033 Tel: +81 3 5841 4297 Fax: +81 3 5841 8791 E-mail: yamagata@eps.s.u-tokyo.ac.jp

Alternate

Prof. Yutaka MICHIDA University of Tokyo Member of National Committee for IOC Kashiwanoha 5-1-5, Kashiwa 277-8564 Tel: +81 4 7136 6362 Fax: +81 4 7136 6362 E-mail: <u>ymichida@aori.u-tokyo.ac.jp</u>

Representatives

Prof. Yasuwo FUKUYO University of Tokyo Member of National Committee for IOC 1-1-1, Yayoi, Bunkyo-ku, Tokyo 113-8657 Tel: +81 3 5841 2782 Fax: +81 3 5841 8040 E-mail: <u>ufukuyo@mail.ecc.u-tokyo.ac.jp</u>

Dr Kazuhiro KITAZAWA Advisor to the Director, Planning Dept. Japan Agency for Marine-Earth Science & Technology (JAMSTEC) 2-15 Natsushima-cho, Yokosuka 237-0061 Tel: +81 46 867 9191 Fax: +81 46 867 9195 E-mail: <u>kitazawa@jamstec.go.jp</u>

Dr Takeshi KAWANO Program Director, Ocean Climate Change Research Program Research Institute for Global Change Japan Agency for Marine-Earth Sciences & Technology (JAMSTEC) 2-15 Natsushima-cho, Yokosuka Kanagawa 237-0061 Tel: +81 46 867 9471 Fax: +81 46 867 9455 E-mail: kawanot@jamstec.go.jp Mr Yoshiaki KANNO Senior Scientific Officer Marine Division, Japan Meteorological Agency 1-3-4, Ote-machi, Chiyoda-ku, Tokyo 100-8122 Tel: +81 3 3212 8341, Ext. 5123 Fax: +81 3 3211 3047 E-mail: <u>ykanno@met.kishou.go.jp</u>

Mr Takeshi KOIZUMI Senior Coordinator for International Earthquake & Tsunami Information Japan Meteorological Agency 1-3-4, Ote-machi, Chiyoda-ku, Tokyo 100-8122 Tel: +81 3 3212 8341, Ext. 4552 Fax: +81 3 3215 2963 E-mail: t-koizumi@met.kishou.go.jp

Mr Tetsuhito MINAMI Senior Specialist for Cooperation with UNESCO Ministry of Education, Culture, Sports, Science & Technology 3-2-2, Kasumigaseki, Chiyoda-ku Tokyo 100-8959 Tel: +81 3 6734 2585 Fax: +81 3 6734 3679 E-mail: <u>tminami@mext.go.jp</u>

Mr Osamu MIYAKI Japan Agency for Marine-Earth Science & Technology (JAMSTEC) 2-15 Natsushima-cho, Yokosuka Kanagawa 237-0061 Tel: +81 46 867 9228 Fax: +81 46 867 9195 E-mail: <u>miyakio@jamstec.go.jp</u>

H.E. Mr Tadamichi YAMAMOTO Ambassador Extraordinary & Plenipotentiary Permanent Delegation of Japan to UNESCO 100, av. de Suffren, 75015 Paris, FRANCE Tel: +33 1 5359 2700 Fax: +33 1 5359 2727 E-mail:

Ms Sonoko WATANABE Minister-Counsellor Permanent Delegation of Japan to UNESCO 100, av. de Suffren, 75015 Paris, FRANCE Tel: +33 1 5359 2700 Fax: +33 1 5359 2727 E-mail: <u>s.watanabe.jp@unesco-delegations.org</u>

Ms Suzuka SAKASHITA First Secretary Permanent Delegation of Japan to UNESCO 100, av. de Suffren, 75015 Paris, FRANCE Tel: +33 1 5359 2716 Fax: +33 1 5359 2727 E-mail: <u>s.sakashita.jp@unesco-delegations.org</u> Prof. Koji INOUE Associate Professor University of Tokyo Kashiwanoha 5-1-5, Kashiwa, Chiba 277-8564 Tel: +81 4 7136 6212 Fax: +81 4 7136 6039 E-mail; inouek@aori.u-tokyo.ac.jp

Kenya/Kenya/Kenya

Head of Delegation

Mr Johnson KAZUNGU Executive Director Kenya Marine & Fisheries Research Institute P.O. Box 81651, Code 80100, Mombasa Tel: +254 11 475 151/7 Fax: +254 11 475 157 E-mail: <u>jkazungu@kmfri.co.ke</u>

Alternate

H.E. Ms Mary KHIMULU Ambassador & Permanent Delegate Permanent Delegation of Kenya to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 3281 Fax: + 33 1 4568 3283 E-mail: <u>m.khimulu.ke@unesco-delegations.org</u>

Representatives

Mr Boniface W. WANYAMA Deputy Secretary-General (Natural Science) Kenya National Commission for UNESCO 14th Floor, National Bank Building Harambee Av., P.O. Box 72107, 00200 Nairobi Tel: +254 20 229 053/4 Mob: +254 721 434 057 Fax: +254 20 213 025 E-mail: <u>bwwekesa@yahoo.com</u>

Mr John-Paul OLUOCH Senior Research Scientist Permanent Delegation of Kenya to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 3281 Fax: + 33 1 4568 3283 E-mail: j.oluoch.ke@unesco-delegations.org

Madagascar/Madagascar/Madagascar

Head of Delegation

Mr Jean-Jacques RANDRIAFAMANTANANTSOA Conseiller Scientifique Délégation Permanente de Madagascar auprès de l'UNESCO Responsable de la Francophonie 40, rue du General Foy, 75008 Paris, FRANCE Tel: +33 1 4293 3477 Fax: +33 1 4522 2289 E-mail: <u>depemadu@wanadoo.fr</u>

Representative

Mr Ny Toky ANDRIAMANJATO Délégation Permanente de Madagascar auprès de l'UNESCO Responsable de la Francophonie 40, rue du General Foy 75008 Paris, FRANCE Tel: +33 1 4293 3477 Fax: +33 1 4522 2289 E-mail: depemadu@wanadoo.fr

Malaysia/Malaisie/Malasia

Head of Delegation

Prof. Dr Nor Aieni Binti HAJI MOKHTAR Under Secretary/Director National Oceanography Directorate Ministry of Science, Technology & Innovation Level 6, Block C4, Complex C Federal Govt. Administrative Centre 62662 Putrajaya Tel: +603 8885 8201 Fax: +603 8889 3008 E-mail: noraieni@mosti.gov.my

Alternate

Mr Mohamed Zaini Bin ABDUL RAHMAN Science Attaché Permanent Delegation of Malaysia to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 3522 Fax: +33 1 4273 3352 Email: <u>mz.abdul-rahman.my@unesco-</u> <u>delegations.org</u>

Mauritius/Maurice/Mauricio

Head of Delegation

Dr Mitrasen BHIKAJEE Director, Mauritius Oceanography Institute 4th Floor, France Centre, Victoria Av. Quatre Bornes Tel: +230 427 4432 Fax: +230 427 4433 E-mail: director@moi.intnet.mu

Mexico/Mexique/México

Head of Delegation

H.E. Mr Carlos DE ICAZA Ambassador & Permanent Delegate Permanent Delegation of Mexico to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 3355 Fax: +33 1 9734 9245 E-mail: dl.mexique@unesco-delegations.org

Alternate

Mr Francisco BRIZUELA-VENEGAS Director-General Dirección General de Educación en Ciencia y Tecnologiá del Mar – SEP-SEMS Viaducto Miguel Alemán 806 México, D.F. 03810 Tel/Fax: +52 55 3601 8501 E-mail: fbrizuela_venegas@yahoo.com.mex

Representative

Ms Cecilia VILLANUEVA BRACHO Déléguée Permanente Adjointe Delegación Permanente de México ante la UNESCO 1, rue Miollis, 75015 Paris, France Tel: +33 1 4568 3487 Fax: +33 1 4734 9245 E-mail: <u>c.villanueva-bracho.mx@unescodelegations.org</u>

Advisor

Mr Ismael MADRIGAL-MONNAREZ Responsable del Sector de Ciencas Delegación Permanente de México ante la UNESCO 1, rue Miollis, 75015 Paris, France Tel: +33 1 4568 3487 Fax: +33 1 4734 9245 E-mail: <u>i.madrigal-monarrez.mx@unescodelegations.org</u>

Peru/Pérou/Perú

Head of Delegation

Mr Javier GAVIOLA Director of Hydrography & Navigation Avenida Gamarra 500, Chucuito–Callao Lima 80 Tel: +51 1 465 8312 Fax: +51 1 4613 6744 E-mail: jgaviola@dhn.mil.pe

Alternate

Mr Alfredo PICASSO de OYAGÜE Technical & Scientific Attaché Permanent Delegation of Peru to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4527 6342 Fax: +33 1 4568 2920 E-mail: al.picasso@orange.fr

Representative

Mr Mario BUSTAMANTE Counsellor, Permanent Delegation of Peru to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 2931 Fax: +33 1 4568 2920 E-mail: <u>m.bustamante.pe@unesco-delegations.org</u>

Portugal

Head of Delegation

Prof. Mario RUIVO Chairman, Portuguese Committee for IOC Av. Infante Santo 42/4th Floor Lisbon 1350 Tel: 351 21 390 4330 Fax: 351 21 395 2212 E-mail: <u>cointersec.presid@fct.mces.pt</u>

Alternate

Mr Pedro Sousa ABREU Deputy Permanent Delegate Permanent Delegation of Portugal to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: 33 1 4568 0000 E-mail: p.sousa-abreu.pt@unesco-delegations.org

Representatives

Mr Frederico NASCIMENTO Head, Division of Multilateral Affairs Ministry of Foreign Affairs Largo de Rivas N° 1 Lison 1350 Tel: +351 9 6441 2561 E-mail: frederico.nascimento@mme.pt

Ms Teresa SALADO Attachée Permanent Delegation of Portugal to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 45 68 30 54 E-mail: <u>t.salado.pt@unesco-delegations.org</u>

Republic of Korea/République de Corée/República de Corea

Head of Delegation

Dr Jang-Won SEO Director, Marine Meteorology Division Observation Infrastructure Bureau Korea Meteorological Administration 45 Gisangcheong-gil, Dongjak-gu Seoul 156-720 Tel: +82 2 2181 0742 Fax: +82 2 2181 0749 E-mail: jwseo@kma.go.kr

Alternate

H.E. Mr Ki-Won JANG Ambassador & Permanent Delegate Permanent Delegation of the Republic of Korea to UNESCO 33, av. du Maine, Paris 75015, FRANCE Tel: +33 1 4410 2400 Fax: +33 1 4335 3824 E-mail: <u>a.manescu.ke@unesco-delegations.org</u>

Representatives

Dr Sang-Kyung BYUN Principal Research Scientist Dept. of Climate Change & Coastal Disaster Korea Ocean Research & Development Institute 1270 Sadong, Ansan 426 744 Tel: +82 31 400 6127 Fax: +81 31 408 5829 E-mail: <u>skbyun@kordi.re.kr</u> (*Also IOC Vice-Chairperson*)

Ms Jeonghee JEONG Marine Territory & Development Division Ministry of Land, Transport & Maritime Affairs 88, Gwanmum-ro, Gwacheon-city 427 712 Tel: +82 2 2110 8458 Fax: +82 2 502 0341 E-mail: <u>ellisa@korea.kr</u>

Mr Hyun-Young KIM Deputy-Director Center for International Cooperative Programs Korea Ocean Research & Development Institute 1270 Sadong, Ansan 426 744 Tel: +82 31 400 7750 Fax: +82 31 401 6925 E-mail: <u>hykim@kordi.re.kr</u>

Mr Ok-Soo KIM Director, Oceanographic Division Korea Hydrographic & Oceanographic Administration, MLTM 195, Seohae-ro Jung-gu, Incheon 400-800 Tel: +82 32 880 0404 Fax: +82 32 885 3905 E-mail: oksookim@korea.kr

Dr Joon-Yong YANG Researcher, National Fisheries Research & Development Institute 152-1, Haean-ro, Gijang-eup Gijang-gun, Busan 619-705 Tel: +82 51 720 2231 Fax: +82 51 720 2225 E-mail: <u>yangjy@nfradi.re.kr</u>

Ms Mi Hye LEE Researcher, Center for International Cooperative Programs Korea Ocean Research & Development Institute 1270 Sadong, Ansan 426 744 Tel: +82 31 400 7751 Fax: +82 31 401 6925 E-mail: <u>mhlee@kordi.re.kr</u>

Russian Federation/Fédération de Russie/Federación de Rusia

Head of Delegation

Dr Alexander V. FROLOV Head, Federal Service for Hydrometeorology & Environmental Monitoring (ROSHYDROMET) 12 Novovagan'kovsky St., 123995 Moscow Tel: +7 495 252 0313 Fax: +7 495 795 2269 E-mail: afrolov@mecom.ru

Representatives

Dr Victor A. AKULICHEV Director, V.I.II'chev Pacific Oceanological Institute Far Eastern Branch Russian Academy of Sciences 43, Baltiyskaya St., 690041 Vladivostok Tel: +7 4232 311 400 Fax: +7 4232 312 573 E-mail: <u>akulich@poi.dvo.ru</u>

Mr Mikhail KOVTUNENKO Senior Specialist Russian Federal Service for Hydrometeorology & Environmental Monitoring 12, Novovagan'kovskiy Lane, 123995 Moscow Tel: +7 495 252 0808 Fax: +7 495 255 2269 E-mail: afrolov@mecom.ru

Dr Nicolai N. MIKHAILOV Head, Oceanographic Data Centre Russian Federal Service for Hydrometeorology & Environmental Monitoring All-Russia Research Institute of Hydrometeorological Information – WDC 6, Korolev St., Obninsk, Kaluga Region 249020 Tel: +7 08439 74907 Fax: +7 095 255 2225 E-mail: <u>nodc@meteo.ru</u> (*Also IOC Vice-Chairperson*)

Dr Alexander A. POSTNOV Deputy-Director State Oceanographic Institute Russian Federal Service for Hydrometeorology & Environmental Monitoring 6, Kropotkinskiy Lane, 119034 Moscow Tel: +7 495 246 7288 Fax: +7 495 246 7288 E-mail: <u>a_postnov@mail.ru</u>

Dr Sergey M. SHAPOVALOV Head, Center for Coordination of Ocean Research P.P. Shirshov Institute of Oceanology Russian Academy of Sciences 36, Nakhimovsky Ave., 117997 Moscow Tel: +7 495 124 5981 Fax: +7 495 124 5983 E-mail: <u>smshap@sio.rssi.ru</u>

Dr Vitaly I. SYCHEV Chief, Dept. of Telecommunications Russian State Hydrometeorological University 98, Malokhtinsky Ave., 195196 St. Petersburg Tel: +7 812 444 6090 Fax: +7 812 224 3060 E-mail: vsychev@bk.ru

Senegal/Sénégal/Senegal

Head of Delegation

Mr Macodou SENE Directeur de la Gestion et de l'Exploitation des Fonds Marins 10,5 Boulevard du Centenaire de la Commune de Dakar, 4050 Tel: +221 33 853 0798 Fax: +221 33 853 0799 E-mail: ngarysene@yahoo.fr

Alternate

Mr Mouhamed KONATE Deuxième Conseiller Délégation Permanente du Sénégal auprès de l'UNESCO 1, rue Miollis, 75732 Paris Cedex 15, FRANCE Tel: +33 1 4568 3389 Fax: +33 1 4306 1055 E-mail: <u>m.konate@unesco.org</u>

Representative

Ms Arame G. N'Diaye KEITA Ministère de l'Economie Maritime Direction des Pêches 1, rue Joies, B.P. 289, Dakar Tel: +221 338 230 137 Fax: +221 338 214 758 E-mail: <u>a.keita@odinafrica.net</u>

South Africa/Afrique du Sud/Africa del Sur

Head of Delegation

Mr Ashley JOHNSON Director Ocean Research Dept. of Water & Environmental Affairs Fore Trust, M. Hamerschlagt Way Cape Town 8001 Tel: +27 21 402 3306 Fax: +27 21 425 6976 E-mail: ajohnson@deat.gov.za

Representative

Mr Mthuthuzeli K. GULEKANA Marine Scientist Environment, Environmental Affairs Private Bag X2, Rogge Bay Cape Town, 8012 Tel: +27 21 402 3136 Fax: +27 21 425 6975 E-mail: mgulekana@deat.gov.za

Spain/Espagne/España

Head of Delegation

Dr Demetrio DE ARMAS Director, Centro Oceanográfico de Canarias Instituto Español de Oceanografía (IEO) Av. Tres de Mayo 73, Edf. Sanahuja 38005 Santa Cruz de Tenerife Islas Canarias Tel: +34 92 254 9400 Fax: +34 92 254 9554 E-mail: dearmas@ca.ieo.es

Representative

Mr Gregorio PARRILLA BARRERA Jefe Área de Medio Marino y Protección Ambiental Instituto Español de Oceanografía (IEO) Avenida de Brasil 31, Madrid 28020 Tel: +34 91 347 3600 Fax: +34 91 413 5597 E-mail: gregorio.parrilla@md.ieo.es

Sri Lanka

Head of Delegation

Mr George COOKE Deputy Permanente Delegate Permanent Delegation of Sri Lanka to UNESCO 1, rue Miollis, Paris 75015, FRANCE Tel: +33 1 4568 3040 E-mail: dl-sri.lanka@unesco-delegations.org

Sweden/Suède/Suecia

Head of Delegation

Mr Stig CARLBERG Senior Oceanographer Swedish Meteorological & Hydrological Institute Sven Kallfelts gata 15 Vastra Frolunda SE-426 71 Tel: +46 31 751 8976 Fax: +46 31 751 8980 E-mail: stig.carlberg@smhi.se

Alternate

Mr Hans DAHLIN Director, European Global Ocean Observing System (EuroGOOS) Swedish Meteorological & Hydrological Institute SE-601 76 Norrköping Tel: +46 11 495 8305 Fax: +46 11 495 8001 E-mail: <u>hans.dahlin@smhi.se</u> (Also representing EuroGOOS)

Representative

Mr Patrick GORRINGE Oceanographer, Swedish Meteorological & Hydrological Institute (SMHI) Folkborgsvägen 1, SE-601 76 Norrköping Tel: +46 11 495 8047 Fax: +46 11 495 8001 E-mail: <u>patrick.gorringe@utas.edu.au</u> (Also representing EuroGOOS)

Thailand/Thailande/Tailandia

Head of Delegation

Dr Cherdchinda CHOTIYAPUTTA Marine Resources Management Specialist Dept. of Marine & Coastal Resources Govt. Complex, 5th Floor, Building B Cheangwattana Rd., Laksi Bangkok 10210 Tel: +66 2 141 1241 Fax: +66 2 143 9240 E-mail: cherdchc@dmcr.go.th

Alternate

Dr Somkiat KHOKIATTIWONG Senior Marine Biologist Phuket Marine Biological Centre Dept. of Marine & Coastal Resources P.O. Box 60, Phuket 83000 Tel: +66 76 391 128/040 Fax: +66 76 391 127 E-mail: skokiattiwong@gmail.com

Representative

Ms Narumol KORNKANITNAN Dept. of Marine & Coastal Resources Marine & Coastal Resources Research Centre (Samutsakhon) 120/1 Bangyaphrak, Muang, Samutsakhon 74000 Tel: +66 34 497 074 Fax: +66 34 497 073 E-mail: triggerfish007@yahoo.com

Ms Suhataj PRAISANKUL Marine Biologist Dept. of Marine & Coastal Resources Marine & Coastal Resources Research Centre (Samutsakhon) 120/1 Bangyaphrak, Muang, Samutsakhon 74000 Tel: +66 34 497 074 Fax: +66 34 497 073 E-mail: <u>zuchanz@gmail.com</u>

Ms Saowalak WINYOONUNTAKUL Foreign Relations Officer Dept. of Marine & Coastal Resources Marine & Coastal Resources Research Centre (Samutsakhon) 120/1 Bangyaphrak, Muang, Samutsakhon 74000 Tel: +66 34 497 074 Fax: +66 34 497 073 E-mail: saowiny@yahoo.com

Tunisia/Tunisie/Túnez

Head of Delegation

Prof. Chérif SAMMARI Chef, Laboratoire du Milieu Marin Institut National des Sciences et Technologies de la Mer (INSTM) 28, rue 2 mars 1934 2025 Salammbô Tel: +216 71 730 420/71 277 735 Fax: +216 71 732 622 E-mail: <u>cherif.sammari@instm.rnrt.tn</u> (Also IOC Vice-Chairperson)

Turkey/Turquie/Turquía

Head of Delegation

Mr Mustafa IPTES Director Office of Navigation, Hydrography & Oceanography 34805 Çubuklu Tel: +90 216 537 8926 Fax: +90 216 331 0525 E-mail: <u>director@shodb.gov.tr</u>

Representatives

Mr Mehmet Akif OZDEMIR First Secretary Permanent Delegation of Turkey to UNESCO 1, rue Miollis, 75015 Paris, France Tel: +33 1 4568 2719/55 Fax: +33 1 4056 0413 E-mail: dl.turquie@@unesco-delegations.org

Dr Erhan GEZGIN Chief of Oceanography Dept. Office of Navigation, Hydrography & Oceanography 34805 Çubuklu Tel: +90 216 322 2580, Ext. 3300 Fax: +90 216 331 0525 E-mail: <u>egezgin@shodb.gov.tr</u>

Dr Dilek EDIGER Senior Researcher Tubitak, Marmara Research Centre Gebze/Kocaeli 41470 Tel: +90 262 677 2975 Fax: +90 262 641 2309 E-mail: <u>dilek.ediger@mam.gov.tr</u>

Prof. Selim BURAK Head, Marine Environmental Sciences Istanbul University Institute of Maritime Sciences & Management Muskule Sok, No. 1 Vefa, Istanbul 34116 Tel: +90 212 440 0000, Ext. 2608 Fax: +90 212 526 8433 E-mail: sburak@istanbul.edu.tr

Ukraine/Ukraine/Ucrania

Head of Delegation

Prof. Valery EREMEEV Director General, Oceanological Centre National Academy of Sciences 2, Kapitanska St., Sevastopol 99011 Tel: +380 692 544 110 Fax: +380 692 557 813 E-mail: <u>director@ibss.iuf.net</u>

United Kingdom of Great Britain & Northern Ireland/Royaume-Uni de Grande Bretagne et d'Irlande du Nord/Reino Unido de Gran Bretaña e Irlanda del Norte

Head of Delegation

Mr Trevor GUYMER Head, UK IOC Office National Oceanography Centre European Way, Southampton SO14 3ZH Tel: +44 23 8059 6611 Fax: +44 23 8059 6204 E-mail: thg@noc.soton.ac.uk

Alternate

Mr David PALMER National Oceanography Centre Old Orchard, The Street, Ubley Bristol BS40 6PJ Tel: +44 1761 462 449 E-mail: <u>davepalmer_x@yahoo.co.uk</u>

Representatives

Mr Roland ROGERS National Oceanography Centre Southampton SO14 3ZH Tel: +44 23 8059 6314 Fax: +44 23 8059 6204 E-mail: rxr@noc.soton.ac.uk Dr David MELDRUM Scottish Association for Marine Science Scottish Marine Institute Oban,Scotland PA37 1QA Tel: +44 1631 559 000 Fax: +44 1631 559 001 E-mail: <u>david.meldrum@sams.ac.uk</u>

Dr Phil WILLIAMSON University of East Anglia School of Environmental Sciences Norwich, Norfolk NR4 7TS Tel: +44 1603 593 111 Fax: +44 23 8059 6204 E-mail: p.williamson@uea.ac.uk

Mr Russell ARTHURTON National Oceanography Centre c/o 5A, Church Lane, Grimston Melton Mowbray LE14 3BY Tel: +44 1664 810 024 Fax: +44 23 8059 6204 E-mail: <u>r.arthurton@talktalk.net</u>

Ms Anne BRAZIER National Oceanography Centre European Way, Southampton Hampshire SO14 3ZH Tel: +44 23 8059 6789 Fax: +44 23 8059 6204 E-mail: <u>abb@noc.soton.ac.uk</u>

Prof. David T. PUGH Marine Science Advisor 3, Deeside Court, Dee Hills Park Chester CH3 5AU Tel: +44 1244 394 454 E-mail: <u>d.pugh@mac.com</u> (Past IOC Chairperson)

Mr Desmond SCOTT National Oceanography Centre European Way, Southampton Hampshire SO14 3ZH Tel: +44 1243 785 705 Fax: +44 23 8059 6204 E-mail: <u>desmondscott2009@hotmail.com</u> (Past IOC Executive Secretary)

United States of America/Etats-Unis d'Amérique/Estados Unidos de América

Head of Delegation

Dr Edward (Ned) CYR Director, Office of Science & Technology NOAA, National Marine Fisheries Service 1315, East-West Highway Silver Spring, Maryland 20910 Tel: +1 301 713 2367 Fax: +1 301 713 1875 E-mail: ned.cyr@noaa.gov

Alternate

Dr Gustavo BISBAL Foreign Affairs Officer, US Dept. of State 2201 C St. NW, HST 2665 Washington D.C. 20520 Tel: +1 202 647 6927 Fax: +1 202 647 1106 E-mail: <u>bisbalga@state.gov</u>

Advisors

H.E. Mr David T. KILLION Ambassador & Permanent Delegate Permanent Delegation of the USA to UNESCO (USUNESCO) 18, av. Gabriel, 75008 Paris, FRANCE Tel: +33 1 4524 7456 Fax: +33 1 4524 7458 E-mail: <u>ParisUNESCO@state.gov</u>

Mr Stephen C. ENGELKEN Deputy Permanent Delegate Permanent Delegation of the USA to UNESCO (USUNESCO) 18, av. Gabriel, 75008 Paris, FRANCE Tel: +33 1 4524 7456 Fax: +33 1 4524 7458 E-mail: <u>ParisUNESCO@state.gov</u>

Mr Mark FORNWALL Director, Center for Biological Informatics, USGS OBIS-USA NODE Manager 310, Kaalthmanu Av., Kahului, Hawaii 96732 Tel: +1 808 984 3724 Fax: +1 808 242 1128 E-mail: mark.fornwall@usgs.gov

Mr Arthur PATERSON Deputy-Director International Program Office NOAA/National Ocean Service 1315, East-West Highway Silver Spring, Maryland 20910 Tel: +1 301 713 3078, Ext. 217 Fax: +1 301 713 4263 E-mail: arthur.e.paterson@noaa.gov

Dr Stephen PIOTROWICZ Oceanographer, NOAA/Office of Oceanic & Atmospheric Research 1100 Wayne Ave., Suite 1202 Silver Spring, Maryland 20910 Tel: +1 301 427 2493 Fax: +1 301 427 0033 E-mail: <u>steve.piotrowicz@noaa.gov</u>

Representatives

Dr Susan AVERY President and Director Woods Hole Oceanographic Institution MS # 40A, Woods Hole, MA 02543 Tel: +1 508 289 2500 Fax: +1 508 457 2190 E-mail: <u>savery@whoi.edu</u>

Dr Terry SCHAEFER Program Analyst NOAA/Office of Oceanic & Atmospheric Research 1315, East-West Highway, Room 11359 Silver Spring, Maryland 20910 Tel: +1 301 734 1187 Fax: +1 301 713 1459 E-mail: terry.schaefer@noaa.gov

Dr Andrew CLARK President, CSnet International P.O. 651369, Vero Beach Florida 32965 Tel: +1 321 505 3000 Fax: +1 888 868 7915 E-mail: aclark@csnetintl.com

Dr Jerry MILLER Senior Policy Expert White House Office of Science & Technology Policy 725, 17th St., NW, Washington D.C. 20502 Tel: +1 202 456 6137 Fax: +1 202 456 6027 E-mail: jmiller@ostp.eop.gov

Venezuela (Bolivarian Republic of)/Venezuela (République bolivarienne de)/Venezuela (República Bolivariana de)

Head of Delegation

CDr Edgar MARQUEZ Venezuelan Navy Huelle Naval Puerto La Guaira La Guaira, Estado Vargas AP 1060 Tel: +58 212 332 3278 E-mail: <u>emarquezbolivar@gmail.com</u>

Representatives

CDr Luis PIBERNAT Head of National Oceanographic Data Center Venezuela Navy – Hydrographic & Navigation Service Av. Orinoco, Red Marte Alegre Apto 63 Bello Monte, Caracas, Distrito Capital 1050 Tel: +58 212 952 0138 Fax: +58 212 481 8666 E-mail: <u>luispibernat@gmail.com</u>

H.E. Mrs. Rebeca SANCHEZ-BELLO Ambassador & Permanent Delegate Permanent Delegation of Venezuela to UNESCO 1, rue Miollis, Paris 75015, France Tel: +33 1 4568 2532 Fax: +33 1 4734 2893 E-mail: venezuela.dl2@unesco.org

Mr Ivan AVILA BELLOSO Minister Advisor Permanent Delegation of Venezuela to UNESCO 1, rue Miollis, Paris 75015, France Tel: +33 1 4568 2532 Fax: +33 1 4734 2893 E-mail: venezuela.dl2@unesco.org

Dr Antonio QUINTERO RAMIREZ Oceanographic Institute of Venezuela Av. Universidad, Cerro Colorado 245 Cumaná Estado Sucre Tel: + 58 293 452 0308 Fax: +58 293 400 2240 E-mail: aquintero@sucre.udo.edu.ve

III. OBSERVERS FROM NON-MEMBER STATES OF THE IOC EXECUTIVE COUNCIL/ OBSERVATEURS D'ETATS NON-MEMBRES DU CONSEIL EXECUTIF DE LA COI/ OBSERVADORES DE PAISES NO MIEMBROS DEL CONSEJO EJECUTIVO DE LA COI

Afghanistan/Afghanistan/Afganistán

Head of Delegation

H.E. Mr Mohammed Kacem FAZELLY Ambassador & Permanent Delegate Permament Delegation of Afghanistan to UNESCO 1, rue Miollis, 75015 Paris FRANCE Tel: +33 1 4568 2773 Fax: +33 1 4568 2772 E-mail: dl.afghanistan@unesco-delegations.org

Algeria/Algérie/Argelia

Head of Delegation

Mr Mokhtar ATTAR Délégation Permanente d'Algérie auprès de l'UNESCO 1 rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 3004 Cell: +33 6 2663 5821 Fax: +33 1 4219 0956 E-mail: <u>dl.algerie@unesco.org</u>

Benin/Bénin/Benín

Head of Delegation

Ms Françoise MEDEGAN First Advisor, Permanent Delegation of Benin to UNESCO 1 rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 3085 Fax: +33 1 4306 1555 E-mail: <u>f.medegan.bj@unesco-delegations.org</u>

Representative

Ms Marguerite YALLOU Advisor, Permanent Delegation of Benin to UNESCO 1 rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 3089 Fax: +33 1 4306 1555 E-mail: dm.yallou.bj@unesco-delegations.org

Costa Rica/Costa Rica/Costa Rica

Head of Delegation

Ms Montserrat VARGAS Advisor, Permanent Delegation of Costa Rica ro UNESCO 1, rue Miollis, Pari s75015, FRANCE Tel: +33 1 4568 2572 Fax: + 33 1 4568 2574 E-mail: <u>dl.costa-rica@delegations.org</u>

Cyprus/Chypre/Chipre

Head of Delegation

Ms Photini PANAYI Deputy Permanent Delegate Permanent Delegation of the Republic of Cyprus to UNESCO 1, rue Miollis, 75015 Paris FRANCE Tel: +33 1 4568 3464 Fax: +33 1 4568 3467 E-mail: p.panayi.cy@unesco-delegations.org

Alternate

Ms Marina DIMITRIAN Permanent Delegation of the Republic of Cyprus to UNESCO 1, rue Miollis, 75015 Paris FRANCE Tel: +33 1 4568 3464 Fax: +33 1 4568 3467 E-mail: m.dimitrian.cy@unesco-delegations.org

Czech Republic/République Tchèque/ República Checa

Head of Delegation

Prof. Dr Bohumir JABSKY President of the National Committee of IOC Charles University Albertor 6, 12843 Prague Tel: +420 60 782 5434 Fax: +420 22 195 1367 E-mail: jansky.b@seznam.cz

Denmark/Danemark/Dinamarca

Head of Delegation

Mr Erik BUCH Director, Centre for Ocean & Ice Danish Meteorological Institute (DMI) Ministry of Climate & Energy Lyngbyvej 100 Copenhagen 2100 Tel: +45 3915 7500 Fax: +43 3915 7300 E-mail: <u>ebu@dmi.dk</u>

El Salvador/Salvador/El Salvador

Head of Delegation

Ms Nanette VIAUD-DESROCHES Conseillère Déléguée Adjointe Permanent Delegation of El Salvador to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 3419 Fax: +33 1 4734 4186 E-mail: dl.el-salvador@unesco-delegations.org

Finland/Filande/Finlandia

Head of Delegation

Ms Kirsi VANAMO-SANTA CRUZ Deputy Permanent Delegate Permanent Delegation of Finland to UNESCO 1, rue Miollis, 75015 Paris FRANCE Tel: +33 1 4568 3433 Fax: +33 1 4568 1902 E-mail: <u>dl.finland@unesco-delegations.org</u>

Gautemala/

Head of Delegation

H.E. Ms Anaisabel PRERA Ambassador & Permanent Delegate Permanent Delegation of Gautemala to UNESCO 2, rue Villebois-Mareuil, 75017 Paris FRANCE Tel: 33 1 4227 9273 Fax: 33 1 4754 0206 E-mail: gautemala.paris@orange.fr

Alternate

Ms Julissa ANZUETO AGUILAR Counsellor, Permanent Delegation of Gautemala to UNESCO 2, rue Villebois-Mareuil, 75017 Paris FRANCE Tel: +33 1 4227 9273 Fax: +33 1 4754 0206 E-mail: gautemala.paris@orange.fr

Iran, Islamic Republic of/République Islamique d'Iran/Irán, República Islámica del Irán

Head of Delegation

Dr Vahid CHEGINI Director, Iranian National Centre for Oceanography 9, Etemadzadeh St., Fatemi Av. P.O. Box 11155-4781, Tehran Tel: +98 21 6694 4867 Fax: +98 21 6694 4866 E-mail: <u>v_chegini@gmail.com</u>

Italy/Italie/Italia

Head of Delegation

Mr Severo MASTRONARDI Permanent Delegation of Italy to UNESCO 1 rue Miollis 75015 Paris FRANCE Tel: +33 1 4568 3141 E-mail: <u>s.mastronardi@unesco.org</u>

Representatives

Ms Emanuela SALVO Intern, Permanent Delegation of Italy to UNESCO 1, rue Miollis 75015 Paris, FRANCE Tel: +33 1 4568 3114

Ms Vittoria VENTURELLI Intern, Permanent Delegation of Italy to UNESCO 1, rue Miollis 75015 Paris, FRANCE Tel: +33 1 4568 3114 E-mail: v.venturelli.it@unesco-delegations.org

Kuwait/Koweit/Kuwait

Head of Delegation

Dr Muna HUSAIN Senior Marine Specialist Environmental Public Authority Al Surah, P.O. Box 221 Kuwait City 45703 Tel: +965 66 339 456 Fax: +965 252 26543 E-mail: mhusain@epa.org.ku

Representative

Mr Mohammed Al SHATTI Délégué Permanent Adjoint Délégation Permanente du Koweit auprès de l'UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 2668 E-mail: <u>m.alshatti@unesco.org</u>

Monaco/Monaco/Mónaco

Head of Delegation

Mr Michel BOISSON Secretary-General, Scientific Centre of Monaco 7, rue Honair Laband Monaco 98000 Tel: +33 6 0793 5432 E-mail: <u>m.boisson@centresscientifique.mc</u>

Norway/Norvège/Noruega

Head of Delegation

Prof. Peter M. HAUGAN Director, Geophysical Institute University of Bergen Alleghten 70 5007 Bergen Tel: +47 5558 2678 Fax: +47 5558 9883 E-mail: <u>peter.haugan@gfi.uib.no</u>

Alternate

Ms Arnihld ARNTSEN Permanent Delegation of Norway to UNESCO 1, rue Miollis 75015 Paris, FRANCE Tel: +33 1 4568 3501 E-mail: <u>a.arntsen.no@unesco-delegations.org</u>

Oman/Oman/Omán

Head of Delegation

Dr Hamed Mohammed AL-GHEILANI Marine Ecology Expert Marine Science & Fisheries Centre Ministry of Fisheries Wealth AlKhwair Ministries St., AlKhwair Muscat 427-100 Tel: +968 9934 0685 Fax: +968 9934 0685 E-mail: asadalaqidah@gmail.com

Panama/Panama/Panamá

Head of Delegation

Mr Arnulfo SANCHEZ MORALES Oceanógrafo, Jefe de la Unidad Ambiental Autoridad Marítima de Panamá Diablo Heights, Panama City 08430533 Tel: +507 501 5197 E-mail: <u>asanchez@amp.gob.pa</u>

Alternate

Mr Jorge PATINO Chargé d'Affaires, a.i. Permanent Delegation of Panama to UNESCO 145, av. du Suffren, Paris 75015, FRANCE Tel: +33 1 4567 9943 E-mail: <u>dl.panama@unesco-delegations.org</u>

Poland/Pologne/Polonia

Head of Delegation

Mr Krzysztof KOCEL Permanent Delegate Permanent Delegation of Poland to UNESCO 1, rue Miollis, 75015 Paris FRANCE Tel: +33 1 4568 2997 Fax: +33 1 4566 5956 E-mail: <u>k.kocel.pl@unesco-delegations.org</u>

Tanzania/République-Unie de Tanzanie/República Unida de Tanzania

Head of Delegation

Mr Mohammed S. SHEYA Minister Plenipotentiary & Deputy Permanent Delegate Permanent Delegation of United Republic of Tanzania to UNESCO 1, rue Miollis, 75015 Paris, FRANCE Tel: +33 1 4568 2731 Fax: +33 1 4566 0914 E-mail: <u>dl.tanzanie@unesco.org</u>

Representative

Dr Margareth S. KYEWALYANGA Director, Institute of Marine Sciences University of Dar-es-Salaam Mizingani Rd., P.O. Box 668, Zanzibar Tel: +255 54 223 2128 Fax: +255 54 223 3050 E-mail: maggie@ims.udsm.ac.tz

Viet Nam/Viet Nam/Viet Nam

Head of Delegation

Mr Tac An NGUYEN Chairman, Vietnam National IOC Committee Institute of Oceanography 01 Cau Da, Nha Trang City Tel: +84 58 359 0035 Fax: +84 58 359 0034 E-mail: nguyentacan45@yahoo.com; dmthu.io@gmail.com

IV. REPRESENTATIVES & OBSERVERS OF ORGANIZATIONS/REPRESENTANTS ET OBSERVATEURS D'ORGANISATIONS/ REPRESENTANTES Y OBSERVADORES DE ORGANIZACIONES

A – ICSPRO Agencies

United Nations Environment Programme/Programme des Nations Unies pour l'environnement/Programa de las Naciones Unidas para el Medio Ambiente (UNEP)

Mr Nelson Andrade COLMENARES Coordinator, Caribbean Environment Programme Regional Coordinating Unit UNEP-CAR/RCU 14-20 Port Royal St., Kingston JAMAICA Tel: +1 876 922 9267/9 Fax: +1 876 922 9292 E-mail: nac@cep.unep.com

World Meteorological Organization/Organisation Météorologique Mondiale/Organización Meteorológica Mundial (WMO)

Mr Edgard CABRERA Chief, Marine Meteorology & Ocean Affairs Division Weather & Disaster Risk Reduction Services Dept. 7bis, av. de la Paix, Case Postale 2300 CH-1211 Genève 2, SWITZERLAND Tel: +41 22 730 8237 Fax: +41 22 730 8128 E-mail: ecabrera@wmo.int

B – Other Intergovernmental Organizations

International Commission for the Scientific Exploration of the Mediterranean Sea/Commission Internationale pour l'Exploration Scientifique de la Mer Mediterranée (CIESM)

Prof. Frederic BRIAND Director-General (CIESM) 16, bd. de Suisse, Monte Carlo 98000 MONACO Tel: +377 9330 3879 Fax: +377 9216 1195 E-mail: <u>fbriand@ciesm.org</u>

International Hydrographic Organization/Organisation hydrographique internationale/Organización Hidrográfica Internacional (IHO)

Mr Hugo GORZIGLIA Director IHO 4, Quai Antoine 1^{er}, B.P. 445, MC 98011 MONACO Cedex Tel: +377 9310 8100 Fax: +377 9310 8140 E-mail: hgorziglia@ihb.mc

Permanent Commission for the South Pacific/Commission permanente du Pacifique Sud/Comisión Permanente del Pacífico Sur (CPPS)

Mr Hector SOLDI Secretary-General CPPS Av. Carlos Julio Arosemena, Km3 Edifício Classic, 2ºPiso, Guayaquil 593-4 ECUADOR Tel: +593 4 222 1202/3 Fax: +593 4 222 1201 E-mail: <u>hsoldi@cpps-int.org</u>

Dr Rodrigo NUNEZ Director, Scientific Affairs CPPS Av. Carlos Julio Arosemena, Km3 Edifício Classic, 2ºPiso, Guayaquil 593-4 ECUADOR Tel: +593 4 222 1202/3 Fax: +593 4 222 1201 E-mail: <u>rnunez@cpps-int.org</u>

North Pacific Marine Science Organization/Organisation des sciences de la mer pour le Pacifique Nord/Organización del Pacífico Norte para las Ciencias del Mar (PICES)

Mr Alexander S. BYCHKOV Executive Secretary PICES c/o Institute pf Ocean Sciences P.O. Box 6000, Sidney, B.C. V8L 4B2 CANADA Tel: + 1 250 363 6364 Fax: + 1 250 363 6827 E-mail: bychkov@pices.int

C – Non-Governmental Organizations

Commission of the History of Oceanography

Mr Selim MORCOS 28204, Kenton Lane Santa Clarita CA 91350 USA Tel/Fax: +1 661 296 1034 E-mail: selimmorx@aol.com

International Council for Science/Conseil International pour la Science/Consejo Internacional para la Ciencia (ICSU)

Mr Carthage SMITH Deputy Executive Director ICSU 5, rue Auguste Vacquerie, 75016 Paris FRANCE Tel: +33 1 4525 0329 Fax: +33 1 4288 9431 E-mail: <u>carthage.smith@icsu.org</u>

Institute of Marine Engineering, Science & Technology (IMAREST)

Dr Hannah FLINT Membership Development Manager IMAREST 88, Coleman St., London EC2R 5BJ UNITED KINGDOM Tel: +44 20 7382 2628 Fax: +44 20 7382 2668 E-mail: <u>bev.mackenzie@imarest.org</u>

Mr Roland ROGERS Fellow IMAREST 88, Coleman St., London EC2R 5BJ UNITED KINGDOM Tel: +44 20 7382 2628 Fax: +44 20 7382 2670 E-mail: <u>bev.mackenzie@imarest.org</u>

International Ocean Institute/Institut international de l'océan/Instituto Oceânico Internacional (IOI)

Mr Cherdsak VIRAPAT Executive Director, IOI P.O. Box 3, Gzira GZR 1000 MALTA Tel: 356 21 346 529 Fax: 356 21 346 502 E-mail: cherdsak.virapat@ioihq.org.mt

Flanders Marine Institute/Institut Flamand de la Mer/Instituto Marino de Flandres (VLIZ)

Prof. Jan MEES Director VLIZ InnovOcean Site, Wandelaarkaai 7 B-8400 Ostend BELGIUM Tel: +32 5934 2130 Fax: +32 5934 2131 E-mail: jan.mees@vliz.be

D – Advisory Bodies

Scientific Committee on Oceanic Research/Comité scientifique de la recherche océanique/Comité Científico de Investigaciones Oceánicas (SCOR)

Prof. Dr Wolfgang FENNEL President SCOR Leibniz-Institut für Ostseeforschung Warnemünde (IOW) an der Universität Rostock Seestr. 15, Rostock D-18119 GERMANY Tel: +49 381 5197 110 Fax: +49 381 5197 114 E-mail: wolfgang.fennel@io-warnemuende.de

Dr Ed URBAN Executive Director, SCOR College of Earth, Ocean, & Environment Robinson Hall, University of Delaware Newark, DE 19716 USA Tel: +1 302 831 7011 Fax: +1 302 831 7012 E-mail: <u>Ed.Urban@scor-int.org</u>

E – IOC Primary Subsidiary Bodies (regional and technical)

Intergovernmental Committee for the Global Ocean Observing System/Comité intergouvernemental pour le Système mondial d'observation de l'océan/Comité Intergubernamental para el Sistema Mundial de Observación de los Océanos (I-GOOS)

Mr Kouadio AFFIAN Directeur, Centre Universitaire de Recherche et d'Application en Télédétection (CURAT) Earth Sciences & Mineral Resources Remote Sensing Center for Applied Research, University of Cocody 22 B.P. 582, Abidjan 22 CÔTE D'IVOIRE Tel: +225 2244 5739 Fax: +225 2244 5270 E-mail: k affian@yahoo.fr

The Joint IOC–ICES Study Group on Nutrient Standards

Mr Michio AOYAMA Senior Scientist Meteorological Research Institute Nagamine 1-1, Tsukuba 305-0052 JAPAN IOC Regional Committee for the Central Eastern Atlantic/Comité régional de la COI pour l'Atlantique du Centre-Est/Comité Regional de la COI para el Atlántico Centrooriental (IOCEA)

Dr Jean FOLACK Chairman IOCEA Director, Specialized Research Centre for Marine Ecosystems (CERECOMA) P.O. Box 219, Kribi CAMEROON Tel.: (237) 33 46 16 46 Fax: (237) - 33 46 14 15 E-mail: jeannotfolack@yahoo.fr

IOC Regional Committee for the Western Indian Ocean/Comité régional de la COI pour l'océan Indien occidental/Comité Regional de la COI para el Océano Índico Occidental (IOCWIO)

Dr Muhamudally BEEBEEJAUN Chair IOCWIO Mauritius Meteorological Services MAURITIUS Tel: +230 686 10 E-mail: <u>mbeebeejaun@mail.gov.mu</u>; <u>m.bbjohn@odinafrica.net</u>

F – International Programmes

European Global Ocean Observing System/Composante régionale du GOOS pour l'Europe/Componente Regional del GOOS para Europa (EuroGOOS)

Mr Hans DAHLIN Director, European Global Ocean Observing System (EuroGOOS) Swedish Meteorological & Hydrological Institute SE-601 76 Norrköping SWEDEN Tel: +46 11 495 8305 Fax: +46 11 495 8001 E-mail: hans.dahlin@smhi.se (Also representing Sweden)

Mr Patrick GORRINGE Oceanographer, Swedish Meteorological & Hydrological Institute (SMHI) Folkborgsvägen 1 SE-601 76 Norrköping SWEDEN Tel: +46 11 495 8047 Fax: +46 11 495 8001 E-mail: <u>patrick.gorringe@utas.edu.au</u> (Also representing Sweden)

General Bathymetric Chart of the Oceans/Carte Générale Bathymétrique des Océans (GEBCO)

Dr Robin FALCONER 21, Leybourne Ave., Waikanae 5036 NEW ZEALAND Tel/Fax: +64 4 904 3579 E-mail: <u>robinfalconerassociates@paradise.net.nz</u>

Ms Feriel FALCONER 21, Leybourne Ave., Waikanae 5036 NEW ZEALAND Tel/Fax: +64 4 904 3579 E-mail: <u>robinfalconerassociates@paradise.net.nz</u>

Partnership for Observation of Global Oceans/Partenariat pour l'observation de l'océan mondial/Colaboración para la Observación de los Océanos Mundiales (POGO)

Ms Shubha SATHYENDRANATH Deputy Director POGO PML, Prospect Place, Plymouth P21 3DH UNITED KINGDOM Tel: +44 1752 633 164 E-mail: <u>shubha@dal.ca</u>

World Climate Research Programme/Programme mondial de recherche sur le climat/Programa Mundial de Investigaciones Climáticas (WCRP)

Dr Vladimir RYABININ Senior Scientific Officer, WCRP, c/o WMO 7bis, av. de la Paix, 1211 Geneva, SWITZERLAND Tel: +41 22 730 8486 Fax: +41 22 730 8036 E-mail: vryabinin@wmo.int

G - Others

V. Lecturers

A – Roger Revelle Memorial Lecturer

Dr Manuel BARANGE PML Director of Science Chair ICES, Science Committee Plymouth Marine Laboratory, Prospect Place, Plymouth PL13DH UNITED KINGDOM E-mail: <u>m.barange@pml.ac.uk;</u> manuel.barange@ices.dk

B – Invited Speakers

Dr Adrian SIMMONS Chairman, GCOS Steering Committee ECMWF, Shinfield Park, Reading RG2 9AX UNITED KINGDOM Tel: +44 118 949 9700 Fax: +44 118 986 9450 E-mail: <u>adrian.simmons@ecmwf.int</u>

VI. SECRETARIAT/SECRETARIAT/ SECRETARIA

A – At Headquarters

1 rue Miollis 75732 Paris Cedex 15 FRANCE Tel: +33 1 4568 1000/4568 3983 Fax: +33 1 4568 5812/10 Tlx: 20446 PARISCbI: UNESCO PARIS/740057 IOCS UC E-mail: initial.familyname@unesco.org

Executive Secretary Ms Wendy WATSON-WRIGHT

Executive Secretary's Office

Ms Réjane HERVE-SMADJA Mr Deven MOONEESWAMY Ms Ksenia YVINEC Mr Nicolas GUERRERO Mr Iouri OLIOUNINE Mr Kyung-kyoo LEE Ms Christy REED

Consulting Editor Mr Ray C. GRIFFITHS

Documentation Office Mr Patrice BONED

Tsunami Unit

Mr Bernardo ALIAGA Mr Stefano BELFIORE Ms Forest COLLINS Ms Silvia SERMENO Mr Dimitri TRAVIN Mr Masahiro YAMAMOTO Ms Diana MOSQUERA

Ocean Sciences Section

Mr Julian BARBIÈRE Mr Luciano FONSECA Ms Kathy TEDESCO Ms Carmen MORALES CASELLES Ms Virginie BONNET Ms Christiane LE CONAN

Ocean Observation & Services Section

Mr Thorkild AARUP Mr Justin AHANHANZO Mr Keith ALVERSON Ms Laurence FERRY Mr Albert FISCHER Ms Irène GAZAGNE Ms Boram LEE Mr Tom GROSS Ms Simonetta HAOND Ms Ho Hien LAM Mr Adrien VANNIER Ms Cornelia HAUKE Ms Miju KIM Mr Peter BATES

Capacity-Building Section

Mr Ehrlich DESA Ms Elena IASYREVA Ms Diana DUMERIL Ms Isabel NORONHA

B-IOC Staff away from Headquarters

Mr Nick D'ADAMO Head, Perth Regional Programme Office c/o Bureau of Meteorology, 5th Floor 1100 Hay St., P.O. Box 1370 West Perth WA 6005 AUSTRALIA Tel: +61 8 9226 2899 Fax: +61 8 9263 0599 E-mail: nick.adamo@bom.gov.au

Mr Tony ELLIOTT Head, ICG/IOTWS Secretariat c/o Bureau of Meteorology 1100 Hay St., P.O. Box 1370 West Perth WA 6872 AUSTRALIA Tel: +61 8 9226 0191 Fax: +61 8 9263 2211 E-mail: <u>t.elliott@unesco.org</u>

Mr Henrik ENEVOLDSEN Programme Specialist Technical Secretary, IPHAB Harmful Algae Bloom Programme IOC Science & Communication Centre on Harmful Algae University of Copenhagen Oster Farimagsgade 2 D, 1353 Copenhagen K DENMARK Tel: +45 3313 4446 Fax: +45 3313 4447 E-mail: <u>h.enevoldsen@unesco.org</u> http://ioc-unesco.org/hab

Mr Stefano MAZZILLI IOC Project Office for the Western Indian Ocean & Data Information Network for Africa UNESCO Nairobi Office P.O. Box 30592, 00100 Nairobi KENYA Tel: +254 20 762 1588 Fax: +254 20 7622 750 E-mail : s.mazzilli@unesco.org

Mr Peter PISSIERSSENS Head, IOC Project Office for IODE Wandelaarkaai 7, 8400 Ostend BELGIUM Tel: +32 59 340 158 Fax: +32 59 340 152 E-mail: <u>p.pissierssens@unesco.org</u> Mr Mika ODIDO Regional Activities Coordinator IOC Project Office for IODE Wandelaarkaai 7, 8400 Ostend BELGIUM Tel: +32 59 340 176 Fax: +32 59 340 152 E-mail: <u>m.odido@unesco.org</u>

Mr Cesar TORO IOC Secretary for IOCARIBE Sub-Commission for the Caribbean & Adjacent Regions Calle de la Factoría 36-57 Casa del Marqués de Valdehoyos 1108, Cartagena de Indias COLOMBIA Tel: +57 5 664 6399 Fax: +57 5 660 0407 E-mail: <u>c.toro@unesco.org</u>

Ms Laura KONG Director, International Tsunami Information Centre (ITIC) 737 Bishop St., Suite 2200 Honolulu, Hawaii 96813-3213 USA Tel: +1 808 532 6423 Fax: +1 808 532 5576 E-mail: <u>I.kong@unesco.org</u>

Ms Jane CUNNEEN ICG/IOTWS at IOC Perth Regional Programme Office c/o Bureau of Meteorology P.O. Box 1370, West Perth 1100 Hay St., Perth WA 6872 AUSTRALIA Tel: +61 8 9321 9976 Fax: +61 8 9263 2211 E-mail: j.cunneen@unesco.org; j.cunneen@bom.gov.au

Ms Monica LION IOC–IEO Science & Communication Centre on Harmful Algae Instituto Español de Oceanografía Centro Oceanográfico de Vigo Cabo Estay-Canido, 36390 Vigo SPAIN Tel: +34 986 492 111 Fax: +34 986 492 003 E-mail: vigohab@vi.ieo.es

Ms Hester VIOLA DBCP/SOT Technical Coordinator, JCOMMOPS 8-10, rue Hermès Parc Technologique du Canal 31526 Ramonville Saint-Agne Cedex FRANCE Tel: +33 5 6139 4782 E-mail: viola@jcommops.org Mr Mathieu BELBEOCH ARGO Technical Coordinator, JCOMMOPS Argo Information Centre (AIC) 8-10, rue Hermès Parc Technologique du Canal 31526 Ramonville Saint-Agne Cedex FRANCE Tel: +33 5 6139 4730 Fax: +33 5 6175 1014 E-mail: <u>belbeoch@jcommops.org</u>

Mr Wenxi ZHU Head, IOC Regional Secretariat for the Western Pacific 9th FI., Govt. Complex B Lak Si, Bangkok 10210 THAILAND Tel: +66 2 141 1287 Fax: +66 2 143 9245 E-mail: <u>z.wenxi@unescobkk.org</u>

ANNEX XII

LIST OF ACRONYMS

ABE-LOS	Advisory Body of Experts on the Law of the Sea
ACCC	Adaptation to Climate Change in Coastal Zones
ADG	Assistant Director-General (UNESCO)
AoA	Assessment of Assessments
BRO	Brochure (IOC)
C/5	UNESCO Programme and Budget
CAP	Complementary Additional Programme of extrabudgetary resources
CARIBE-EWS	Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions
CAS	Commission for Atmospheric Sciences (WMO)
CBD	Convention on Biological Diversity
CBS	WMO Commission for Basic Systems
CD	Capacity Development
CEAMSA	Central Eastern Atlantic Marine Science Association
CLIVAR	Climate Variability and Prediction (WCRP)
COAST-MAP-IO	Improving Emergency Response to Ocean-based Extreme Events through Coastal Mapping Capacity Building in the Indian Ocean
COLACMAR	Latin American Congress on Marine Sciences
COP	Conference of the Parties
СТВТО	Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization
CTWC	Caribbean Tsunami Warning Centre
DG	Director-General (UNESCO)
DOALOS	Division for Ocean Affairs and the Law of the Sea (UN/OLA)
DR	Draft Resolution
EC	Executive Council
ENC	Electronic Navigation Chart
ETOOFS	Expert Team on Operational Ocean Forecasting Systems (JCOMM)
ETWS	JCOMM Expert Team on Wind Waves and Storm Surges (JCOMM)
GCOS	Global Climate Observing System (WMO-ICSU-IOC-UNEP)
GEBCO	General Bathymetric Chart of the Oceans (IOC-IHO)
GEF	Global Environment Facility (UNDP)
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (IMO-FAO-UNESCO-WMO-WHO-IAEA-UN- UNEP-UNIDO)
GFCS	Global Framework for Climate Services (WMO)
GLOBEC	Global Ocean Ecosystem Dynamics (SCOR–ICSU/IGBP)
GLOSS	Global Sea-Level Observing System (IOC)

GOBI	Global Ocean Biodiversity Initiative (UN)
GODAE	Global Ocean Data Assimilation Experiment (IOC/IODE)
GOHWMS	Ad hoc Working Group on the Framework for the Global Tsunami and other Ocean-Related Hazards Early Warning System (IOC)
GOOS	Global Ocean Observing System (IOC-WMO-UNEP-ICSU)
GO-SHIP	Global Ocean Ship-based Hydrographic Investigations Program (IOCCP-CLIVAR)
GSSC	Scientific Steering Committee of the Global Ocean Observing System
HAB	Harmful Algal Blooms (IOC)
HLO	High-level Objective (UNESCO/IOC)
IAEA	International Atomic Energy Agency (UN)
ICACGP	International Commission on Atmospheric Chemistry and Global Pollution (UN)
ICAM	Integrated Coastal Area Management Programme (IOC)
ICES	International Council for the Exploration of the Sea
ICG	Intergovernmental Coordination Group (IOC)
ICP	United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea
ICSU	International Council for Science
IEEE	Institute of Electrical and Electronics Engineers
IGBP	International Geosphere-Biosphere Programme (ICSU)
I-GOOS	Intergovernmental Committee for the Global Ocean Observing System (IOC-WMO-UNEP)
IHB	International Hydrographic Bureau
IHO	International Hydrographic Organization
IMO	International Maritime Organization (UN)
INF	Information document (IOC)
INSS	International Nutrients Scale System (IOC)
IOCARIBE	IOC Sub-Commission for the Caribbean and Adjacent Regions (IOC)
IOCCP	International Ocean Carbon Coordination Project (Joint SCOR-IOC Pilot Project)
IOCEA	IOC Regional Committee for the Central Eastern Atlantic (IOC)
IOCINDIO	IOC Regional Committee for the Central Indian Ocean (IOC)
IOCWIO	IOC Regional Committee for the Western Indian Ocean (IOC)
IODE	International Oceanographic Data and Information Exchange (IOC)
IOTWS	Indian Ocean Tsunami Warning and Mitigation System (IOC)
IPCC	Intergovernmental Panel on Climate Change (UNEP)
IPCC AR5	5th Assessment Report (IPCC)
IPHAB	Intergovernmental Panel on Harmful Algal Blooms
ISA	International Seabed Authority
JAMSTEC	Japan Agency for Marine-Earth Science and Technology
JCOMM	Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM-IOC)

JCOMMOPS	JCOMM in-situ Observing Platform Support Centre
LC-LP	London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1972), and its 1996 Protocol
LDP	Least-developped Country
MARCUBA	Latin American Marine Sciences Congress
MDG	United Nations Millennium Development Goals
METAREAS	Meteorological Forecasts and Warnings for the High Seas the Areas (WMO)
MLA	Main Line of Action (UNESCO)
MoU	Memorandum of Understanding
MPERSS	Marine Pollution Emergency Response Support System
MSR	Marine Scientific Research (IOC/ABE-LOS)
NCOSM	National Centre of Ocean Standards and Metrology (China)
NEAMTWS	Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas (IOC)
NEWS2USE	Nutrient Export from Watersheds – User Scenario Evaluation (IOC)
NGO	Non-governmental organization
NOAA	National Oceanic and Atmospheric Administration (USA)
OBIS	Ocean Biogeographic Information System (IOC)
OCEATLAN	Regional Alliance for the Upper Southwestern and Tropical Atlantic Ocean
ODAS	Ocean Data Acquisition System
ODIN	Oceanographic Data and Information Network
ODINAFRICA	Ocean Data and Information Network for Africa
OLA	Office of Legal Affairs (UN)
OOPC	Ocean Observations Panel for Climate (GCOS)
OSS	Ocean Science Section (IOC)
PaCFA	Global Partnership for Climate, Fisheries and Aquaculture
PICES	North Pacific Marine Science Organization
PTWC	Pacific Tsunami Warning Center (USA)
RMIC	Regional Marine Instrument Centres (WMO-IOC)
RMNS	Reference material for nutrients in seawater (IOC)
RSB	Regional Subsidiary Body (IOC)
RTWC	Regional Tsunami Watch Centre (IOC)
RTWP	Regional Tsunami Watch Provider (IOC)
SC/BES	Division of Basic and Engineering Sciences (UNESCO Science Sector)
SC/EES	Division of Ecological and Earth Sciences (UNESCO Science Sector)
SCOR	Scientific Committee on Oceanic Research (ICSU)
SGONS	Joint IOC-ICES Study Group on Nutrient Standards
SIDS	Small Island Developing States
SISTER	System of Information on Strategies, Tasks and the Evaluation of Results (UNESCO)

SOLAS	Surface Ocean Lower Atmosphere Study
TEOS	Thermodynamic Equation of State of Seawater
TIC	Tsunami Information Centres (IOC)
ТМТ	Transfer of Marine Technology (IOC/ABE-LOS)
TOWS-WG	Working Group on Tsunamis and Other Hazards related to Sea-Level Warning and Mitigation Systems (IOC)
TS	Technical Series (IOC)
TSU	Tsunami Unit (IOC)
TWAS	Academy of Sciences for the Developing World
TWFP	Tsunami Warning Focal Point
TWS	Tsunami Warning System (IOC)
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea, 1982
UNEP	United Nations Environment Programme (UN)
UNEP RS	UNEP Regional Seas Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UN-OCEANS	United Nations Oceans and Coastal Areas Network
VLIZ	Vlaams Institut voor de Zee (Flanders Marine Institute, Belgium)
WCRP	World Climate Research Programme
WESTPAC	IOC Regional Secretariat for the Sub-Commission for the Western Pacific (IOC)
WIOMSA	Western Indian Ocean Marine Science Association
WIS/WIGOS	WMO Information System/Integrated Global Observing Systems
WMO	World Meteorological Organization (UN)
WSSD	World Summit on Sustainable Development
WWAP	World Water Assessment Programme

 Reports of Governing and Major Subsidiary Bodies, which was initiated at the begithe reports of the following meetings have already been issued: Eleventh Session of the Working Committee on international Oceanographic Data Seventheenth Session of the Executive Council Fourth Session of the Working Committee for Training, Education and Mutual A. Fifth Session of the Working Committee for the Global Investigation of Pollution First Session of the IoC Sub-Commission for the Caribbean and Adjacent Reging Third Session of the IoC Sub-Commission for the Caribbean and Adjacent Reging First Session of the Programme Group on Ocean Processes and Climate Eighteenth Session of the Executive Council Thirteenth Session of the Executive Council, Paris, 1986 Sixth Session of the IOC Scientific Committee for the Global Investigation of Pol Thereth Session of the IOC Sub-Commission for the Caribbean and Adjacent R First Session of the IOC Sub-Commistion for the Caribbean and Adjacent R First Session of the IOC Regional Committee for the Global Investigation of Pol Twentieth Session of the IOC Regional Committee for the Southern Ocean Second Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Western Pacific, Bangko Fourthession of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1989 Firthersh Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 11 1989 Firth Session of the IOC Regional Committee for the Western Pacific, Han	a Exchange sistance n the Marine Environment ns sion, of the UN Convention on the Law System in the Pacific ution in the Marine Environment Data Exchange gjons, Havana, 1986 aia, 1987 on in the North and Central Western s, 1987 g System in the Pacific, Novosibirski,	E, F, S, R E, F, S, R, Ar E, F, S, R E, F, S, R, Ar E, F, S, R E, F, S, S, R E, S, S, R E, S, S, R E, S, S, R E, S, S, S, R E, S, S, S, R E, S, S, S, R E, S,
 Seventeenth Session of the Executive Council Fourth Session of the Working Committee for the Global Investigation of Pollution First Session of the OC Sub-Commission for the Caribbean and Adjacent Regine Third Session of the New Ocean Regime First Session of the Programme Group on Ocean Processes and Climate Eighteenth Session of the Executive Council Thirteenth Session of the Assembly Tenth Session of the International Co-ordination Group for the Tsunami Warning Nineteenth Session of the Executive Council, Paris, 1986 Sixth Session of the IOC Sub-Commission for the Caribbean and Adjacent R First Session of the IOC Sub-Commission for the Caribbean and Adjacent R First Session of the IOC Sub-Commission for the Caribbean and Adjacent R First Session of the IOC Regional Committee for the Global Investigation of Polations of the IOC Regional Committee for the Caribbean and Adjacent R First Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Co-operative Investigation Index on the IOC Regional Committee for the Co-operative Investigation Index on the IOC Regional Committee for the Western Pacific, Bangko Twenty-First Session of the Executive Council, Paris, 1988 Twenty-Second Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Tird Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Twenty-Second Session of the Executive Council, Paris, 1989 Firiteenth Session of the Executive Council, Paris, 1989 Firiteenth Session of the Executive Council, Paris, 1989 Firiteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Twelfth Se	sistance n the Marine Environment ns sion, of the UN Convention on the Law System in the Pacific ution in the Marine Environment Data Exchange gions, Havana, 1986 aia, 1987 on In the North and Central Western s, 1987 989 g System in the Pacific, Novosibirski,	E, F, S, R, Ar E, F, S, R E, F, S, R, Ar E, F, S, R E, S
 Fifth Session of the Working Committee for the Global Investigation of Pollution First Session of the OC Sub-Commission for the Caribbean and Adjacent Regive Third Session of the <i>ad hoc</i> Task team to Study the Implications, for the Commission for the Sea and the New Ocean Regime First Session of the Programme Group on Ocean Processes and Climate Eighteenth Session of the Executive Council Thirteenth Session of the Executive Council, Paris, 1986 Sixth Session of the International Co-ordination Group for the Tsunami Warning Nineteenth Session of the Executive Council, Paris, 1986 Sixth Session of the IOC Sub-Commistee for the Global Investigation of Pol Twelfth Session of the IOC Sub-Commistee for the Central Eastern Atlantic, P Second Session of the IOC Regional Committee for the Central Eastern Atlantic, P Second Session of the IOC Regional Committee for the Southern Ocean First Session of the IOC Regional Committee for the Cooperative Investigation Or the IOC Regional Committee for the Cooperative Investigat Indian Ocean, Arusha, 1987 Fourteenth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-First Session of the Executive Council, Paris, 1988 Twenty-First Session of the Executive Council, Paris, 1989 Fifthession of the IOC Regional Committee for the Western Pacific, Bangko Twenty-Second Session of the Executive Council, Paris, 1989 Third Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Twetfth Session of the INC Committee on International Oceanographic Data Indian Ocean, Arusha, 1987 Fifth Session of the IOC Committee on Crain Processes and Climate, Paris, 1 Twetfth Session of the IOC Committee on Crain Processes and Climate, Paris, 1 Twetfth Session of the IOC Comm	n the Marine Environment ns sion, of the UN Convention on the Law System in the Pacific ution in the Marine Environment Data Exchange gions, Havana, 1986 aia, 1987 on System in the Pacific, Beijing, 1987 on in the North and Central Western s, 1987 g System in the Pacific, Novosibirski,	E, F, S, R E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S, R E, F, S, R E, F, S, R, Ar E, F, S, S, R E, S
 First Session of the IOC Sub-Commission for the Caribbean and Adjacent Regid. Third Session of the ad <i>hoc</i> Task team to Study the Implications, for the Commis of the Sea and the New Ocean Regime First Session of the Programme Group on Ocean Processes and Climate Eighteenth Session of the Assembly Tenth Session of the International Co-ordination Group for the Tsunami Warning Nineteenth Session of the IOC Scientific Committee for the Global Investigation of Pol Tsitt Session of the IOC Scientific Committee for the Central Eastern Atlantic, P Sixth Session of the IOC Regional Committee for the Central Eastern Atlantic, P Second Session of the IOC Regional Committee for the Central Eastern Atlantic, P Second Session of the IOC Regional Committee for the Central Eastern Atlantic, P First Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1989 Fifteenth Session of the Executive Council, Paris, 1989 Fifteenth Session of the IOC Commitseo on Ocean Processes and Climate, Paris, 1 Twenty-first Session of the Executive Council, Paris, 1989 Fifteenth Session of the IOC commitsion for the Caribbean and Adjacent Regions, First Session of the Sub-Commission for the Western Pacific, Hangzhou, 1989 Third Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the IOC Committee for the Western Pacific, Hangzhou, 1989 Third Session of the IOC Committee for The Global Investigation of Pollution <l< td=""><td>ns sion, of the UN Convention on the Law System in the Pacific ution in the Marine Environment Data Exchange gions, Havana, 1986 aia, 1987 on System in the Pacific, Beijing, 1987 on in the North and Central Western s, 1987 g System in the Pacific, Novosibirski,</td><td>E, F, S E, F, S, R E, F, S, R E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S E, F, S E, F, S E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S, R</td></l<>	ns sion, of the UN Convention on the Law System in the Pacific ution in the Marine Environment Data Exchange gions, Havana, 1986 aia, 1987 on System in the Pacific, Beijing, 1987 on in the North and Central Western s, 1987 g System in the Pacific, Novosibirski,	E, F, S E, F, S, R E, F, S, R E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S E, F, S E, F, S E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S, R
 Third Session of the <i>ad hoc</i> Task team to Study the Implications, for the Commiss of the Sea and the New Ocean Regime First Session of the Programme Group on Ocean Processes and Climate Eighteenth Session of the Executive Council Thirteenth Session of the International Co-ordination Group for the Tsunami Warning Nineteenth Session of the IOC Scientific Committee for the Global Investigation of Pol Twelfth Session of the IOC Sub-Commission for the Caribbean and Adjacent R Sixth Session of the IOC Regional Committee for the Central Eastern Atlantic, P Second Session of the IOC Regional Committee for the Control Cover and Adjacent R First Session of the IOC Regional Committee for the Control Cover and Adjacent R Fourteenth Session of the IOC Regional Committee for the Control Cover and Adjacent R Fourteenth Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1989 Fifteenth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1989 Fifteenth Session of the IOC Commission for the Caribbean and Adjacent Regions, First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 11 989 Third Session of the IOC Committee on International Oceanographic Data 1990 First Session of the IOC Committee for the Western Pacific, Hangzhou, 11 990 Seventh Session of the IOC Committee for The Global Investigation of Pollution Fifth Session of the IOC Committee for The Global Investigation of Pollution Fifth Session of the IOC Commi	sion, of the UN Convention on the Law System in the Pacific ution in the Marine Environment Data Exchange ogions, Havana, 1986 aia, 1987 on System in the Pacific, Beijing, 1987 on in the North and Central Western s, 1987 g System in the Pacific, Novosibirski,	E, F, S, R E, F, S, R, Ar E, F, S, R E, F, S E, F, S E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, S E, S
 of the Sea and the New Ocean Regime First Session of the Programme Group on Ocean Processes and Climate Eighteenth Session of the Executive Council Thirteenth Session of the Executive Council, Paris, 1986 Sixth Session of the IOC Scientific Committee for the Global Investigation of Pol Twelfth Session of the IOC Sub-Commission for the Caribbean and Adjacent R First Session of the IOC Regional Committee for the Carbean and Adjacent R First Session of the IOC Regional Committee for the Carbean and Adjacent R First Session of the IOC Regional Committee for the Carbean and Adjacent R First Session of the IOC Regional Committee for the Carbean and Adjacent R Fourteenth Session of the IOC Regional Committee for the Southern Ocean Fourteenth Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1988 Twenty-first Session of the Executive Council, Paris, 1988 Twenty-first Session of the IOC Commitsion for the Western Pacific, Bangko Twelfth Session of the IOC Commission for the Western Pacific, Hangzhou, 1989 Fifteenth Session of the IOC Commission for the Western Pacific, Hangzhou, 1989 First Session of the IOC Committee for the Western Pacific, Hangzhou, 1989 Third Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for The Global Investigation of Pollution Fifth Session of the IOC Committee for The Global Investigation of Pollution Fifth Session of the IOC Committee for Training, Education and Mutual Assistar Fourthy-Se	System in the Pacific ution in the Marine Environment Data Exchange gions, Havana, 1986 aia, 1987 on g System in the Pacific, Beijing, 1987 on in the North and Central Western x, 1987 g System in the Pacific, Novosibirski,	E, F, S, R E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S E, F, S E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S, R E, F E, S, R E, F, S E, F, S, R E, F, S E, F, S R E, F, S R E, F, S R E, F, S R E, F, S, R E, F, S, R
 Eighteenth Session of the Executive Council Thirteenth Session of the Assembly Tenth Session of the International Co-ordination Group for the Tsunami Warning Nineteenth Session of the Executive Council, Paris, 1986 Sixth Session of the IOC Scientific Committee for the Global Investigation of Pol Twelfth Session of the IOC Working Committee on International Oceanographic Second Session of the IOC Regional Committee for the Central Eastern Atlantic, P Second Session of the IOC Regional Committee for the Central Eastern Atlantic, P Second Session of the IOC Regional Committee for the Southern Ocean Fourteenth Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Co-operative Investigati Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1989 Futenty-Second Session of the Executive Council, Paris, 1989 Third Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Tweffth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the IDC Commitseion for the Western Pacific, Hangzhou, 1: 1989 Third Session of the Sub-Commission for the Caribbean and Adjacent Regions, First Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Western Pacific, Hangzhou, 1: 990 Third Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee on International Oceanographic D	ution in the Marine Environment Data Exchange gions, Havana, 1986 aia, 1987 on System in the Pacific, Beijing, 1987 on in the North and Central Western a, 1987 g System in the Pacific, Novosibirski,	E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S E, F, S E, F, S E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S E, F, S, R E, F, S E, F, S R E, F, S, R E, F, S R E, F, S, R E, F, S R E, F, S, R E, F, S, R
 9. Thirteenth Session of the Assembly 10. Tenth Session of the International Co-ordination Group for the Tsunami Warning 11. Nineteenth Session of the Executive Council, Paris, 1986 12. Sixth Session of the IOC Scientific Committee for the Global Investigation of Pol 13. Twelfth Session of the IOC Sub-Commission for the Caribbean and Adjacent R 14. Second Session of the IOC Regional Committee for the Central Eastern Atlantic, P 15. First Session of the IOC Regional Committee for the Central Eastern Atlantic, P 16. Second Session of the IOC Regional Committee for the Southern Ocean 17. Twentieth Session of the IOC Regional Committee for the Southern Ocean 18. Fourteenth Session of the IOC Regional Committee for the Co-operative Investigat 11. Indian Ocean, Arusha, 1987 12. Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko 23. Twenty-second Session of the Executive Council, Paris, 1988 24. Twenty-second Session of the Executive Council, Paris, 1989 25. Fifteenth Session of the IOC Regional Committee for the Western Pacific, Bangko 24. Twenty-second Session of the Executive Council, Paris, 1989 25. Fifteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 27. Welfth Session of the IOC Commission for the Caribbean and Adjacent Regions, 28. Third Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1 29. Third Session of the IOC Committee on International Oceanographic Data 1990 23. Seventh Session of the IOC Committee for the Global Investigation of Pollution 34. Fifth Session of the IOC Committee on International Oceanographic Data 1990 33. Seventh Session of the IOC Committee on International Oceanographic Data 1990 33. Seventh Session of the	ution in the Marine Environment Data Exchange gions, Havana, 1986 aia, 1987 on System in the Pacific, Beijing, 1987 on in the North and Central Western k, 1987 g System in the Pacific, Novosibirski,	E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S, R E, F, S E, F, S E, F, S, R, Ar E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S E, F E, S E, F E, S E, F
 Tenth Session of the International Co-ordination Group for the Tsunami Warning Nineteenth Session of the ICC Scientific Committee for the Global Investigation of Pol Sixth Session of the IOC Working Committee on International Oceanographic Second Session of the IOC Working Committee on International Oceanographic Second Session of the IOC Programme Group on Ocean Processes and Climat First Session of the IOC Regional Committee for the Central Eastern Atlantic, P Second Session of the IOC Programme Group on Ocean Processes and Climat Twentieth Session of the Executive Council, Paris, 1987 Fourteenth Session of the International Co-ordination Group for the Tsunami Warning Second Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1988 Twenty-second Session of the Executive Council, Paris, 1989 Fifteenth Session of the IOC committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the IDC Commitseon for the Western Pacific, Hangzhou, 11 Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 11 First Session of the IOC Sub-Committee for the Western Pacific, Hangzhou, 11 First Session of the IOC Committee on International Oceanographic Data 1990 Third Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee on Cean Processes and Climate, Paris, 1991 Sixteenth Session of the IOC Committee on International Oceanographic Data 1990	ution in the Marine Environment Data Exchange gions, Havana, 1986 aia, 1987 on System in the Pacific, Beijing, 1987 on in the North and Central Western k, 1987 g System in the Pacific, Novosibirski,	E, F, S, R, Ar E, F, S E, F, S, R E, F, S E, F, S E, F, S E, F, S E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S, R E, F E only E, F, S, R E, F, S E, S E, S E, S E, S E, S E, S E, S E
 Nineteenth Session of the Executive Council, Paris, 1986 Sixth Session of the IOC Scientific Committee for the Global Investigation of Pol Twelfth Session of the IOC Sub-Commission for the Caribbean and Adjacent R First Session of the IOC Regional Committee for the Central Eastern Atlantic, P Second Session of the IOC Programme Group on Ocean Processes and Climat Fourteenth Session of the Executive Council, Paris, 1987 Fourteenth Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1988 Twenty-second Session of the Executive Council, Paris, 1988 Timd Session of the IOC committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the IOC Commitse on Ocean Processes and Adjacent Regions, 1989 Third Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1: 1989 Third Session of the IOC Committee on International Oceanographic Data 1990 Third Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution 400 Fifth Session of the IOC Committee for the Global Investigation of Pollution 1990 Seventh Session of the IOC Committee on Ocean Processes and Climate, Paris, 300 Thirdeenth Session of the IOC Committee on Cean Processes and Climate, Paris, 301 Thirdeenth Session of t	ution in the Marine Environment Data Exchange gions, Havana, 1986 aia, 1987 on System in the Pacific, Beijing, 1987 on in the North and Central Western k, 1987 g System in the Pacific, Novosibirski,	E, F, S E, F, S, R E, F, S E, F, S E, F, S E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S, R E, F E only E, F, S, R E, F, S E, F, S
 Sixth Session of the IOC Scientific Committee for the Global Investigation of Pol Twelfth Session of the IOC Sub-Commission for the Caribbean and Adjacent R Second Session of the IOC Regional Committee for the Central Eastern Atlantic, P Second Session of the IOC Regional Committee for the Central Eastern Atlantic, P Second Session of the IOC Regional Committee for the Central Eastern Atlantic, P Fourteenth Session of the Assembly, Paris, 1987 Fourteenth Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1988 Twenty-first Session of the Executive Council, Paris, 1989 Filteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the IOC Commission for the Caribbean and Adjacent Regions, Pirst Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1: 989 First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1: 990 Third Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for the Global Investigation of Pollution Firth Session of the IOC Committee for the Global Investigation of Pollution Twenty-fourth Session of the Executive Council, Paris, 1990 Thirdeenth Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for the Global Investigation of Pollution Twenty	Data Exchange gions, Havana, 1986 aia, 1987 on g System in the Pacific, Beijing, 1987 on in the North and Central Western x, 1987 989 g System in the Pacific, Novosibirski,	E, F, S E, F, S, R E, F, S E, F, S E, F, S E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S, R E, F E only E, F, S, R E, F, S E, F, S
 Second Session of the IOC Sub-Commission for the Caribbean and Adjacent R. First Session of the IOC Regional Committee for the Central Eastern Atlantic, P. Second Session of the IOC Programme Group on Ocean Processes and Climat Twentieth Session of the Executive Council, Paris, 1987 Fourteenth Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourt Session of the IOC Regional Committee for the Western Pacific, Bangko Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1988 Twenty-second Session of the Executive Council, Paris, 1989 Fifteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 989 Third Session of the IDC Commission for the Caribbean and Adjacent Regions, 1989 Third Session of the IDC Regional Committee for the Western Pacific, Hangzhou, 11 989 Third Session of the IDC Commission for the Caribbean and Adjacent Regions, First Session of the IDC Regional Committee for the Western Pacific, Hangzhou, 11 980 Third Session of the IDC Regional Committee on International Oceanographic Data 1990 Thirteenth Session of the IDC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for Training, Education and Mutual Assistar Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 990 Seventh Session of the IOC Committee for the Globa	igions, Havana, 1986 aia, 1987 ng System in the Pacific, Beijing, 1987 on in the North and Central Western 5, 1987 989 g System in the Pacific, Novosibirski,	E, F, S E, F, S E, F, S E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S, R E, F E only E, F, S, R E, S
 First Session of the IOC Regional Committee for the Central Eastern Atlantic, P. Second Session of the IOC Programme Group on Ocean Processes and Climat Twentieth Session of the Executive Council, Paris, 1987 Fourteenth Session of the Assembly, Paris, 1987 Fifth Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1988 Twenty-first Session of the Executive Council, Paris, 1989 Fifteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the INC Commission for the Caribbean and Adjacent Regions, First Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1 1989 Third Session of the Sub-Commission for the Western Pacific, Hangzhou, 1 1989 Third Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1 1989 Third Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1 1989 Third Session of the IOC Committee on International Oceanographic Data 1990 Thirteenth Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee on Corean Processes and Climate, Paris, 1991 Seventh Session of the IOC Committee on Corean Processes and Climate, Paris, 1990 Seventh Session of the IOC Committee on Ocean Processes and Climate, Paris, 1990 Seventh Session of the IOC Committee on Ocean Processes and Climate, Paris, 1991 Sixteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Thirteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth	aia, 1987 g ng System in the Pacific, Beijing, 1987 on in the North and Central Western s, 1987 g System in the Pacific, Novosibirski,	E, F, S E, F, S E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S, R E, F E only E, F, S, R E, S
 Second Session of the IOC Programme Group on Ocean Processes and Climat Twentieth Session of the Executive Council, Paris, 1987 Fourteenth Session of the Assembly, Paris, 1987 Fifth Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the International Co-ordination Group for the Tsunami Warn Second Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1988 Twenty-first Session of the Executive Council, Paris, 1988 Twenty-second Session of the Executive Council, Paris, 1989 Fifteenth Session of the INC Committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the INC Commission for the Caribbean and Adjacent Regions, First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1 1989 Third Session of the IOC Committee on International Oceanographic Data 1990 Thirteenth Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1991 Sixteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Thirteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1993 Second Session of the IOC Committee on Ocean Processes and Climate, Paris, 1994 Second Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Thirteenth Sessi	ng System in the Pacific, Beijing, 1987 on in the North and Central Western k, 1987 989 g System in the Pacific, Novosibirski,	E, F, S E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S, R E, F E only E, F, S, R E, S, S
 Twentieth Session of the Executive Council, Paris, 1987 Fourteenth Session of the Assembly, Paris, 1987 Fifth Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the INternational Co-ordination Group for the Tsunami Warn Second Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1988 Twenty-second Session of the Executive Council, Paris, 1989 Fifteenth Session of the Assembly, Paris, 1989 Fifteenth Session of the IOC committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the IOC committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the INternational Co-ordination Group for the Tsunami Warni 1989 Third Session of the Sub-Commission for the Caribbean and Adjacent Regions, First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 11 Fifth Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 11 Fifth Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for Training, Education and Mutual Assistar Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Second Session of the IOC Committee on Ocean Processes and Climate, Paris, Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Second Session of the IOC Committee on Ocean Processes and Climate, Paris, Second Session of the INC-WMO Intergovernmental WOCE Panel, Paris, 1992 Thirteenth Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Fifth Session of the IOC Committee on Ocean P	ng System in the Pacific, Beijing, 1987 on in the North and Central Western k, 1987 989 g System in the Pacific, Novosibirski,	E, F, S, R, Ar E, F, S, R, Ar E, F, S, R E, F, S, R E, F E only E, F, S, R E, S
 Fifth Session of the IOC Regional Committee for the Southern Ocean Eleventh Session of the International Co-ordination Group for the Tsunami Warm Second Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1988 Twenty-second Session of the Executive Council, Paris, 1989 Fifteenth Session of the Assembly, Paris, 1989 Third Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 7 welfth Session of the IDC Commission for the Caribbean and Adjacent Regions, 89 Third Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 11 89 Third Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 11 7 wenty-third Session of the IOC Commitseion for the Western Pacific, Hangzhou, 11 80 First Session of the IOC Committee for the Western Pacific, Hangzhou, 11 80 Thirteenth Session of the IOC Committee for the Global Investigation of Pollution 81 Seventh Session of the IOC Committee for Training, Education and Mutual Assistar 85 Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, 86 Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 80 Thirteenth Session of the INC Committee on Ocean Processes and Climate, Paris, 81 Fuerth Session of the IOC Committee on Ocean Processes and Climate, Paris, 82 Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Thirteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Twenty-fifth S	on in the North and Central Western k, 1987 989 g System in the Pacific, Novosibirski,	E, F, S, R E, F, S, R E, F E only E, F, S, R E, S
 Eleventh Session of the International Co-ordination Group for the Tsunami Warm Second Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1988 Twenty-second Session of the Executive Council, Paris, 1989 Fifteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the INC Commission for the Caribbean and Adjacent Regions, 1989 Third Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1 Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1 Fifth Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1 Fifth Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1 Seventh Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for Training, Education and Mutual Assistar Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the INC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the INC Committee on Ocean Processes and Climate, Paris, 1992 Thirteenth Session of the INC Committee on Ocean Processes and Climate, Paris, 1992 Thirteenth Session of the INC Committee on Ocean Processes and Climate, Paris, 1992 Thirteenth Session of the INC Committee on Ocean Processes and Climate, Paris, 1992 Thirteenth Session of the INC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Ses	on in the North and Central Western k, 1987 989 g System in the Pacific, Novosibirski,	E, F, S, R E, F E only E, F, S, R E, S
 Second Session of the IOC Regional Committee for the Co-operative Investigat Indian Ocean, Arusha, 1987 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1988 Twenty-second Session of the Executive Council, Paris, 1989 Fifteenth Session of the Assembly, Paris, 1989 Third Session of the IOC committee on Ocean Processes and Climate, Paris, 1 1989 Third Session of the Sub-Commission for the Caribbean and Adjacent Regions, 1989 Third Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1: 1989 First Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1: 1989 First Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1: 1990 Thirderth Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution 4. Fifth Session of the IOC Committee for Training, Education and Mutual Assistar 5. Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, 3. Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, 4. Twenty-fourth Session of the INC Committee on Ocean Processes and Climate, Paris, 5. Twenty-fourth Session of the INC Committee on Ocean Processes and Climate, Paris, 4. Thirteenth Session of the INC Committee on Ocean Processes and Climate, Paris, 1992 Sixteenth Session of the INC Committee on Ocean Processes and Climate, Paris, 1992 Firth Session of the INC WMO Intergovernmental WOCE Panel, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1924 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1924 Fifth Session of the INC Commi	on in the North and Central Western k, 1987 989 g System in the Pacific, Novosibirski,	E, F E only E, F, S, R E, S
 Fourth Session of the IOC Regional Committee for the Western Pacific, Bangko Twenty-first Session of the Executive Council, Paris, 1988 Twenty-second Session of the Executive Council, Paris, 1989 Fifteenth Session of the Assembly, Paris, 1989 Third Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 1989 Third Session of the International Co-ordination Group for the Tsunami Warni 1989 Third Session of the Sub-Commission for the Caribbean and Adjacent Regions, First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1: 30. Fifth Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1: 11. Twenty-third Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1: 22. Thirteenth Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution 14. Fifth Session of the IOC Committee for Training, Education and Mutual Assistar 1990 Seventh Session of the IOC Committee on Ocean Processes and Climate, Paris, 6. Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the IOC committee on Ocean Processes and Climate, Paris, 7. Twenty-fourth Session of the INC Committee on Ocean Processes and Climate, Paris, 8. Thirteenth Session of the INC Committee Ordination Group for the Tsunami Wa California, 1991 Second Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192<	989 g System in the Pacific, Novosibirski,	E, F, S, R E, S
 Twenty-second Session of the Executive Council, Paris, 1989 Fifteenth Session of the Assembly, Paris, 1989 Third Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the International Co-ordination Group for the Tsunami Warni 1989 Third Session of the Sub-Commission for the Caribbean and Adjacent Regions, First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1: Twenty-third Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1: Twenty-third Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for Training, Education and Mutual Assistar Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Kitteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, Seventh Session of the IOC Committee on Ocean Processes and Climate, Paris, Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, Kitteenth Session of the INC Committee Ordination Group for the Tsunami Wa California, 1991 Second Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 First Session of the IOC Regional Committee for the Central Eastern Atlantic Second Session of the IOC Regional Co	g System in the Pacific, Novosibirski,	E, F, S, R E, S
 Fifteenth Session of the Assembly, Paris, 1989 Third Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the International Co-ordination Group for the Tsunami Warni 1989 Third Session of the Sub-Commission for the Caribbean and Adjacent Regions, First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1 Fifth Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1 Fifth Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 1 Thirteenth Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the IOC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the INC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the INC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the International Co-ordination Group for the Tsunami Wa California, 1991 Second Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Regional Committee for the Central	g System in the Pacific, Novosibirski,	E, F, S, R E, F, S, R E, F, S, R E, S
 Third Session of the IOC Committee on Ocean Processes and Climate, Paris, 1 Twelfth Session of the International Co-ordination Group for the Tsunami Warni 1989 Third Session of the Sub-Commission for the Caribbean and Adjacent Regions, First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, Fifth Session of the IOC Regional Committee for the Western Pacific, Hangzhou, Twenty-third Session of the Executive Council, Paris, 1990 Thirteenth Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for Training, Education and Mutual Assistar Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the INC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the INC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the INC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the INC Committee on Ocean Processes and Climate, Paris, 1991 Sixteenth Session of the INC-WMO Intergovernmental WOCE Panel, Paris, 1992 Twenty-fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992 First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal B	g System in the Pacific, Novosibirski,	E, F, S, R E, F, S, R E, S
 Twelfth Session of the International Co-ordination Group for the Tsunami Warnin 1989 Third Session of the Sub-Commission for the Caribbean and Adjacent Regions, First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 11 Fifth Session of the IOC Regional Committee for the Western Pacific, Hangzhou, 11 Twenty-third Session of the Executive Council, Paris, 1990 Thirteenth Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for Training, Education and Mutual Assistar Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1991 Sixteenth Session of the INC Committee Ocean International Oceanographic Data 1990 Fourth Session of the IOC Committee for Training, Education and Mutual Assistar Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the INC-WMO Intergovernmental WOCE Panel, Paris, 1992 Twenty-fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Regional Committee for the Central Eastern Atlantic Second Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992<td>g System in the Pacific, Novosibirski,</td><td>E, F, S, R E, S</td>	g System in the Pacific, Novosibirski,	E, F, S, R E, S
 First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1 Fifth Session of the IOC Regional Committee for the Western Pacific, Hangzhou Twenty-third Session of the Executive Council, Paris, 1990 Thirteenth Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the IOC committee on Ocean Processes and Climate, Paris, Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joht IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992 First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms 	Caraaaa 1000	
 Fifth Session of the IOC Regional Committee for the Western Pacific, Hangzhou Twenty-third Session of the Executive Council, Paris, 1990 Thirteenth Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for Training, Education and Mutual Assistar Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Kenthy Session of the IOC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the Executive Council, Paris, 1991 Sixteenth Session of the INCE-WMO Intergovernmental WOCE Panel, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 First Session of the IOC Regional Committee for the Central Eastern Atlantic Environment, Paris, 1992 First Session of the IOC-KAO Intergovernmental Panel on Harmful Algal Blooms 		
 Twenty-third Session of the Executive Council, Paris, 1990 Thirteenth Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for Training, Education and Mutual Assistar Fourth Session of the IOC Committee for Training, Education and Mutual Assistar Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Sixteenth Session of the Executive Council, Paris, 1991 Thirteenth Session of the International Co-ordination Group for the Tsunami Wa California, 1991 Second Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992 First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms 		E only
 Thirteenth Session of the IOC Committee on International Oceanographic Data 1990 Seventh Session of the IOC Committee for the Global Investigation of Pollution Fifth Session of the IOC Committee for Training, Education and Mutual Assistar Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the INCC-WMO Intergovernmental WOCE Panel, Paris, 1992 Second Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Fifth Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1922 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1922 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1922 Fifth Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992 First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms 	, 1990	E, F, S, R
 Fifth Session of the IOC Committee for Training, Education and Mutual Assistar Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the Assembly, Paris, 1991 Thirteenth Session of the International Co-ordination Group for the Tsunami Wa California, 1991 Second Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Twenty-fifth Session of the Executive Council, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 192 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 15 Second Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992 First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms 	and Information Exchange, New York,	E only
 Fourth Session of the IOC Committee on Ocean Processes and Climate, Paris, Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the Assembly, Paris, 1991 Thirteenth Session of the International Co-ordination Group for the Tsunami Wa California, 1991 Second Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Twenty-fifth Session of the Executive Council, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 15 Second Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992 First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms 	n the Marine Environment, Paris, 1991	E, F, S, R
 Twenty-fourth Session of the Executive Council, Paris, 1991 Sixteenth Session of the Assembly, Paris, 1991 Thirteenth Session of the International Co-ordination Group for the Tsunami Wa California, 1991 Second Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Twenty-fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 15 Second Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992 First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms 		E, F, S, R E, F, S, R
 Sixteenth Session of the Assembly, Paris, 1991 Thirteenth Session of the International Co-ordination Group for the Tsunami Wa California, 1991 Second Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Twenty-fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 15 Second Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992 First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms 	1991	E, F, S, R
 California, 1991 Second Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1992 Twenty-fifth Session of the Executive Council, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 1992 Second Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992 First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms 		E, F, S, R, Ar
 Twenty-fifth Session of the Executive Council, Paris, 1992 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 19 Second Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992 First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms 	ning System in the Pacific, Baja	E, F, S, R
 Fifth Session of the IOC Committee on Ocean Processes and Climate, Paris, 19 Second Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992 First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms 		E only E, F, S, R
 Second Session of the IOC Regional Committee for the Central Eastern Atlantic First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Inv Environment, Paris, 1992 First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms 	92	E, F, S, R
Environment, Paris, 1992 44. First Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms		E, F
	0	E, F, S, R
		E, F, S E, F, S, R
 Third Session of the IOC Regional Committee for the Co-operative Investigation Ocean, Vascoas, 1992 	0	E, F, S, K 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 Re	jions, Veracruz, 1992	E, S
49. Third Session of the IOC Regional Committee for the Central Eastern Atlantic, E		E, F
50. First Session of the IOC Committee for the Global Ocean Observing System, Pa	ris, 1993	E, F, S, R
51. Twenty-sixth Session of the Executive Council, Paris, 1993		E, F, S, R
 Seventeenth Session of the Assembly, Paris, 1993 Fourteenth Session of the International Co-ordination Group for the Tsunami Wa 1993 		E, F, S, R E, F, S, R
54. Second Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blog	rning System in the Pacific, Tokyo,	E, F, S
55. Twenty-seventh Session of the Executive Council, Paris, 1994		E, F, S, R
 First Planning Session of the IOC-WMO-UNEP Committee for the Global Ocear Eighth Session of the IOC-UNEP-IMO Committee for the Global Investigation of 		E, F, S, R E, F, S
San José, Costa Rica, 1994 58. Twenty-eighth Session of the Executive Council, Paris, 1995	ms, Paris, 1993 Observing System, Melbourne, 1994	L, I , O
59. Eighteenth Session of the Assembly, Paris, 1995	ms, Paris, 1993 Observing System, Melbourne, 1994	
60. Second Session of the IOC-WMO-UNEP Committee for the Global Ocean Obse	ms, Paris, 1993 Observing System, Melbourne, 1994	E, F, S, R E, F, S, R

61. 62.	Third Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1995 Fifteenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Papetee, 1995	E only E, F, S, R
63. 64.	Third Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms, Paris, 1995 Fifteenth Session of the IOC Committee on International Oceanographic Data and Information Exchange	E, F, S 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. 71.	Twenty-ninth Session of the Executive Council, Paris, 1996 Sixth Session for the IOC Regional Committee for the Southern Ocean and the First Southern Ocean Forum, Bremerhaven, 1996	E, F, S, R E, F, S,
72. 73.	IOC Black Sea Regional Committee, First Session, Varna, 1996 IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean, Fourth	E, R E, F
74.	Session, Mombasa, 1997 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. 82.	Second Session of the IOC Black Sea Regional Committee, Istanbul, 1999 Twentieth Session of the Assembly, Paris, 1999	E only 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 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, 2001	E, F, S, R
91. 92.	Thirty-fifth Session of the Executive Council, Paris, 2002 Sixteenth Session of the IOC Committee on International Oceanographic Data and Information Exchange, Lisbon,	E, F, S, R E, F, S, R
93.	2000 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 only
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*
100.	Sixth Session of the IOC Intergovernmental Panel on Harmful Algal Blooms, St. Petersburg (USA), 2002 (* Executive Summary available separately in E, F, S & R)	E*
101.	Seventeenth Session of the IOC Committee on International Oceanographic Data and Information Exchange, Paris, 2003 (* Executive Summary available separately in E, F, S & R)	E*
102.	Sixth Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 2003 (* Executive Summary available separately in E, F, S & R)	E*
103.	Nineteenth Session of the International Coordination Group for the Tsunami Warning System in the Pacific, Wellington, New Zealand, 2003 (* Executive Summary available separately in E, F, S & R)	E*
104.	Third Session of the IOC Regional Committee for the Central Indian Ocean, Tehran, Islamic Republic of Iran, 21-23 February 2000	Eonly
105. 106.	Thirty-seventh Session of the Executive Council, Paris, 2004 Seventh Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 2005 (* Executive Summary available separately in E, F, S & R); and Extraordinary Session, Paris, 20 June 2005	E, F, S, R E*
107.	First Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS), Perth, Australia, 3–5 August 2005	E only
108.	Twentieth Session of the Intergovernmental Coordination Group for the Tsunami Warning System in the Pacific, Viña del Mar, Chile, 3–7 October 2005 (* Executive Summary available separately in E, F, S & R)	E*
109.	Twenty-Third Session of the Assembly, Paris, 21–30 June 2005	E, F, S, R
110.	First Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North Eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS), Rome, Italy, 21–22 November 2005	E only
111.	Eighth Session of the IOC Sub-commission for the Caribbean and Adjacent Regions (IOCARIBE), Recife, Brazil, 14–17 April 2004 (* Executive Summary available separately in E, F, S & R)	E*
112.	First Session of the Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean Sea and Adjacent Regions (ICG/CARIBE-EWS), Bridgetown, Barbados, 10–12 January 2006	E only
113.	Ninth Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE), Cartagena de Indias, Colombia, 19–22 April 2006 (* Executive Summary available separately in E, F, S & R)	E S*
I		

114.	Second Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS), Hyderabad, India, 14–16 December 2005	E only
115.	Second Session of the WMO-IOC Joint Technical Commission for Oceanography and Marine Meteorology, Halifax, Canada, 19–27 September 2005 (Abridged final report with resolutions and recommendations)	E, F, R, S
116.	Sixth Session of the IOC Regional Committee for the Western Indian Ocean (IOCWIO), Maputo, Mozambique, 2–4 November 2005 (* Executive Summary available separately in E, F, S & R)	E*
117.	Fourth Session of the IOC Regional Committee for the Central Indian Ocean, Colombo, Sri Lanka 8–10 December 2005 (* Executive Summary available separately in E, F, S & R)	E*
118.	Thirty-eighth Session of the Executive Council, Paris, 20 June 2005 (Electronic copy only)	E, F, R, S
119.	Thirty-ninth Session of the Executive Council, Paris, 21–28 June 2006	E, F, R, S
120.	Third Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS), Bali, Indonesia, 31 July–2 August 2006 (*Executive Summary available separately in E,F,S & R)	E*
121.	Second Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North Eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS), Nice, France, 22–24 May 2006	E only
122.	Seventh Session of the IOC Intergovernmental Panel on Harmful Algal Blooms, Paris, France, 16–18 March 2005 (* Executive Summary available separately in E, F, S & R)	E*
123.	Fourth Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS-IV), Mombasa, Kenya, 30 February-2 March 2007 (* Executive Summary available separately in E, F, S & R)	E*
124.	Nineteenth Session of the IOC Committee on International Oceanographic Data and Information Exchange, Trieste, Italy, 12–16 March 2007 (* Executive Summary available separately in E, F, S & R)	E*
125.	Third Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North Eastern Atlantic, the Mediterranean and Connected Seas, Bonn, Germany, 7–9 February 2007 (* Executive Summary available separately in E, F, S & R)	E*
126.	Second Session of the Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean Sea and Adjacent Regions, Cumaná, Venezuela, 15–19 January 2007 (* Executive Summary available separately in E, F, S & R)	E*
127.	Twenty-first Session of the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System, Melbourne, Australia, 3–5 May 2006 (* Executive Summary available separately in E, F, S & R)	E*
128.	Twenty-fourth Session of the Assembly, Paris, 19–28 June 2007	E, F, S, R
129.	Fourth Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North Eastern Atlantic, the Mediterranean and Connected Seas, Lisbon, Portugal, 21–23 November 2007 (* Executive Summary available separately in E, F, S & R)	E*
130.	Twenty-second Session of the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System, Guayaquil, Ecuador, 17–21 September 2007 (* Executive Summary available in E, F, S & R included)	E*
131.	Forty-first Session of the Executive Council, Paris, 24 June-1 July 2008	E, F, R, S
132.	Third Session of the Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean Sea and Adjacent Regions, Panama City, Panama, 12–14 March 2008 (* Executive Summary available separately in E, F, S & R)	E*
133.	Eighth Session of the IOC Intergovernmental Panel on Harmful Algal Blooms, Paris, France, 17–20 April 2007 (* Executive Summary available separately in E, F, S & R)	E*
134.	Twenty-third Session of the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System, Apia, Samoa, 16–18 February 2009 (*Executive Summary available separately in E, F, S & R)	E*
135.	Twentieth Session of the IOC Committee on International Oceanographic Data and Information Exchange, Beijing, China, 4–8 May 2009 (*Executive Summary available separately in E, F, S & R)	E*
136.	Tenth Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE), Puerto La Cruz, Bolivarian Republic of Venezuela, 22–25 October 2008 (*Executive Summary available separately in E, F, S & R)	E, S*
137.	Seventh Session of the IOC Sub-Commission for the Western Pacific (WESTPAC-VII), Sabah, Malaysia, 26–29 May 2008 (*Executive Summary available separately in E, F, S & R)	E*
138.	Ninth Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, France, 10–12 June 2009 (* Executive Summary available separately in E, F, S & R);	E*
139.	Fifth Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North Eastern Atlantic, the Mediterranean and Connected Seas, Athens, Greece, 3–5 November 2008 (* Executive Summary available separately in E, F, S & R)	E*
140.	Fourth Session of the Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean Sea and Adjacent Regions, Fort-de-France, Martinique, France, 2–4 June 2009 (* Executive Summary available separately in E, F, S & R)	E*
141.	Twenty-fifth Session of the Assembly, Paris, 16–25 June 2009	E, F, R, S
142.	Third Session of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology, Marrakesh, Morocco, 4–11 November 2009	E, F, R, S
143.	Ninth Session of the IOC Intergovernmental Panel on Harmful Algal Blooms, Paris, France, 22–24 April 2009 (* Executive Summary available separately in E, F, S & R)	E*
144.	Fifth Session of the Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean Sea and Adjacent Regions, Managua, Nicaragua, 15–17 March 2010 (* Executive Summary available in E, F, S & R)	E*
145.	Sixth Session of the IOC Regional Committee for the Central and Eastern Atlantic Ocean, Accra, Ghana, 28–30 March 2010 (* Executive Summary available in E, F, S & R)	E*
146.	Forty-second Session of the Executive Council; Paris, 15, 19 & 20 June 2009	E, F, R, S
	Forty-third Session of the Executive Council; Paris, 8–16 June 2010	E, F, R, S