

Intergovernmental Oceanographic Commission
Reports of Governing and Major Subsidiary Bodies



**Twenty-eighth Session
of the Assembly**

Paris, 18–25 June 2015

UNESCO

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UNESCO 2015

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PART I

SUMMARY REPORT

1. OPENING

1 The Chair, Mr Sang-Kyung Byun, opened the 28th Session of the IOC Assembly at 10:00 on Thursday 18 June 2015 in Room II at UNESCO Headquarters. He welcomed the new officers recently elected in the following subsidiary bodies of the Commission: IOCARIBE, WESTPAC, IODE, IPHAB, ICG/IOTWS and ICG/PTWS.

2 UNESCO Director-General, Irina Bokova, addressed the IOC Assembly during the opening session, and returned on June 22 to take questions from the Member States. The Director-General stressed the importance of the role of the ocean within the sustainable development agenda, congratulated the IOC on the successful UN World Oceans Day event, and recalled the Rio+20 thematic priority of the ocean for development, livelihood and science. The Director-General recounted the challenge to IOC of performing with reduced financial resources and staff during the current biennium, which were partially offset by additional resources made available to IOC from the UNESCO Emergency Fund, and assured the Assembly that the IOC is one of the high priorities for UNESCO. As evidence of this commitment the Director-General reminded the Assembly that the UNESCO Draft Budget for 2016–2017 contains a proposed allocation to the IOC at the level of 2% of the total UNESCO budget, which, while modest, is a confirmation of a steady increase in the IOC share of the Organization's total budget over the last four biennia ([Annex III-A](#)).

3 The Director-General indicated that she follows, with great interest, the work on the Future of the IOC, its efforts to further sharpen the IOC mission and raise its visibility, and the reflections on the IOC functional autonomy and the efficiency of its governance. She expects from this work a clear statement from the IOC of its mandate, vision and responsibility in support of the Sustainable Development Agenda.

4 The Director-General complemented the commission on successful work within limited resources and thanked the outgoing officers for their commitment and contributions to the commission.

5 The Member States thanked the Director-General for her support and interest in the IOC. The Assembly appreciated the Director-General's expression of support with regard to the need to sharpen the IOC mission and raise IOC image within the UN organizations, to further prioritize its core mandate in the area of long-term sustained observations and related data and information management, to increase the emphasis on regional priorities, including through a more balanced geographical distribution within the IOC Secretariat. The Director-General reiterated the importance of the Future of IOC process and emphasized how the IOC intergovernmental role, the interface between science and politics, is so important to the governance questions related to all Sustainable Development Goals and of fundamental importance to UNESCO.

6 The Chair asked participants to stand for a minute of silence to honour distinguished individuals who had participated in the work of the Commission and have passed away during the past year: Demetrio de Armas Pérez (1949–2015, Spain), Neil John Campbell (1925–2014, Canada), Lev Karlin (1947–2014, Russian Federation), Laurence Mee (1951–2014, U.K.), Kostas Nittis (1964–2014; Greece), Desmond Scott (1923–2015, U.K.), past Executive Secretary of IOC.

7 The Chair invited participants to visit the poster exhibition which illustrates the activities of IODE, WESTPAC and Tsunami programme and its collaboration with other IOC programmes in the Foyer. He thanked, on behalf of the Assembly, the Marine Technology Society (USA) for hosting the reception at the end of the opening day, the Government of Flanders (Belgium) for the SPINCAM cocktail, and several partners for sponsoring coffee/tea services and events during the session: Permanent Delegation of Japan to UNESCO, Scientific Committee on Oceanic Research (SCOR), Institute of Marine Engineering, Science & Technology (IMarEST), Permanent Delegation of Republic of Korea to UNESCO, Permanent Delegation of United States of America to UNESCO, Permanent Delegation of Germany to UNESCO, and Permanent Delegation of India to UNESCO.

8 The representatives of eight Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [France](#) and [USA](#).

2. ORGANIZATION OF THE SESSION

2.1 ADOPTION OF THE AGENDA

9 The Chair reminded that the Executive Council, acting as the Steering Committee for this Assembly session, examined the revised provisional agenda for the session and noted there was no request for supplementary items. The chair also reminded that the A. Bruun and N.K. Panikkar Memorial Lectures, 2015, which were previously included as part of the Assembly session, were organized during the Ocean Science Day that took place the day before the Assembly.

10 The Assembly appreciated the structural changes of the action paper used in recent years to economize in light of funding difficulties, but recognized that the concise sessional reporting may limit description of background discussions.

11 The representatives of one Member State took the floor.

Decision [IOC-XXVIII/2](#) (I)

The Assembly,

Adopts the [Agenda](#) and the timetable of work as set out in document IOC-XXVIII/1 Prov. Rev. and Add. Rev.

2.2 DESIGNATION OF THE RAPPORTEUR

Decision [IOC-XXVIII/2](#) (II)

The Assembly,

On a proposal of Argentina, seconded by Brazil,

Designates Mr Carlo Elisca S. Cerome of Haiti Rapporteur for its present session to assist the Chairperson and the Executive Secretary in the preparation of the draft provisional report of the Session;

2.3 ESTABLISHMENT OF INTRASESSIONAL COMMITTEES AND WORKING GROUPS

12 Referring to the recommendations made by the Executive Council (EC-XLVIII/Dec.3.1 and 3.3) at its 48th session on this item, acting as the steering committee for the present session, the Chair reminded of the mandate of the three sessional committees, the open-ended composition thereof, and the working arrangements made for their meetings.

With reference to the recommendations of the Executive Council, the Chair proposed the establishment of four sessional working groups on: the International Indian Ocean Expedition 2 (IIOE-2); the review of GEBCO; the IOC Capacity-Building Strategy and the related Draft Resolution; and the Future of IOC. He then invited proposals for additional sessional working groups and received none.

Decision [IOC-XXVIII/2](#) (III)

The Assembly,

Establishes the following sessional open-ended committees and four working groups and referred to them the following agenda items and responsibilities:

- Financial Committee (to examine the financial implications of draft decisions/resolutions, work plans of subsidiary bodies: under the chairmanship of Professor Peter M. Haugan (Norway) with the following Member States declaring their wish to participate: Australia, Spain, Germany, South Africa, Kenya, USA, Japan, Russian Federation, Malaysia, UK, Côte d'Ivoire, China, Belgium, Brazil, Canada, Cameroon, Greece, India, France, Turkey, Portugal, Trinidad and Tobago, Republic of Korea, Thailand, Mauritius, Argentina, Denmark, Egypt. Ms Ksenia Yvinec provides the Secretariat support to the Financial Committee.
- Resolutions Committee (to report on all draft resolutions duly presented for consideration at the session –item 12: under the chairship of Terry Schaefer (USA) with the following Member States declaring their wish to participate: Argentina, Australia, USA, Malaysia, France, India, China, Turkey, Islamic Republic of Iran, Tunisia, Japan, UK, Côte d'Ivoire, Portugal, Greece, Republic of Korea, Thailand, Ecuador. Julian Barbière provides the Secretariat support to the Resolutions Committee.
- Nominations Committee (to examine all proposals of candidates for the elections to the chair, vice-chairs and to the Executive Council at the present session, and to report on them –item 11.3): under the chairship of Javier Valladares (Argentina) with the following Member States declaring their wish to participate: Japan, USA, China, India, France, Turkey, Saudi Arabia, Spain, Cuba, Egypt, Bulgaria, Republic of Korea, Russian Federation, UK. Thorkild Aarup provides the Secretariat support to the Nominations Committee.

Establishes also:

On a proposal of the Executive Council acting as the steering committee for the present session:

- a sessional working group on International Indian Ocean Expedition 2 (IIOE-2) (5.3) under the chairship of Sateesh Shenoi (India) with the following Member States declaring their wish to participate: (to be completed in the final report). Nick D'Adamo provides the Secretariat support to the group.
- a sessional working group on the review of GEBCO (item 6.2) under the chairship of Craig McLean (USA) with the following Member States declaring their wish to participate: Argentina, Japan, France, Colombia, China, Brazil, Bulgaria, Portugal, Tunisia, Turkey, Canada, USA, Australia, Spain, Malaysia, Russian Federation, Tanzania, Ireland, Republic of Korea, UK, India, Monaco, IHO, GEBCO. Julian Barbière provides the Secretariat support to the group.
- a sessional working group on the IOC Capacity Building Strategy and Draft Resolution (9.1) under the chairship of Prof. Adoté Blim Blivi (Togo) with the following Member States declaring their wish to participate: Australia, USA, Japan, UK, Côte d'Ivoire, Senegal, Malaysia, Mauritius, Saudi Arabia, Germany, South Africa, Egypt, Kenya, China, Belgium, Brazil, Cameroon, France, India, Nigeria, Portugal, Trinidad and Tobago, Republic of Korea, Thailand, Argentina, Tanzania. Peter Pissierssens provides

the Secretariat support to the group.

- a sessional working group on the Future of IOC (item 4.) under the chairship of Peter Haugan (Norway). Ksenia Yvinec provides the Secretariat support to the group, with the following Member States declaring their wish to participate: Denmark, USA, Japan, UK, Senegal, Cuba, Spain, Russian Federation, Germany, Algeria, South Africa, Argentina, Australia, Ecuador, Malaysia, Morocco, Colombia, China, Chile, Canada, Brazil, Greece, France, Finland, Indonesia, Islamic Republic of Iran, India, Pakistan, Philippines, Portugal, Turkey, Tunisia, Thailand, Republic of Korea, Egypt, Togo.

2.4 INTRODUCTION OF DOCUMENTATION, TIMETABLE AND MEMORIAL LECTURES

- 14 The Executive Secretary introduced this item. He reviewed briefly the list of working documents and reminded the Assembly that the report would be focused on decisions. Referring to IOC-XXVIII/Inf.1, the Executive Secretary reminded that draft decisions would be agreed to during the discussion of each agenda item. The Action Paper was intentionally drafted as a pre-report in order to streamline the reporting process during the session. Taking into account the feedback from Member States at sessions of IOC governing bodies since 2012, a summary of the discussion that led to the decision under each agenda item was to be drafted during the session and was to be submitted to Member States under item 12 for adoption as possible during the plenary session or alternatively by correspondence after the session. Dr Ryabinin invited delegates to consider the online evaluation questionnaire concerning governing body session working arrangements as early as possible and to complete it before the discussion on working arrangements in item 12. Member States that wished to have specific, particularly important, plenary interventions recorded, were invited to provide written records thereof in one of the four working languages of the Commission, to be annexed to the report, in their original language as an informational annex to this report. A template and a dedicated e-mail address (iocgovbody@unesco.org) was set up to this end.
- 15 With reference to the timetable for the session, the Executive Secretary informed about the interpretation arrangements during the session. Meetings of the Financial Committee benefitted from English/French interpretation. An inquiry about the wish of Member States to continue to provide interpretation during future meetings of this committee was added to the evaluation questionnaire for the session.
- 16 The Executive Secretary drew some conclusions on the Ocean Science Day that took place the day before the Assembly opening in the working languages of the commission. He acknowledged supports from Norway for the organization of the event and invited comments on this initiative of the Officers. He also mentioned for the record of this Assembly that the IOC Anton Bruun Memorial Lecture and N.K. Panikkar Memorial Lecture 2015 were delivered during the Ocean Science Day respectively by Lora E. Fleming on "Oceans, Health and Wellbeing: the Next Frontier" and John Field on the "From the Indian Ocean to the World Ocean and back in 50 years". Following their presentation Ms Fleming was awarded the IOC Anton Bruun medal and Mr John Field the IOC N.K. Panikkar Medal ([Annex VI](#)).
- 17 The Assembly noted that all documentation of the Session were not posted in a timely manner and encouraged the Secretariat to work harder to complete most documentation two months in advance of the Session as stated in Rule of Procedure 11.
- 18 The Assembly expressed great satisfaction with the Ocean Science Day, and applauded the quality of the presentations. The sense of the Assembly seemed to be to continue the activity in future sessions (see IOC-XXVIII, Dec.11.4).
- 19 The representatives of three Member States took the floor. The following Member State chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Brazil](#), [Malaysia](#).

3. STATE OF THE IOC, ITS REGIONAL SUBSIDIARY BODIES AND ITS PROGRAMME AND BUDGET

3.1 STATEMENT OF THE CHAIRMAN ON THE STATE OF IOC

20 In accordance with rule of procedure 8.1(a), the Chair delivered an oral statement on recent developments in the work of the Commission and perspectives for the coming years ([Annex III-B](#)).

21 The Assembly thanked the Chair for his presentation, and appreciated his service and leadership during his tenure as Chair of IOC (2012–2015). The Assembly noted, in particular, the Chair and Representative of Korea's support for the regional consultative workshops on "Future of Sustained Ocean Observations and Services" and capacity development activities.

22 The representatives of nine Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [China](#), [France](#), [Republic of Korea](#), [Tanzania](#).

3.2 REPORT BY THE EXECUTIVE SECRETARY ON PROGRAMME AND BUDGET (2014–2015) IMPLEMENTATION

23 In accordance with Rule of Procedure 8(b) and 49, the Executive Secretary reported on the implementation of the Commission's Medium-Term Strategy (2014–2021) and on its programme implementation for the period 2014–2015 since the 47th Session of the Executive Council (1–4 July 2014).

24 Dr Ryabinin started by thanking his predecessor Dr Wendy Watson-Wright under whose leadership the main part of the activities for the period concerned by the report were implemented. He mentioned the difficult conditions in which the Secretariat had to operate for the second biennium with a reduced budget and explained that IOC was able to maintain a reasonable level of activity although it was not possible to operate at optimum level in any of the programmes. He then gave an overview of the activities carried out by the Commission (IOC-XXVIII/2 Annex 1) under the six functions identified in the IOC Medium-Term Strategy 2014–2021 (IOC/INF-1314).

25 The Executive Secretary introduced the Report on Budget Execution in 2014 and reminded the Assembly of the context in which the budget was implemented. In the Zero Nominal Growth draft budget of \$ 653 M for the biennium 2014–2015 presented by the Director-General to UNESCO Member States, the budgetary allocation to the IOC for the biennium 2014–2015 was of \$ 12 M, which implied a nominal increase of approximately \$ 0.5 M compared to the previous biennium. However, in the ZNG \$ 507 M Expenditure Plan for 2014–2015 adopted by the General Conference of UNESCO at its 37th session, the actual 2014–2015 budgetary allocation to the IOC was reduced to \$ 8.6 M, or 72% of the fully-funded Programme and Budget (37 C/5).

26 This decision was brought to the attention of the IOC Member States at the 47th session of the IOC Executive Council (Paris, 1–4 July 2014), in document IOC/XLVII/2 Annex 3 rev., which also provided information on the Secretariat restructuring as well as the detailed analysis of the impact of this budgetary reduction on programme delivery under each expected result and function.

27 In its Resolution EC-XLVII.2 the Executive Council recognized 'the efforts of the IOC Executive Secretary to maintain programme continuity under these challenging circumstances and the difficulty to fully implement the guiding principles adopted by the IOC Assembly at its 27th session (Resolution XXVII-2(C), Annex 2), given that the Assembly provided its

recommendation on a scenario with an allocation of 86% (and not 72%) of the 37 C/5 approved budget.' It welcomed the programmatic choices of the Executive Secretary and endorsed the Programme and Budget for 2014–2017 and Work plans for 2014–2015 contained in document IOC/EC-XLVII/2 Annex 3 rev. as a measure to ensure programme continuity at essential level and consistent with the priorities of the Medium-Term Strategy for 2014–2021.

28 The Executive Secretary informed the Assembly of the additional allocation to the IOC of US\$ 500,000 proposed by the Director-General and approved by the UNESCO Executive Board at its 196th session. These funds will be made available from the Emergency Fund and will allow to create the much needed full-time position of the IOCARIBE Secretary in Cartagena, Colombia, as soon as possible in the current biennium.

29 He then presented to the Assembly his vision and proposals for future actions, based on the first three months in office. One of the highlights of his presentation concerned the need to improve the visibility of IOC's work as of high relevance to the societal challenges of sustainable development, in particular through its enhanced presence in the regions.

30 Interventions will be listed under 3.4.

Decision [IOC-XXVIII/3.2](#)

The Assembly,

Having examined documents IOC-XXVIII/2 Annex 1 Rev. and Addendum and IOC-XXVIII/2 Annex 2 and Corr.,

Takes note of the report of the Executive Secretary on programme and budget implementation, including the report on budget execution 2014, subject to the review of the Financial Committee in Resolution XXVIII-(11.1).

3.3 REPORTS BY THE CHAIRS OF THE IOC SUB-COMMISSIONS AND REGIONAL COMMITTEES

3.3.1 IOC Sub-Commission for the Western Pacific: 10th Session of WESTPAC, 12–15 May 2015, Phuket, Thailand

31 Dr Somkiat Khokiattiwong, Chair of WESTPAC reported on the key accomplishments over the last intersessional period, and major outcomes of the 10th intergovernmental session of WESTPAC.

32 He reported to the meeting that WESTPAC has been continuously striving to strengthen the leadership of IOC/UNESCO in the region in marine research, sustained ocean observations and capacity development on the occasion of its 25th Anniversary. Some 2,150 marine scientists, governmental officials and resources managers directly took part in WESTPAC activities over its last intersessional period.

33 Dr Khokiattiwong reiterated the major accomplishments of WESTPAC reported at the WESTPAC's tenth Intergovernmental Session (Phuket, Thailand, 12–15 May 2015).

34 He reported on major decisions and recommendation of the WESTPAC-X. WESTPAC-X approved: (i) four new regional programmes; (ii) the establishment of a Scientific Steering Committee as a primary arm to guide the development of the Indo-Pacific Ocean Observations and Services Network (SC-IPON); (iii) the establishment of an open-ended Intersessional Task Force on the Feasibility Study of the second Cooperative Study of the Kuroshio and Adjacent Regions (CSK-2); as well as other on-going activities and management, (iv) the continuous development of the IOC regional network; and resource centre; (v) organization of the international scientific symposium in 2017, Xintao, China.

35 While highlighting the strong ownership of WESTPAC by Member States, Dr Khokiattiwong also pointed out that the current grade of the head of the WESTPAC office has been a major impediment to leveraging higher political commitment. In this view he introduced two amendments to the draft decision. Several Member States provided interventions supporting the Chair's amendments to consider any possibility of appointing the Head of the WESTPAC office to an appropriate level.

36 He concluded by welcoming Sri Lanka and Bangladesh as the 21st and 22nd Member States of the Sub-Commission.

37 The Assembly noted the successful development of the programme in the region.

38 The Assembly highlighted the contribution of WESTPAC Member States and high-quality performance of the WESTPAC Office to the development and cooperation of regional marine science. The Assembly considered that the WESTPAC achievements demonstrated the great importance of IOC Regional Subsidiary Bodies for IOC as a whole to assist its Member States building/enhancing their capacity and advancing scientific knowledge to underpin the sustainability of their marine and coastal resources. Given that the WESTPAC development offered a pragmatic regional approach to enhancing IOC's global efficiency and visibility, the Assembly further suggested that its experience should be drawn on and inter-regional cooperation could be developed among all IOC Regional Subsidiary Bodies with a view to strengthening the IOC's presence at the global, regional and national levels.

39 Concrete commitments were made by many countries, which, *inter alia*, include: Thailand will continue hosting and supporting the operation of the WESTPAC Office; Indonesia and Malaysia decided to establish IOC Regional Training and Research Centres (RTRCs) respectively on Tropical Marine Biodiversity and Harmful Algal Bloom Studies; China renewed its commitments of voluntary contributions providing regular trainings in the IOC Regional Training and Research Center on Ocean Dynamics and Climate and other training facilities, conducting joint research, and hosting WESTPAC workshops and the 10th WESTPAC International Scientific Symposium; Japan and Republic of Korea will continue to make financial contributions to WESTPAC in support of its programme implementation.

40 The representatives of 13 Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [China](#), [Indonesia](#), [Japan](#), [Kenya](#), [Republic of Korea](#), [Malaysia](#), [Philippines](#), [Thailand](#).

Decision [IOC-XXVIII/3.3.1](#)

The Assembly,

Having considered the executive summary report of the 10th Session of the IOC Sub-Commission for the Western Pacific, Phuket, Thailand, 12–15 May (IOC/WESTPAC-X/3s),

Expresses its deep appreciation to the Government of Thailand for hosting and supporting the WESTPAC Office, the Government of Vietnam for hosting and co-organizing the 9th WESTPAC International Scientific Symposium (22–25 April 2014, Nha Trang, Vietnam), the Government of China for hosting the IOC Regional Training and Research Centre on Ocean Dynamics and Climate, as well as to all other WESTPAC Member States for their financial and in-kind support provided to WESTPAC diverse activities;

Taking into account the pivotal role of the WESTPAC Office in WESTPAC's achievement over the past decade,

Requests the Executive Secretary to consider any possibility of appointing the Head of WESTPAC Office to an appropriate grade in order to leverage higher level political commitments in response to the unprecedented ever-increasing demands of its Member States, and to be in line with the practices of other UN agencies and programmes in the region;

Accepts the report of WESTPAC-X and the recommendations therein, including the workplan of the Sub-Commission for May 2015–May 2017;

Encourages WESTPAC Member States to keep the momentum of WESTPAC, and further demonstrate their ownership over all IOC programmes at regional level;

Agrees that the regular budget for these activities will be identified as part of the overall IOC Programme and Budget Resolution XXVIII-3.

3.3.2 IOC Sub-Commission for the Caribbean and Adjacent Regions: 13th Session of IOCARIBE, 25–28 May 2015, Merida, Mexico

41 The IOCARIBE Vice-chair Mr Arnulfo Sanchez (Panama) on behalf of the Chair Mr Francisco Brizuela (Mexico) reported on the progress achieved in IOCARIBE focal programmes for 2014–2015: the Caribbean Large Marine Ecosystem (CLME); the IOCARIBE Global Ocean Observing System Regional Alliance (IOCARIBE-GOOS); the Harmful Algal Blooms in the Caribbean and Adjacent Regions (HAB-ANCA) programme; the Integrated Coastal Area Management (ICAM) programme; the International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico (IBCCA); the International Oceanographic Data and Information Exchange (IODE) and related Ocean Data and Information Network for the IOCARIBE and South America Regions (ODINCARSA); the Caribbean Marine Atlas; and activities for Capacity Development.

42 He reported on the successful completion in 2014 of: (i) the Caribbean Large Marine Ecosystem (CLME), a 58 million GEF project; and (ii) the Caribbean Marine Atlas phase 1 (CMA1). He also noted the IOCARIBE endorsement of the development of the Caribbean Marine Atlas phase 2 (CMA2). Mr Sanchez informed the Assembly about the current and new IOCARIBE projects: "Demonstrate Approaches for Nutrient and Sediment Reduction at Selected Pilot Study Areas in the Wider Caribbean"; "Partnership for Sustainable Management of Ocean and Coastal in Latin America (Central and South America)", and "Design of a GEO Coastal Ocean Pilot Project" for the Caribbean Region GEO pilot Project as part of IOCARIBE-GOOS. Also, he noted IOCARIBE support to the "CIFDP-C – Coastal Inundation Forecasting Project in the Caribbean", developed by WMO and IOC within the JCOMM framework.

43 Referring to HAB-ANCA work and IPHAB Recommendation to develop "A Plan for Improved Research and Management of Ciguatera" on a global scale, IOCARIBE supports regional participation in and implementation of the IOC Ciguatera Strategy and requested developing a project focused on Ciguatera-causing organisms, toxins, contaminated seafood and epidemiology.

44 IOCARIBE has identified the gap in ocean science capacity as a prerequisite, especially for SIDS, for sustainably managing the vast ocean spaces and resources under their national jurisdiction. IOCARIBE Member States agreed to develop an implementation plan, customized to address components of highest relevance to the region, and supported the proposed IOC Capacity Development Strategy.

45 Noting IOCARIBE Member States concern in understanding the extent of the ocean acidification (OA) impact on marine ecosystems and the need for soundly-based observational data, the Sub-commission recommended to coordinate and facilitate Member State participation in the Global Ocean Acidification Observing Network and to contribute to the OA research.

- 46 Mr Sanchez stressed the need to strengthen and properly staff IOCARIBE Secretariat and invited Member States and the scientific community to actively participate in the IOCARIBE 35th Anniversary International Marine Sciences to be held in 2017.
- 47 The Assembly recognised the efforts carried out by IOCARIBE in capacity development and institutional strengthening. Member States noted the progress achieved in CLME and Tsunami and Other Coastal Hazards Early Warning System projects and recognised their contribution in increasing Member States capacities to ecosystem management and disaster risk reduction. IOC's global and IOCARIBE regional programmes are partners in co-designing programmes, for example a GOOS Coastal pilot project, Ocean Teacher Global Academy Hub located in Colombia, capacity development, and a renewed focus on Ciguatera in parallel with the new IOC IPHAB Ciguatera Strategy.
- 48 Member States stressed the need to improve cooperation and communication between Sub-commissions, recommended developing synergies with UNESCO 2014–2021 Plan of Action for SIDS, and expressed their concern that Sub-commission secretaries should be appointed to the appropriate grade corresponding to their level of responsibility.
- 49 Member States welcomed the reinforcement of the IOCARIBE Sub-commission through the IOC Executive Secretary decision to restore the current IOCARIBE Secretary's position in Cartagena and the expanded Colombian support to IOCARIBE's staff. Member States noted their obligation to actively participate in IOCARIBE projects and programmes.
- 50 The Assembly expressed appreciation to the Government of Colombia for continued hosting of the secretariat and for its support by seconding experts working as IOCARIBE staff.
- 51 The representatives of 7 Member States and GEBCO took the floor. The following Member States and organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Dominican Republic](#), [Kenya](#), [USA](#), [Venezuela](#) and [GEBCO](#).

Decision [IOC-XXVIII/3.3.2](#)

The Assembly,

Having considered the executive summary report of the 13th Session of the IOC Sub-Commission for the Caribbean and Adjacent Region (IOCARIBE), Merida, Mexico, 25–28 May 2015 (IOC/SC-IOCARIBE-XIII/3s),

Taking note of the IOCARIBE recommendation SC-IOCARIBE-XIII.1 considering the need to strengthen the IOCARIBE Secretariat and to relocate the current IOCARIBE Secretary's position to Cartagena, Colombia, and relevant IOC decision XXVII/Dec.3.3(III),

Noting with satisfaction the reinforcement of the IOC Regular Programme Budget for 2016–2017 as proposed in the Draft UNESCO Programme and Budget (38 C/5),

Welcomes the decision of the Executive Secretary to restore the current IOCARIBE Secretary's position as a full-time, Regular Programme, fixed-term post, and relocate this post to Cartagena, Colombia;

Accepts the report of IOCARIBE-XIII and the recommendations therein;

Agrees that the regular budget for these activities will be identified as part of the overall IOC Programme and Budget Resolution XXVIII-3.

**3.3.3 IOC Sub-Commission for Africa and the Adjacent Island States:
3rd Session of IOCAFRICA, 13–15 April 2015, Nairobi, Kenya**

- 52 The Chair of the IOC Sub-Commission for Africa and the Adjacent Island States, Dr Monde Mayekiso (South Africa), reported on the major outcomes of the 3rd session of the Sub Commission (IOCAFRICA-III, 14–15 April 2015, Nairobi, Kenya). He highlighted the activities developed in the scope of the IOCAFRICA Strategic Plan, 2014–2021 (IOC/INF-1318): training courses and workshops in the field of Application of Ocean Data and Modelling products in particular and others in the context of the fourth phase of ODINAFRICA; Regional Training centres established in four countries as part of the OceanTeacher Global Academy Project; an artwork competition for children and youth; and preparation of reports on coastal erosion problems and oceanography capacities in West Africa.
- 53 The IOCAFRICA programme of work for 2015–2017 has 16 action areas (Rec. IOCAFRICA-III.4).
- 54 The development of an ocean observations network in the region was identified as the priority area considering the little progress that has been made so far in this area.
- 55 The Assembly noted opportunities to develop programmes in association with the African Union Decade of the African Seas and Oceans (2015–2025).
- 56 China reiterated its continued support for the Sub-Commission, especially in the fields of capacity development, ocean observations and the blue economy. China will work with IOCAFRICA through their proposed Joint Coordination Committee to finalize a detailed work programme and implementation plan.
- 57 The Assembly expressed its gratitude to China and all Member States that have also contributed to IOCAFRICA activities: Governments of Flanders (Belgium), Republic of Korea, Kenya, Nigeria, South Africa and Spain and suggested that more Member States could strengthen IOCAFRICA by supplementing resources and staff assigned to the secretariat.
- 58 The representatives of 13 Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [China](#), [India](#), [Kenya](#), [South Africa](#), [Tanzania](#).

Decision [IOC-XXVIII/3.3.3](#)

The Assembly,

Having considered the executive summary report of the 3rd Session of the IOC Sub-Commission for Africa and the Adjacent Island States, Nairobi, Kenya, 13–15 April 2015,

Noting the progress that has been made in the implementation of the IOCAFRICA work programme, especially in capacity development, and the limited progress in development of ocean observations in the region,

Welcomes the support provided by various Member States for the development and implementation of the programmes of the Sub-Commission, including the Government of Flanders (Belgium), Republic of Korea, Nigeria, Spain and South Africa;

Urges Member States, partner organizations and programmes to support the implementation of the Work Programme (2015–2017) of the Sub-Commission;

Accepts the report of IOCAFRICA-III and the recommendations therein;

Requests the IOC Executive Secretary to consider strengthening of the IOCAFRICA Secretariat through the regular budget;

Agrees that the regular budget for these activities will be identified as part of the overall IOC Programme and Budget Resolution XXVIII-3.

3.3.4 Report of the IOC Meeting of the Regional Subsidiary Bodies

59 The IOC Vice-chair in charge of capacity development and regions, Prof. Adoté Blivi (Togo), introduced this item. Resolutions XXV-2 and EC-XLIII.3 requested the IOC Executive Secretary to: (i) ensure that a meeting of IOC Regional Subsidiary Bodies (RSBs) and other regional activities be held in conjunction with IOC Assembly sessions; (ii) re-activate the IOC Regional Committee for the Central Indian Ocean (IOCINDIO), giving consideration to the activities of existing IOC and other relevant regional bodies; (iii) 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; (iv) improve communications between IOC and its RSBs, and between regional and global programmes; and (v) explore, in consultation with Member States, the establishment where needed, of supporting facilities in those regions.

60 The meeting of the Regional Subsidiary Bodies was held on Monday 15 June 2015 prior to the Assembly under the chairship of Prof. Adoté Blivi. The meeting (IOC-XXVIII/RSB/3s) highlighted the persistent challenges the RSBs are facing and identified recurrent needs: (i) strengthen the regular budget allocations; (ii) increase the extra-budgetary resource base for the regions; reinforce the staffing of the Secretariat of the RSBs as there is only one UNESCO professional staff in the secretariat of each of the three Sub-commissions; (iii) improve the coherence and integration of IOC global and regional programmes; and (iv) increase consultations and communication between the Headquarters, the RSBs and the Member States.

61 Prof. Blivi reminded that the state of development of the Sub-commissions is uneven. Whereas WESTPAC builds results on strong ownership, commitment and investment by Member States in its region, IOCARIBE and IOCAFRICA still consider best practices that are adapted to their region. The staffing needs for a new sub-commission like IOCAFRICA (2011) are critical. The RSB meeting suggested that the Technical Secretaries, the officers of the Sub-commissions and Headquarters Secretariat meet on a regular basis to share experiences and best practices. With the recent restructuring of the IOC Secretariat at the Headquarters, the Marine Policy and Regional Coordination section (MPR) is expected to play an essential role to meet the required coordination, communication and integration needs of the Regional Subsidiary Bodies. In this regard it was noted that the new Executive Secretary actively contributed to the RSB meeting and rightly identified the difficulties and challenges facing the Sub-commissions. Prof. Blivi called also upon the Member States to provide the required level of support for the optimal operation of the RSB. He concluded that while the challenges are well known, the mechanisms for efficient and long-term solutions require further coordination and communication.

62 The Assembly noted that the key elements for solutions to meet regional needs include sharing best practices, integration and co-design of global programmes, and strengthened communication with and reporting to RSB constituencies. Ownership of the RSBs by Member States is an essential prerequisite to mobilizing and attracting resources from all Member States in support of the RSB secretariats.

63 The representatives of two Member States took the floor.

Decision [IOC-XXVIII/3.3.4](#)

The Assembly,

Having considered the executive summary report of the meeting of the Regional

Subsidiary Bodies prior to its 28th session (IOC-XXVIII/RSB/3s),
Takes note of the report of the IOC Vice-chairman for regions.

3.4 INTRODUCTION TO DRAFT PROGRAMME AND BUDGET FOR 2016–2017

- 64 In introducing the Draft Programme and Budget for 2016–2017, the Executive Secretary explained that these were elaborated by the Secretariat based on the budgetary allocations for IOC proposed by the Director-General to the 196th session of the UNESCO Executive Board in document Draft 38 C/5 and addendum. This Programme and Budget is consistent with the IOC Medium-Term Strategy for 2014–2021 (IOC/INF-1314) adopted by the IOC Assembly at its 27th session (26 June–5 July 2013) and is a direct continuation of the four-year programme defined for the period 2014–2017. It translates the strategic objectives defined in the Medium-Term Strategy into programme focus areas with clear results expected at the end of the four-year period. While the programmes are defined for the quadrennial period 2014–2017, this document covers the budget allocation to the programmes proposed for the biennial period 2016–2017, in line with the General Conference resolutions to maintain the biennial cycle for the appropriation of the budget and to move towards a results-based budgeting approach.
- 65 He emphasized that due to the strong support of its Member States and the high priority that they attribute to the work of IOC, the \$ 507 M Expenditure Plan of UNESCO for 2016–2017 foresees the IOC regular budget allocation, which is increased by \$ 1 M over the previously anticipated value, bringing it to \$ 9.7 M. This reinforcement is of tremendous importance given the overall situation whereby UNESCO, as a whole, faces a severe financial crisis. Nevertheless, the current budgetary allocation still represents 80% of the fully-funded scenario for 2014–2015 and 73% of the fully-funded scenario for 2016–2017.
- 66 With a \$ 1 M additional allocation for 2016–2017, the IOC will be finally in a position to hire a full time P4 IOCARIBE Secretary in Cartagena, Colombia. The rest of the additional funding represents only a partial restoration to the level of activity funding before 2011 for IOC. This funding would be directed to programme activities, with a particular focus on partial restoration of capacity development programmes and the strengthening of the regional sub-commissions. In particular, it is proposed to:
- strengthen tsunami and coastal sea-level hazard preparedness and awareness with focus on SIDS and LDCs,
 - strengthen engagement with UN institutions and processes, including technical guidance and training for monitoring ocean SDG objectives and climate change adaptation and mitigation,
 - ensure partial restoration of funding to core ocean research and observational activities which help leverage the collective contribution of all IOC Member States, including a focus on capacity development that will build local services from ocean data and forecast system infrastructure, and marine spatial planning.
- 67 In the ZNG+ \$ 667 M budget expenditure plan of \$ 518 M, the IOC was allocated \$ 10,155,000. Comparatively to the \$ 507 M ZNG expenditure plan, the \$ 518 M ZNG+ expenditure plan would allow IOC to assist more SIDS Member States in the transfer of marine technology, to build capacity and to respond to some of the most pressing staffing needs by creating a new professional post to coordinate the work on ocean warming and acidification.
- 68 The Executive Secretary informed the Assembly that the UNESCO Executive Board at its 196th session in April 2015 recommended that the Director-General should present to the 197th session of the Board and the 38th session of the General Conference a budget proposal based on the Zero Nominal Growth Plus approach. He stressed that this is indeed excellent news for both UNESCO and the IOC, that the foreseen US\$ 1.5M reinforcement of the IOC

budget in the Zero Nominal Growth Plus Expenditure Plan will be recommended.

69 During discussions of Agenda items 3.2 and 3.4 the representatives of 24 Member States took the floor. The Assembly was unanimous in expressing its appreciation to former Executive Secretary Dr Wendy Watson-Wright for her commitment and leadership and in congratulating Dr Vladimir Ryabinin on his appointment. The Assembly also expressed its thanks to the new Executive Secretary for his comprehensive, rich and forward-looking presentation. All speakers expressed their full support of and commitment to work collectively on the most salient points raised by the Executive Secretary with regard to the need to increase IOC visibility through prioritization of programme activities based on clear criteria emerging from the post-2015 agenda Sustainable Development Goals, with particular regard to regional and inter-regional cooperation and the needs of Small Island Developing States and LDCs.

70 The following Member States and organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Canada](#), [Chile](#), [China](#), [India](#), [France](#), [Kenya](#), [Republic of Korea](#), [Philippines](#), [Tanzania](#), [USA](#) and [GEBCO](#).

Decision [IOC-XXVIII/3.4](#)

The Assembly,

Having examined document IOC-XXVIII/2 Annex 3,

Takes note of the report of the Executive Secretary's introduction on programme and budget implementation, subject to the review of the Financial Committee in Resolution XXVIII-3.

3.5 REPORT OF THE IOC (2014–2015) TO THE THIRTY-EIGHTH GENERAL CONFERENCE OF UNESCO

71 The Executive Secretary introduced this item. He gave a brief overview of the highlights of this period and explained that, similarly to the report of the Executive Secretary on programme implementation, the reporting was done under the six functions identified in the IOC Medium-Term Strategy 2014–2021. He brought to the attention of the Assembly that the document also gives a brief introduction on the IOC status, mission and vision, given that this will be the first report to the General Conference under the current Medium-Term Strategy.

72 The Assembly agreed that the report could benefit from an analytical section on the challenges encountered and lessons learned in the process of programme implementation over the covered period, as well as from reflecting the main outcomes and messages from this session of the Assembly.

73 The representatives of two Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Kenya](#).

Decision [IOC-XXVIII/3.5](#)

The Assembly,

Recalling Article 3.2 of the Statutes and Rule of Procedure 49.2,

Having examined document IOC-XXVIII/6,

Requests the Executive Secretary to update, in consultation with the Officers, the current version of the report taking into account the main outcomes of the Assembly and including a section on challenges and lessons learnt; and submit the report on IOC activities (2014–2015) to the 38th General Conference of UNESCO (38 C/REP.9).

4. THE FUTURE OF IOC

74 Prof. Peter M. Haugan (Norway), Chair of the Inter-sessional working group on the Future of IOC introduced this item. He informed the Assembly of the consultative process conducted in the inter-sessional period in accordance with Decision EC-XLVII/Dec.4 and presented a brief summary of the conclusions, including those achieved during the inter-sessional working group meeting on 16 June 2015 and the sessional working group meeting on 19 June 2015. Among the main outcomes of the group's discussions was the common agreement on the need to raise the awareness of the role that the IOC with its regional bodies can play as the global hub for intergovernmental ocean science cooperation, advice and information. Prof. Haugan also conveyed the emphasis put by the Group on the fact that the Commission has a unique mandate to establish a long-term, systematic ocean observing, modelling and analysis programme which is the foundation of environmental protection, sustainable development, climate change and hazard risk reduction and these commonly agreed priorities should be adequately reflected in the budgeting process.

75 He underlined the overall consensus that the IOC Governing Bodies should maintain in their agendas a mechanism to enable Member States to reflect and engage in a constructive dialogue on this highly strategic and important subject. He thanked past IOC Chair Javier Valladares (Argentina) for his contribution to the work of the group, as well as the representatives of the United Kingdom for what Prof. Haugan considered to be an extremely useful and thought-provoking *Policy Brief 'An evaluation of the Intergovernmental Oceanographic Commission's role in global marine science and oceanography'*. The Assembly was unanimous in expressing its high appreciation of Prof. Haugan's leadership in this important and strategic consultative process. The Assembly urged the elected Officers and all Member States to work even more actively and responsibly during the intersessional period to support, strengthen and promote the vision and the mission of the Commission, including through increased investments in ocean-related activities at national level and provision of extrabudgetary funds to the IOC.

76 The representatives of 20 Member States and one observer (PICES) took the floor. The following Member States or organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Australia](#), [Canada](#), [Chile](#), [China](#), [France](#), [Malaysia](#), [Turkey](#), [USA](#), and [PICES](#).

Decision [IOC-XXVIII/4](#)

The Assembly,

Having considered the report of the Chair of the Inter-sessional Working Group on the Future of IOC (IOC-XXVIII/2 Annex 4),

Noting the consensus reached by IOC Member States that the IOC Governing Bodies should maintain in their agendas an item and mechanism to enable Member States to continuously reflect and exchange ideas on this highly strategic and important subject,

Recognizing the financial difficulties currently faced by UNESCO and the IOC,

Expresses its appreciation to Professor Peter M. Haugan for his leadership and contribution to the work of the inter-sessional working group;

Decides that the process to be followed in order to frame the action of the governing bodies of IOC will be structured in two phases:

- (i) one for immediate action by entrusting the Officers of the Commission with the mission of raising awareness on, and clarifying within UNESCO the special statutes of IOC, emphasizing its functional autonomy and its role of intergovernmental specialized mechanism within the framework of UNESCO and in cooperation with the relevant UN system organization whose interest and activities are related to its

purposes;

- (ii) a second phase, during the intersessional period, for in-depth consideration by Member States, with a view of ensuring to the Commission the required institutional and operational sustainability exploring, among others, the possibilities offered by Article 10 of the IOC statutes;

Requests the Officers with the support of the Executive Secretary to develop the messages adapted to specific audiences about the societal benefits of IOC's mission, programmes and activities based on the input from the sessional working group and the discussions in plenary, and to convey it clearly and explicitly in a timely fashion to UNESCO and other UN organizations;

Encourages Member States to use this common message as a reference to assist them in raising the profile of the mandate and work of the IOC and related capabilities in fostering a common national approach in intergovernmental fora;

Further requests the Executive Secretary, in close consultation with the Officers, to explore ways of increasing IOC's strategic and functional visibility using a range of communication tools, and its contribution to the post-2015 Sustainable Development Goals consistent with IOC's vision and report back to the Executive Council at its 49th session;

Decides that the inter-sessional work on this subject should continue under the leadership of the IOC Officers with a view of providing a fully developed document with recommendation to the IOC Executive Council at its 49th session in 2016.

5. OCEAN RESEARCH

5.1 STATUS REPORT OF THE IOC GLOBAL OCEAN SCIENCE REPORT (GOSR)

77 The Head of the Ocean Sciences Section of IOC, Luis Valdés, introduced this item. The Global Ocean Science Report (GOSR) is envisaged to provide an overview on nations (i) investments, (ii) resources, and (iii) scientific productivity in Ocean Science by June 2016. It will provide a tool for mapping and evaluating the human and institutional capacity of Member States in terms of marine research, observations and data/information management, as well as a global overview of the main fields of interest, technological developments, capacity building needs and overall trends. The Global Ocean Science Report (GOSR) is part of the voluntary commitment of the IOC at Rio+20.

78 Dr Valdés reported on the number of responses received to the GOSR questionnaire and the information gathered so far on Ocean Science in IOC Member States. Furthermore some organizations provided information on different matters, in particular human resources, which was perceived as an encouraging signal for the IOC Secretariat of this exercise. While the analysis of the received information is under examination, additional information resources were identified in each chapter. A complementary approach to obtain data on research capacity and resources focused on analysing the gender and geographical distribution of scientists in a selection of international conferences and symposia within the context of international collaboration.

79 Dr Martha Crago, Vice-president Research at Dalhousie University and expert for the Canadian Ocean Science report, presented the Canada Ocean Science Report and explained how it is helping the scientific community, the policy makers, the funding agencies, and the private donors in Canada to make better decisions on ocean science matters.

80 Some Member States announced that they will complete the questionnaire soon. The Assembly suggested an extension of the questionnaire deadline to allow more Member States to respond as well. The Secretariat suggested an extension to 1st September 2015. The Assembly expected greater participation of Member States in the editorial process of the report. Dr Valdés reminded the Member States that the Editorial Board will consist of a limited number of experts selected for their expertise and capacity. The Member States will be invited to provide experts during the review process after the 49th Session of the IOC Executive Council in 2016. The Assembly stressed the importance of addressing regional needs, by analysing national plans, existing facilities and scientific expertise as specified by Member States in the questionnaires.

81 The representatives of 12 Member States and one organization took the floor. The following Member States and organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Argentina](#), [Australia](#), [Brazil](#), [Canada](#), [India](#), [Republic of Korea](#), [UK](#), [USA](#), and [PICES](#).

Decision [IOC-XXVIII/5.1](#)

The Assembly,

Having considered document IOC/INF-1321,

Welcomes the report of the Secretariat and takes note of the progress, challenges and prospects for the achievement of a comprehensive Global Ocean Science Report;

Expresses its appreciation to the Member States who responded to the GOSR questionnaire and provided in-kind support for the project;

Recalling Decision EC-XLVII/6.2 by which the IOC Executive Council at its 47th session accepted the GOSR proposal although no Regular Programme funds were allocated for this effort,

Recognizes the challenges faced by the secretariat in implementing the GOSR with limited financial resources and personnel;

Decides to allow the secretariat to consider the use of core funding for seed funding to implement activities beyond the current capacity of the secretariat that are critical for the completion of the GOSR;

Agrees that the regular budget for these activities will be identified as part of the overall IOC Programme and Budget resolution XXVIII-3;

Calls upon Member States to increase their extra-budgetary contributions, secondments of staff members, and in-kind support to IOC to provide the needed resources to complete the GOSR;

Requests the Executive Secretary to facilitate the preparation of the draft of the Global Ocean Science Report according to the initial schedule and to present it to the Executive Council at its 49th session for revision and comments, as appropriate.

5.2 WMO-IOC-ICSU WORLD CLIMATE RESEARCH PROGRAMME (WCRP):
REPORT AND REVIEW

82 The Director of the World Climate Research Programme, David Carlson, introduced this item. Dr Carlson reported on recent progress achieved by the WCRP in improving knowledge and understanding of global and regional climate variability and change, and in developing improved numerical models and climate projections, with particular emphasis on the priorities of IOC Member States. He spoke about WCRP's on-going work coordinating research and climate projections which will have increased focus on decadal-scale and regional-scale. Dr Carlson highlighted WCRP ocean research activities under the CLIVAR project, oceanographic activities in the polar regions undertaken through the CliC (Climate and Cryosphere) international project,

the activities of the WCRP Grand Challenge of Regional Sea Level. WCRP activities contribute to the IOC High-level Objectives as well as to the individual national objectives of IOC Member States as they develop ocean and climate research, mitigation, and adaptation strategies.

83 The Assembly encouraged WCRP to pursue its work on regional climate models.

84 The IOC Executive Secretary was requested to explain (on behalf of the WCRP Director) that the WCRP Regional Sea Level Grand Challenge represents an area of close coordination and active partnership with IOC, and that the sea-level related activities coordinated by the WCRP/IOC Task Group on Sea-Level Variability and Change will be incorporated into the WCRP Grand Challenge on Regional Sea Level.

85 The representatives of three Member States took the floor. The following Member State and organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Republic of Korea](#) and [PICES](#).

Decision [IOC-XXVIII/5.2](#)

The Assembly,

Recalling that IOC joined WMO and ICSU as sponsors of the WCRP in 1993;

Recalling further that the Assembly and Executive Council, since 2005, have reaffirmed continued co-sponsorship of WCRP at a level of US\$ 125,000 per annum and that Assembly at its 27th session identified IOC support as a high priority;

Taking note of the current financial difficulties of UNESCO that resulted in a reduced financial contribution to WCRP during the biennium 2014–2015;

Having considered the report of WCRP (IOC/INF-1323);

Decides to discontinue the WCRP/IOC Task Group on Sea-Level Variability and Change and requests WCRP to incorporate the sea-level related activities coordinated by that Task Group into the WCRP Grand Challenge on Regional Sea Level;

Requests WCRP to continue planning of its oceanographic activities in close cooperation with IOC;

Agrees that the regular budget for supporting WCRP activities will be identified as part of the overall IOC Programme and Budget resolution XXVIII-3;

Urges Member States to support the execution of this course of action through participation of their scientists as well as financial contributions to the IOC Special Trust-Fund for the WCRP.

5.3 SECOND INTERNATIONAL INDIAN OCEAN EXPEDITION

86 The chair of the Interim Planning Committee (Group of Experts) [IPC] for the Second International Indian Ocean Expedition (IIOE-2), Satheesh Shenoi, introduced this item. Recalling the resolution adopted by the IOC Executive Council (EC-XLVII.1, 2014), he reported on the meetings and outputs of the SCOR-IOC-IOGOOS Interim Planning Committee (Group of Experts) for IIOE-2. Based on a Science Plan for IIOE-2, whose development was led by SCOR, the IPC developed a Strategic Framework for Implementation of the IIOE-2, which benefited from input from IOC's network of Regional Subsidiary Bodies, Committees, Decentralized Offices, global programmes, and supporting stakeholder alliances.

87 Dr Shenoi highlighted the IPC's work in producing its report, including reference to governance and coordination, science and research, data and information management, capacity building, operational coordination, outreach and communication, transitioning science

for society, and resources and sponsorship. Dr Shenoi advised that IPC offered to continue its tenure until the time of the recommended IIOE-2 launch (4 December 2015, Goa, India), to oversee the development of an IIOE-2 Steering Committee, and a complementary operational structure and implementation plan. Dr Shenoi urged other Member States and associated stakeholders to complement India's and Australia's early commitments of support, pointing to the IOC report for specific areas of need where further resources can be channelled for IIOE-2 by willing Member States and donors.

88 Prof. Peter Burkill, President of SCOR, presented in more detail on the developed science plan for IIOE-2, which was recommended by IPC for adoption as the IIOE-2 underpinning science framework, and which focussed on the six themes of: human impacts; boundary current dynamics, upwelling variability and ecosystem impacts; monsoon variability and ecosystem response; circulation, climate variability and change; extreme events and their impacts on ecosystems and human populations; and unique geological, physical, biogeochemical and ecological features of the Indian Ocean.

89 The Assembly commented on the IPC work and indicated strong support for the IIOE-2. Specific points were made: linking the IIOE-2 with the Indian Ocean Rim Association; promoting opportunities for berths on the first cruise for IIOE-2 (December 2015, Goa to Mauritius) aboard the Indian ORV *Sagar Nidhi*; dealing effectively with sovereignty issues in national EEZs in regard to data sharing, availability and activities in EEZs; promoting activity in the marginal seas of the Indian Ocean; engagement in IIOE-2 of the formal IOC Subsidiary Bodies, in particular regional ones; emerging commitments by various Member States to actively engage in IIOE-2, such as via cruises; and consideration of the merits of mounting similar 'expeditions' in other oceans.

90 Drs Shenoi and Burkill acknowledged and thanked Member States and Observers for their support.

91 The representatives of 17 Member States and four Observers took the floor. The following Member States and organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Australia](#), [China](#), [Indonesia](#), [Japan](#), [Thailand](#), [UK](#), [USA](#) and [GEBCO](#).

92 The Assembly adopted [Resolution XXVIII-1](#) submitted by Australia, India, Thailand, I.R. Iran, Mauritius, Tanzania, Egypt, United Kingdom, South Africa, Republic of Korea, Madagascar, Togo, China, Seychelles and Kenya.

Second International Indian Ocean Expedition

The Intergovernmental Oceanographic Commission,

Recalling:

- (i) Decision IOC-XXVII/Dec.5.1.2 to further develop a proposal for the Second International Indian Ocean Expedition (IIOE-2),
- (ii) Resolution EC-XLVII-1 which, *inter alia*, entrusted the Scientific Committee on Ocean Research (SCOR) to develop the science plan for the IIOE-2 jointly with IOC and the Indian Ocean Global Ocean Observing System (IOGOOS)

Appreciating the leading role played by SCOR in developing the IIOE-2 Science Plan jointly with IOC and IOGOOS,

Welcoming the steps taken by the IOC Executive Secretary in the establishment of the IIOE-2 Interim Planning Committee (Group of Experts) [IPC] for the initial planning of the IIOE-2,

Acknowledging with thanks the IPC Report titled Strategic Framework for Implementation of the Second International Indian Ocean Expedition as contained in IOC/INF-1324,

Reaffirming the importance of the IIOE-2, not only for the Indian Ocean Member States but for the whole world, as a catalyst project linking Indian Ocean processes to the global ocean and atmosphere,

Accepts the Recommendation of the IPC, as referenced in IOC/INF-1324, to launch IIOE-2 at Goa, India, on the 4th of December 2015, for an initial period of five years;

Adopts the Second International Indian Ocean Expedition (IIOE-2) *A Basin-Wide Research Program* Draft Science Plan Version 1 (13 May 2015) [IIOE-2 Science Plan] developed by SCOR and recommended by the IPC as the scientific basis for IIOE-2;

Approves the governance structure of the IIOE-2 and other recommendations of the IPC contained in the IPC report;

Decides to continue the IPC mandate until the official launch of the IIOE-2 in December 2015 and provide a seamless transition to the IIOE-2 Steering Committee;

Encourages the IPC to complete the IIOE-2 implementation plan based on the recommendations of the IPC and input to be received from IIOE-2 stakeholders and IOC Member States;

Requests the IOC Executive Secretary, as a matter of priority, to work with other IIOE-2 co-sponsors and partners to establish the IIOE-2 Steering Committee and IIOE-2 International Project Office Framework (IPO), including their Terms of Reference, and to report on this to the IOC Executive Council at its 49th Session in 2016;

Accepts with appreciation the generous offers of India and Australia to support/host key components of the IIOE-2 IPO: the IIOE-2 Project Office in Hyderabad and the Perth Programme Office respectively;

Authorizes the IOC Executive Secretary to:

- (i) continue efforts in extending the list of partners in planning and implementation of IIOE-2;
- (ii) formalize the offer of India to establish an IIOE-2 Project Office in India to support the IIOE-2 related activities;
- (iii) designate an IOC staff member to coordinate the IIOE-2 activities in close coordination with the IIOE-2 Steering Committee, Member States and the IIOE-2 IPO by taking advantage of the generous action of Australia in hosting and supporting the IOC Perth Programme Office in Perth, Western Australia;

Urges Member States to commit adequate resources as cash using available IOC funding mechanisms or in-kind, to support IPO functions, the work of the Steering Committee and implementation of the IIOE-2 Science Plan;

Encourages IOC Member States, IOC Regional Subsidiary Bodies, including Member States of IOCINDIO, and other relevant organizations to propose, coordinate and promote research projects to implement IIOE-2 science priorities, noting the ongoing East Indian Ocean Upwelling Research Initiative and West Indian Ocean Upwelling Research Initiative;

Urges the IPO to build synergies among existing regional initiatives and programmes, including those already planned or underway.

6. ASSESSMENT AND INFORMATION FOR POLICY

6.1 UNITED NATIONS WORLD OCEAN ASSESSMENT

The Coordinator of the UN Group of Experts of the Regular Process, Alan Simcock, provided an overview on the main developments that have taken place in the preparation of the

World Ocean Assessment, including the review process completed in March 2015. The UN Ad Hoc Working Group of the Whole will meet in September 2015, in New York, to consider the WOA report and summary for decision-makers to formulate recommendations to the UN General Assembly for the future implementation of the Regular Process. Mr Simcock summarised the main findings of the report including information gaps that had been identified in the conduct of the assessment as well as areas in need of further capacity development support. He also invited IOC Member States to convey to their national representatives attending the UN Ad Hoc Working Group, the importance of strengthening the participation of IOC, as a competent organization in marine sciences, in future cycles of the WOA.

94 Julian Barbière, Head of Marine Policy and Regional Coordination Section (MPR) provided information on the support that IOC provided to the Group of Experts tasked with the preparation of the WOA report. He also highlighted the implementation of the GEF Transboundary Waters Assessment Programme (TWAP), expected to be finalized in September 2015. The TWAP marine components led by IOC will make available in the form of technical reports and global data portal, a suite of marine indicators and assessment outputs that will complement the WOA report. Finally, he highlighted recent development related to the Intergovernmental Platform on Biodiversity and Ecosystem Services.

95 The representatives of 8 Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [China](#), [India](#), [Republic of Korea](#).

Decision [IOC-XXVIII/6.1](#)

The Assembly,

Having considered document IOC/INF-1331,

Requests the Executive Secretary to continue to provide technical and scientific support to the Regular Process in accordance with UNGA resolution 67/78, including in its follow-up phase, and to disseminate the results of the World Ocean Assessment to the IOC Member States as well as in relevant international fora;

Encourages the increased participation of IOC in the work of the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES) through OBIS and other relevant IOC programmes;

Welcomes the leading role of IOC in the conduct of the GEF Transboundary Water Assessment Programme—TWAP (Marine components);

Expresses its appreciation to the GEF, the European Commission, Governments of France, Norway, and Flanders (Belgium) for supporting IOC activities related to WOA and TWAP;

Encourages the Commission to continue to support the scientific assessments of the ocean as a mean to improve the science-policy interface;

Takes note of the preliminary information provided by the Secretariat regarding TWAP; and further takes note that the assessment will be ready in September 2015.

6.2 REVISED TERMS OF REFERENCE OF THE GENERAL BATHYMETRIC CHART OF THE OCEANS (GEBCO) GUIDING COMMITTEE

96 Mr Julian Barbière, Head of Marine Policy and Regional Coordination Section (MPR) introduced this item. He informed the Assembly of the consultative process conducted during the intersessional period in order to follow-up on decision EC-XLVII,Dec.3.1(II), and presented a brief summary of a consolidated proposal for the revision of the terms of reference and rules of procedure (TOR-ROP) for GEBCO Guiding Committee.

- 97 The Chair of the Sessional Working Group on the Review of GEBCO reported on the conclusions of the group in relation to revision of the TOR-ROP. The Assembly did not support proposed paragraph 1.4 of consolidated proposal in Table 1 of document, IOC-XXVIII/2 Annex 6, concerning the participation of a graduate alumni of appropriate IHO or IOC associated tertiary level or higher ocean bathymetric mapping course in the GEBCO Guiding Committee as the Alumni observer.
- 98 The Executive Secretary informed the Assembly of the level of IOC involvement into the GEBCO project as one of the two parent organizations with IHO, and explained the need to review IOC's role and involvement in the GEBCO project and consider appropriate future governing mechanism of the GEBCO project.
- 99 Dr Ryabinin described how IOC's involvement in GEBCO, from a programmatic and financial aspect, has been progressively reduced over the past 10 years. On the other hand, IHO continues to support the GEBCO project as a primary activity. This situation has resulted in the inefficiency of GEBCO management through the existing IHO-IOC co-sponsorship. The Executive Secretary expressed the view that IOC may be better placed to facilitate and guide the use of GEBCO bathymetric data sets and products through the user communities that represents its own programmes, primarily GLOSS, GOOS, IODE, JCOMM, Tsunami as well as its regional subsidiary bodies. This approach would relieve IOC from the responsibility to support the operation of the GEBCO project, whilst still contributing to its development. In this context, the Executive Secretary suggested that the review of the project from an end-user-perspective should be initiated and should include new governance options of the project for consideration by IOC governing bodies. To this view, it was proposed that a review group composed of external experts designated through IOC programmes and Sub-commissions could take on the task of identifying concrete and potential user needs in bathymetry within the IOC community and recommend governance options for GEBCO.
- 100 The Assembly stressed the importance of collection of bathymetric data and ocean mapping undertaken through the GEBCO project, considering its relevance to IOC programmes and components of programmes and mechanism of cooperation, including IIOE-2 in terms of improving bathymetry for ocean mapping in the Indian Ocean.
- 101 The Assembly expressed concern with regard to the reduced level of IOC's involvement in the project as one of the co-sponsoring organizations, and called for the review to be carried out by external experts nominated by interested Member States in addition to those nominated through the relevant IOC programmes and Sub-commissions.
- 102 The representatives of 17 Member States took the floor in relation to IOC-XXVIII, Dec. 6.2 (I), and the representatives of six Member States and GEBCO took the floor in relation to IOC-XXVIII, Dec. 6.2 (II). The following Member States and GEBCO chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Brazil](#), [Canada](#), [Chile](#), [China](#), [France](#), [India](#), [Japan](#), [Republic of Korea](#), [Malaysia](#), [Turkey](#) and [GEBCO](#).

Decision [IOC-XXVIII/6.2](#)

The Assembly,

**I. Revised Terms of Reference
for the Joint IHO–IOC GEBCO Guiding Committee**

Having examined document IOC-XXVIII/2 Annex 6,

Recognizing the importance of cooperation between IOC and the International Hydrographic Organization (IHO) in the field of ocean mapping, including bathymetry;

Encourages Member States to voluntarily contribute to the improvement of global

bathymetric data sets and data products of the IHO-IOC GEBCO Project;

Endorses the revised Terms of Reference and Rules of Procedure for the Joint IHO–IOC GEBCO Guiding Committee as presented in the Annex to this decision;

Requests the Executive Secretary to convey this endorsement to the IHO Secretariat, copy to the Joint IHO–IOC GEBCO Guiding Committee.

II. Review of IOC's Role and Involvement in the General Bathymetric Chart of the Oceans (GEBCO)

Taking note of document IOC-XXVIII/2 Annex 7,

Recalling Resolution VIII-3 on the formation of the Joint IHO-IOC GEBCO Guiding Committee (1973),

Further recalling that the Memorandum of Understanding, concluded in 1984 and then revised in 2000, between the IHO and IOC, includes GEBCO and International Bathymetric Charts (IBC) as activities of common interest to both organizations and their Member States,

Considering that bathymetry is of relevance to several on-going IOC programmes, components of programmes and mechanisms of cooperation,

Decides that:

- (i) the IHO-IOC GEBCO project will be reviewed to consider IOC's role and involvement in the project, mainly from a view point of users of GEBCO bathymetric dataset and products;
- (ii) the review will be carried out by a review group, which will be comprised of external experts nominated by IOC Member States and the chairpersons of Guiding Committee of GEBCO, GLOSS, GOOS, IODE, JCOMM, TOWS-WG, IOCAFRICA, IOCARIBE and WESTPAC, during the intersessional period by correspondence;
- (iii) the report of the review will be submitted to the Executive Council at its 49th session (2016) for consideration and further action;

Requests the Executive Secretary to establish the review group in accordance with the terms of reference as contained in Annex 2 to this decision.

7. ASSESSMENT AND INFORMATION FOR POLICY

7.1 OBSERVING SYSTEMS

7.1.1 Global Ocean Observing System

103

The co-chair of the IOC-WMO-UNEP-ICSU Global Ocean Observing System Steering Committee (GOOS SC), Eric Lindstrom, introduced this item. Through Resolution XXVI-8 (2011), the Assembly decided that the GOOS SC would "produce a biennial work plan for consideration [...] and adoption by the Assembly." It also decided that amongst the membership of the GOOS SC "five experts will be appointed by Member State 'Electoral Groups' during the IOC Assembly, one from each group." The GOOS work plan is focused on: (i) articulating goals and milestones for the implementation of global sustained ocean observations responding to the needs for climate information, ocean services, and sustaining ocean health, through a GOOS Strategic Mapping; (ii) exercising the Framework for Ocean Observing by defining requirements, coordinating observing elements, and evaluating the observing system and its outputs; (iii) improving GOOS Regional Alliance implementation; and (iv) developing GOOS Projects.

- 104 Dr Lindstrom reported on the status of GOOS as an observing system and programme, its engagement with partners and the scientific community, and the activities of the GOOS Steering Committee and its panels. The capabilities of GOOS to deliver for climate, ocean-related services, and ocean health are slowly improving, even as risks to the sustainability of some *in situ* observing elements are present. Mitigating these risks depends on linking continuity with innovation, and closely coordinating research and operational communities.
- 105 Recalling the limitations of IOC support for GOOS through Regular Programme human and financial resources, GOOS has prioritized the operation of the existing Physics and Climate Panel (the GCOS-GOOS-WCRP Ocean Observations Panel for Climate, OOPC) and the coordination of existing *in situ* observing networks. Extrabudgetary and in-kind support has made possible modest developments of the activities of the GOOS Biogeochemical Panel (led by the SCOR-IOC International Ocean Carbon Coordination Project, IOCCP), the GOOS Biology and Ecosystems Panel, engaging the remote sensing agencies, and the fostering of cooperative work amongst GOOS Regional Alliances.
- 106 In-kind support, in particular from the USA (through voluntary contributions to the GCOS Office at WMO and US-based staff), Australia (through the hiring of an International Project Officer to support the GOOS Biology and Ecosystems Panel) and the European Commission (through the GEOWOW project) have permitted the GOOS programme activities to define biogeochemical Essential Ocean Variables supporting climate and ocean health objectives, to develop the Framework for Ocean Observing to incorporate increasing needs for sustained observations in support of ocean health, to engage the GOOS Regional Alliances in identification of common projects, and to improve community networking through webinars and e-mail updates. Several regional and thematic development projects are underway, and will strengthen elements of GOOS by evaluating requirements, observing networks, data management and delivery, engaging stakeholders, and evolving the observing system. These include the Tropical Pacific Observing System in 2020 project, the Deep Ocean Observing Strategy, and the EC Horizon 2020 AtlantOS project.
- 107 Dr Lindstrom presented the GOOS Strategic mapping linking societal benefit, applications, Essential Ocean Variables and the observing networks, as well as a clarification of how the structures of GOOS work in the areas of scientific oversight, coordination of observations execution (closely with JCOMM), and innovation through projects. He introduced the proposed GOOS Work Plan for 2016–2017 as presented in the report of the GOOS SC-IV report.
- 108 The Assembly stressed the importance of GOOS in delivering on all of IOC's High Level Objectives, and supported its expansion from physical to biogeochemical and biological variables, envisioning the development of standards and systems adding to those already available for physical variables. The Assembly supported the improved links to regional ocean observing efforts through the GRAs, the project approach to developing GOOS in particular regions or themes, and the close link to JCOMM. The Assembly noted the importance of improved communications and strengthened capacity development to further develop GOOS, the importance of coastal observations, as well as the importance of maintaining links to information generation activities that underpin societal benefit from ocean observations.
- 109 The representatives of 13 Member States took the floor. The following Member States and organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Australia](#), [Canada](#), [India](#), [Japan](#), [Republic of Korea](#), [Thailand](#), [Turkey](#), [USA](#) and [PICES](#).

Decision [IOC-XXVIII/7.1.1](#)

The Assembly,

I. GOOS Work Plan

Noting the fundamental role of global sustained ocean observations through GOOS in enabling ocean research, provision of early warning and ocean services, development of assessments and information for policy, sustainable management and governance of the ocean, and therefore all functions of the IOC Medium-Term Strategy,

Having examined the executive summary report of the Fourth Meeting of the Global Ocean Observing System Steering Committee (May 2015, IOC/GOOS-SC-IV/3s),

Agrees to the GOOS Work Plan for 2016–2017 (IOC/GOOS-SC-IV/3s, Annex 1);

Notes the financial and human resource implications of the work plan and the shortfall against the draft IOC Programme and Budget allocation for GOOS (IOC/GOOS-SC-IV/3s, Annex 2);

Expresses its appreciation for the in-kind and direct support to the GOOS programme provided by Australia, the European Commission, and the USA;

Agrees to adopt the GOOS programme and budget as part of the overall IOC Programme and Budget resolution XXVIII-3; and

Urges Member States to support the GOOS Work Plan through cash contributions to the IOC Special Account for GOOS, secondments of staff members to the GOOS Project Office, in-kind support such as hosting meetings or workshops with participant funding, the establishment of GOOS support offices, the funding of GOOS projects, or other means as agreed by the GOOS-SC.

II. GOOS SC Regional Membership

Recalling the GOOS-SC regional membership appointment defined in IOC Resolution XXVI-8, and further recalling IOC Circular Letter, 2570, requesting nominations of experts for appointment by Member State Electoral Groups;

Notes the appointment by each of the Member State Electoral Groups of a regional expert member of the GOOS SC for 2016–2017:

- Glenn Nolan, Ireland (Group I)
- Atanas PALAZOV, Bulgaria (Group II)
- Frederico NOGUEIRA, Brazil (Group III)
- Ramasamy VENKATESAN, India (Group IV)
- Kouadio Affian, Côte d'Ivoire (Group V).

7.1.2 WMO-ICSU-IOC-UNEP Global Climate Observing System (GCOS)

110 The Director of the WMO-ICSU-IOC-UNEP Global Climate Observing System (GCOS), Carolin Richter, introduced this item. GCOS responds to the needs of Member States for comprehensive, continuous, reliable climate and climate-related data and information: for climate monitoring, research, and projections, and increasingly to assess climate impacts, monitor the effectiveness of mitigation, support adaptation, develop climate information services, and promoting sustainable development.

111 Dr Richter presented the outcomes of a comprehensive independent review of the GCOS programme, undertaken by its four sponsors. The review was motivated by new developments including the establishment of the Global Earth Observation System of Systems (GEOSS), increased attention on adaptation to climate change, outcomes of the Fifth

Assessment Report of the Intergovernmental Panel for Climate Change (IPCC), the development of the Global Framework for Climate Services (GFCS), and evolving scientific research programmes such as Future Earth and the Programme of Research on Climate Change Vulnerability, Impacts, and Adaptation (PROVIA). The review recognized the significance of the programme, the normative work of GCOS in defining guidelines and setting principles, and made 18 recommendations to assist the sponsors in their consideration of action to support the GCOS programme. The GCOS Steering Committee has already responded to a number of these recommendations.

112 The Global Ocean Observing System (GOOS) is a key contributor to the atmospheric, oceanic, and terrestrial domains covered by GCOS. The strong link is evident in the joint sponsorship of the GCOS-GOOS-WCRP Ocean Observations Panel for Climate (OOPC), which for GOOS is the Physics and Climate Panel. The secretariat for OOPC has been hosted by GCOS since 2013. The OOPC now draws on the work of its sister GOOS panels (Biogeochemistry, Biology and Ecosystems) in the definition of requirements, coordination of observations, and evaluation of outputs for biogeochemical and biological Essential Climate Variables (ECVs), a subset of Essential Ocean Variables (EOVs) that respond to the climate theme in the GOOS Strategic Mapping. Dr Richter expressed her appreciation for the ongoing IOC financial sponsorship of GCOS in 2013, 2014, and 2015.

113 Dr Richter recalled that the UN Framework Convention on Climate Change (UNFCCC) invited GCOS, through its Subsidiary Body on Scientific and Technological Advice (SBSTA) to submit a Status Report on the status of each Essential Climate Variable, progress against the GCOS Implementation Plan (GCOS-138, 2010), and gaps, to its 43rd session at COP-21 in December 2015; and a new GCOS Implementation Plan considering new developments, to its 45th session at COP-22 in December 2016.

114 The Assembly stressed the strong link between the work of GOOS and GCOS in securing sustained ocean observations for climate and other societal benefit areas, as well as the importance of the visibility gained within the UN Framework for Climate Change (UNFCCC) afforded by the GCOS cycle of reporting. The Assembly welcomed the extension of climate observations to biogeochemical and biological variables, and in responding more closely to regional priorities.

115 The representatives of two Member States and one programme took the floor. The following Member State chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Canada](#).

Decision [IOC-XXVIII/7.1.2](#)

The Assembly,

Recalling the 1998 Memorandum of Understanding between WMO, IOC, UNEP, and ICSU on the Global Climate Observing System,

Having considered the GCOS planning and implementation (IOC/INF-1326) and the Synthesis report of the GCOS Review Board (GCOS-181),

Reaffirms the IOC commitment to continue as a sponsor of the Global Climate Observing System;

Expresses its appreciation that GCOS support of the OOPC has strengthened the contribution of GOOS to GCOS;

Requests the Executive Secretary to work with the other sponsors of GCOS in revising the existing Memorandum of Understanding for the GCOS Programme based on the recommendations of the GCOS Review Board; and

Urges Member States to support GCOS through cash contributions to the IOC Special

Account for GCOS, support to sustained ocean observing elements measuring Essential Climate Variables, and experts contributing to the GCOS programme.

7.1.3 Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM)

- 116 The Co-President of the Joint IOC-WMO Technical Commission for Oceanography and Marine Meteorology (JCOMM), Nadia Pinardi, introduced this item. JCOMM is a Primary Subsidiary Body of the IOC Assembly and reports under IOC Rule of Procedure 48.3.
- 117 Dr Pinardi, reported on the activities of the Commission within the framework of the evolving JCOMM Strategy, 2012–2017 (2014, version 3). The JCOMM strategic priorities of: (i) weather and ocean forecasting; (ii) disaster risk reduction; (iii) Global Framework for Climate Services; (iv) WMO Integrated Global Observing System (WIGOS) and WMO Information System (WIS) implementation; and (v) capacity development guide the activities of JCOMM, connecting science and technology to WMO and IOC Member States' need for services and knowledge for sustainable development. Dr Pinardi informed the IOC Assembly of activities including: JCOMM's new Cross Cutting Task Team on Integrated Marine Meteorological and Oceanographic Services for WIS (TT-MOWIS) to improve the interoperability with WIS of the near real time and delayed mode data sets of ocean observations, as well as of analysis and forecasting products; the successful transition of the JCOMM in situ Observing Programme Support Centre (JCOMMOPS) to Brest, France in March 2015; and the IOCAFRICA-JCOMM African Summer School on Application of Ocean and Coastal Data and Modelling Products.
- 118 Dr Pinardi reported on recent developments under JCOMM with regard to the establishment of a network of Centres for Marine-Meteorological and Oceanographic Climate Data (CMOCs). The Assembly was informed of the successful evaluation by JCOMM of the application of the State Oceanic Administration (SOA) National Marine Data and Information Service (NMDIS) in Tianjin, China to become a CMOC, and noted the adoption by WMO-CG-17 of Resolution CG-17 4.2.3(3)/1 (Designation of the Centre for Marine Meteorological and Oceanographic Climate Data—CMOC in Tianjin, China), subject to parallel approval by the IOC Assembly at this session. The Assembly thanked China for its commitment in this regard, noting the substantial benefits expected from the CMOCs to addressing the needs of IODE, GOOS and JCOMM.
- 119 The Assembly appreciated the work JCOMM does in support of all IOC High Level Objectives through its primary mandate to coordinate ocean and meteorological observation systems. Recognizing that the majority of observation networks depend on research funding and that a lack of sustained funding models for the networks continues to be a risk for the system, the Assembly called upon Member States to maintain their substantial commitments to JCOMM programmes. The Member States encouraged JCOMM to engage regional activities, such as GRAs, ODINs, RMICs, and the CMOC network, and emphasized the value to JCOMM of participation in the IIOE-2.
- 120 China welcomed the strong support of Member States for the approval of the CMOC in Tianjin, and reiterated its support for the CMOC and other regional activities.
- 121 The representatives of 7 Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Australia](#), [China](#), [Japan](#), [New Zealand](#), [Republic of Korea](#).

Decision [IOC-XXVIII/7.1.3](#)

The Assembly,

I. JCOMM Activities

Having examined the reports of 4th Session of JCOMM and the 11th Session of the

JCOMM Management Committee,

Notes with appreciation the financial and in kind support provided to JCOMMOPS by France (Ifremer, CLS, Brest métropole, département Finistère, and région Bretagne), as well as the financial support of many other Member State organizations; and urges Member States to continue their support to JCOMMOPS;

Agrees to consider an overall JCOMM programme and budget as a part of the IOC Programme and Budget resolution XXVIII-3;

Notes the formation of the JCOMM Task Team on Integrated Marine Meteorological and Oceanographic Services for WIS (TT-MOWIS);

Encourages Member States to propose experts to participate in the TT-MOWIS;

II. Establishment of a Centre for Marine-Meteorological and Oceanographic Climate Data (CMOC)

Recalling decisions by the IOC Executive Council and World Meteorological Congress:

- (i) IOC EC-XLV, Dec.3.2 accepting WMO-IOC/JCOMM-4/3s Report of the Fourth Session of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM), and Recommendation 2 contained therein, including Terms of Reference for CMOCs, and mechanism for formal appointment of a CMOC,
- (ii) WMO Resolution 4.2.3(03)/1 (Cg-17) Designation of the Centre For Marine-Meteorological And Oceanographic Climate Data (CMOC) In Tianjin, China,

Noting the Summary Background for New Centres for Marine-Meteorological and Oceanographic Climate Data in Tianjin, China as reported in the Report by the co-presidents,

Welcomes the proposal from China to run a CMOC at the National Marine Data and Information Service (NMDIS) of the State Oceanic Administration (SOA), China;

Acknowledges the successful demonstration provided by the National Marine Data and Information Service, China, regarding its capability to run a CMOC, including statement of compliance and commitment in terms of CMOC capabilities and corresponding functions, in accordance with the procedures and criteria established by JCOMM, and the IOC International Oceanographic Data and Information Exchange (IODE);

Approves the establishment of a Centre for Marine-Meteorological and Oceanographic Climate Data (CMOC) at the National Marine Data and Information Service (NMDIS) of State Oceanic Administration (SOA) in Tianjin, China (CMOC/China).

7.2 DATA MANAGEMENT

7.2.1 International Oceanographic Data and Information Exchange: 23rd Session of IODE, 17–20 March 2015, Bruges, Belgium

122 The IODE Co-Chair of the IOC Committee on International Oceanographic Data and Information Exchange (IODE), Cyndy Chandler (USA), introduced this item.

123 Ms Chandler informed the Assembly on the outcome of the 23rd Session of the IODE Committee (4 decisions and 5 recommendations) and the one-day (16 March 2015) scientific conference in celebration of the tenth anniversary of the establishment of the IOC Project Office for IODE in Ostend, Belgium (2005–2015).

- 124 The Committee focused its attention on the future of the IODE Programme, taking into account the continuing current financial crisis situation in which IOC and all its programmes find themselves, including IODE, but also the increased need for data and information management as a service to the ocean research, observation and management communities. The increased attention to data/information management by these communities has been demonstrated during the past inter-sessional period (2013–2015) by the establishment of 14 Associate Data Units (ADUs) that complement the network of 67 National Oceanographic Data Centres (NODCs). The cross-cutting nature of IODE is also evidenced by the contributions of IODE to the six functions defined in the IOC Medium-Term Strategy. The Committee had extensive discussions on how IODE should evolve and established an inter-sessional working group to propose the restructuring of IODE. At the regional level the Committee decided that the Ocean Data and Information Networks (ODINs) should focus (where that is not the case yet) on linking with on-going projects that have a data and information management component or require data and information management expertise. Regarding global activities, the Committee streamlined all activities into projects with specific terms of reference and management structures. In addition to the already existing 16 global projects, the Committee recommended the establishment of two new projects, while it closed one project.
- 125 The Committee had noted with appreciation the creation of a P-3 regular programme position for OBIS and GOOS. Both OBIS and ICAN (International Coastal Atlas Network) were now developing well within IODE and provided services to a variety of IOC (and other) programmes. The joint OBIS-GOOS Biology position would generate new opportunities for closer collaboration between IODE and GOOS.
- 126 The Assembly recognized the 10th anniversary of the IOC Project Office for IODE as an important milestone for the IOC and noted the continuous support of several Member States: the Government of Flanders (Belgium) for supporting the office, Russian Federation for its support through the Partnership Centre for the IODE Ocean Portal and Canada for providing staff support for the Portal.
- 127 The Assembly noted the high importance of oceanographic data and information management for research and policy-making.
- 128 The Assembly, while welcoming the increasing focus on the development of products and services, called on IODE not to forget its important role in long-term secure archival of oceanographic data and information.
- 129 Malaysia recalled that it has established an IODE ADU as well as OceanTeacher Regional Training Centre in 2014 and will proceed with organizing several training courses on quality management, GIS and fundamentals of data management in 2016.
- 130 South Africa, noting that an OceanTeacher Global Academy Regional Training Centre has been established in South Africa in 2014, informed the Assembly that a training centre on operational oceanography will be established in Cape Town, South Africa in the near future and offered cooperation of this new centre with the OceanTeacher Global Academy.
- 131 The Assembly noted the value of the new ADU as a mechanism to bring into IODE new data types and new stakeholder communities, and commended the decision taken by IODE-XXIII to review and revise the structure of IODE in order to make the programme more efficient as part of the “Future of IODE” actions. The Assembly also welcomed the integration of IODE across several other IOC programmes.
- 132 The representative of GEBCO, noting the data management component of GEBCO, called for collaboration with IODE.

133 The representative of POGO, referring to the history in collaboration with IODE, called for continued cooperation with IODE in the area of capacity development related to data and information management.

134 The representatives of 11 Member States and two organizations took the floor. The following Member States and organizations chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Canada](#), [Chile](#), [India](#), [Japan](#), [Malaysia](#), [South Africa](#), [Turkey](#) and [GEBCO](#), [POGO](#).

Decision [IOC-XXVIII/7.2.1](#)

The Assembly,

Having examined the Executive Summary and Report of the 23rd Session of the IOC Committee on International Oceanographic Data and Information Exchange (IODE-XXIII) (17–20 March, Bruges, Belgium), the recommendations and the decisions contained therein (IOC/IODE-XXIII/3s),

Noting the financial and human resource implications of the work plan and the shortfall against the draft IOC Programme and Budget allocation for IODE,

Agrees to the IODE Work Plan for 2015–2017 (Recommendation IODE-XXIII.5) and to consider it in the overall IOC Programme and Budget resolution XXVIII-3;

Endorses the Report of the 23rd Session of the IOC Committee on International Oceanographic Data and Information Exchange and the recommendations contained therein;

Welcomes the increasing role of IODE across all IOC programmes through the six functions identified in the IOC Medium-Term Strategy;

Welcomes the balance, in the work plan, between global and regional activities and the strong focus on capacity development spearheaded by the OceanTeacher Global Academy;

Expresses its deep appreciation to the Government of Flanders (Belgium) for hosting and supporting the IOC Project Office for IODE and for its continuing and increasing financial support to IODE, the Russian Federation for its support through the hosting of the Partnership Centre for the IODE Ocean Data Portal in Obninsk, as well as to other donors and Member States who are providing financial and in-kind support for IODE;

Expresses its appreciation to the UNESCO Director-General for establishing a regular programme position for OBIS (shared with GOOS Biology) in March 2015;

Expresses its appreciation for the in-kind support for the IODE Programme provided by Member States through establishing and maintaining IODE Data Centres, provision of experts, through the provision of valuable ocean data and information products and services, and through financial and in-kind contributions to IOC;

Urges Member States to support the IODE Work Plan through cash contributions to the IOC Special Accounts for IODE and OBIS, secondments of staff members to the IODE Project Office, in-kind support such as hosting meetings or workshops with participant funding, the establishment of IODE partnership centres or OceanTeacher Regional Training Centres, or the funding of IODE or OBIS Projects or the establishment of National Oceanographic Data Centres.

8. EARLY WARNING AND SERVICES

8.1 REGIONAL TSUNAMI WARNING SYSTEMS

8.1.1 Intergovernmental Coordination Group for the Pacific Tsunami Warning Mitigation System: 26th Session of ICG/PTWS, 24–26 March 2015, Hawaii, USA

135 Mr Tomoaki Ozaki, Vice Chairman (Japan), on behalf of Ms Filomena Nelson (Samoa), Chair of the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS), introduced this item. Mr Ozaki reported on recent developments of the ICG/PTWS, including the New Enhanced PTWC products for PTWS which were introduced on 1st October 2014, as well as the start of the process for Enhanced Products by the North West Pacific Tsunami Advisory Center (NWPTAC). He further reported on the on-going establishment of a Tsunami Warning System in the South China Sea Region and the proposed establishment of a Regional Tsunami Advisory Centre for Central America, as discussed at the 26th session of the ICG/PTWS hosted by USA in Honolulu on 22–25 April 2015. He indicated that the ICG/PTWS decided to constitute, under the Steering Committee, a Task Team to look into performance monitoring measures for Tsunami Service Providers (TSPs), National Tsunami Warning Centres (NTWCs), and national warning systems. It also decided to establish a Task Team on Evacuation Planning and Mapping to develop a new programme aimed at facilitating tsunami resilience through community preparedness, specifically through the preparation of tsunami evacuation maps and associated response plans for tsunami-vulnerable coastal communities. Mr Ozaki expressed that to enable the continued maintenance and enhancement of the ICG/PTWS, Member States will be requested to reaffirm their commitment to the system. He referred to the land marking International Tsunami Symposium “Making the Pacific Ready for the Tsunami Threat”, 20–21 April 2015, hosted by the Government of USA to celebrate the 50th anniversary of the ICG/PTWS.

136 Member States expressed support for the work of ICG/PTWS and offered to share their experience and expertise with other Member States. Japan confirmed its intention to develop North West Pacific Tsunami Advisory Center (NWPTAC) Enhanced Products by 2018. China indicated it will host an experts’ meeting on the South China Sea region hazard assessment in 2015. Panama indicated its support to the Central America Tsunami Advisory Center (CATAC) and Colombia noted that at the 26th session of the ICG/PTWS and the 10th session of ICG/CARIBE-EWS Member States indicated the need for a detailed hosting proposal of the CATAC by Nicaragua.

137 The representatives of nine Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Chile](#), [China](#), [Colombia](#), [Japan](#), [Republic of Korea](#), [Thailand](#).

Decision [IOC-XXVIII/8.2](#) (I)

The Assembly,

Noting with appreciation the tsunami forecasting products provided for the Member States of the PTWS by the PTWC hosted by the USA and the NWPTAC hosted by Japan, and the guidance materials by the ITIC,

Noting the outcomes of the International Tsunami Symposium Commemorating the 50th Anniversary of the Pacific Tsunami Warning and Mitigation System “Making the Pacific Ready for the Tsunami Threat” (20–21, April 2015, Honolulu, Hawaii, USA),

Endorses the continuity of the PTWC Enhanced Products for PTWS;

Agrees that the Northwest Pacific Tsunami Advisory Center (NWPTAC) should proceed with its development of enhanced products for the North West Pacific;

Takes note of Nicaragua's offer to host and develop a Tsunami Advisory Center for Central America (CATAC) under the guidance of the Regional Working Group on Tsunami Warning and Mitigation System on the Central American Pacific Coast, within the framework of ICG/PTWS, ICG/CARIBE-EWS and TOWS-WG;

Requests Member States to promptly inform the Secretariat of all changes to their Tsunami National Contacts (TNCs), National Tsunami Warning Centres (NTWCs), and Tsunami Warning Focal Points (TWFPs) through official channels;

8.1.2 Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System: 10th Session of ICG/IOTWS, 24–26 March 2015, Muscat, Oman

138 Dr Srinivasa Tummala (India), Chair of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS), introduced this item. He recalled the history and governance structure of the ICG/IOTWS and highlighted its achievements in the decade since it was established. He reported on the progress and key activities of the ICG/IOTWS since it last reported to the Assembly. He highlighted the results of the IOWave14 exercise (9–10 September 2014) and the four IOTWS Communications Tests that had been conducted. He reported on the international conference to commemorate the 10th anniversary of the Indian Ocean Tsunami (Jakarta, Indonesia, 24–25 November 2014), the key recommendations and outcomes of which (IOC/BRO/2015/2) were conveyed to the 3rd UN World Conference on Disaster Risk Reduction (Sendai, Japan, 14–18 March 2015). He informed the Assembly that at its 10th session (Muscat, Oman, 24–25 March 2015), the ICG/IOTWS decided to merge two of its three working groups into a new working group focusing on “Tsunami Risk, Community Awareness and Preparedness”, and had established a new sub-regional Working Group for the Northwest Indian Ocean. The ICG/IOTWS also endorsed Terms of Reference for the Indian Ocean Tsunami Information Centre (IOTIC) and welcomed Indonesia's offer to host IOTIC for a five-year period commencing 2016.

139 Looking to the future, Dr Tummala informed the Assembly that the ICG/IOTWS would place greater focus on community awareness and preparedness to help ensure more appropriate responses to tsunami warning information. He emphasized the important role of Tsunami National Contacts (TNC), National Tsunami Warning Centres (NTWC) and Tsunami Warning Focal Points (TWFP) and encouraged the IOTWS Member States to respond to requests from the secretariat to nominate these key points of contact. Finally, he informed the Assembly that the ICG/IOTWS would continue to organise training activities to develop capacity in coastal hazards and risk assessment, and Standard Operating Procedures for tsunami warning and emergency response, subject to the availability of funding.

140 Member States expressed their continued support for the work of the ICG/IOTWS, and noted the achievements of the IOTWS in the decade since its establishment. The Assembly noted the recommendations of the international conference to commemorate the 10th Anniversary of the Indian Ocean Tsunami held in Jakarta, Indonesia in November 2014. It also noted that sustainability of the IOTWS and all other systems was a major concern. Australia confirmed that it will continue to provide funding support to the ICG/IOTWS Secretariat. India noted that the Indian National Centre for Ocean Information Services (INCOIS) is now a multi-hazard warning centre as it also forecasts storm surges.

141 The representatives of six Member States took the floor. The following Member States and organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Australia](#), [India](#), [Indonesia](#), [Malaysia](#), and [ESCAP](#).

Decision [IOC-XXVIII/8.2](#) (II)

The Assembly,

Notes the outcomes and recommendations of the international conference “The Indian Ocean Tsunami Warning and Mitigation System 10 years after the Indian Ocean Tsunami: Achievements, Challenges, Remaining Gaps and Policy Perspectives” (22–23 November, Jakarta, Indonesia); and notes also the International Conference “Reducing Tsunami Risk in the Western Indian Ocean: a Regional Conference in Muscat”, 22–23 March 2015, Muscat, Oman;

Notes with concern that the EUMETSAT Meteosat-7 will be decommissioned in 2016, and urges WMO to address the issue of its replacement to ensure availability of real-time sea level data in the Indian Ocean region for tsunami warnings;

Encourages Member States to update their Tsunami National Contact (TNC), National Tsunami Warning Centre (NTWC) and Tsunami Warning Focal Point (TWFP) information and inform the Secretariat of all changes through official channels;

Notes the diminishing engagement by some Member States in the activities of the ICG/IOTWS, and urges Member States to participate more actively;

Welcomes with gratitude, the generous offer of Indonesia to support IOTIC for a period of five years commencing 2016;

Decides to change the IOTWS acronym to IOTWMS to fully reflect the actual name of the System and the importance of Mitigation in the work of the ICG.

8.1.3 Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions: 10th Session of the ICG/CARIBE-EWS, 19–21 May 2015; Sint Maarten, Kingdom of the Netherlands

142 Ms Christa Von Hillebrandt Andrade (USA), Chair of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS), introduced this item. She highlighted the results of the CARIBE WAVE15 exercise and the continued enhancement of the detection network in the region. She indicated that since 2011, almost 500,000 people have participated in the CARIBE WAVE Exercises, with the next one already scheduled on Thursday 17 March 2016. With respect to monitoring networks she reported that there are currently 74 sea-level stations (including DARTS), which represent close to 70% of the Implementation Plan. She reported that the ICG/CARIBE-EWS approved the launch of PTWC Enhanced Products for the ICG/CARIBE-EWS in parallel with current products on 1st October 2015 and full transition to the Enhanced Products on 1st March 2016.

143 Ms Von Hillebrandt Andrade also reported on preparedness and awareness activities in the region including the status of the Caribbean Tsunami Information Center (CTIC). She reported that the Caribbean Tsunami Information Center’s core financial resources for its operational expenses are covered until the end of the year thanks to the recent approval of Emergency Funds for CTIC by the Director-General, and highlighted a matter of concern for Caribbean Member States that operational expense finances beyond 2015 are not secured. .

144 Member States expressed their support to the ICG/CARIBE-EWS. United Kingdom indicated it will be providing additional sea-level stations for Anguilla (UK) and Turks and Caicos (UK) in partnership with NOAA. Panama will soon provide five new stations to the system. They requested the IOC Executive Secretary to make every effort to address the imminent gap in funding that may result in the halt of all operations of the Caribbean Tsunami Information Centre (CTIC) by identifying resources from the regular budget, extrabudgetary and/or other sources that may become available for the next biennium 2016-2017. Member States urged the IOC secretariat to explore innovative approaches to bring resources and continued funding to CTIC,

such as the UK's approach to the private sector including the cruise ship industry. Additional extra budgetary funds are sought to support CTIC, including through a specific proposal to be included in the updated Complementary Additional Programme (CAP) for 2016-2017.

145

The representatives of 10 Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Brazil](#), [Dominican Republic](#), [Venezuela](#).

Decision [IOC-XXVIII/8.2](#) (III)

The Assembly,

Endorses the start of issuance of the PTWC Enhanced Products for CARIBE-EWS in parallel with current products on October 1, 2015 and its full transition to the new products on March 1, 2016;

Notes the approval of the guidelines for the Community Performance Based Tsunami Recognition Programme for the Caribbean and Adjacent Regions as outlined in Appendix I of Recommendation ICG/CARIBE-EWS-X.6, for implementation on a pilot basis, and invites Member States and donor agencies to support pilot projects;

Takes note of Nicaragua's offer to host and develop a Tsunami Advisory Center for Central America (CATAC) as a sub-regional Tsunami Service Provider under the guidance of the Regional Working Group on Tsunami Warning and Mitigation System on the Central American Pacific Coast, within the framework of ICG/PTWS, ICG/CARIBE-EWS and TOWS-WG;

Recognizes the Caribbean Tsunami Information Center (CTIC) essential function in the region and agrees that CTIC is a matter of priority for the IOC, and calls on Member States and other donors to provide extra-budgetary funds to sustain its functioning.

8.1.4 Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas: 11th Session of ICG-NEAMTWS, 12–14 November 2014, Nicosia, Cyprus

146

Dr Ahmet Yalciner (Turkey), Chair of Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS), introduced this item. He reported on the developments of the ICG/NEAMTWS, notably the continuation of the interim operational phase of NEAMTWS involving the Candidate Tsunami Service Providers (CTSPs) of France, Greece, and Turkey, and including the commencement of the activity of Italy as CTSP as of 1st October 2014. He also reported the steady progress made towards the provision of tsunami services for the region by Portugal. Ensuring interoperability among these centres is one of the priority areas for the upcoming years, and for this reason a new Task Team on Operations has been established at the ICG/NEAMTWS-XI. He also reported the progress made by Germany, Israel, and Spain towards the creation of their National Tsunami Warning Centres (NTWCs). Dr Yalciner informed the Assembly of preparatory activities, including a regional workshop for Maghreb countries, a workshop for Civil Protection Authority organized in Brussels jointly with the European Commission Directorate General for Humanitarian Aid and Civil Protection (DG ECHO), which co-funded the exercise. Dr Yalciner informed the Assembly of a side event during this session to present the NEAMWave14 results. In a more prospective view Dr Yalciner highlighted the challenges and the priorities for NEAMTWS. The public and the authorities remain relatively unaware of the regional tsunami risk, therefore it is recommended to increase education and awareness raising activities in the region. The participation of civil protection authorities has significantly increased as demonstrated by their participation in NEAMWave14, but more targeted activities, including training for emergency managers, will have to be organized. The

success of the NEAMTWS depends on the participation of all countries bordering the Mediterranean Sea and North-eastern Atlantic Ocean, including countries that have not yet nominated tsunami national contacts and tsunami warning focal points. Dr Yalciner emphasized that the detection networks need to be sustained by national and international funding and that targeted activities should be organized for those countries where there remain gaps in the seismic and sea level networks.

147 Member States commended the work of NEAMTWS to implement the system and stressed that this is a very crucial moment for the system which requires elevation from pre-operational status to its full implementation. Member States intervened to remind the Assembly of significant national achievements which are cumulatively contributing to the implementation of NEAMTWS in the region. The Assembly, considering the increase of the activities of NEAMTWS and of its Tsunami information Centre (NEAMTIC), suggested that the IOC Secretariat consider means to strengthen support and consider the establishment of a full time technical secretary position.

148 The representatives of five Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Turkey](#), [UK](#).

Decision [IOC-XXVIII/8.2](#) (IV)

The Assembly,

Welcomes that the Candidate Tsunami Service Providers of France, Greece, Italy and Turkey provide tsunami warning service to the ICG/NEAMTWS Member States upon request via the IOC;

Notes the steady progress of Germany, Israel, Spain, and Portugal in developing their National Tsunami Warning Centres and the intent of Portugal to also act as Candidate Tsunami Service Provider and thereby contributing to tsunami monitoring coverage for all geographic areas of NEAMTWS;

Urges Member States to support NEAMTWS through extra-budgetary contributions, secondments of staff members, and in-kind support for the organization of workshops and capacity development activities;

8.2 GLOBAL COORDINATION OF WARNING AND MITIGATION SYSTEMS FOR OCEAN HAZARDS (TOWS-WG)

149 Mr Yutaka Michida (Japan), Chair of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG) introduced this item. He reported on the decisions and recommendations of the 8th meeting of TOWS-WG.

150 Mr Michida emphasised the importance of the Sendai Framework for Disaster Risk Reduction 2015–2030 and noted that the tsunami programme activities should be planned within this framework. He noted that 2014 and 2015 were commemorative years for all the ICGs and highlighted in particular the international conferences for the IOTWS and PTWS held in Jakarta, Indonesia and Honolulu, USA respectively. He outlined the structure of the tsunami programme at IOC and referenced the IOC resolutions and decisions that had established and maintained the TOWS-WG and its Task Teams.

151 Referring to the 8th Meeting of the TOWS-WG held in Morioka, Japan, 12–13 March 2015, he noted the decisions and recommendations arising from the meeting. In particular he referred to the recommendations of the TOWS-WG Task Teams on: Tsunami Watch Operations; Hazard Assessment Related to Highest Potential Tsunami Source Areas; and Disaster Management and Preparedness. Mr Michida acknowledged the involvement of the CTBTO, IHO

and GEBCO in the TOWS-WG and emphasised the importance of collaboration with both organisations for tsunami warning purposes.

152 Mr Michida highlighted some of the challenges that lie ahead, including the lack of core financial resources to sustain the CTIC beyond December 2015. He strongly urged the Member States to increase their extra-budgetary contributions to the IOC to provide needed resources for the priorities identified by the TOWS-WG.

153 Finally, Mr Michida recommended that the TOWS-WG and its Task Teams should be extended for another intersessional period with the same Terms of Reference and membership to allow it to complete their workplans.

154 Member States noted that global coordination of tsunami warning systems is essential and appreciated that the TOWS-WG has proven to be a successful and essential mechanism for ensuring coordination and information exchange, leading to mutually beneficial developments and harmonization of tsunami warning systems globally. The Assembly commended the work done by the ICGs and the organization of tsunami exercises which have brought visibility to the IOC. IHO/GEBCO commented that it will continue to provide support to the ICGs and requested that it be informed of ICG meetings so that it can participate.

155 The representatives of four Member States and GEBCO took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [France](#), [USA](#), and [GEBCO](#).

Decision [IOC-XXVIII/8.2](#) (V)

The Assembly,

Having considered the executive summary reports of the recent sessions of the Intergovernmental Coordination Groups for: the Pacific Ocean Tsunami Warning and Mitigation System (ICG/PTWS-XXVI), The Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS-X), the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS-X), the North-Eastern Atlantic, the Mediterranean and Connected Seas Tsunami Warning and Mitigation System (ICG/NEAMTWS-XI), and the report of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-VIII),

Accepts the reports and the decisions and recommendations contained therein;

Notes the ongoing work of TOWS-WG as well as the work of its Task Teams and decides that their ToRs and membership be extended for the next biennial period;

Noting the growing dependence and use of seismic data from the International Monitoring System of the Preparatory Commission for the Comprehensive nuclear-test-ban treaty organization (CTBTO) data by National Tsunami Warning Centres, as set out under the CTBTO-UNESCO MoU of 2010;

Encourages more National Tsunami Warning Centres to sign formal agreements with CTBTO to receive seismic and hydro acoustic data from the CTBTO International Monitoring System;

Notes further the reports on the ITU/UNESCO-IOC/WMO Joint Task Force (JTF) to investigate the potential of using submarine telecommunications cables for ocean and climate monitoring and disaster warning; and encourages the development of pressure sensors for underwater telecommunication systems to augment existing tsunami monitoring networks;

Recognizes that the current financial situation strongly limits the implementation of the tasks of the Group, ICGs and Inter-ICG Task Teams; and strongly urges the Member States to increase their extra-budgetary contributions to the IOC to provide the needed resources for the priorities identified by TOWS-WG and the Intergovernmental Coordination Groups (ICG);

Notes with concern that the Caribbean Tsunami Information Centre's core financial resources to cover its operational expenses (including salaries) beyond December 2015 are currently non-existent;

Agrees that the regular budget for ICG activities will be identified as part of the overall IOC Programme and Budget resolution XXVIII-3.

8.3 HARMFUL ALGAL BLOOMS: 12TH SESSION OF THE INTERGOVERNMENTAL PANEL ON HARMFUL ALGAL BLOOMS (IPHAB), 28–30 APRIL 2015, UNESCO, PARIS

156 The Chair of the IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB), Mr Gires Usup (Malaysia), introduced this item and presented the report, work plan, eight decisions and two recommendations of the 12th Session of the IOC Intergovernmental Panel on Harmful Algal Blooms Paris, 28–30 April 2015.

157 The Chair IPHAB emphasized the decisions and recommendations made regarding: an international strategy for *ciguatera* fish poisoning, for the joint IOC-SCOR research initiative on HABs in a changing world to meet societal needs; the development of the Global HAB Status Report; long-term capacity building; and the regional development of the Programme. He also stressed the unique role IOC can play in resolving scientific issues and management solutions to the problems encountered by the desalination industry due to HABs, provided that the adequate extra-budgetary funds are identified for the Complementary Additional Programme.

158 The Chair advocated for participation of Member States in IPHAB sessions and recognition of the HAB programme in the appropriate national agencies and institutions.

159 The Chair IPHAB urged the IOC Member States to carefully match the HAB Programme work plan with national priorities and potential funding in order to actively interact with and support its implementation.

160 The Assembly expressed appreciation of the progress made and the priorities set for the biennium 2016–2017. Member States referred to the continuous, and in several cases, increasing major public health threats from neurotoxins, impact on aquaculture, massive fish kills, damage to coastal ecosystems, and impacts of *Ciguatera* Fish Poisoning (CFP). The Assembly acknowledged that HAB occurrences may be determined by both natural and anthropogenic factors and that the IOC should continue to pursue the science for improved management and mitigation through GlobalHAB. Particular importance was given to the interagency strategy on CFP under development and implementation. The Assembly recognized that the Global HAB Status Report will be important for informing public opinion and the broader international community.

161 The Assembly stressed the need for effective and continuous coordination between regional and global IOC activities on HAB to ensure benefits of complementarity and synergy.

162 Several Member States expressed their willingness to directly support work plan implementation; Spain expressed its willingness to support the continued publication of the IOC newsletter *Harmful Algae News*; the USA expressed its willingness to provide scientific expertise and financial resources to address CFP; Malaysia offered to host a workshop on biotoxins for South East Asia; and Colombia expressed commitment to contribute to capacity development activities on HAB. India expressed its wish to associate with IPHAB.

163 The representatives of 12 Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Australia](#), [Canada](#), [Colombia](#), [France](#), [India](#), [Japan](#), [Malaysia](#), [Thailand](#).

Decision [IOC-XXVIII/8.3](#)

The Assembly,

Recalling IOC Resolution XVI-4, which established the Intergovernmental Panel on Harmful Algal Blooms,

Having considered the Executive Summary Report of the 12th Session of the IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB), its eight Decisions and two Recommendations and the work plan for 2016–2017 adopted at the Session (IOC/IPHAB-XII/3),

Expresses its appreciation for the support for the HAB Programme provided by Member States through regional HAB groups, the IOC Science and Communication Centre on Harmful Algae, provision of experts, and through the provision of HAB data, and financial and in-kind contributions to IOC;

Noting with satisfaction that IPHAB has continued to provide an efficient mechanism to respond to new HAB-related problems experienced by Member States, to leverage resources from diverse sources to focus on priority needs, and to establish partnerships with relevant organizations,

Endorses the Executive Summary Report of IPHAB-XII and the recommendations contained therein (IOC/IPHAB-XII/3s);

Agrees to the HAB Work Plan for 2016–2017 (Recommendation IPHAB-XII.2) and to consider it in the overall IOC Programme and Budget resolution XXVIII-3;

Urges funding agencies and institutions in IOC Member States to assist in the mobilization of funding that will ensure the implementation of the IPHAB Work Plan for 2016–2017 (~US\$ 460.000 for full implementation).

9. CAPACITY DEVELOPMENT

9.1 REPORT OF THE INTERSESSIONAL WORKING GROUP FOR THE DEVELOPMENT OF THE IOC CAPACITY DEVELOPMENT STRATEGY

164 The Chair of the Intersessional Working Group for the IOC Capacity Development Strategy, Prof. Adoté Blim Blivi introduced this item. He recalled that the IOC Executive Council, at its 47th session, through Decision EC-XLVII/Dec. 6.1, had decided to reconstitute the Intersessional Working Group for the IOC Capacity Development Strategy and had instructed the Chair of the Group to submit the final draft of the IOC Capacity Development Strategy and associated documentation to this session of the Assembly.

165 He reported that in response to IOC Circular Letter, 2531 (August 2014) 36 Member States designated members to the Intersessional Working Group. A first draft of a revised Strategic Plan was circulated to the members of the Group as well as to IOC programme managers by email on 1 December 2014. This resulted in 16 responses and a revised version of the Strategic Plan. A face-to-face meeting of the Intersessional Working Group was held at UNESCO Headquarters on 16–18 February 2015. The meeting was attended by 18 participants from 13 Member States. The meeting further revised the Strategic Plan document, “IOC Capacity Development Strategy for 2015-2021” including extensive background information in annexes. In order to ensure the widest possible awareness of the document amongst IOC

communities of practice, the group recommended that presentations on the Strategy be delivered at IODE-XXIII, IOCAFRICA-III, IOCARIBE-XIII and WESTPAC-X before the Assembly.

166 A sessional working group further reviewed and revised the draft resolution and strategy document.

167 This strategic framework provides six recommendations and 13 activities detailed in numerous actions. The recommendations call for investing in people and the institutions of which they are a part, enhancing access to scientific tools and methodologies, reinforcing IOC's capabilities to provide services to Member States, enhancing the communication between scientific and policy makers communities, expanding ocean literacy in civil society and mobilizing resources to accomplish these goals. While this framework provides general guidance on elements of an implementation plan yet to be developed, it explores venues for elevating IOC's impact to the scale required. The conclusions identify elements of a draft work plan including conducting needs assessments to establish CD work plans, mobilizing associated resources and enhanced communication and collaboration.

168 The Assembly welcomed the IOC Capacity Development Strategy (2015–2021) emphasizing that capacity development is a key function of the IOC.

169 The Assembly stressed the need to measure the effectiveness and impact of the new strategy on a regular basis in order to identify and address any weaknesses, and to further fine-tune the strategy. The secretariat was instructed to publish the IOC Capacity Development Strategy, 2015–2021.

170 The Assembly advised that implementation of the strategy should provide special attention to young researchers and their requirements.

171 The representatives of 15 Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Australia](#), [China](#), [France](#), [Japan](#), [Kenya](#), [Republic of Korea](#), [Tanzania](#), [USA](#).

172 The Assembly adopted [Resolution XXVIII-2](#) submitted by Japan, USA, Belgium, Tanzania, Togo, Trinidad and Tobago, Portugal and India.

IOC Capacity Development Strategy (2015–2021)

The Intergovernmental Oceanographic Commission,

Noting that capacity development is a fundamental tenet of IOC's mission, enabling all Member States to participate in, and benefit from, ocean research and services that are vital to sustainable development and human welfare on the planet,

Noting further that the Vision Statement of the IOC Capacity Development Strategy (2015–2021) as contained in IOC-XXVIII/2 Annex 8 and its revised corrigendum, identifies capacity development as the primary catalyst by which IOC will achieve its four high level objectives in the current IOC Medium-Term Strategy (2014–2021),

Adopts the IOC Capacity Development Strategy, 2015–2021 (IOC/INF-1332);

Agrees that, by the 29th Session of the IOC Assembly, IOC Primary Subsidiary Bodies (global programmes and Regional Subsidiary Bodies) should take the following actions:

- (i) develop programmatic and regionally relevant capacity development work plans based on this strategy and related needs assessments conducted in a consistent manner, building on ongoing activities and making use of existing training and education facilities;
- (ii) mobilize resources in order to reinforce the Secretariat staffing of the regional Sub-

- Commissions, other subsidiary bodies and global programmes;
- (iii) catalyze capacity development through global, regional, and national programme development, including projects prepared in consultation with Member States with a view to raise extra-budgetary resources; and
 - (iv) enhance collaboration and communication between its global programmes and Regional Subsidiary Bodies, to contribute to (i) and (ii) above;
- Urges** IOC Member States to:
- (i) identify needs and new opportunities to participate in, and benefit from, reinforced partnerships through the IOC to achieve their capacity development goals in marine science, early warning systems, and ocean governance;
 - (ii) mobilize the knowledge, personnel, infrastructural and financial resources to support IOC's catalytic role in helping Member States achieve these goals; and
 - (iii) raise the visibility of IOC's unique niche in capacity development.

10. SUSTAINABLE DEVELOPMENT AND GOVERNANCE

10.1 UN COORDINATION AND CONTRIBUTION TO OCEAN GOVERNANCE

173 The Head of the Marine Policy and Regional Coordination Section (MPR), Julian Barbière, presented the IOC contribution to various ocean-related UN inter-agency activities. As the focal point within the UN system for ocean sciences, observations, services, data and information exchange and capacity development, IOC contributes to a number of UN processes, responds to the needs expressed by the UN General Assembly, and plays an active role in UN inter-agency mechanisms and activities.

174 Mr Barbière highlighted a number of UN initiatives that are highly relevant to the mandate of the IOC, namely: (i) the on-going UN negotiations related to formulation of a set of the Sustainable Development Goals in the context of the Post-2015 Development Agenda, and particularly the proposed goal No. 14 on ocean, that calls for, *inter alia*, increasing scientific knowledge, developing research capacities and transferring marine technology taking into account the *IOC Criteria and Guidelines on the Transfer of Marine Technology* (SDG Target 14.a); (ii) UN-Oceans, the UN inter-agency coordination mechanism on ocean affairs; (iii) the outcome of the UN Conference on Small Island Developing States (1–4 September 2014) in Samoa; (iv) negotiations related to the development of a legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity in areas beyond national Jurisdiction (BBNJ); and (v) the forthcoming UNFCCC Conference of Parties (COP-21) to be held in December 2015 in Paris.

175 The Assembly welcomed the engagement of IOC in the Post-2015 Development Agenda and SDG process, including its role in providing technical support for the development of the SDG indicator framework, as well as their future implementation. The Assembly highlighted the importance of supporting the needs of SIDS in response to the priorities contained in the SAMOA Pathways outcome document, particularly in the areas of climate change adaptation, tsunami, and the sustainable use of marine biodiversity.

176 In the context of emerging frameworks such as the Post-2015 Development agenda and BBNJ process, and without pre-empting the outcome of such negotiations, the Assembly encouraged the Secretariat, with the support of the IOC Member States, to raise the visibility of the Commission in the fields of ocean indicator development, capacity development in ocean science and transfer of marine technology.

- 177 The representatives of five Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [France](#), [Indonesia](#), [Japan](#), [New Zealand](#), [Poland](#), [UK](#).

Decision [IOC-XXVIII/10.1](#)

The Assembly,

Having considered document IOC/INF-1328,

Takes note and welcomes the active role played by the Commission in UN-Oceans, the Post-2015 Development Agenda and elaboration of proposed Sustainable Development Goals (SDG), targets and indicators, the outcome to the UN Conference on Small Island Developing States (SIDS), and the UN negotiations related to the conservation and sustainable use of marine biological diversity beyond areas of national Jurisdiction;

Invites IOC Member States to support IOC's role and contributions in these processes by integrating, as far as possible, the importance of the oceans and the contribution of IOC into their preparation and statements at intergovernmental negotiations on the Post-2015 Development Agenda, as well as at negotiations related to the development of an international legally binding instrument under the United Nations Convention on the Law of the Sea related to the conservation and sustainable use of marine biological diversity beyond areas of national Jurisdiction.

10.2 INTEGRATED COASTAL AREA MANAGEMENT PROGRAMME (ICAM)

- 178 In accordance with IOC-XXVI/Dec.8.2, Julian Barbière, Head, Marine Policy and Regional Coordination section (MPR), introduced this item and provided a progress report on the implementation of the ICAM Strategy, covering activities that are being developed in the field of Integrated Coastal Area Management (ICAM), Marine Spatial Planning (MSP), coastal hazards mitigation, and decision-support tools for coastal and ocean management.

- 179 In this context, Mr Barbière presented new project initiatives: first the GEF:Learn-LME Project entitled "Strengthening global governance of Large Marine Ecosystems and their coasts through enhanced sharing and application of LME/ICM/MPA knowledge and information tools" to be implemented through IOC; secondly, the European Horizon 2020 Project AQUACROSS in which IOC/MPR is leading the work packages of transboundary waters indicators and the development of the information platform, as well as the pilot case study at the Intercontinental Biosphere Reserve of the Mediterranean: Andalusia (Spain) – Morocco; and thirdly the new activities sponsored by the Moore Foundation to support a global assessment on dissemination of MSP practices around the world.

- 180 Mr Barbière highlighted the implementation progress of the Data and Information Network in support to Integrated Coastal Area Management in the Southeast Pacific region (SPINCAM Project) with the support of IODE and ICAN, and the final results of the European FP7 Project PEGASO for the Mediterranean and the Black Sea. In terms of capacity development, Mr Barbière presented the framework design by MPR for trainings on ecosystem-based management (ICAM/MSP) and decision support tools in response to different demands from the coastal community, the lessons learnt from the 15 trainings organized during the last two years and the newest set of IOC guidelines on Marine Spatial Planning in different languages.

- 181 The Assembly welcomed the contribution of SPINCAM to the Southeast Pacific Region and the capacity development activities dedicated to marine spatial planning commonly organized by the IOC/MPR and OceanTeacher in English (South Africa) and Spanish (Colombia) by highlighting the need to continue the training efforts in other languages such as French and Portuguese, and in other regions.

182 The representatives of three Member States, two organisations took the floor. The following Member State and organization chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [India](#) and [GEBCO](#).

Decision [IOC-XXVIII/10.2](#)

The Assembly,

Recalling IOC-XXVI/Dec.8.2,

Takes note of the progress in implementing the IOC ICAM Strategy, including activities related to marine spatial planning and large marine ecosystems (IOC/INF-1329);

Expresses its deep appreciation to the Government of Flanders (Belgium) for the secondment of an expert to the ICAM Programme (SPINCAM Project);

Invites Member States to support through extra-budgetary resources, as well as in-kind contributions, the ICAM Strategy and relevant project activities such as the organisation of an international conference on Marine Spatial Planning in 2016 at IOC Headquarters.

10.3 INTERNATIONAL POLAR PARTNERSHIP INITIATIVE

183 The Executive Secretary, Dr Vladimir Ryabinin, introduced this item. He reviewed the scientific and societal value of the expected outputs of the International Polar Partnership Initiative (IPPI), and the scope and objectives defined in the IPPI concept. He expressed that the IPPI seeks to strengthen cooperation and improve coordination and sharing of resources for polar activities through a common implementation plan for the development of observing systems, research, services, education and outreach, and practical application of knowledge. An Interagency Steering Group has initially developed and, later, refined a concept for the IPPI, which indicates the strong influence of the polar regions on the Earth system, the harsh polar environment and resultant high cost of operations, and the fact that no nation or organization is able to effectively achieve the objectives of their polar activities without strong cooperation with partners.

184 Dr Ryabinin reviewed the updated scope, objectives and expected outputs of the IPPI. He recalled the decision of the IOC Executive Council (EC-XLVII/Dec.6.4, 2014), which provided an advice to the IPPI Steering Group to clearly identify added value, societal outputs, and scope, objectives, and expected results of IPPI and to identify synergies with other polar initiatives. Dr Ryabinin presented examples of the added value of the IPPI to existing IOC research, observation, data collection and management, and services programmes. As well, he recalled the recent decision of the 17th World Meteorological Congress (25 May–12 June 2015, Geneva, Switzerland), which encouraged the WMO Secretary-General to further develop a clear Framework of the Partnership, to be reviewed by WMO Executive Council in 2016, with a view to defining WMO's roles in and contributions to the future IPPI Framework, and the support to the idea of IPPI expressed by a number of other international organizations.

185 The Assembly stressed the importance of research and observations of the polar regions for all IOC Member States, and stressed that the IPPI Framework needed further development, with traceable consultation with the consultative Parties to the Antarctic Treaty and the Members of the Arctic Council.

186 The representatives of 12 Member States took the floor. The following Member States chose to provide records of their plenary intervention on this agenda item for the informational annex to the meeting report: [Argentina](#), [Australia](#), [Canada](#), [Colombia](#), [Denmark](#), [France](#), [India](#), [Japan](#), [Malaysia](#), [Republic of Korea](#).

Decision [IOC-XXVIII/10.3](#)

The Assembly,

Noting the revised Concept Paper for the International Polar Partnership Initiative (IPPI, IOC-XXVIII/2 Annex 9),

Having also noted the decision of the World Meteorological Congress-17 (25 May–12 June 2015, Geneva, Switzerland) on WMO participation in IPPI,

Encourages the Steering Group to develop a clear framework of the Partnership, acting in close coordination and consultation and respecting the interests and obligations of the consultative Parties to the Antarctic Treaty and similar interests of the members of the Arctic Council; and reiterates its request to the Executive Secretary to work towards the IPPI Framework being developed in close coordination and consultation with consultative parties to the Antarctic Treaty and members of the Arctic Council;

Requests the Executive Secretary to:

- secure IOC representation in the development of the IPPI Framework;
- submit the Framework for consideration of the IOC Executive Council at its 49th session in 2016 in order to analyse the possible participation, roles in and contributions of IOC to future IPPI activities, and report to it on the interactions and meetings attended in this regard.

11. ADMINISTRATION AND MANAGEMENT

11.1 REPORT BY THE CHAIRPERSON OF THE FINANCIAL COMMITTEE ON THE IOC DRAFT PROGRAMME AND BUDGET FOR 2016–2017 (DRAFT 38 C/5)

187 The Chair of the Financial Committee reported to the Assembly on the results of the Committee's review of the Report on Budget Execution 2014 and Draft Programme and Budget for 2016–2017, in accordance with Rule of procedure 8.1(c). He informed the Assembly that the Financial Committee had several very productive meetings and thanked the Member States that participated in its consensual in-depth discussions in the spirit of constructive collaboration. He then made a detailed presentation of the work carried out by the Committee, its main conclusions and recommendations reflected in the draft resolution prepared by the Financial Committee for consideration by the Assembly.

188 The Assembly was unanimous in congratulating the Chairman of the Financial Committee for the exceptional quality of his leadership and the considerable work accomplished in a short period of time.

189 The Assembly adopted [Resolution XXVIII-3](#) submitted by Argentina, Australia, Belgium, Brazil, Cameroon, Canada, China, Cote d'Ivoire, Denmark, France, Germany, Greece, India, Japan, Kenya, Korea (Republic of), Malaysia, Norway, Portugal, Russian Federation, South Africa, Spain, Thailand, Trinidad and Tobago, Turkey, United Kingdom, and United States of America.

Financial Matters of the Commission

The Intergovernmental Oceanographic Commission,

Having examined documents IOC-XXVIII/2 Annex 2 and Corr. and IOC-XXVIII/2 Annex 3,

Confirms that the IOC budget for 2014 has been executed in accordance with the approved Programme and Budget for 2014–2015 (37 C/5) and the workplans endorsed by the IOC

Executive Council at its 47th Session (IOC/EC-XLVII/2 Annex 3 Rev.);

Expresses great concern for the impact of the financial difficulties of UNESCO on the delivery of the IOC programmes, with the reduction of the IOC budget from US\$ 12,026,200 in the approved Programme and Budget for 2014–2015 (37 C/5) to US\$ 8,643,600 under the US\$ 507 M expenditure plan for 2014–2015 (or 72% of the 37 C/5 approved);

Further expresses great dissatisfaction with the fact that the budgetary allocation to the IOC for the biennium 2014–2015 at the level of 72% of the 37 C/5 approved is not consistent with the recommendations of the 5th Special Session of the Executive Board of UNESCO (Paris, 4 July 2013) to allocate between 100% and 80% to high priority Expected Results, like those of the IOC;

Recognizes the efforts of the IOC Executive Secretary to maintain programme continuity under these challenging circumstances and the difficulty to fully implement the guiding principles adopted by the IOC Assembly at its 27th Session (Resolution XXVII-2(C), Annex 2), given that the Assembly provided its recommendation on a scenario with an allocation of 86% (and not 72%) of the 37 C/5 approved budget;

Welcomes the additional allocation of US\$ 500,000 from the Emergency Fund proposed by the Director-General of UNESCO and approved by the Executive Board of UNESCO at its 196th Session in April 2015;

Expresses its satisfaction with the budgetary allocations proposed for the IOC in the UNESCO Draft Budget for 2016–2017 (Draft 38 C/5) and Addendum:

- US\$ 13,270,400 to the IOC in the ZNG US\$ 653 M budget for UNESCO
- US\$ 9,672,785 to the IOC in the ZNG US\$ 507 M expenditure plan for UNESCO
- US\$ 13,860,900 to the IOC in the ZNG+ US\$ 667 M budget for UNESCO
- US\$ 10,155,000 to the IOC in the ZNG+ US\$ 518 M expenditure plan for UNESCO;

Endorses the Draft Programme and Budget for 2016–2017 contained in document IOC-XXVIII/2 Annex 3 as a measure to ensure programmed continuity at an essential level and consistent with the IOC Medium-Term Strategy for 2014–2021, with some changes to the budgetary allocations reflected in Annex 1 to this resolution;

Invites the IOC Executive Secretary to further improve the performance indicators and targets for 2016–2017 programme delivery to make them more pertinent and measurable and to report on programme implementation against those performance indicators and targets to the IOC Governing Bodies;

Requests the IOC Executive Secretary to further facilitate Member States' support by updating a Complementary Additional Programme (CAP) of Extrabudgetary Resources for 2016–2017 based on the ZNG+ expenditure plan for review and endorsement by the IOC Executive Council at its 49th Session in June 2016;

Expresses its thanks to Member States who have already contributed to the 2014–2015 CAP; and

Urges all Member States to provide voluntary contributions for the financing of the CAP, preferably to the IOC Special Account;

Further urges Member States to increase their support, including through direct and in-kind contributions, to the activities in the regions;

Encourages Member States to:

- (i) continue to advocate to the Director-General and the Governing Bodies of UNESCO the importance of IOC as a body with functional autonomy within UNESCO, focusing in particular on the value that IOC provides to UNESCO and to the sustainable

development of coastal areas and islands;

- (ii) support the budgetary allocation proposed for the IOC in the UNESCO Draft Budget and expenditure plans for 2016–2017 at the meetings of the Governing Bodies of UNESCO as essential to preserve the ability of the Commission to assist its Member States in achieving the post-2015 Sustainable Development Goals;

Invites the Director-General of UNESCO to:

- (i) consider the budgetary allocation proposed for the IOC in the ZNG+ US\$ 518 M expenditure plan for UNESCO for 2016–2017 as the minimum required to ensure the Commission's programme continuity, given it represents 85% of the 37 C/5 Approved Budget and 73% of the Draft 38 C/5 ZNG+ Budget;
- (ii) request the Governing Bodies of UNESCO to ensure that resources allocated to the IOC in the Draft 38 C/5 be clearly identified in the appropriation resolution;
- (iii) maintain all IOC activities in a single Main Line of Action in the Draft 38 C/5 entitled "Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts";

Decides to reconstitute the open-ended Intersessional Financial Advisory Group (IFAG) under the leadership of a Vice-Chairperson, to provide guidance in preparing the preliminary proposal for a Draft Programme and Budget for 2018–2019 in accordance with the Terms of Reference contained in Annex 2 to this resolution, and to consider the appropriate arrangements to reinforce the budget of the Commission, including by using the provisions under Article 10 of its Statutes;

Requests the IOC Executive Secretary to:

- (i) prepare for the review by the IOC Executive Council at its 49th Session in June 2016, a preliminary proposal for a Draft Programme and Budget for 2018–2019 built around one expected result and consistent with the high level objectives and functions defined in the IOC Medium-Term Strategy for 2014–2021; and
- (ii) make every effort, in the budgetary proposal for 2018–2019, to reflect the IOC priorities confirmed by Member States' discussions on the Future of the IOC on long-term sustained observations and data and information management, as well as regional activities, which are fundamental to *inter alia*:
 - increased resiliency and adaptability to climate change and variability;
 - early warning for ocean hazards, including tsunamis;
 - healthy ocean ecosystems; and
 - enhanced knowledge of emerging issues;
- (iii) support the work of the IFAG by providing timely information on the UNESCO budgetary planning process;

Invites the Chairperson of the IOC to forward this resolution to the Director-General of UNESCO.

11.2 SELF-ASSESSMENT OF THE IOC GOVERNING BODIES IN FOLLOW-UP TO THE UNITED NATIONS JOINT INSPECTION UNIT'S (JIU) RECOMMENDATIONS CONCERNING THE METHODS OF WORK OF UNESCO'S INTERGOVERNMENTAL BODIES

The Executive Secretary informed the Assembly that an audit of the Governance of UNESCO and dependent entities, funds and programmes, including the IOC had been initiated at the request of the UNESCO General Conference (37 C/Resolution 96). This audit has been entrusted to the External Auditor with a view to formulating governance reform and cost-saving

measures for the 38th General Conference of UNESCO in 2015 and was addressed to the IOC Governing Bodies through its chairman in May 2014. In the framework of this strategic review, the governing bodies of IOC were invited to *'perform a self-assessment of the overall relevance of their work in relation to their specific terms of reference as well as the efficiency and effectiveness of their meetings, including the impact and utility of experts' time'*, with the IOC Secretariat limiting its role to providing factual information as necessary.

191 This item was included in the agenda of the IOC Executive Council at its 47th session (1–4 July 2014). Through EC-XLVII/Decision 7.2, the Executive Council stressed *'the need that the unique role of IOC in the UN system in relation to ocean science and the scientific base for ocean management and its position as a body with functional autonomy within UNESCO be reflected in any nomenclature of UNESCO's intergovernmental bodies or any other parts of the final governance review document'* and entrusted the IOC Officers, in consultation with IOC Member States, to answer the audit on behalf of the governing bodies of the Commission taking into account advice already received from the open-ended inter-sessional working groups dealing with financial matters and the Future of IOC.

192 The IOC Chair submitted all the requested information by the deadline, following an elaborate consultative process with the Commission's Officers and Member States, while the Secretariat provided some additional factual information, as contained in IOC-XXVIII/Inf-4.

193 The interim report of the External Auditor to the 196th session of the UNESCO Executive Board (196 EX/23.INF5) contains a number of observations and suggestions concerning the IOC that, in the Secretariat's opinion, will require a follow-up with the external auditor's team, following its review and discussion by the Assembly.

194 The Executive Secretary further informed the Assembly that on 16 June the External Auditor shared with the UNESCO Secretariat a draft audit report on governance for comments prior to its finalization. This provisional draft is available in French only and the external auditors have conveyed their apologies for any inconveniences this may cause. The Chair of IOC is invited to transmit comments directly to the External Auditor by 3 July 2016. The Secretariat is invited to provide comments from its perspective to indicate: (i) factual corrections and (ii) to indicate, for recommendations addressed to the Secretariat, whether there would be any difficulties in implementation. Lack of response will indicate a validation of factual content for the External Auditor.

195 The Secretariat will be working in close collaboration with the UNESCO Legal Advisor to prepare comments and will provide every support required for the formal communication from Chair on behalf of the Officers and Member States of the Commission.

196 No Member States took the floor.

Decision [IOC-XXVIII/11.2](#)

The Assembly,

Having considered the elements of the audit and in particular the two questionnaires submitted by the Chair of IOC and the interim report of the external auditor to the 196th session of the UNESCO Executive Board,

Stresses the need that the unique role of IOC in the UN system in relation to ocean science and the scientific base for ocean management and its position as a body with functional autonomy within UNESCO be reflected in any nomenclature of UNESCO's intergovernmental bodies or any other parts of the final governance review document;

Entrusts the IOC Chair and Officers, with the assistance of the Secretariat, to follow up with the team of the external auditor on behalf of the governing bodies of the

Commission to ensure that all inconsistencies or recommendations that did not meet the approval of the IOC Assembly be clearly pointed out and, to the extent possible, taken into account in the final report of the external auditor to the UNESCO General Conference.

11.3 ELECTIONS OF THE OFFICERS OF THE COMMISSION AND MEMBERS OF THE EXECUTIVE COUNCIL

197 Captain Javier Valladares, Chair of the Nominations Committee reported on this item. He informed the Assembly that all the nomination forms received as of Friday 18 June 2015 at 18.00 hrs by the Committee were valid and had therefore been forwarded to the Assembly as document IOC-XXVIII/NOM/WP3.

198 He further informed Assembly that: (i) Vanuatu and Palau – both belonging to Electoral Group IV had joined IOC since the 27th Session of the Assembly; (ii) the number of seats on the Executive Council had not changed since the 25th Session of the Assembly; and (iii) following the adoption of Resolution XXV-15 concerning the expansion of the quota of seats of Group II, the allocation of seats for Groups I and II, starting after the 25th Session of the Assembly, would be 10 seats for Group I and 3 seats for Group II; (iv) the quotas of seats for Groups III, IV and V remain unchanged.

11.3.1 Election of the Chair of the Commission

199 The Assembly noted that there was only one candidate for the position of Chair. Professor Peter Haugan (Norway) was therefore elected by acclamation.

11.3.2 Election of the Vice-Chairs of the Commission

200 The Assembly noted that there was only one candidate for each of Electoral Groups I, II, III, IV and V for the positions of Vice-Chair. The following were therefore elected by acclamation:

Mr Stephen Peter Hall (UK) – Group I

Dr Alexander Postnov (Russian Federation) – Group II

Mr Ariel Hernan Troisi (Argentina) – Group III

Dr Somkiat Khokiattiwong (Thailand) – Group IV

Dr Ashley Johnson (South Africa) – Group V

11.3.3 Election of the Members of the Executive Council

201 The Assembly noted that there were 9 candidates for the remaining Member State seats on the Executive Council for Electoral Group I, and that the number of those remaining seats was 8 and consequently a ballot would be needed for Electoral Group I.

202 The Assembly noted that there were 2 candidates for the remaining Member State seat on the Executive Council for Electoral Group II, whereas the maximum number of those seats was 2. The candidate Member States were therefore declared elected by acclamation.

203 The Assembly noted that there were 8 candidates for the remaining Member State seats on the Executive Council for Electoral Group III, which was the maximum number of those seats. The candidate Member States were therefore declared elected by acclamation.

204 The Assembly noted that there were 8 candidates for the remaining Member State seats on the Executive Council for Electoral Group IV, which was the maximum number of those seats. The candidate Member States were therefore declared elected by acclamation.

205 The Assembly noted that there were 9 candidates for the remaining Member State seats on the Executive Council for Electoral Group V, whereas the number of those remaining seats was eight and consequently a ballot would be needed for Electoral Group V.

206 After a ballot to elect the representatives to the Executive Council from Electoral Groups I and V, the Assembly elected:

- (i) Belgium, Canada, Denmark, France, Germany, Portugal, Turkey, USA, to the Executive Council for Electoral Group I;
- (ii) Cote d'Ivoire, Egypt, Kenya, Morocco, Senegal, Tanzania, Togo, Tunisia to the Executive Council for Electoral Group V.

207 The membership of the Executive Council for the next intersessional period and the 29th Session of the Assembly is given in [Annex VII](#) to the present report.

11.4 29th SESSION OF THE ASSEMBLY AND 49th and 50th SESSIONS OF THE EXECUTIVE COUNCIL

208 The Executive Secretary introduced this item. He highlighted the fact that the present session had been scheduled over a period of six working days compared to 7,5 working days in 2013, 10 working days in 2011 and 8,5 days in 2009. Similarly the duration of Executive Council plenary sessions decreased from 7 to 3.5 working days. Budgets of governing bodies have reduced by 40% over the same period. Sponsorship of services (interpretation and catering) and side events during governing body sessions by Member States and partner organizations have become an increasingly significant financial support. Dr Ryabinin reminded the Assembly that some Member States did not want to consider hosting sessions of IOC governing bodies under the present situation.

209 The interim report on the current Audit of the Governance of UNESCO and Entities (item 11.2) shows that it is premature to consider that the Audit may lead to a consensus by Member States on new principles that will guide intergovernmental meetings in the future. Dr Ryabinin strongly encouraged Member States to express views on the organization of their governing bodies and future sessions in the evaluation questionnaire prepared for the present session.

210 Dr Ryabinin reminded the Assembly of the recommendations of the Executive Council, acting as the Steering Committee for this Assembly, on the dates of the 49th session of the Council in 2016 and duration of the 29th session of the Assembly in 2017 taking into account scheduled or anticipated dates of major international commitments of the oceanographic communities and IOC's partners in June 2016.

211 The Chairman reminded the discussion under item 2.4 on the results of the Ocean Science Day that took place before this session and invited the Assembly to decide on organizing such an event at the next session of the Assembly.

212 A list of proposed future IOC Memorial Lectures topics was presented. The Member States were encouraged to suggest additional topics, which can be submitted to Luis Valdes for consideration by the Officers at their January 2016 and 2017 meetings.

213 The Assembly when considering scheduling of future governing body sessions noted that timing of the assembly vis-à-vis several subsidiary body sessions prevented some documentation from being available two months in advance. The Assembly also considered improvements to the session's reporting procedures and other arrangements based on the comments from the floor and responses to evaluation questionnaire for the session.

214 The representatives of 10 Member States took the floor.

Decision [IOC-XXVIII/11.4](#)

The Assembly,

Recalling the recommendations of the Executive Council at its 48th session (EC-XLVIII, Dec.4.),

Decides to hold:

- (i) The 49th session of the Executive Council for 3.5 days in UNESCO Headquarters, Paris over the period of 6–10 June 2016,
- (ii) The 29th session of the Assembly for a duration of six working days at UNESCO Headquarters in June 2017, preceded by a one-day session of the Executive Council acting as the steering committee of the Assembly and an Ocean Science Day;

Calls on the Member States to consider the possibility of providing voluntary extrabudgetary contributions to allow their effective organization;

Requests the Executive Secretary to approach Members States and seek their broad input on the themes of IOC memorial lectures for subsequent consideration by the Officers of the IOC;

Invites the Executive Secretary to promote visibility thereof.

12. ADOPTION OF THE SUMMARY REPORT AND RESOLUTIONS

215 The Chair of the Resolutions Committee reported to the Assembly on the work of the Resolutions Committee during the session ([Annex IV-A](#) to the present report).

216 The IOC Chair then invited the Assembly to adopt, in plenary, the draft decision on the Future of the IOC (item 4) and resolutions that were still pending after discussion in plenary:

- Resolution XXVIII-1= Second International Ocean Indian Expedition (item 5.3)
- Resolution XXVIII-2= IOC Capacity Building Strategy (2015-2021) (item 9.1)
- Resolution XXVIII-3= Financial Matters of the Commission (item 11.1)

217 The draft summary report of the discussions of the present session was presented in four parts to the Assembly. It was reviewed and completed during the session.

Decision [IOC-XXVIII/12](#)

The Assembly,

Welcoming the efforts since 2012 to adapt the documentation to shorten sessions of governing bodies and the formal strengthening of decisions as the core output of IOC governing body sessions with resolutions and the scope and definition of resolutions adopted by decision IOC-XXVII,Dec.6.4,

Identifies areas of further improvements for governing body session working arrangements as follows:

- (i) identify best practices of other intergovernmental organisations with a view to study how they could contribute to the future conduct of sessional and intersessional business with a view to apply these to the work of the Commission, as appropriate;
- (ii) strengthen the terms of reference of existing and future intersessional working groups in order to optimise their work and ensure active participation and

- contribution of IOC Member States during intersessional periods; including through the use of circular letters;
- (iii) through consultation between the Officers and the Secretariat, consider ways of rendering the Action Paper more strategic and strongly focused on the substance of the items being debated; and ensuring better reflections of national positions in the reports of IOC governing bodies;
 - (iv) ensure the availability of the governing body documentation in due time and in accordance with IOC Rules of Procedures;
 - (v) implement as far as possible paperless sessions of future IOC governing bodies;
- Adopts the Draft Summary Report for the present session;
- Requests the Executive Secretary to circulate the summary report to Member States within one month after the closure of the session and to inform the Officers of the results of the evaluation questionnaire in order to pursue the reflection on this issue.

13. CLOSURE

- 218 The Assembly met in plenary session during 6 days from 18 to 25 June 2015, considered 36 items on its agenda and approved 30 decisions and 3 resolutions. The plenary meeting was supported by some 21 preparatory meetings, 13 meetings of electoral and regional groups and 7 information side meetings during the session.
- 219 The Chairman of the Commission congratulated the incoming Chair and Vice-Chairs, and thanked the outgoing Vice-Chairs for their contributions. The Chair also thanked delegates, partners, individuals who chaired sessional committees and groups, the Rapporteur for the session and UNESCO staff and IOC Secretariat.
- 220 The Assembly congratulated the Chairman for his dedicated work to the Commission during two consecutive terms and the Executive Secretary offered him the gavel of the session.
- 221 The new Chairman, Peter Haugan, invited the elected Officers, delegates of IOC Member States and representatives of partner organizations to work actively during the intersessional period.
- 222 The Chair of the Commission closed the 28th Session of the Assembly at 15:30 on Thursday 25 June 2015.

PART II

RESOLUTIONS AND DECISIONS

Resolution XXVIII-1

Second International Indian Ocean Expedition

The Intergovernmental Oceanographic Commission,

Recalling:

- (i) Decision IOC-XXVII/Dec.5.1.2 to further develop a proposal for the Second International Indian Ocean Expedition (IIOE-2),
- (ii) Resolution EC-XLVII-1 which, *inter alia*, entrusted the Scientific Committee on Ocean Research (SCOR) to develop the science plan for the IIOE-2 jointly with IOC and the Indian Ocean Global Ocean Observing System (IOGOOS)

Appreciating the leading role played by SCOR in developing the IIOE-2 Science Plan jointly with IOC and IOGOOS,

Welcoming the steps taken by the IOC Executive Secretary in the establishment of the IIOE-2 Interim Planning Committee (Group of Experts) [IPC] for the initial planning of the IIOE-2,

Acknowledging with thanks the IPC Report titled Strategic Framework for Implementation of the Second International Indian Ocean Expedition as contained in IOC/INF-1324,

Reaffirming the importance of the IIOE-2, not only for the Indian Ocean Member States but for the whole world, as a catalyst project linking Indian Ocean processes to the global ocean and atmosphere,

Accepts the Recommendation of the IPC, as referenced in IOC/INF-1324, to launch IIOE-2 at Goa, India, on the 4th of December 2015, for an initial period of five years;

Adopts the Second International Indian Ocean Expedition (IIOE-2) *A Basin-Wide Research Program* Draft Science Plan Version 1 (13 May 2015) [IIOE-2 Science Plan] developed by SCOR and recommended by the IPC as the scientific basis for IIOE-2;

Approves the governance structure of the IIOE-2 and other recommendations of the IPC contained in the IPC report;

Decides to continue the IPC mandate until the official launch of the IIOE-2 in December 2015 and provide a seamless transition to the IIOE-2 Steering Committee;

Encourages the IPC to complete the IIOE-2 implementation plan based on the recommendations of the IPC and input to be received from IIOE-2 stakeholders and IOC Member States;

Requests the IOC Executive Secretary, as a matter of priority, to work with other IIOE-2 co-sponsors and partners to establish the IIOE-2 Steering Committee and IIOE-2 International Project Office Framework (IPO), including their Terms of Reference, and to report on this to the IOC Executive Council at its 49th Session in 2016;

Accepts with appreciation the generous offers of India and Australia to support/host key components of the IIOE-2 IPO: the IIOE-2 Project Office in Hyderabad and the Perth Programme Office respectively;

Authorizes the IOC Executive Secretary to:

- (i) continue efforts in extending the list of partners in planning and implementation of IIOE-2;
- (ii) formalize the offer of India to establish an IIOE-2 Project Office in India to support the IIOE-2 related activities;
- (iii) designate an IOC staff member to coordinate the IIOE-2 activities in close coordination with the IIOE-2 Steering Committee, Member States and the IIOE-2 IPO by taking advantage of the generous action of Australia in hosting and supporting the IOC Perth Programme Office in Perth, Western Australia;

Urges Member States to commit adequate resources as cash using available IOC funding mechanisms or in-kind, to support IPO functions, the work of the Steering Committee and implementation of the IIOE-2 Science Plan;

Encourages IOC Member States, IOC Regional Subsidiary Bodies, including Member States of IOCINDIO, and other relevant organizations to propose, coordinate and promote research projects to implement IIOE-2 science priorities, noting the ongoing East Indian Ocean Upwelling Research Initiative and West Indian Ocean Upwelling Research Initiative;

Urges the IPO to build synergies among existing regional initiatives and programmes, including those already planned or underway.

Resolution XXVIII-2

IOC Capacity Development Strategy (2015–2021)

The Intergovernmental Oceanographic Commission,

Noting that capacity development is a fundamental tenet of IOC's mission, enabling all Member States to participate in, and benefit from, ocean research and services that are vital to sustainable development and human welfare on the planet,

Noting further that the Vision Statement of the IOC Capacity Development Strategy (2015–2021) as contained in IOC-XXVIII/2 Annex 8 and its revised corrigendum, identifies capacity development as the primary catalyst by which IOC will achieve its four high level objectives in the current IOC Medium-Term Strategy (2014–2021),

Adopts the IOC Capacity Development Strategy, 2015–2021 (IOC/INF-1332);

Agrees that, by the 29th Session of the IOC Assembly, IOC Primary Subsidiary Bodies (global programmes and Regional Subsidiary Bodies) should take the following actions:

- (i) develop programmatic and regionally relevant capacity development work plans based on this strategy and related needs assessments conducted in a consistent manner, building on ongoing activities and making use of existing training and education facilities;
- (ii) mobilize resources in order to reinforce the Secretariat staffing of the regional Sub-Commissions, other subsidiary bodies and global programmes;
- (iii) catalyze capacity development through global, regional, and national programme development, including projects prepared in consultation with Member States with a view to raise extra-budgetary resources; and
- (iv) enhance collaboration and communication between its global programmes and Regional

Subsidiary Bodies, to contribute to (i) and (ii) above;

Urges IOC Member States to:

- (i) identify needs and new opportunities to participate in, and benefit from, reinforced partnerships through the IOC to achieve their capacity development goals in marine science, early warning systems, and ocean governance;
- (ii) mobilize the knowledge, personnel, infrastructural and financial resources to support IOC's catalytic role in helping Member States achieve these goals; and
- (iii) raise the visibility of IOC's unique niche in capacity development.

Resolution XXVIII-3

Financial Matters of the Commission

The Intergovernmental Oceanographic Commission,

Having examined documents IOC-XXVIII/2 Annex 2 and Corr. and IOC-XXVIII/2 Annex 3,

Confirms that the IOC budget for 2014 has been executed in accordance with the approved Programme and Budget for 2014–2015 (37 C/5) and the workplans endorsed by the IOC Executive Council at its 47th Session (IOC/EC-XLVII/2 Annex 3 Rev.);

Expresses great concern for the impact of the financial difficulties of UNESCO on the delivery of the IOC programmes, with the reduction of the IOC budget from US\$ 12,026,200 in the approved Programme and Budget for 2014–2015 (37 C/5) to US\$ 8,643,600 under the US\$ 507 M expenditure plan for 2014–2015 (or 72% of the 37 C/5 approved);

Further expresses great dissatisfaction with the fact that the budgetary allocation to the IOC for the biennium 2014–2015 at the level of 72% of the 37 C/5 approved is not consistent with the recommendations of the 5th Special Session of the Executive Board of UNESCO (Paris, 4 July 2013) to allocate between 100% and 80% to high priority Expected Results, like those of the IOC;

Recognizes the efforts of the IOC Executive Secretary to maintain programme continuity under these challenging circumstances and the difficulty to fully implement the guiding principles adopted by the IOC Assembly at its 27th Session (Resolution XXVII-2(C), Annex 2), given that the Assembly provided its recommendation on a scenario with an allocation of 86% (and not 72%) of the 37 C/5 approved budget;

Welcomes the additional allocation of US\$ 500,000 from the Emergency Fund proposed by the Director-General of UNESCO and approved by the Executive Board of UNESCO at its 196th Session in April 2015;

Expresses its satisfaction with the budgetary allocations proposed for the IOC in the UNESCO Draft Budget for 2016–2017 (Draft 38 C/5) and Addendum:

- US\$ 13,270,400 to the IOC in the ZNG US\$ 653 M budget for UNESCO
- US\$ 9,672,785 to the IOC in the ZNG US\$ 507 M expenditure plan for UNESCO
- US\$ 13,860,900 to the IOC in the ZNG+ US\$ 667 M budget for UNESCO
- US\$ 10,155,000 to the IOC in the ZNG+ US\$ 518 M expenditure plan for UNESCO;

Endorses the Draft Programme and Budget for 2016–2017 contained in document IOC-XXVIII/2 Annex 3 as a measure to ensure programmed continuity at an essential level and

consistent with the IOC Medium-Term Strategy for 2014–2021, with some changes to the budgetary allocations reflected in Annex 1 to this resolution;

Invites the IOC Executive Secretary to further improve the performance indicators and targets for 2016–2017 programme delivery to make them more pertinent and measurable and to report on programme implementation against those performance indicators and targets to the IOC Governing Bodies;

Requests the IOC Executive Secretary to further facilitate Member States' support by updating a Complementary Additional Programme (CAP) of Extrabudgetary Resources for 2016–2017 based on the ZNG+ expenditure plan for review and endorsement by the IOC Executive Council at its 49th Session in June 2016;

Expresses its thanks to Member States who have already contributed to the 2014–2015 CAP; and

Urges all Member States to provide voluntary contributions for the financing of the CAP, preferably to the IOC Special Account;

Further urges Member States to increase their support, including through direct and in-kind contributions, to the activities in the regions;

Encourages Member States to:

- (i) continue to advocate to the Director-General and the Governing Bodies of UNESCO the importance of IOC as a body with functional autonomy within UNESCO, focusing in particular on the value that IOC provides to UNESCO and to the sustainable development of coastal areas and islands;
- (ii) support the budgetary allocation proposed for the IOC in the UNESCO Draft Budget and expenditure plans for 2016–2017 at the meetings of the Governing Bodies of UNESCO as essential to preserve the ability of the Commission to assist its Member States in achieving the post-2015 Sustainable Development Goals;

Invites the Director-General of UNESCO to:

- (i) consider the budgetary allocation proposed for the IOC in the ZNG+ US\$ 518 M expenditure plan for UNESCO for 2016–2017 as the minimum required to ensure the Commission's programme continuity, given it represents 85% of the 37 C/5 Approved Budget and 73% of the Draft 38 C/5 ZNG+ Budget;
- (ii) request the Governing Bodies of UNESCO to ensure that resources allocated to the IOC in the Draft 38 C/5 be clearly identified in the appropriation resolution;
- (iii) maintain all IOC activities in a single Main Line of Action in the Draft 38 C/5 entitled "Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts";

Decides to reconstitute the open-ended Intersessional Financial Advisory Group (IFAG) under the leadership of a Vice-Chairperson, to provide guidance in preparing the preliminary proposal for a Draft Programme and Budget for 2018–2019 in accordance with the Terms of Reference contained in Annex 2 to this resolution, and to consider the appropriate arrangements to reinforce the budget of the Commission, including by using the provisions under Article 10 of its Statutes;

Requests the IOC Executive Secretary to:

- (i) prepare for the review by the IOC Executive Council at its 49th Session in June 2016, a preliminary proposal for a Draft Programme and Budget for 2018–2019 built around one

expected result and consistent with the high level objectives and functions defined in the IOC Medium-Term Strategy for 2014–2021; and

- (ii) make every effort, in the budgetary proposal for 2018–2019, to reflect the IOC priorities confirmed by Member States' discussions on the Future of the IOC on long-term sustained observations and data and information management, as well as regional activities, which are fundamental to *inter alia*:
- increased resiliency and adaptability to climate change and variability;
 - early warning for ocean hazards, including tsunami;
 - healthy ocean ecosystems; and
 - enhanced knowledge of emerging issues;
- (iii) support the work of the IFAG by providing timely information on the UNESCO budgetary planning process;

Invites the Chairperson of the IOC to forward this resolution to the Director-General of UNESCO.

Annex 1 to Resolution XXVIII-3

Proposed budgetary allocations for 2016–2017

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Impl. Unit	Draft 38 C/5 (2016-2017)			
		Fully-funded budget proposals		Expenditure Plans based on anticipated reduced cashflow	
		ZNG \$653M (\$13.3M)	ZNG+ \$667M (\$13.9M)	ZNG \$507M (\$9.7M)	ZNG+ \$518M (\$10.2M)
ER 4 - Scientific understanding of ocean and coastal processes bolstered and used by Member States to improve the management of the human relationship with the ocean					
Function A: Foster ocean research to strengthen knowledge of ocean and coastal processes and human impacts upon them		531,065	578,950	219,435	240,010
WCRP	IOC	250,000	250,000	80,000	90,000
Ocean Carbon Sources & Sinks	IOC	151,500	177,315	75,160	80,860
Impact of CC on ocean & coastal ecosystems	IOC	129,565	151,635	64,275	69,150
Function B: Maintain, strengthen and integrate global ocean observing, data and information systems		1,135,170	1,301,310	563,790	610,490
GOOS Work Plan	IOC	550,150	643,880	272,940	293,645
GOOS Projects through IOCAFRICA	NAI	82,265	96,280	40,810	43,905
GOOS Pacific Ocean Projects through PPO	JAK	40,000	40,000	20,000	20,000
GOOS Indian Ocean Projects through PPO	NAI	40,000	40,000	20,000	20,000
IIOE-2 (developing capacities for sustained observations)	JAK	80,000	80,000	40,000	50,000
JCOMM Observations	IOC	164,520	192,550	81,620	87,810
IODE & OBIS core systems	IOC	178,235	208,600	88,420	95,130
Total ER 4 DIRECT COSTS		1,666,235	1,880,260	783,225	850,500
OFFICE: IOC operating costs	IOC	26,000	29,000	19,125	20,498
Total ER 4		1,692,235	1,909,260	802,350	870,998

Main Line of Action 3: Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts	Impl. Unit	Draft 38 C/5 (2016-2017)			
		Fully-funded budget proposals		Expenditure Plans based on anticipated reduced cashflow	
		ZNG \$653M (\$13.3M)	ZNG+ \$667M (\$13.9M)	ZNG \$507M (\$9.7M)	ZNG+ \$518M (\$10.2M)
ER 5 - Risks and impacts of ocean-related hazards reduced, climate change adaptation and mitigation measures taken, and policies for healthy ocean ecosystems developed and implemented by Member States					
Function C: Develop early warning systems and preparedness to mitigate the risks of tsunamis and ocean-related hazards		937,285	1,089,305	483,475	520,145
Promote integrated and sustained WS	IOC	175,496	205,400	87,070	93,675
Promote integrated and sustained WS	RAB	45,000	45,000	40,810	43,905
Educating communities at risk	IOC	125,310	146,660	62,170	66,885
Educating communities at risk	API	82,266	96,280	40,810	43,905
Contribute to develop MS capacities for ass't	IOC	125,310	146,660	62,170	66,885
Contribute to develop MS capacities for ass't	JAK	82,266	96,280	40,810	43,905
Research & monitoring on algal events	IOC	82,266	96,280	40,810	43,905
JCOMM Services	IOC	137,105	160,465	68,015	73,175
IODE & OBIS products and services	IOC	82,266	96,280	40,810	43,905
Function D: Support assessment and information to improve the science-policy interface		335,210	392,325	166,300	178,920
WOA	IOC	90,850	106,330	45,075	48,495
Science for reducing nutrient enrichment	IOC	123,395	144,415	61,215	65,860
Climate change adaptation in coastal zones	NAI	66,120	77,390	32,805	35,295
Climate change adaptation in coastal zones	IOC	54,845	64,190	27,205	29,270
SUB-TOTAL ER 5 DIRECT COSTS		1,272,495	1,481,630	649,775	699,065
OFFICE: IOC operating costs	IOC	23,000	26,000	17,020	18,500
Total ER 5		1,295,495	1,507,630	666,795	717,565
ER 6 - Member States' institutional capacities reinforced to protect and sustainably manage ocean and coastal resources					
Function E: Enhance ocean governance through a shared knowledge base and improved regional cooperation		805,000	850,000	501,840	535,000
IOC Governing bodies	IOC	395,000	395,000	275,000	290,000
IOCARIBE	KNG	60,000	60,000	40,000	45,000
IOCAFRICA	NAI	60,000	60,000	40,000	45,000
WESTPAC	BGK	60,000	60,000	40,000	45,000
UN partnerships, policy and outreach	IOC	100,000	120,000	40,000	40,000
ICAM & MSP	IOC	130,000	155,000	66,840	70,000
Function F: Develop the institutional capacity in all of the functions above, as a cross-cutting function		633,940	735,280	340,760	390,737
CD & TMT & GOSR*	IOC	100,320	115,550	27,210	45,737
CD IOCAFRICA	NAI	119,540	139,910	75,000	85,000
CD IOCARIBE	KNG	119,540	139,910	75,000	85,000
CD WESTPAC	BGK	119,540	139,910	75,000	85,000
IODE and OBIS training and education	IOC	175,000	200,000	88,550	90,000
SUB-TOTAL ER 6 DIRECT COSTS		1,438,940	1,585,280	842,600	925,737
UNDAF 2% (of which 1% to revert to IOC)	UNR	91,000	102,000	48,000	52,000
OFFICE: IOC operating costs	OPC	26,000	30,000	18,855	20,000
Total ER 6		1,555,940	1,717,280	909,455	997,737
TOTAL IOC PROGRAMME		4,543,670	5,134,170	2,378,600	2,586,300
Contribution to UNESCO Common Charges		162,100	162,100	162,100	162,100
TOTAL STAFF (5% lapse factor for Draft 38 C/5)		8,564,630	8,564,630	7,132,100	7,406,600
TOTAL		13,270,400	13,860,900	9,672,800	10,155,000

* Amounts allocated to GOSR are: US\$ 17,160 in the ZNG fully-funded budget, US\$ 18,225 in the ZNG+ fully-funded budget, US\$ 16,462 in the ZNG + Expenditure Plan and US\$ 0 in the ZNG Expenditure Plan. These allocations are seen as seed money to facilitate extrabudgetary fundraising.

Annex 2 to Resolution XXVIII-3

Revised Terms of Reference of IOC Intersessional Financial Advisory Group

Purpose

To provide advice from IOC Member States to the Chairperson of IOC and to the Assembly and the Executive Council in a transparent and objective fashion.

The Financial Advisory Group will be constituted at each Session of the IOC Governing Body and operate for the following intersessional period.

Functions

- (a) To advise on the adequacy of the linkage between the results-based management and the IOC Medium-Term Strategy and the IOC Programme and Budget;
- (b) To advise on preliminary proposals from the Director-General of UNESCO for strategy and draft budgets provided by UNESCO;
- (c) To advise on the adequacy of regular and extrabudgetary resource allocations against expected results; and
- (d) To advise on the overall IOC budget level, taking into account issues of affordability and sustainability.

Composition

- (a) An Officer of the Commission serves as chairperson;
- (b) Open to all IOC Member States; however, the Executive Council and Assembly, as appropriate, may request the participation of Member States as part of the core membership.

Working arrangements

- (a) The Financial Advisory Group will conduct the majority of its business by electronic means;
- (b) If appropriate, the Chairperson may convene a meeting in time, and for a long enough period, to prepare a report prior to the commencement of a session of the Assembly or the Executive Council;
- (c) The Financial Advisory Group will provide a report on all its activities to subsequent sessions of the Assembly and Executive Council, as appropriate;
- (d) Relevant documents should be made available before the Financial Advisory Group, in adequate time for review; and
- (e) The Financial Advisory Group should follow procedures for IOC Subsidiary Bodies, seeking to formulate its conclusions and recommendations through consensus.

DECISIONS

IOC-XXVIII/Dec.2

The Assembly,

I. Agenda

Adopts the agenda and the timetable of work as set out in document IOC-XXVIII/1 Prov. Rev. and Add. Rev.

II. Rapporteur

On a proposal of Argentina, seconded by Brazil,

Designates Mr Carlo Elisca S. Cerome of Haiti Rapporteur for its present session to assist the Chairperson and the Executive Secretary in the preparation of the draft provisional report of the Session;

III. Sessional Committees and Working Groups

Establishes the following sessional open-ended committees and four working groups and referred to them the following agenda items and responsibilities:

- Financial Committee (to examine the financial implications of draft decisions/resolutions, work plans of subsidiary bodies: under the chairmanship of Professor Peter M. Haugan (Norway) with the following Member States declaring their wish to participate: Australia, Spain, Germany, South Africa, Kenya, USA, Japan, Russian Federation, Malaysia, UK, Côte d'Ivoire, China, Belgium, Brazil, Canada, Cameroon, Greece, India, France, Turkey, Portugal, Trinidad and Tobago, Republic of Korea, Thailand, Mauritius, Argentina, Denmark, Egypt. Ms Ksenia Yvinec provides the Secretariat support to the Financial Committee.
- Resolutions Committee (to report on all draft resolutions duly presented for consideration at the session –item 12: under the chairship of Terry Schaefer (USA) with the following Member States declaring their wish to participate: Argentina, Australia, USA, Malaysia, France, India, China, Turkey, Islamic Republic of Iran, Tunisia, Japan, UK, Côte d'Ivoire, Portugal, Greece, Republic of Korea, Thailand, Ecuador. Julian Barbière provides the Secretariat support to the Resolutions Committee.
- Nominations Committee (to examine all proposals of candidates for the elections to the chair, vice-chairs and to the Executive Council at the present session, and to report on them –item 11.3): under the chairship of Javier Valladares (Argentina) with the following Member States declaring their wish to participate: Japan, USA, China, India, France, Turkey, Saudi Arabia, Spain, Cuba, Egypt, Bulgaria, Republic of Korea, Russian Federation, UK. Thorkild Aarup provides the Secretariat support to the Nominations Committee.

Establishes also:

On a proposal of the Executive Council acting as the steering committee for the present session:

- a sessional working group on International Indian Ocean Expedition 2 (IIOE-2) (5.3) under the chairship of Sateesh Shenoï (India) with the following Member States declaring their wish to participate: (to be completed in the final report). Nick D'Adamo provides the Secretariat support to the group.
- a sessional working group on the review of GEBCO (item 6.2) under the chairship of Craig McLean (USA) with the following Member States declaring their wish to participate:

Argentina, Japan, France, Colombia, China, Brazil, Bulgaria, Portugal, Tunisia, Turkey, Canada, USA, Australia, Spain, Malaysia, Russian Federation, Tanzania, Ireland, Republic of Korea, UK, India, Monaco, IHO, GEBCO. Julian Barbière provides the Secretariat support to the group.

- a sessional working group on the IOC Capacity Building Strategy and Draft Resolution (9.1) under the chairship of Prof. Adoté Blim Blivi (Togo) with the following Member States declaring their wish to participate: Australia, USA, Japan, UK, Côte d'Ivoire, Senegal, Malaysia, Mauritius, Saudi Arabia, Germany, South Africa, Egypt, Kenya, China, Belgium, Brazil, Cameroon, France, India, Nigeria, Portugal, Trinidad and Tobago, Republic of Korea, Thailand, Argentina, Tanzania. Peter Pissierssens provides the Secretariat support to the group.
- a sessional working group on the Future of IOC (item 4.) under the chairship of Peter Haugan (Norway). Ksenia Yvinec provides the Secretariat support to the group, with the following Member States declaring their wish to participate: Denmark, USA, Japan, UK, Senegal, Cuba, Spain, Russian Federation, Germany, Algeria, South Africa, Argentina, Australia, Ecuador, Malaysia, Morocco, Colombia, China, Chile, Canada, Brazil, Greece, France, Finland, Indonesia, Islamic Republic of Iran, India, Pakistan, Philippines, Portugal, Turkey, Tunisia, Thailand, Republic of Korea, Egypt, Togo.

IOC-XXVIII/Dec.3.2

Report of the Executive Secretary

The Assembly,

Having examined documents IOC-XXVIII/2 Annex 1 Rev. and Addendum and IOC-XXVIII/2 Annex 2 and Corr.,

Takes note of the report of the Executive Secretary on programme and budget implementation, including the report on budget execution 2014, subject to the review of the Financial Committee in Resolution XXVIII-3.

IOC-XXVIII/Dec.3.3.1

IOC Sub-Commission for the Western Pacific (WESTPAC)

The Assembly,

Having considered the executive summary report of the 10th Session of the IOC Sub-Commission for the Western Pacific, Phuket, Thailand, 12–15 May (IOC/WESTPAC-X/3s),

Expresses its deep appreciation to the Government of Thailand for hosting and supporting the WESTPAC Office, the Government of Vietnam for hosting and co-organizing the 9th WESTPAC International Scientific Symposium (22–25 April 2014, Nha Trang, Vietnam), the Government of China for hosting the IOC Regional Training and Research Centre on Ocean Dynamics and Climate, as well as to all other WESTPAC Member States for their financial and in-kind support provided to WESTPAC diverse activities;

Taking into account the pivotal role of the WESTPAC Office in WESTPAC's achievement over the past decade,

Requests the Executive Secretary to consider any possibility of appointing the Head of WESTPAC Office to an appropriate grade in order to leverage higher level political commitments in response to the unprecedented ever-increasing demands of its Member States, and to be in line with the practices of other UN agencies and programmes in the region;

Accepts the report of WESTPAC-X and the recommendations therein, including the workplan of the Sub-Commission for May 2015–May 2017;

Encourages WESTPAC Member States to keep the momentum of WESTPAC, and further demonstrate their ownership over all IOC programmes at regional level;

Agrees that the regular budget for these activities will be identified as part of the overall IOC Programme and Budget Resolution XXVIII-3.

IOC-XXVIII/Dec.3.3.2

IOC Sub-Commission for the Caribbean and Adjacent Region (IOCARIBE)

The Assembly,

Having considered the executive summary report of the 13th Session of the IOC Sub-Commission for the Caribbean and Adjacent Region (IOCARIBE), Merida, Mexico, 25–28 May 2015 (IOC/SC-IOCARIBE-XIII/3s),

Taking note of the IOCARIBE recommendation SC-IOCARIBE-XIII.1 considering the need to strengthen the IOCARIBE Secretariat and to relocate the current IOCARIBE Secretary's position to Cartagena, Colombia, and relevant IOC decision XXVII/Dec.3.3(III),

Noting with satisfaction the reinforcement of the IOC Regular Programme Budget for 2016–2017 as proposed in the Draft UNESCO Programme and Budget (38 C/5),

Welcomes the decision of the Executive Secretary to restore the current IOCARIBE Secretary's position as a full-time, Regular Programme, fixed-term post, and relocate this post to Cartagena, Colombia;

Accepts the report of IOCARIBE-XIII and the recommendations therein;

Agrees that the regular budget for these activities will be identified as part of the overall IOC Programme and Budget Resolution XXVIII-3.

IOC-XXVIII/Dec.3.3.3

IOC Sub-Commission for Africa and the Adjacent Island States (IOCAFRICA)

The Assembly,

Having considered the executive summary report of the 3rd Session of the IOC Sub-Commission for Africa and the Adjacent Island States, Nairobi, Kenya, 13–15 April 2015,

Noting the progress that has been made in the implementation of the IOCAFRICA work programme, especially in capacity development, and the limited progress in development of ocean observations in the region,

Welcomes the support provided by various Member States for the development and implementation of the programmes of the Sub-Commission, including the Government of Flanders (Belgium), Republic of Korea, Nigeria, Spain and South Africa;

Urges Member States, partner organizations and programmes to support the implementation of the Work Programme (2015–2017) of the Sub-Commission;

Accepts the report of IOCAFRICA-III and the recommendations therein;

Requests the IOC Executive Secretary to consider strengthening of the IOCAFRICA Secretariat through the regular budget;

Agrees that the regular budget for these activities will be identified as part of the overall IOC Programme and Budget Resolution XXVIII-3.

IOC-XXVIII/Dec.3.3.4

Regional Subsidiary Bodies

The Assembly,

Having considered the executive summary report of the meeting of the Regional Subsidiary Bodies prior to its 28th session (IOC-XXVIII/RSB/3s),

Takes note of the report of the IOC Vice-chairman for regions.

IOC-XXVIII/Dec.3.4

Introduction to Draft Programme and Budget for 2016–2017

The Assembly,

Having examined document IOC-XXVIII/2 Annex 3,

Takes note of the report of the Executive Secretary's introduction on programme and budget implementation, subject to the review of the Financial Committee in Resolution XXVIII-3.

IOC-XXVIII/Dec.3.5

Report of the IOC (2014–2015) to the Thirty-Eighth General Conference of UNESCO

The Assembly,

Recalling Article 3.2 of the Statutes and Rule of Procedure 49.2,

Having examined document IOC-XXVIII/6,

Requests the Executive Secretary to update, in consultation with the Officers, the current version of the report taking into account the main outcomes of the Assembly and including a

section on challenges and lessons learnt; and submit the report on IOC activities (2014–2015) to the 38th General Conference of UNESCO (38 C/REP.9).

IOC-XXVIII/Dec.4

The Future of the IOC

The Assembly,

Having considered the report of the Chair of the Inter-sessional Working Group on the Future of IOC (IOC-XXVIII/2 Annex 4),

Noting the consensus reached by IOC Member States that the IOC Governing Bodies should maintain in their agendas an item and mechanism to enable Member States to continuously reflect and exchange ideas on this highly strategic and important subject,

Recognizing the financial difficulties currently faced by UNESCO and the IOC,

Expresses its appreciation to Professor Peter M. Haugan for his leadership and contribution to the work of the inter-sessional working group;

Decides that the process to be followed in order to frame the action of the governing bodies of IOC will be structured in two phases:

- (i) one for immediate action by entrusting the Officers of the Commission with the mission of raising awareness on, and clarifying within UNESCO the special statutes of IOC, emphasizing its functional autonomy and its role of intergovernmental specialized mechanism within the framework of UNESCO and in cooperation with the relevant UN system organization whose interest and activities are related to its purposes;
- (ii) a second phase, during the intersessional period, for in-depth consideration by Member States, with a view of ensuring to the Commission the required institutional and operational sustainability exploring, among others, the possibilities offered by Article 10 of the IOC statutes;

Requests the Officers with the support of the Executive Secretary to develop the messages adapted to specific audiences about the societal benefits of IOCs mission, programmes and activities based on the input from the sessional working group and the discussions in plenary, and to convey it clearly and explicitly in a timely fashion to UNESCO and other UN organizations;

Encourages Member States to use this common message as a reference to assist them in raising the profile of the mandate and work of the IOC and related capabilities in fostering a common national approach in intergovernmental fora;

Further requests the Executive Secretary, in close consultation with the Officers, to explore ways of increasing IOCs strategic and functional visibility using a range of communication tools, and its contribution to the post-2015 Sustainable Development Goals consistent with IOCs vision and report back to the Executive Council at its 49th session;

Decides that the inter-sessional work on this subject should continue under the leadership of the IOC Officers with a view of providing a fully developed document with recommendation to the IOC Executive Council at its 49th session in 2016.

IOC-XXVIII/Dec.5.1

Global Ocean Science Report (GOSR)

The Assembly,

Having considered document IOC/INF-1321,

Welcomes the report of the Secretariat and takes note of the progress, challenges and prospects for the achievement of a comprehensive Global Ocean Science Report;

Expresses its appreciation to the Member States who responded to the GOSR questionnaire and provided in-kind support for the project;

Recalling Decision EC-XLVII/6.2 by which the IOC Executive Council at its 47th session accepted the GOSR proposal although no Regular Programme funds were allocated for this effort,

Recognizes the challenges faced by the secretariat in implementing the GOSR with limited financial resources and personnel;

Decides to allow the secretariat to consider the use of core funding for seed funding to implement activities beyond the current capacity of the secretariat that are critical for the completion of the GOSR;

Agrees that the regular budget for these activities will be identified as part of the overall IOC Programme and Budget resolution XXVIII-3;

Calls upon Member States to increase their extra-budgetary contributions, secondments of staff members, and in-kind support to IOC to provide the needed resources to complete the GOSR;

Requests the Executive Secretary to facilitate the preparation of the draft of the Global Ocean Science Report according to the initial schedule and to present it to the Executive Council at its 49th session for revision and comments, as appropriate.

IOC-XXVIII/Dec.5.2

World Climate Research Programme (WCRP)

The Assembly,

Recalling that IOC joined WMO and ICSU as sponsors of the WCRP in 1993;

Recalling further that the Assembly and Executive Council, since 2005, have reaffirmed continued co-sponsorship of WCRP at a level of US\$ 125,000 per annum and that Assembly at its 27th session identified IOC support as a high priority;

Taking note of the current financial difficulties of UNESCO that resulted in a reduced financial contribution to WCRP during the biennium 2014–2015;

Having considered the report of WCRP (IOC/INF-1323);

Decides to discontinue the WCRP/IOC Task Group on Sea-Level Variability and Change and requests WCRP to incorporate the sea-level related activities coordinated by that Task Group into the WCRP Grand Challenge on Regional Sea Level;

Requests WCRP to continue planning of its oceanographic activities in close cooperation with IOC;

Agrees that the regular budget for supporting WCRP activities will be identified as part of the overall IOC Programme and Budget Resolution XXVIII-3;

Urges Member States to support the execution of this course of action through participation of their scientists as well as financial contributions to the IOC Special Trust-Fund for the WCRP.

IOC-XXVIII/Dec.6.1

IOC Contribution to World Ocean Assessment and Other Ocean Assessment Processes (IPBES, TWAP)

The Assembly,

Having considered document IOC/INF-1331,

Requests the Executive Secretary to continue to provide technical and scientific support to the Regular Process in accordance with UNGA resolution 67/78, including in its follow-up phase, and to disseminate the results of the World Ocean Assessment to the IOC Member States as well as in relevant international fora;

Encourages the increased participation of IOC in the work of the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES) through OBIS and other relevant IOC programmes;

Welcomes the leading role of IOC in the conduct of the GEF Transboundary Water Assessment Programme—TWAP (Marine components);

Expresses its appreciation to the GEF, the European Commission, Governments of France, Norway, and Flanders (Belgium) for supporting IOC activities related to WOA and TWAP;

Encourages the Commission to continue to support the scientific assessments of the ocean as a mean to improve the science-policy interface;

Takes note of the preliminary information provided by the Secretariat regarding TWAP; and further takes note that the assessment will be ready in September 2015.

IOC-XXVIII/Dec.6.2

IHO-IOC General Bathymetric Chart of the Oceans (GEBCO) Project

The Assembly,

I. Revised Terms of Reference for the Joint IHO–IOC GEBCO Guiding Committee

Having examined document IOC-XXVIII/2 Annex 6,

Recognizing the importance of cooperation between IOC and the International Hydrographic Organization (IHO) in the field of ocean mapping, including bathymetry;

Encourages Member States to voluntarily contribute to the improvement of global bathymetric data sets and data products of the IHO-IOC GEBCO Project;

Endorses the revised Terms of Reference and Rules of Procedure for the Joint IHO-IOC GEBCO Guiding Committee as presented in the Annex to this decision;

Requests the Executive Secretary to convey this endorsement to the IHO Secretariat, copy to the Joint IHO-IOC GEBCO Guiding Committee.

II. Review of IOC's Role and Involvement in the General Bathymetric Chart of the Oceans (GEBCO)

Taking note of document IOC-XXVIII/2 Annex 7,

Recalling Resolution VIII-3 on the formation of the Joint IHO-IOC GEBCO Guiding Committee (1973),

Further recalling that the Memorandum of Understanding, concluded in 1984 and then revised in 2000, between the IHO and IOC, includes GEBCO and International Bathymetric Charts (IBC) as activities of common interest to both organizations and their Member States,

Considering that bathymetry is of relevance to several on-going IOC programmes, components of programmes and mechanisms of cooperation,

Decides that:

- (i) the IHO-IOC GEBCO project will be reviewed to consider IOC's role and involvement in the project, mainly from a view point of users of GEBCO bathymetric dataset and products;
- (ii) the review will be carried out by a review group, which will be comprised of external experts nominated by IOC Member States and the chairpersons of Guiding Committee of GEBCO, GLOSS, GOOS, IODE, JCOMM, TOWS-WG, IOCAFRICA, IOCARIBE and WESTPAC, during the intersessional period by correspondence;
- (iii) the report of the review will be submitted to the Executive Council at its 49th session (2016) for consideration and further action;

Requests the Executive Secretary to establish the review group in accordance with the terms of reference as contained in Annex 2 to this decision.

Annex 1 to IOC-XXVIII/Dec. 6.2 (I)

General Bathymetric Chart of the Ocean (GEBCO) Project – Terms of Reference and Rules of Procedure for the Joint IHO-IOC GEBCO Guiding Committee

PREAMBLE

GEBCO was proposed in 1899 and became a reality in April 1903 when HSH Prince Albert I of Monaco offered to organize and finance the production of a new chart series designated: "The General Bathymetric Chart of the Oceans" (GEBCO), under the Prince's Scientific Cabinet. In 1922 the responsibility for GEBCO was passed to the Director of the Oceanographic Museum of Monaco and in 1929 was transferred to the International Hydrographic Bureau (today the IHO).

Since 1973, GEBCO has been a joint Project of the International Hydrographic Organization (IHO) and the Intergovernmental Oceanographic Commission (IOC) of UNESCO.

The goals of the IHO-IOC GEBCO Project are to:

1. Develop and constantly improve the portrayal of global ocean depths;
2. Act as the designated international authority for undersea feature names;
3. Advance the development and application of sea floor mapping technology;
4. Encourage and facilitate ocean mapping cooperation leading to the exchange and preservation of bathymetric data and associated metadata;
5. Foster collaboration among individuals and organizations with established and developing expertise so as to assist local and regional mapping efforts to attain a global standard of quality;
6. Identify oceanic areas that are insufficiently mapped and recommend to appropriate ocean-going organizations and institutions that such areas are surveyed;
7. Promote education and training in ocean mapping through high level courses in Ocean Bathymetry acknowledged by IHO and IOC;
8. Bring together the ocean mapping community and users of bathymetry thereby leading to products that are more widely used.

GEBCO is an IHO and IOC Project that is open to all those interested in mapping the ocean floor. It relies largely on the voluntary efforts of an international collaborating community of scientists and hydrographers with the support of the IHO and the IOC.

GEBCO is led by the Joint IHO-IOC GEBCO Guiding Committee.

Terms of Reference

The GEBCO Guiding Committee shall:

1. Guide the IHO-IOC GEBCO Project, under the general governance of IHO and IOC while recognising and following IHO and IOC policies.
2. Prepare and disseminate maps, grids, data files and other appropriate depictions of the ocean floor.
3. Identify the needs of the various user communities of the bathymetry of the world's oceans, study the ways and means whereby these needs can be met.
4. Identify the necessary resources, both human and financial, for its undertakings and make appropriate recommendations to its parent organisations.
5. Stimulate the flow of data relevant to the GEBCO Project by actively identifying sources of new data and encouraging and promoting the release of data to appropriate data banks, with the objective of ensuring that maximum available data are provided to the IHO Data Centre for Digital Bathymetry (DCDB).
6. Supervise the development, maintenance and routine updating of GEBCO products. Activities are to include but are not restricted to:
 - (1) Study and set out procedures for new compilations of bathymetry.
 - (2) Develop standards and methodologies for the production of bathymetric maps and grids and recommend their adoption to the IHO and IOC and to the seafloor mapping community.
 - (3) Supervise the development, production and updating of a worldwide grid of digital bathymetric data.

- (4) Supervise the preparation and maintenance, in association with national and international bodies, of an authoritative IHO/IOC GEBCO Gazetteer of Undersea Feature Names.
- (5) Study and implement the best distribution mechanism for the effective use of GEBCO products by all users.
7. Investigate and develop appropriate logistical and financial arrangements necessary for the furtherance of the GEBCO Project, recognising and taking into account the relevant IHO and IOC policies, and seeking the assistance of the Secretariats of the IHO and IOC as appropriate.
8. Integrate into its products the geographical names of undersea features that appear in the IHO-IOC GEBCO Gazetteer of Undersea Feature Names.
9. As required, establish subordinate bodies (sub-committees and working groups) to fulfil the Committee Work Programme and approve the Terms of Reference and Rules of Procedure of those bodies, reviewing annually the continuing need for each subordinate body. The GEBCO Guiding Committee will report annually and intersessionally if necessary, to the IHO and IOC for endorsement on the status of subordinate bodies and encompass their comments before establishing, reviewing, modifying, and/or terminating subordinate bodies; actions which must be included as GGC agenda items to allow sufficient prior consideration by the IHO and IOC secretariats and member states.
10. Direct and monitor the work of its subordinate bodies.
11. Engage with regional mapping projects to encourage their compatibility with, and eventual inclusion in, GEBCO products.
12. Build capacity by encouraging and enabling the training and scientific education of new generations of ocean mapping operational experts worldwide.
13. Pursue, in dialogue with the IHO and IOC, policies that facilitate the suitability of GEBCO products not only for scientific users but also, where appropriate, for educational and socio-economic purposes in the broadest sense.
14. Take all practical opportunities to advocate the scientific and societal benefits of mapping the seafloor.
15. Report annually to the IHO and to the IOC, through their respective governing bodies and should also propose activities to be considered in the IHO's and IOC's work programmes, identifying and requesting, where necessary, the required funding support.
16. Prepare an annual GEBCO Work Plan and budget and propose it to each meeting of the IHO and the IOC, through their respective governing bodies. The Guiding Committee should consider and submit to the IHO and IOC governing bodies proposals for new work items under the GEBCO Work Plan, taking into account the financial, administrative and wider stakeholder consequences.
17. Monitor the execution of the GEBCO Work Plan and receive reports from its Subordinate Bodies, including an evaluation of performance and progress achieved against agreed objectives.

Rules of Procedure

1. Membership

1.1 The Committee shall consist of five Members appointed by the IHO, and five Members appointed by the IOC. The Secretariats of the IHO and IOC, in close consultation with the Committee Chair, will seek to strive that all appointed Members are, as far as possible, from different regions so as to achieve a balanced and diverse representation.

1.2 Appointed Members shall serve for a term of five years, renewable by a majority recommendation of the Committee for one additional five-year term and with the approval of the corresponding parent organization. The Chair shall inform the relevant parent organization of any foreseeable vacancy in a timely manner.

1.3 The Chairs of GEBCO Sub-Committees established under Article 9 of the Terms of Reference and the Director of the IHO Data Centre for Digital Bathymetry (DCDB), shall also be voting Members of the Committee. If a Member of the Committee mentioned under paragraphs 1.1 and 1.2 above is also the Chair of a subordinate body, that Member shall have only one vote on the Committee.

1.4 Representatives of the Secretariats of the IHO and the IOC shall be permanent Observers in the Committee. The Secretariats of the IHO and IOC will also be recognised as permanent Observers in all subordinate bodies established by the Committee.

1.5 The Committee may invite other suitably qualified individuals to take part in specific meetings as Expert Contributors.

1.6 Members of the Guiding Committee serve as experts¹ in their personal capacity rather than as representatives of their organization and/or country.

1.7 Members are expected to attend every meeting of the Committee. Members who are absent for two consecutive meetings will normally be considered to have resigned and new nominations shall be sought. No substitution shall be allowed at meetings.

1.8 Business may be conducted between meetings by appropriate communication systems.

1.9 All documents related to meetings and decisions of the Committee and Sub-Committees and other relevant documents will be posted on the GEBCO web site linked to the IHO and IOC web sites.

2. Office Bearers

2.1 The Chair and Vice-Chair shall be elected by the Committee from the voting Members of the Committee and normally should be from different parent organizations. The Chair and Vice-Chair are each elected for up to a five-year term, but not exceeding their current membership of the Committee. They can be re-elected for one additional term by the Committee. The Chair shall conduct the business of the Committee. If the Chair is unable to carry out the duties of the office, the Vice-Chair shall assume the Chair with the same powers and duties.

2.2 The Committee shall appoint a Secretary for a five-year term which can be renewed by the Committee. If resources permit and at the Committee's request, a secretary may be provided by either the Secretariat of the IHO or the IOC. The function of the Secretary shall be defined by the Guiding Committee.

3. Meetings

3.1 Representatives from Member States of IHO and IOC may participate as observers in Committee meetings.

3.2 Meetings shall be held at least every two years. The venue and date of the next meeting will normally be decided at the previous meeting, in order to facilitate participants' travel arrangements.

3.3 The quorum to hold a meeting shall be two more than half of the voting Members of the Committee.

3.4 An extraordinary meeting can be called by the Chair or any Committee Member, with the agreement of the simple majority of all voting members of the Committee.

3.5 The working language of the Committee shall be English.

3.6 The Committee shall strive to make decisions by consensus. If consensus cannot be reached, decisions shall be taken by simple majority vote of the Members entitled to vote. The Chair shall have the casting vote if there is a tie.

4. Amendment and Revision

4.1 These Terms of Reference and Rules of Procedure shall be endorsed and approved by the IHO and IOC according to their current procedures. The Committee may propose to IHO and IOC changes to these Terms of Reference and Rules of Procedure with the approval of two thirds of the Committee. Any changes shall enter in force after being endorsed and approved by both IHO and IOC.

Annex 2 to IOC-XXVIII/Dec.6.2 (II)

Terms of Reference of the Review Group with regard to IOC's Role and Involvement in the GEBCO Project

(Objective)

The review group shall:

- (i) Generally consider IOC's role and involvement in the GEBCO project, and specifically identify the user needs in bathymetry from the relevant IOC programmes and regional subsidiary bodies in relation to the GEBCO bathymetric dataset and products;
- (ii) Consider IOC's role and involvement in the GEBCO project, based upon needs identified under (i) above;
- (iii) Recommend key elements for future governing mechanism of the GEBCO project in relation to IOC's role and involvement.

(Composition)

The review group shall be comprised of representatives of IOC Member States and one expert each from the GEBCO Guiding Committee, GOOS, GLOSS, JCOMM, IODE, TOWS-WG, IOCAFRICA, IOCARIBE and WESTPAC.

The experts will be appointed by the IOC Executive Secretary through nomination by the chairpersons of the said IOC programmes and regional subsidiary bodies.

The review group will elect its own Chair.

(Functions)

The review group should conduct the review of the GEBCO project in line with the above-mentioned objectives, in consultation with the relevant IOC programmes and regional subsidiary bodies as well as the IHO, mainly based on a questionnaire developed by the Secretariat.

The review should be produced by the review group and submitted in draft form by its representative to the GEBCO Guiding Committee for their comments. A report should be submitted to the next ordinary session of the Executive Council (June/July 2016).

(Working arrangements)

The review group should conduct its business by electronic means.

IOC-XXVIII/Dec.7.1.1

Global Ocean Observing System

The Assembly,

I. GOOS Work Plan

Noting the fundamental role of global sustained ocean observations through GOOS in enabling ocean research, provision of early warning and ocean services, development of assessments and information for policy, sustainable management and governance of the ocean, and therefore all functions of the IOC Medium-Term Strategy,

Having examined the executive summary report of the Fourth Meeting of the Global Ocean Observing System Steering Committee (May 2015, IOC/GOOS-SC-IV/3s),

Agrees to the GOOS Work Plan for 2016–2017 (IOC/GOOS-SC-IV/3s, Annex 1);

Notes the financial and human resource implications of the work plan and the shortfall against the draft IOC Programme and Budget allocation for GOOS (IOC/GOOS-SC-IV/3s, Annex 2);

Expresses its appreciation for the in-kind and direct support to the GOOS programme provided by Australia, the European Commission, and the USA;

Agrees to adopt the GOOS programme and budget as part of the overall IOC Programme and Budget resolution XXVIII-3; and

Urges Member States to support the GOOS Work Plan through cash contributions to the IOC Special Account for GOOS, secondments of staff members to the GOOS Project Office, in-kind support such as hosting meetings or workshops with participant funding, the establishment of GOOS support offices, the funding of GOOS projects, or other means as agreed by the GOOS-SC.

II. GOOS SC Regional Membership

Recalling the GOOS-SC regional membership appointment defined in IOC Resolution XXVI-8, and further recalling IOC Circular Letter, 2570, requesting nominations of experts for appointment by Member State Electoral Groups;

Notes the appointment by each of the Member State Electoral Groups of a regional expert member of the GOOS SC for 2016–2017:

- Glenn Nolan, Ireland (Group I)
- Atanas PALAZOV, Bulgaria (Group II)
- Frederico NOGUEIRA, Brazil (Group III)
- Ramasamy VENKATESAN, India (Group IV)
- Kouadio Affian, Côte d'Ivoire (Group V).

IOC-XXVIII/Dec.7.1.2

WMO-ICSU-IOC-UNEP Global Climate Observing System (GCOS)

The Assembly,

Recalling the 1998 Memorandum of Understanding between WMO, IOC, UNEP, and ICSU on the Global Climate Observing System,

Having considered the GCOS planning and implementation (IOC/INF-1326) and the Synthesis report of the GCOS Review Board (GCOS-181),

Reaffirms the IOC commitment to continue as a sponsor of the Global Climate Observing System;

Expresses its appreciation that GCOS support of the OOPC has strengthened the contribution of GOOS to GCOS;

Requests the Executive Secretary to work with the other sponsors of GCOS in revising the existing Memorandum of Understanding for the GCOS Programme based on the recommendations of the GCOS Review Board; and

Urges Member States to support GCOS through cash contributions to the IOC Special Account for GCOS, support to sustained ocean observing elements measuring Essential Climate Variables, and experts contributing to the GCOS programme.

IOC-XXVIII/Dec.7.1.3

Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM)

The Assembly,

I. JCOMM Activities

Having examined the reports of 4th Session of JCOMM and the 11th Session of the JCOMM Management Committee,

Notes with appreciation the financial and in kind support provided to JCOMMOPS by France (Ifremer, CLS, Brest métropole, département Finistère, and région Bretagne), as well as the financial support of many other Member State organizations; and urges Member States to continue their support to JCOMMOPS;

Agrees to consider an overall JCOMM programme and budget as a part of the IOC Programme and Budget resolution XXVIII-3;

Notes the formation of the JCOMM Task Team on Integrated Marine Meteorological and Oceanographic Services for WIS (TT-MOWIS);

Encourages Member States to propose experts to participate in the TT-MOWIS;

II. Establishment of a Centre for Marine-Meteorological and Oceanographic Climate Data (CMOC)

Recalling decisions by the IOC Executive Council and World Meteorological Congress:

- (i) IOC EC-XLV, Dec.3.2 accepting WMO-IOC/JCOMM-4/3s Report of the Fourth Session of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM), and Recommendation 2 contained therein, including Terms of Reference for CMOCs, and mechanism for formal appointment of a CMOC,

- (ii) WMO Resolution 4.2.3(03)/1 (Cg-17) Designation of the Centre For Marine-Meteorological And Oceanographic Climate Data (CMOC) In Tianjin, China,

Noting the Summary Background for New Centres for Marine-Meteorological and Oceanographic Climate Data in Tianjin, China as reported in the Report by the co-presidents,

Welcomes the proposal from China to run a CMOC at the National Marine Data and Information Service (NMDIS) of the State Oceanic Administration (SOA), China;

Acknowledges the successful demonstration provided by the National Marine Data and Information Service, China, regarding its capability to run a CMOC, including statement of compliance and commitment in terms of CMOC capabilities and corresponding functions, in accordance with the procedures and criteria established by JCOMM, and the IOC International Oceanographic Data and Information Exchange (IODE);

Approves the establishment of a Centre for Marine-Meteorological and Oceanographic Climate Data (CMOC) at the National Marine Data and Information Service (NMDIS) of State Oceanic Administration (SOA) in Tianjin, China (CMOC/China).

IOC-XXVIII/Dec.7.2.1

International Oceanographic Data and Information Exchange

The Assembly,

Having examined the Executive Summary and Report of the 23rd Session of the IOC Committee on International Oceanographic Data and Information Exchange (IODE-XXIII) (17–20 March, Bruges, Belgium), the recommendations and the decisions contained therein (IOC/IODE-XXIII/3s),

Noting the financial and human resource implications of the work plan and the shortfall against the draft IOC Programme and Budget allocation for IODE,

Agrees to the IODE Work Plan for 2015–2017 (Recommendation IODE-XXIII.5) and to consider it in the overall IOC Programme and Budget resolution XXVIII-3;

Endorses the Report of the 23rd Session of the IOC Committee on International Oceanographic Data and Information Exchange and the recommendations contained therein;

Welcomes the increasing role of IODE across all IOC programmes through the six functions identified in the IOC Medium-Term Strategy;

Welcomes the balance, in the work plan, between global and regional activities and the strong focus on capacity development spearheaded by the OceanTeacher Global Academy;

Expresses its deep appreciation to the Government of Flanders (Belgium) for hosting and supporting the IOC Project Office for IODE and for its continuing and increasing financial support to IODE, the Russian Federation for its support through the hosting of the Partnership Centre for the IODE Ocean Data Portal in Obninsk, as well as to other donors and Member States who are providing financial and in-kind support for IODE;

Expresses its appreciation to the UNESCO Director-General for establishing a regular programme position for OBIS (shared with GOOS Biology) in March 2015;

Expresses its appreciation for the in-kind support for the IODE Programme provided by Member States through establishing and maintaining IODE Data Centres, provision of experts, through the provision of valuable ocean data and information products and services, and through financial and in-kind contributions to IOC;

Urges Member States to support the IODE Work Plan through cash contributions to the IOC Special Accounts for IODE and OBIS, secondments of staff members to the IODE Project Office, in-kind support such as hosting meetings or workshops with participant funding, the establishment of IODE partnership centres or OceanTeacher Regional Training Centres, or the funding of IODE or OBIS Projects or the establishment of National Oceanographic Data Centres.

IOC-XXVIII/Dec.8.2

Tsunami and Other Coastal Hazards Warning Systems

The Assembly,

Notes the outcomes from the Third United Nations World Conference on Disaster Risk Reduction Risk (UN WCDRR), Sendai, Japan, 14–18 March 2015, and the resulting government commitments to the Sendai Framework for Disaster Risk Reduction 2015-2030 (A/CONF.224/L.2);

Decides that in the future all Intergovernmental Coordination Groups for Tsunami Early Warning and Mitigation include in their reports to the IOC Governing Bodies a section with their performance against targets of the Sendai Framework for Disaster Risk Reduction 2015–2030;

Recognizes the importance of the TOWS working group in continued harmonisation of products and services of all tsunami early warning and mitigation systems, with the necessary adjustments for smaller seas;

I. Pacific Tsunami Warning and Mitigation System (PTWS)

Noting with appreciation the tsunami forecasting products provided for the Member States of the PTWS by the PTWC hosted by the USA and the NWPTAC hosted by Japan, and the guidance materials by the ITIC,

Noting the outcomes of the International Tsunami Symposium Commemorating the 50th Anniversary of the Pacific Tsunami Warning and Mitigation System “Making the Pacific Ready for the Tsunami Threat” (20–21, April 2015, Honolulu, Hawaii, USA),

Endorses the continuity of the PTWC Enhanced Products for PTWS;

Agrees that the Northwest Pacific Tsunami Advisory Center (NWPTAC) should proceed with its development of enhanced products for the North West Pacific;

Takes note of Nicaragua's offer to host and develop a Tsunami Advisory Center for Central America (CATAC) under the guidance of the Regional Working Group on Tsunami Warning and Mitigation System on the Central American Pacific Coast, within the framework of ICG/PTWS, ICG/CARIBE-EWS and TOWS-WG;

Requests Member States to promptly inform the Secretariat of all changes to their Tsunami National Contacts (TNCs), National Tsunami Warning Centres (NTWCs), and Tsunami Warning Focal Points (TWFPs) through official channels;

II. Indian Ocean Tsunami Warning and Mitigation System (IOTWS)

Notes the outcomes and recommendations of the international conference “The Indian Ocean Tsunami Warning and Mitigation System 10 years after the Indian Ocean Tsunami: Achievements, Challenges, Remaining Gaps and Policy Perspectives” (22–23 November, Jakarta, Indonesia); and notes also the International Conference “Reducing Tsunami Risk in the Western Indian Ocean: a Regional Conference in Muscat”, 22–23 March 2015, Muscat, Oman;

Notes with concern that the EUMETSAT Meteosat-7 will be decommissioned in 2016, and urges WMO to address the issue of its replacement to ensure availability of real-time sea level data in the Indian Ocean region for tsunami warnings;

Encourages Member States to update their Tsunami National Contact (TNC), National Tsunami Warning Centre (NTWC) and Tsunami Warning Focal Point (TWFP) information and inform the Secretariat of all changes through official channels;

Notes the diminishing engagement by some Member States in the activities of the ICG/IOTWS, and urges Member States to participate more actively;

Welcomes with gratitude, the generous offer of Indonesia to support IOTIC for a period of five years commencing 2016;

Decides to change the IOTWS acronym to IOTWMS to fully reflect the actual name of the System and the importance of Mitigation in the work of the ICG.]

III. Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (CARIBE-EWS)

Endorses the start of issuance of the PTWC Enhanced Products for CARIBE-EWS in parallel with current products on October 1, 2015 and its full transition to the new products on March 1, 2016;

Notes the approval of the guidelines for the Community Performance Based Tsunami Recognition Programme for the Caribbean and Adjacent Regions as outlined in Appendix I of Recommendation ICG/CARIBE-EWS-X.6, for implementation on a pilot basis, and invites Member States and donor agencies to support pilot projects;

Takes note of Nicaragua’s offer to host and develop a Tsunami Advisory Center for Central America (CATAC) as a sub-regional Tsunami Service Provider under the guidance of the Regional Working Group on Tsunami Warning and Mitigation System on the Central American Pacific Coast, within the framework of ICG/PTWS, ICG/CARIBE-EWS and TOWS-WG;

Recognizes the Caribbean Tsunami Information Center (CTIC) essential function in the region and agrees that CTIC is a matter of priority for the IOC, and calls on Member States and other donors to provide extra-budgetary funds to sustain its functioning.

IV. North-Eastern Atlantic, the Mediterranean and Connected Seas Tsunami Warning and Mitigation System (NEAMTWS)

Welcomes that the Candidate Tsunami Service Providers of France, Greece, Italy and Turkey provide tsunami warning service to the ICG/NEAMTWS Member States upon request via the IOC;

Notes the steady progress of Germany, Israel, Spain, and Portugal in developing their National Tsunami Warning Centres and the intent of Portugal to also act as Candidate Tsunami Service

Provider and thereby contributing to tsunami monitoring coverage for all geographic areas of NEAMTWS;

Urges Member States to support NEAMTWS through extra-budgetary contributions, secondments of staff members, and in-kind support for the organization of workshops and capacity development activities;

V. Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG)

Having considered the executive summary reports of the recent sessions of the Intergovernmental Coordination Groups for: the Pacific Ocean Tsunami Warning and Mitigation System (ICG/PTWS-XXVI), The Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS-X), the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS-X), the North-Eastern Atlantic, the Mediterranean and Connected Seas Tsunami Warning and Mitigation System (ICG/NEAMTWS-XI), and the report of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-VIII),

Accepts the reports and the decisions and recommendations contained therein;

Notes the ongoing work of TOWS-WG as well as the work of its Task Teams and decides that their ToRs and membership be extended for the next biennial period;

Noting the growing dependence and use of seismic data from the International Monitoring System of the Preparatory Commission for the Comprehensive nuclear-test-ban treaty organization (CTBTO) data by National Tsunami Warning Centres, as set out under the CTBTO-UNESCO MoU of 2010;

Encourages more National Tsunami Warning Centres to sign formal agreements with CTBTO to receive seismic and hydro acoustic data from the CTBTO International Monitoring System;

Notes further the reports on the ITU/UNESCO-IOC/WMO Joint Task Force (JTF) to investigate the potential of using submarine telecommunications cables for ocean and climate monitoring and disaster warning; and encourages the development of pressure sensors for underwater telecommunication systems to augment existing tsunami monitoring networks;

Recognizes that the current financial situation strongly limits the implementation of the tasks of the Group, ICGs and Inter-ICG Task Teams; and strongly urges the Member States to increase their extra-budgetary contributions to the IOC to provide the needed resources for the priorities identified by TOWS-WG and the Intergovernmental Coordination Groups (ICG);

Notes with concern that the Caribbean Tsunami Information Centre's core financial resources to cover its operational expenses (including salaries) beyond December 2015 are currently non-existent;

Agrees that the regular budget for ICG activities will be identified as part of the overall IOC Programme and Budget resolution XXVIII-3.

IOC-XXVIII/Dec.8.3

Harmful Algal Blooms

The Assembly,

Recalling IOC Resolution XVI-4, which established the Intergovernmental Panel on Harmful Algal Blooms,

Having considered the Executive Summary Report of the 12th Session of the IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB), its eight Decisions and two Recommendations and the work plan for 2016–2017 adopted at the Session (IOC/IPHAB-XII/3),

Expresses its appreciation for the support for the HAB Programme provided by Member States through regional HAB groups, the IOC Science and Communication Centre on Harmful Algae, provision of experts, and through the provision of HAB data, and financial and in-kind contributions to IOC;

Noting with satisfaction that IPHAB has continued to provide an efficient mechanism to respond to new HAB-related problems experienced by Member States, to leverage resources from diverse sources to focus on priority needs, and to establish partnerships with relevant organizations,

Endorses the Executive Summary Report of IPHAB-XII and the recommendations contained therein (IOC/IPHAB-XII/3s);

Agrees to the HAB Work Plan for 2016–2017 (Recommendation IPHAB-XII.2) and to consider it in the overall IOC Programme and Budget resolution XXVIII-3;

Urges funding agencies and institutions in IOC Member States to assist in the mobilization of funding that will ensure the implementation of the IPHAB Work Plan for 2016–2017 (~US\$ 460.000 for full implementation).

IOC-XXVIII/Dec.10.1

UN Coordination and Contribution to Ocean Governance

The Assembly,

Having considered document IOC/INF-1328,

Takes note and welcomes the active role played by the Commission in UN-Oceans, the Post-2015 Development Agenda and elaboration of proposed Sustainable Development Goals (SDG), targets and indicators, the outcome to the UN Conference on Small Island Developing States (SIDS), and the UN negotiations related to the conservation and sustainable use of marine biological diversity beyond areas of national Jurisdiction;

Invites IOC Member States to support IOC's role and contributions in these processes by integrating, as far as possible, the importance of the oceans and the contribution of IOC into their preparation and statements at intergovernmental negotiations on the Post-2015 Development Agenda, as well as at negotiations related to the development of an international legally binding instrument under the United Nations Convention on the Law of the Sea related to the conservation and sustainable use of marine biological diversity beyond areas of national Jurisdiction.

IOC-XXVIII/Dec.10.2

Implementation of IOC Integrated Coastal Area Management Strategy

The Assembly,

Recalling IOC-XXVI/Dec.8.2,

Takes note of the progress in implementing the IOC ICAM Strategy, including activities related to marine spatial planning and large marine ecosystems (IOC/INF-1329);

Expresses its deep appreciation to the Government of Flanders (Belgium) for the secondment of an expert to the ICAM Programme (SPINCAM Project);

Invites Member States to support through extra-budgetary resources, as well as in-kind contributions, the ICAM Strategy and relevant project activities such as the organisation of an international conference on Marine Spatial Planning in 2016 at IOC Headquarters.

IOC-XXVIII/Dec.10.3

International Polar Partnership Initiative

The Assembly,

Noting the revised Concept Paper for the International Polar Partnership Initiative (IPPI, IOC-XXVIII/2 Annex 9),

Having also noted the decision of the World Meteorological Congress-17 (25 May–12 June 2015, Geneva, Switzerland) on WMO participation in IPPI,

Encourages the Steering Group to develop a clear framework of the Partnership, acting in close coordination and consultation and respecting the interests and obligations of the consultative Parties to the Antarctic Treaty and similar interests of the members of the Arctic Council; and reiterates its request to the Executive Secretary to work towards the IPPI Framework being developed in close coordination and consultation with consultative parties to the Antarctic Treaty and members of the Arctic Council;

Requests the Executive Secretary to:

- secure IOC representation in the development of the IPPI Framework;
- submit the Framework for consideration of the IOC Executive Council at its 49th session in 2016 in order to analyse the possible participation, roles in and contributions of IOC to future IPPI activities, and report to it on the interactions and meetings attended in this regard.

IOC-XXVIII/Dec.11.2

Self-Assessment of the IOC Governing Bodies in Follow-up to the United Nations Joint Inspection Unit's (JIU) Recommendations Concerning the Methods of Work of UNESCO'S Intergovernmental Bodies

The Assembly,

Having considered the elements of the audit and in particular the two questionnaires submitted by the Chair of IOC and the interim report of the external auditor to the 196th session of the UNESCO Executive Board,

Stresses the need that the unique role of IOC in the UN system in relation to ocean science and the scientific base for ocean management and its position as a body with functional autonomy within UNESCO be reflected in any nomenclature of UNESCO's intergovernmental bodies or any other parts of the final governance review document;

Entrusts the IOC Chair and Officers, with the assistance of the Secretariat, to follow up with the team of the external auditor on behalf of the governing bodies of the Commission to ensure that all inconsistencies or recommendations that did not meet the approval of the IOC Assembly be clearly pointed out and, to the extent possible, taken into account in the final report of the external auditor to the UNESCO General Conference.

IOC-XXVIII/Dec.11.4

Dates and Places of next Sessions of the Executive Council and Assembly

The Assembly,

Recalling the recommendations of the Executive Council at its 48th session (EC-XLVIII, Dec.4.),

Decides to hold:

- (i) The 49th session of the Executive Council for 3.5 days in UNESCO Headquarters, Paris over the period of 6–10 June 2016,
- (ii) The 29th session of the Assembly for a duration of six working days at UNESCO Headquarters in June 2017, preceded by a one-day session of the Executive Council acting as the steering committee of the Assembly and an Ocean Science Day;

Calls on the Member States to consider the possibility of providing voluntary extrabudgetary contributions to allow their effective organization;

Requests the Executive Secretary to approach Members States and seek their broad input on the themes of IOC memorial lectures for subsequent consideration by the Officers of the IOC;

Invites the Executive Secretary to promote visibility thereof.

IOC-XXVIII/Dec.12

Working arrangements and summary report

The Assembly,

Welcoming the efforts since 2012 to adapt the documentation to shorten sessions of governing bodies and the formal strengthening of decisions as the core output of IOC governing body sessions with resolutions and the scope and definition of resolutions adopted by decision IOC-XXVII,Dec.6.4,

Identifies areas of further improvements for governing body session working arrangements as follows:

- (i) identify best practices of other intergovernmental organisations with a view to study how they could contribute to the future conduct of sessional and intersessional business with a view to apply these to the work of the Commission, as appropriate;
- (ii) strengthen the terms of reference of existing and future intersessional working groups in order to optimise their work and ensure active participation and contribution of IOC Member States during intersessional periods; including through the use of circular letters;
- (iii) through consultation between the Officers and the Secretariat, consider ways of rendering the Action Paper more strategic and strongly focused on the substance of the items being debated; and ensuring better reflections of national positions in the reports of IOC governing bodies;
- (iv) ensure the availability of the governing body documentation in due time and in accordance with IOC Rules of Procedures;
- (v) implement as far as possible paperless sessions of future IOC governing bodies;

Adopts the Draft Summary Report for the present session;

Requests the Executive Secretary to circulate the summary report to Member States within one month after the closure of the session and to inform the Officers of the results of the evaluation questionnaire in order to pursue the reflection on this issue.

ANNEX I

AGENDA

- 1. OPENING**
- 2. ORGANIZATION OF THE SESSION**
 - 2.1 ADOPTION OF THE AGENDA
[Rule of Procedure 8]
 - 2.2 DESIGNATION OF THE RAPPORTEUR
[Rule of Procedure 25.4]
 - 2.3 ESTABLISHMENT OF INTRASESSIONAL COMMITTEES
AND WORKING GROUPS
[Rule of Procedure 12]
 - 2.4 INTRODUCTION OF DOCUMENTATION, TIMETABLE
AND MEMORIAL LECTURES
[Rule of Procedure 11; EC-XLVII/DEC.7.3]
- 3. STATE OF THE IOC, ITS REGIONAL SUBSIDIARY BODIES
AND ITS PROGRAMME AND BUDGET**
 - 3.1 STATEMENT OF THE CHAIRMAN ON THE STATE OF IOC
[Rule of Procedure 8.1(a)]
 - 3.2 REPORT BY THE EXECUTIVE SECRETARY ON PROGRAMME
AND BUDGET (2014–2015) IMPLEMENTATION
[Rule of Procedure 8.1(b) and (c); Rule of Procedure 49.1]
 - 3.3 REPORTS BY THE CHAIRS OF THE IOC SUB-COMMISSIONS
AND REGIONAL COMMITTEES
[Rule of Procedure 48.3; Res. XXVI-1]
 - 3.3.1 IOC Sub-Commission for the Western Pacific:
10th Session of WESTPAC, 12–15 May 2015, Phuket, Thailand**
 - 3.3.2 IOC Sub-Commission for the Caribbean and Adjacent Regions:
13th Session of IOCARIBE, 25–28 May 2015, Merida, Mexico**
 - 3.3.3 IOC Sub-Commission for Africa and the Adjacent Island States:
3rd Session of IOCAFRICA, 13–15 April 2015, Nairobi, Kenya**
 - 3.3.4 Report of the IOC Meeting of the Regional Subsidiary Bodies**
[Res. XXV-2; Res. XXVI-1]
 - 3.4 INTRODUCTION TO DRAFT PROGRAMME
AND BUDGET FOR 2016–2017
[Statutes Art. 1.2; Res. EC-XLVII.2]
 - 3.5 REPORT OF THE IOC (2014–2015) TO THE THIRTY-EIGHTH GENERAL
CONFERENCE OF UNESCO
[Statutes Art. 3.2; Rule of Procedure 49.2]
- 4. THE FUTURE OF IOC**
[Dec. EC-XLVII.4; IOC-XXVII/Dec.5.1]
- 5. OCEAN RESEARCH**
[Res. XXVII-2(B)]

- 5.1 STATUS REPORT OF THE IOC GLOBAL OCEAN SCIENCE REPORT (GOSR)
[EC-XLVII/Dec.6.2]
- 5.2 WMO-IOC-ICSU WORLD CLIMATE RESEARCH PROGRAMME (WCRP):
REPORT AND REVIEW
[IOC-XXVII/Dec.5.4.1]
- 5.3 SECOND INTERNATIONAL INDIAN OCEAN EXPEDITION
[Res. EC-XLVII.1]
- 6. ASSESSMENT AND INFORMATION FOR POLICY**
[Res. XXVII-2(B)]
 - 6.1 UNITED NATIONS WORLD OCEAN ASSESSMENT
[Rule of Procedure 8.1(g)]
 - 6.2 REVISED TERMS OF REFERENCE OF THE GENERAL BATHYMETRIC
CHART OF THE OCEANS (GEBCO) GUIDING COMMITTEE
[EC-XLVII/Dec.3.1(II)]
- 7. OBSERVING SYSTEMS AND DATA MANAGEMENT**
[Res. XXVII-2(B)]
 - 7.1 OBSERVING SYSTEMS
 - 7.1.1 Global Ocean Observing System**
[Rule of Procedure 8.1(a); Res. XXVI.8; IOC-XXVII/Dec.5.3.2]
 - 7.1.2 WMO-ICSU-IOC-UNEP Global Climate Observing System (GCOS)**
[Res. XVI-8; IOC-XXVII/Dec.5.3.5]
 - 7.1.3 Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM)**
[Rule of Procedure 48.3; EC-XLVII/Dec.3.2.2]
 - 7.2 DATA MANAGEMENT
 - 7.2.1 International Oceanographic Data and Information Exchange: 23rd Session of IODE, 17–20 March 2015, Bruges, Belgium**
[Rule of Procedure 48.3]
- 8. EARLY WARNING AND SERVICES**
[Res. XXVII-2(B)]
 - 8.1 REGIONAL TSUNAMI WARNING SYSTEMS
[Rule of Procedure 48.3]
 - 8.1.1 Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System: 26th Session of ICG/PTWS, 22–24 April 2015, Hawaii, USA**
 - 8.1.2 Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System: 10th Session of ICG/IOTWS, 24–26 March 2015, Muscat, Oman**
 - 8.1.3 Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions: 10th Session of the ICG/CARIBE-EWS, 19–21 May 2015; Sint Maarten, Kingdom of the Netherlands**
 - 8.1.4 Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the**

**Mediterranean and Connected Seas: 11th Session of ICG-NEAMTWS,
12–14 November 2014, Nicosia, Cyprus**

- 8.2 GLOBAL COORDINATION OF WARNING AND MITIGATION SYSTEMS
FOR OCEAN HAZARDS (TOWS-WG)
[Rule of Procedure 48.3; IOC-XXVII/Dec. 5.2.2(IV)]
- 8.3 HARMFUL ALGAL BLOOMS: 12TH SESSION OF THE INTERGOVERNMENTAL
PANEL ON HARMFUL ALGAL BLOOMS (IPHAB), 28–30 APRIL 2015, UNESCO,
PARIS
[Rule of Procedure 8.1(a)]
- 9. CAPACITY DEVELOPMENT**
[Res. XXVII-2(B)]
 - 9.1 REPORT OF THE INTERSESSIONAL WORKING GROUP FOR THE
DEVELOPMENT OF THE IOC CAPACITY DEVELOPMENT STRATEGY
[EC-XLVII/Dec.6.1]
- 10. SUSTAINABLE DEVELOPMENT AND GOVERNANCE**
[Res. XXVII-2(B)]
 - 10.1 UN COORDINATION AND CONTRIBUTION TO OCEAN GOVERNANCE
[Rule of Procedure 8.1(g)]
 - 10.2 INTEGRATED COASTAL AREA MANAGEMENT PROGRAMME (ICAM)
[IOC-XXVI/Dec. 8.2]
 - 10.3 INTERNATIONAL POLAR PARTNERSHIP INITIATIVE
[EC-XLVII/Dec.6.4]
- 11. ADMINISTRATION AND MANAGEMENT**
[Statutes Art. 6B]
 - 11.1 REPORT BY THE CHAIRPERSON OF THE FINANCIAL COMMITTEE
ON THE IOC DRAFT PROGRAMME AND BUDGET FOR 2016–2017
(DRAFT 38 C/5)
[Statutes Art. 1.2; Res. EC-XLVII.2]
 - 11.2 SELF-ASSESSMENT OF THE IOC GOVERNING BODIES IN FOLLOW-UP TO
THE UNITED NATIONS JOINT INSPECTION UNIT'S (JIU)
RECOMMENDATIONS CONCERNING THE METHODS OF WORK OF
UNESCO'S INTERGOVERNMENTAL BODIES
 - 11.3 ELECTIONS OF THE OFFICERS OF THE COMMISSION AND MEMBERS
OF THE EXECUTIVE COUNCIL
[Statutes Art. 6.B.5 and 7; Annex I to the Rules of Procedure]
 - 11.3.1 Election of the Chairperson of the Commission**
 - 11.3.2 Election of the Vice-Chairpersons of the Commission**
 - 11.3.3 Election of the Members of the Executive Council**
 - 11.4 29TH SESSION OF THE ASSEMBLY AND 49TH AND 50TH SESSIONS
OF THE EXECUTIVE COUNCIL
[Statutes, Art. C.7; Rule of procedure 19.2]
- 12. ADOPTION OF THE SUMMARY REPORT AND RESOLUTIONS**
- 13. CLOSURE**

ANNEX II

**REPORT OF THE FORTY-EIGHTH SESSION OF THE IOC EXECUTIVE COUNCIL
ACTING AS THE STEERING COMMITTEE OF THE ASSEMBLY**

UNESCO, Paris, 16 June 2015
(IOC/EC-XLVIII/3)

1. OPENING

1 The Chair, Mr Sang-Kyung Byun, opened the 48th Session of the Executive Council at 10.00 h in Room IV on Tuesday 16 June 2015. He welcomed the participants and briefly referred to the documentation prepared for this session, which can be found on the IOC web site (<http://ioc-unesco.org/ec-48>). He informed the Council that, in accordance with Rule of Procedure No. 12(2), the Council was acting as the Steering Committee for the 28th Session of the Assembly. Mr Byun welcomed Vladimir Ryabinin to his inaugural appearance at an IOC governing body session as Executive Secretary of IOC.

2. ORGANIZATION OF THE SESSION

2.1 ADOPTION OF THE AGENDA

2 The Executive Secretary introduced this item.

3 The Executive Council met during half a day and resumed its work later in the afternoon to adopt the summary report of this session.

EC-XLVIII/Dec.2.1

Agenda

The Executive Council adopts the agenda as set out in document IOC/EC-XLVIII/1 Prov.

2.2 DESIGNATION OF THE RAPPORTEUR

4 The Chair invited the Executive Council to designate the Rapporteur for the present session.

5 Brazil proposed, and Kenya seconded, Frederico Saraiva Nogueira (Brazil) as Rapporteur for the present session. Frederico Saraiva Nogueira accepted this invitation.

EC-XLVIII/Dec.2.2

Rapporteur

The Executive Council designates Frederico Saraiva Nogueira (Brazil) Rapporteur for its present session to assist the Chair and the Executive Secretary in the preparation of the summary report of the Session. Thomas Gross will be the editor of the report for the Secretariat.

3. ARRANGEMENTS FOR THE 28th SESSION OF THE ASSEMBLY

3.1 DESIGNATION OF STATUTORY COMMITTEES

- 6 The Chair reminded the Executive Council that, in the designation of the three Statutory Committees for the Assembly (Nominations, Resolutions and Financial Committees), it may submit proposals on their composition, but that the ultimate decision as to that composition, including the Chairpersonship of each Statutory Committee, remains entirely with the Assembly. Chairman Byun indicated that he would not read out the names of the Member States wishing to participate in the various Committees by show of hands during the Assembly with the exception of the Nominations Committee. Only the names of the Member States present and participating in the Committees and sessional working groups were to be listed in the final report of the Assembly. Meetings of the Financial Committee would benefit from English/French interpretation.

EC-XLVIII/Dec.3.1

Sessional Committees

Pursuant to Rule of Procedure No. 12(2) the Executive Council, acting as the Steering Committee of the Assembly, recommends to the Assembly the formation of each of the following committees:

1. Financial Committee: under the chairship of Peter Haugan (Norway). Ksenia Yvinec provides the Secretariat support to the Financial Committee.
2. Resolutions Committee: under the chairship of Terry Schaefer (USA). Julian Barbière provides the Secretariat support to the Resolutions Committee.
3. Nominations Committee: under the chairship of Javier Valladares (Argentina). Thorkild Aarup provides the Secretariat support to the Nominations Committee.

3.2 CONSIDERATION OF REQUESTS FOR SUPPLEMENTARY ITEMS

- 7 The Chair informed the Executive Council that, under Rules of Procedure 8, 9 and 11.2, dealing with the preparation of the agenda for the Assembly, no request for a supplementary item was received at the Secretariat by 18 April 2015 (two months before the date of the opening of the 28th session.)

3.3 SESSIONAL WORKING GROUPS

- 8 The Chair invited Member States to propose sessional working groups by briefly explaining the scope of their work expected during the Assembly session.

- 9 A sessional working group for the Future of IOC was proposed by Portugal and seconded by France, Russian Federation, Columbia and Togo. The chair of the intersessional working group for the Future of IOC, Prof. Peter Haugan, agreed to chair the sessional working group.

- 10 The prospective chair, Sateesh Shenoi of the IIOE-2 working group, informed the session that the working group will review development of the Strategic Framework for Implementation of the IIOE-2 and review the draft Resolution, IOC-XXVIII/DR.(5.3) to be presented to the Assembly.

- 11 The prospective chair, Craig McLean of the Review of GEBCO working group, informed the session that the working group would review the continued engagement of the IOC in GEBCO, in view of the increased role of the IHO and the progressive reduction of IOC's involvement and support for GEBCO over the past few years.

- 12 The prospective chair, Prof. Adoté Blim Blivi of the IOC Capacity Development Strategy and Draft Resolution working group, informed the session that the working group would provide an opportunity for Member States to review IOC-XXVIII/DR.(9.1) which will adopt the IOC Capacity Development Strategy for 2015–2021. The working group will

develop ideas for activities and capacity development work plans specified in the Strategy and enumerated in the Draft Resolution.

EC-XLVIII/Dec.3.3

Sessional Working Groups

The Executive Council,

Having examined the revised provisional agenda for the 28th session of the Assembly,

With a concern to ensure a smooth running of the Assembly, and

With no prejudice to decision of the Assembly and its chair on establishing a sessional working group as needed during the discussion of any agenda item,

Recommends to the Assembly the establishment of the following working groups at the beginning of its session under agenda item 2.3:

- a sessional working group on International Indian Ocean Expedition 2 (IIOE-2) (5.3) under the chairship of Sateesh Shenoi (India). Nick D'Adamo provides the Secretariat support to the group;
- a sessional working group on the review of GEBCO (item 6.2) under the chairship of Craig McLean (USA). Julian Barbière provides the Secretariat support to the group;
- a sessional working group on the IOC Capacity Development Strategy and Draft Resolution (9.1) under the chairship of Prof. Adoté Blim Blivi (Togo). Peter Pissierssens provides the Secretariat support to the group;
- a sessional working group on the Future of IOC under the chairship of Peter Haugan (Norway). Ksenia Yvinec provides the Secretariat support to the group.

3.4 TIMETABLE AND IOC MEMORIAL LECTURES

13 The Chair briefly presented the provisional timetable for the Assembly and the sequence of meetings with this Council session followed by an Ocean Science Day before the start of the Assembly (18–25 June 2015). Chairman Byun presented the Ocean Science Day as an initiative of the IOC Officers, which featured both IOC A. Bruun and N.K. Panikkar Memorial Lectures and two other panel discussions. The Head of the Ocean Science Section, Luis Valdés presented the programme of that day (IOC-XXVIII/Inf.2).

14 The IOC Officers decided to institute an Ocean Science Day during the week of the IOC Assembly dedicated to outstanding scientists of the A. Bruun and N.K. Panikkar Memorial Lectures and to topics on emerging ocean issues.

EC-XLVIII/Dec.3.4

Timetable for the 28th session of the Assembly

The Executive Council,

Taking into consideration the comments made by the Officers, the reporting of sessional working groups and statutory committees in plenary and scheduled invitation of speakers,

Accepts the provisional timetable for the 28th session of the Assembly as set out in document IOC-XXVIII/1 Add. Prov. with the addition of a session of the Future of IOC working group.

4. DATES AND PLACE OF THE 49th SESSION OF THE EXECUTIVE COUNCIL AND PROPOSAL FOR DATES AND PLACE OF THE 29th SESSION OF THE ASSEMBLY

15 The Chair reminded the Council that the Assembly and the Executive Council did not give clear indication of duration and dates for their next session. Based on the experience of holding both the Executive Council and Assembly sessions on a reduced budget without emergency funds during the 2014–2015 biennium, the Officers recommended that the Assembly should adopt the same scheme for the next biennium, 3.5 days for the Executive council and 6 working days for the Assembly. The benefit of a one-day scientific forum in connection to the Assembly session would be evaluated by the Assembly at its 28th session.

EC-XLVIII/Dec.4.

Dates and places of next sessions of the Executive Council and Assembly

The Executive Council,

Taking into account both the level of funding provided for the organization of the IOC governing body sessions in the 38 C/5, and the new programming cycle of UNESCO,

Considering the experience gained during the 2014–2015 biennium,

Recommends to the Assembly to carefully consider the items to be on the agenda of the 49th session of the Executive Council so that it fits in a session of a duration not longer than four consecutive working days;

Recommends also to the Assembly to identify any potential calendar conflicts with important meetings over the period 7–10 June 2016 for the 49th session of the Executive Council and a period of six working days preceded by a one-day session of the Executive Council over a period to be decided in June/July 2017 for the 29th session of the Assembly.

5. ADOPTION OF THE SUMMARY REPORT

EC-XLVIII/Dec.5.

Report

The Executive Council,

Having considered the draft summary report of the session (IOC/EC-XLVIII/3s prov.) presented to it in plenary session at 17:10 on 16 June 2015,

Adopts the summary report of its 48th session as the Executive Council recommendations to the Assembly at its 28th session.

6. CLOSURE

16 The Chair closed the 48th session of the Executive Council at 17:10 on 16 June 2015.

- 1. OPENING**
- 2. ORGANIZATION OF THE SESSION**
 - 2.1 ADOPTION OF THE AGENDA
 - 2.2 DESIGNATION OF THE RAPPORTEUR
- 3. ARRANGEMENTS FOR THE 28TH SESSION OF THE ASSEMBLY**
[Rule of Procedure 12.2]
 - 3.1 DESIGNATION OF STATUTORY COMMITTEES
 - 3.2 CONSIDERATION OF REQUESTS FOR SUPPLEMENTARY ITEMS
 - 3.3 SESSIONAL WORKING GROUPS
 - 3.4 TIMETABLE AND IOC MEMORIAL LECTURES
- 4. DATES AND PLACE OF THE 49th SESSION OF THE EXECUTIVE COUNCIL AND PROPOSAL FOR DATES AND PLACE OF THE 29th SESSION OF THE ASSEMBLY**
[Rules of Procedure 4 and 19.2]
- 5. ADOPTION OF THE SUMMARY REPORT**
- 6. CLOSURE**

ANNEX III

ADDRESSES AND STATEMENTS

–A–

**Ms Irina Bokova, Director-General
of the United Nations Educational, Scientific and Cultural Organization (UNESCO)
On the occasion of the Opening of the 28th Session of the Intergovernmental
Oceanographic Commission (IOC) Assembly**

UNESCO, 18 June 2015

Mr Chairman,
Excellencies,
Ladies and Gentlemen,

I am honoured to address Member States and the Secretariat of the Intergovernmental Oceanographic Commission.

This is the first time I speak before you since the appointment of Vladimir Ryabinin as Executive Secretary.

Last year, at the 47th session of the Executive Council, I expressed my sincere appreciation for the work led by Wendy Watson-Wright -- she accomplished a great deal in sustaining and strengthening the role of the Intergovernmental Oceanographic Commission in the United Nations system.

I feel absolutely confident Vladimir Ryabinin will take this forward, bolstering UNESCO's action on crucial issues relating to the ocean.

This is especially important now, in this turning point year for the world, as States shape the new global sustainable development agenda and lead negotiations on a new climate change agreement -- the ocean must be at the heart of both processes.

This was the message sent on *World Ocean Day*, during a highly successful celebration, held here on 8 June.

Organised by UNESCO's Intergovernmental Oceanographic Commission and the *Ocean and Climate Platform*, we brought together more than a thousand participants from across the ocean horizon, to identify promising actions and strategies to mitigate climate change and its impacts.

This was a milestone in UNESCO's contribution in the run-up to United Nations summit in September and the 2015 Paris Climate Conference, COP21.

In his opening statement on *World Ocean Day*, the French Minister of Foreign Affairs, Laurent Fabius, was clear.

While forests are usually referred to as the lung of our planet, it is better to have two lungs, rather than one, and the planet's other lung is the ocean.

This follows precisely the position long advocated by UNESCO.

The future of earth depends on the ocean – as the source of life, as the prime regulator of climate, as a key provider of economic and social services.

This is the importance of the Intergovernmental Oceanographic Commission – because our lives are affected by the ocean every day, because the well-being of every Member State, landlocked or coastal, depends on the health of the ocean.

The Intergovernmental Oceanographic Commission is leading from the front on a number of global initiatives, and I believe this says a lot about the unique importance of the Commission, its mandate, its staff, its accumulated expertise and networks.

I recall well the active participation of the Commission in the 2012 Rio+20 Conference which broke new ground – this helped to clear the way to reaching consensus on the ocean as a thematic priority in the post-2015 development agenda and as a thematic Sustainable Development Goal.

Mesdames et Messieurs,

Grâce au développement de sa Stratégie à Moyen Terme 2014-2021, je suis convaincue que la Commission confirmera son leadership scientifique au sein des Nations-Unies – comme organe d'observation des tendances et des forces émergentes de la science, qu'il faut soutenir par la coopération internationale.

Soyez assurés que je soutiendrai la Commission par tous les moyens.

La Commission a été extrêmement performante dans un contexte de ressources très limitées, avec un personnel réduit, et je suis déterminée à faire tout mon possible pour soutenir et encourager la Commission, comme un organe fonctionnel autonome au sein de l'UNESCO – en renforçant le budget de la Commission dans le prochain programme et budget, mais aussi en allouant des ressources supplémentaires, pour aider le programme dans son exercice biennal.

Je sais que cette session sera l'occasion d'élire un nouveau président et un nouveau bureau de la Commission.

Je voudrais prendre le temps de remercier l'actuel Président, le professeur Sang-Kyung Byun, et l'ensemble des membres du bureau pour leur engagement.

J'ai hâte de poursuivre notre excellente collaboration avec la nouvelle équipe, et avec chacun d'entre vous.

Les enjeux sont considérables.

L'océan produit la moitié de notre oxygène, 80% de notre eau, et une part considérable de notre alimentation.

L'océan aide à réguler le climat.

Il constitue une ressource pour la médecine, le tourisme, et permet le transport d'une grande partie de l'économie mondiale, à laquelle il contribue pour près de 20 trillions de dollars chaque année.

L'océan est resté stable depuis 36 millions d'années et au cours des deux derniers siècles, en grande partie à cause des activités humaines, l'Océan se réchauffe, il devient plus acide et perd de son oxygène.

Les répercussions de ces changements sont gigantesques, et supposent un développement considérable de nos capacités scientifiques.

Observer pour comprendre, comprendre pour agir... le rôle de la Commission Océanographique Intergouvernementale n'a jamais été aussi important.

Je suis convaincue que c'est par l'unité, la détermination et une vision stratégique que nous réussirons, j'ai confiance dans l'avenir.

Je vous remercie.

–B–
Chairman's Statement
of the State of the Intergovernmental Oceanographic Commission (IOC)

Dr Sang-Kyung Byun
UNESCO, 18 June 2015

Your Excellencies,
Distinguished guests and colleagues,
Ladies and Gentlemen,

It is a pleasure and honour for me to report on the state of the Intergovernmental Oceanographic Commission (IOC) to its Twenty-eighth Session of the Assembly on behalf of the IOC Officers.

This is the last IOC Assembly chaired by me. I should like to express my sincere appreciation to the member states for allowing me to work together and to the Republic of Korea for unwavering support to discharge my responsibilities. The collaboration with IOC secretariats was also a source of constant inspiration to me during my term of office. Taking this opportunity, I would like to pay tribute, on behalf of the Officers, to Capt. Javier Armando Valladares, former chairman of IOC, for continuous advice with his vast experience and good humor.

Five years ago we celebrated the 50th anniversary of IOC. Since then, we had faced challenges arising from the change of external circumstances among which the financial situation of UNESCO and IOC has drawn our keen attention. The current budget reduction has never been experienced before, yet IOC has endeavored to respond to it by minimizing its impact on activities. IOC hopes the Member States to be informed of the current financial situation of IOC so as to explore the ways to contribute to its extra-budgetary funds.

We have our definite goals adopted as four High Level Objectives in the Medium Term Strategy for 2014-2021. They are:

1. Healthy ocean ecosystems and sustained ecosystem services,
2. Effective early warning systems and preparedness for tsunamis and other ocean-related hazards,
3. Increased resiliency to climate change and variability and enhanced safety, efficiency and effectiveness of all ocean-based activities through scientifically-founded services, adaptation and mitigation strategies, and
4. Enhanced knowledge of emerging ocean science issues.

Member States should take into account four High Level Objectives in developing their national plans and programmes for ocean sciences, observations and services, as well as in planning their contribution to and participation in the programmes of the Commission.

Ladies and gentlemen,

I will report briefly the activities carried out since the 27th IOC Assembly. As regards the activities prior to June 2014, please refer to my statement on the state of IOC reported during the 47th IOC Executive Council last year.

Concerning the administrative process for the post of IOC Executive Secretary, I, accompanied by Former Executive Secretary, Ms. Wendy Watson-Wright, visited the Director General and transmitted a short list of 6 qualified candidates selected by the 47th Executive Council. On 25 July 2014, those 6 candidates were evaluated by Interview Panel composed of 6 persons including Deputy Director-General (DDG), IOC Chair, IOC Executive Secretary (ES), Assistant Director-General for Education (ADG/ED), Director of Office of the Director-General (DIR/ODG), Director of Human Resources Management (DIR/HRM) and the result was reported to Director General immediately for her reference. On 21 November 2014 DG sent me a letter informing her nomination of Mr. Ryabinin as IOC Executive Secretary. On 18 December 2014 I was informed by DG that Ms. Flavia Schlegel, ADG for Natural Science, would undertake the function of the IOC Executive Secretary on the temporary basis from 12 January to 28 February 2015 after the departure of Ms. Wendy Watson-Wright. Finally we have Mr. Vladimir Ryabinin here working as our Executive Secretary. Please join me in giving him warm round of applause for his future success in IOC activity.

In follow-up to the decision 7.2 adopted by 47th IOC-EC, the response to Self-Assessment Questionnaires was completed with the help of IOC Secretary and the comments from Member States and submitted to the External Auditor on 2 September 2014 on behalf of IOC. It was stressed that IOC should be working with functional autonomy within UNESCO so as to be different from other programmes and to increase visibility of IOC.

The 2015 IOC officers' meeting was held on 26-27 January 2015 at IOC headquarters with participation of Dr. Ryabinin in order to prepare the provisional agenda and timetable for the 28th Assembly and 48th Executive Council. After the meeting, the joint IOC Officers-WMO Bureau Meeting was held on 28 January 2015 at WMO Headquarter, Geneva, Switzerland to review and enhance mutual cooperation. It was decided to have a meeting every two years by visiting counterpart office.

I attended International Conference on "The Indian Ocean Tsunami Warning and Mitigation System 10 Years after the Indian Ocean Tsunami: Achievements, Challenges, Remaining Gaps and Policy Perspectives" held at auditorium of Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG), Jakarta, Indonesia during 24-25 November 2014. The Conference was organized to recognize the achievements of the last 10 years, to highlight work to be done and seek re-commitment to continued investment in the IOTWS among the decision makers and scientists.

I was very pleased to attend the two meetings of sub-commission. They were the 3rd session of the IOC Sub-Commission for Africa and the Adjacent Island States (IOCAFRICA) held in Nairobi, Kenya during 14-15 April 2015 with support of the Kenya government, and the 10th Intergovernmental Session of the IOC Sub-Commission for the Western Pacific (WESTPAC) held in Phuket, Thailand during 12-15 May 2015 with support of Thailand government. During the sessions, I found the strong engagement of the member states into their own regional activity and some exchanges between the two sub-commissions of IOCAFRICA and WESTPAC.

Following decision 4.2 of the 45th Session of IOC Executive Council to improve IOC's activities in the area of sustained ocean observations and services, the fourth Regional Forum was held on 11-13 April 2015, in Nairobi, Kenya, with the participation of 29 experts from 14 Member States of Group V, under the auspices of the IOCAFRICA and the government of Republic of Korea. This workshop was a series of fora held for Group II in Varna, Bulgaria, in March 2012, Group III in Rio de Janeiro, Brazil, in March 2013, and Group IV in Bangkok, Thailand in November 2013. The Forum was held in conjunction with IOCAFRICA-III to

facilitate the participation of experts. I expect such forum to be continued for the development of operational oceanography in IOC.

Ladies and gentlemen,

I am very pleased to report to you on regional meetings

I had an opportunity to participate at the 4th APEC Ocean-related Ministerial Meeting held in Xiamen, China on 28 August 2014 with the theme of “Towards New Partnership through Ocean Cooperation in the Asia Pacific Region” hosted by State Oceanic Administration of China. The Meeting adopted a Joint Ministerial Statement as Xiamen Declaration aiming at reinvigorating more integrated, sustainable, inclusive and mutually favorable partnership among APEC members. Prior to the Meeting, the 3rd APEC Blue Economy Forum was held to have dialogue between the public and private sectors on developing the blue economy. .

I attended at 2014 Qingdao-China International Ocean Summit Forum during 14-16 October 2014 in Qingdao, China hosted by Xinhua International Ocean Information Center and the Administrative Committee of Qingdao (West Coast) Huandao New Area. This Forum aimed at in-depth discussions on the independent innovation of marine science and technology, the construction of the 21st century maritime Silk Road and approaches for the development of marine economy.

It is worth mentioning that I attended at the “2nd Munakata Eco-100 International Forum” held in Munakata, Japan, from 22-24 May 2015 with the theme of “Living with our Oceans: Re-examining the relationship between oceans, forests and humans”. This Forum was organized by UBrain TV JAPAN in collaboration with Munakata city in order to bring together environmental leaders from around the world to discuss practical solutions facing the global environment. Approximately 100 university students were also invited to increase their environmental knowledge and awareness and to nurture them as global citizens of tomorrow.

I was also invited to speak on “Contribution of Asian countries to the IOC activity” at the 20th Anniversary Ceremony of the Center for International Collaboration at Atmosphere and Ocean Research Institute (AORI), University of Tokyo held at Kashiwa, Japan on 3 March 2015.

I wish to mention the Yeosu International Ocean Forum held in Yeosu, Korea during 23-24 October 2014 organized by EXPO 2012 Yeosu Korea Foundation under the auspices of the Ministry of Oceans and Fisheries of Korea. The Forum was initiated to improve the roadmap of Yeosu Project, to prioritize distinct projects and seek capacity development in developing nations. It concluded with Joint Statement from high-level roundtable panel meeting where 8 experts from IOC were invited to take part in.

Ladies and gentlemen,

As stated explicitly in the Statutes, IOC has been working on promoting international cooperation and coordinating programmes in research, services and capacity-building, in order to learn more about the nature and resources of the ocean and coastal areas and to apply that knowledge for the improvement of management, sustainable development, the protection of the marine environment, and the decision-making processes of its Member States. In this regard, Africa as well as Small Island Developing States, as priority for UNESCO and for IOC, need more help for their capacity development in oceanic activities.

Since its establishment in 1960, IOC's activities seem to be more focused on science rather than services. This brings IOC in facing continuous challenges on the national and international level during the last decades in terms of its leadership in the UN system. In order to meet the emerging ocean issues of member states, IOC should promote the function in

ocean forecasting for reducing ocean-related disasters and climate change impact over the global ocean and coastal seas. IOC should find proper mechanisms, in consensus, such as operational oceanography for sustainable observation and service as well as for scientific research and knowledge.

It is true that today we have many challenges caused by recent budgetary reductions and also by wavering functional autonomy in UNESCO. However, the ocean plays a key role in the sustainability of our planet, which promises IOC's future in the blue and green ocean. I am sure that we can make the future of IOC to be more bright, promising and prosperous if we strive hand in hand to overcome challenges. Let's go forward together!

Thank you for your attention.

–C–

Statement of Dorota Pyć
Undersecretary of State, Ministry of Infrastructure and Development of Poland

UNESCO, 23 June 2015
(*under item 10.1*)

Mr. Chairman
Ladies and gentlemen,

The fundamental value of ocean governance is the maintenance of long-term sustainability of marine natural resources. Ocean governance means the coordination of various uses of the ocean and protection of the marine environment. Ocean governance is also defined as the process necessary to sustain ecosystem structure and functions. Effective ocean governance requires globally-agreed international rules and procedures, regional action based on common principles, national legal frameworks and integrated policies.

Global ocean governance, as well as management of the marine environment or management of the World Ocean, is essential for achieving the objectives of sustainable development. Common and rational use of the World Ocean, which is also defined as the marine environment and its resources, should be based on integrated maritime governance, understood as the processes of planning, decision-making and management at the global level. This also includes maritime areas beyond national jurisdiction, and integrates activities substantively and institutionally. Protection and preservation of the environment and natural resources should be considered as superior to irrational use of the marine environment. It is assumed that this would be possible with the creation of a global maritime administration having clear objectives and scope of activities. This would also need to have appropriate available financial resources and adequately-trained human resources, as well as a constantly-updated database.

The creation of integrated management of the marine environment in maritime areas within the boundaries of coastal States and territories, where coastal States exercise sovereign rights associated with efficient and flexible instruments, allows a reasonable balance between the protection and preservation of the environment and the freedom to use the seas and oceans. The sectoral approach to the marine environment, developed and persisted through the years, should be balanced by an integrated approach. This kind of approach to the marine environment includes comprehensive, integrated management of human activities based on the available scientific knowledge on ecosystems and their dynamics, origin and impact of the activities, which are essential for the health of the marine ecosystems, as well as achieving sustainable use of marine ecosystem assets and maintaining the integrity of the marine ecosystem.

It should be emphasized that the International Oceanographic Commission's activities aiming at promoting of international cooperation and coordination procedures and practices in marine research, services, observation systems, hazard mitigation and capacity development are crucial in order to understand the idea of proper management of marine and coastal resources. This is also a common value of humanity, necessary for further sustainable development of the world maritime economy.

Ladies and gentlemen,

The Baltic Sea location of Poland is an especially important asset and national treasure on strategic importance for the long-term socio-economic development. The objective of the new Polish Maritime Policy from 2015 is to use the marine natural resources in sustainable manner. Maritime management in Poland is based on marine spatial planning, decision making and integrated management understood as the implementation of decisions and continuous improvement planning procedures and decision-making. Maritime spatial planning involves identifying possible uses of marine resources and their rational distribution as well as providing sustainable activity in terms of the ecosystem, all of which is performed in the marine environment in order to achieve economic, social and environmental objectives arising from regional and national policies in accordance with international rules and standards, recommended practices and procedures for the protection and preservation of the marine environment.

To conclude, nowadays, the world discussion on global and regional maritime issues requires stepping out of traditional thinking. It is desirable for the development of the management system to base it on the integration of instruments and institutional capacity for cooperation and coordination, the creation of a knowledge base and cross-cutting tools necessary to enable the introduction of an integrated policy, the improvement of the quality of sector policies through the active search for synergies and increased coherence between sectors. All these activities should take into account the specificity of each of the regional seas, as well as all world maritime regions, through solutions tailored to the needs and pragmatic implementation of all global ocean governance objectives and rules.

ANNEX IV

REPORTS OF THE CHAIRPERSONS OF THE SESSIONAL COMMITTEES

–A–

Report of the Chairman of the Resolutions Committee

Terry Schaefer (USA)

The Resolutions Committee met twice.

During those meetings, three Draft Resolutions were reviewed.

I would like to thank Julian Barbière for his support of the Committee's work.

Special thanks to the authors for their careful preparation of their Draft Resolutions as it made the work of the Committee much easier and more efficient.

Finally, I would like to thank those representatives of the Member States who took time to participate in the work of the Committee.

–B–

Report of the Chairman of the Financial Committee

Peter M. Haugan (Norway)

The Financial Committee met four times during the General Assembly and transmitted the Draft Resolution IOC-XXVIII/DR.(11.1) to the Resolutions Committee for their discussion on Tuesday the 23rd of June.

The Chair would like to thank the Member States for active involvement in the drafting of the resolution as well as constructive debates and contributions to drawing budgetary implications of the resolutions and decisions of the assembly. A total of 28 Member States (Argentina, Australia, Belgium, Brazil, Cameroon, Canada, China, Cote d'Ivoire, Denmark, France, Germany, Greece, India, Japan, Kenya, Korea (Republic of), Malaysia, Norway, Portugal, Russian Federation, South Africa, Spain, Thailand, Trinidad and Tobago, Turkey, United Kingdom, United States of America) contributed to the committee work. The Chair would also like to thank the Secretariat, in particular Ksenia Yvinec, for excellent support to the committee.

The first main task for the committee was to review the 2014 budget implementation to ascertain that the Secretariat has executed the budget in accordance with the decisions of the IOC Governing Bodies. The second main task was to review the Secretariat's proposal for budgetary allocation for 2016-2017 and provide guidance for adjustments and improvements, including the financial implications of decisions and resolutions put in front of the Assembly. The results of our work are reflected in the draft resolution that we are proposing for your review and adoption.

As you know, like the rest of UNESCO, IOC has undergone yet another difficult biennium with a decrease in the budget accompanied by a restructuring of the Secretariat. At the same time, it should be noted that the overall percentage of UNESCO's budget attributed to the IOC has been growing steadily in the last few years, thanks to the support of its Member States and the continuous efforts of the Director-General to increase funding to programmatic sectors.

At the same time, the decrease in regular budget due to reduced cash flow has been quite dramatic. As is well known, the IOC has been strongly affected by the financial crisis experienced by UNESCO. It has seen not only a reduction in its regular budget but also a loss of USA's extensive voluntary contributions, which used to provide a solid funding base for its global programmes.

In the current biennium, to give priority to the programme implementation, the IOC drastically reduced its administration and coordination costs. This was the only way to ensure continuation of programmatic staffing needs and to preserve – to the extent possible – the quality of delivery. The absence of the Emergency Fund during the first year 2014 has made programme implementation even more problematic.

While we have been able to maintain a reasonable level of activity, it has not been possible to operate at optimum level in any of the programmes. In this context, the reinforcement of \$0.5M from the Emergency Fund approved by the UNESCO Executive Board at its 196th session (April 2015) is particularly appreciated. This will allow – as a matter of high priority – to re-establish the full-time IOCARIBE Secretary position in Cartagena as soon as possible already in the current biennium. This full-time RP-funded post was already included in the Draft 38 C/5 \$507 and \$518 expenditure plans for the next biennium.

As you are all aware, IOC is now implementing the Medium-Term Strategy 2014-2021 adopted by the IOC Assembly at its 27th session in 2013. The Financial Committee reviewed in depth the document IOC-XXVIII/2 Annex 2 and Corr and concluded that the Secretariat has implemented the 2014 budget in accordance with the decisions of the IOC Governing Bodies. This forms the first part of the Draft Resolution that the Financial Committee proposes for your review.

Thanks to the strong support of its Member States – Friends of the IOC - and the high priority that UNESCO attributes to the work of IOC, the \$ 507 M Expenditure Plan of UNESCO for 2016–2017 foresees the IOC regular budget allocation to be increased by 1 million \$ over the previously anticipated value, bringing it to \$ 9.7 M, while the \$518M expenditure plan includes an additional reinforcement of \$0.5M. This reinforcement is of tremendous significance given the overall situation whereby UNESCO, as a whole, faces a severe financial crisis. These proposed expenditure plans represent, respectively, 80% and 85% of the fully-funded scenario for 2014–2015 and 73% of the fully-funded scenario for 2016–2017.

The Draft Programme and Budget document in front of you was prepared by the Secretariat before the approval of the UNESCO Executive Board of the ZNG+ expenditure plan for UNESCO. Compared to the \$ 507 M ZNG expenditure plan, the \$ 518 M ZNG+ expenditure plan would allow IOC to assist more SIDS Member States in the transfer of marine technology, to build capacity and to respond to some of the most pressing staffing needs by creating a new professional post to coordinate the work on ocean warming and acidification (the fully-funded position for the IOCARIBE Secretary in Cartagena being already included in the \$ 507 M ZNG expenditure plan).

In preparing the proposal for budgetary allocations for the ZNG \$ 507 M and the ZNG+ \$ 518 M expenditure plans the Secretariat has followed the guiding principles adopted by the IOC Assembly at its 27th session through Resolution XXVII-2 and the subsequent review by the IOC Executive Council at its 47th session of the 37 C/5 (2014–2015) ZNG \$ 507 M expenditure plan in which IOC was allocated \$ 8.6 M. In preparing the budget, every effort was made to ensure sufficient allocations to our statutory and legal commitments and to restore to the extent possible the budgets of the regional Sub-Commissions.

The Financial Committee proposed minor changes to the Secretariat's budgetary proposals for 2016-2017 contained in document IOC-XXVIII/2 Annex 3 to reflect the allocations to IIOE-2 and GOSR, in accordance with the discussions of these items in plenary and the relevant proposed draft decisions and resolutions. It is important to note that the Assembly reached the decision on the principle of allowing the Secretariat to use core/RP funding for GOSR, although the actual amounts allocated to it in 2016-2017 budgetary proposals are very modest and intended to be seen as seed money to facilitate extrabudgetary fundraising. The Secretariat informed the

Financial Committee that some additional funds may become available in the general UNESCO end of biennium re-programming in which case, based on the Assembly's approval of the principle, some of that funding could be used already in this biennium to advance the work on GOSR.

All transfers are done within Function B for IIOE-2 and within ER 6 for GOSR, thus not affecting sub-totals by Expected Result.

The DR also requests the Executive Secretary to further improve performance indicators and targets, to report on performance against those indicators and targets and to update the Complementary Additional Programme, and urges the MSs to contribute to the CAP, to increase support to regional activities and support the IOC budget in UNESCO Governing Body discussions.

In preparation of the 2018-2019 budget the Executive Secretary is requested to build it around one expected result taking into account the priorities emerging from the Future of IOC discussions, and to seek guidance from a reconstituted Intersessional Financial Advisory Group.

ANNEX V

INFORMATIONAL ANNEX

Record of Member States' interventions at the 28th Session of the IOC Assembly that were provided to the IOC Secretariat by the respective Member States. Interventions are reprinted without review or verification.

1. Opening

France

Merci aussi à la délégation britannique pour son analyse sur l'avenir de la commission océanographique intergouvernementale qui est largement partagée par la délégation française. Nous partageons aussi largement ce qui vient d'être dit par les délégations des États-Unis et du Portugal, aussi je ne répéterais pas les points qu'ils ont soulignés. La France est attachée à ce que les politiques publiques reposent sur des bases scientifiques solides, aussi nous soutenons les activités de la COI au sein de l'UNESCO. De ce point de vue la France souhaite que la COI soit plus ambitieuse sur le plan scientifique, ce qui bénéficiera à tous les pays membres.

USA

The United States would like to reinforce comments made by Portugal. We commend the current IOC leadership and the Director General on hearing our needs and providing a physical presence to here to help us identify a path forward. We were pleased to hear the Director General highlight that the IOC has identified a need to sharpen our mission and raise visibility within the UN context. We have been hearing a sense of some frustration in IOC that other parts of the UN sphere are taking ownership of some ocean subjects that IOC was created to address. We seem to be less effective at advocating our purpose and role, and what we have to offer. Many ocean enterprises are involved in setting and organizing scientific thought and priorities. The US would like to hear from the Director General as to whether or not we, the IOC member states, are sufficiently relaying that we are the governments who will be able to fund those science priorities. Secondly, we would like to ask the UNESCO body to please consider the role oceans play in so many subjects that a few years ago may not have been considered ocean issues. A good deal of UNESCO's agenda is dependent upon ocean science, as well the impacts people around the globe are facing, particularly those without the resources or wealth to respond to changes. There have been recent pronouncements from high authorities such as the head of the Catholic Church on issues like climate change. Oceans and ocean science are connected to these emerging challenges, and we invite you to comment on those topics.

2.4 Introduction of Documentation, Timetable and Memorial Lectures

Brazil

On behalf of Center of Excellence for the Brazilian Sea (Cembra) we are very pleased to introduce to you this Digital Edition of the book "Brazil and the Sea in the 21st Century" in English. This is the most recent step of a very long road.

The Cembra is an association arising from the cooperative effort of sectors of Brazilian society dedicated to the research and development of new technologies by means of the implementation of infrastructure projects. It was set up as a non-governmental and non-profit organization. Its essential purpose is to meet the aspirations of Brazil and Brazilian society of achieving and maintaining the cutting edge of knowledge and exploration of the Brazilian sea, regarding to their socio-economic, scientific and technological aspects. To this aim, through survey studies, projects, research and development of advanced technologies, seeks continuous and sustained appreciation of the institutions chosen for partnerships and persons conducting the work, and the generation of technologies, processes or high quality services. The Brazilian Sea, also called the "Blue Amazon", refers to the oceanic region where Brazil exerts sovereignty or jurisdiction rights as established in the UN Convention on the Law of the Sea (Unclos). The Cembra is fully supported by the Brazilian Navy, the "Alberto Luiz Coimbra Institute for Graduate Studies, and Research in Engineering" (Coppe/UFRJ), the Rio Grande Federal University (Furg) and the Sea Studies Foundation (Femar).

This is a special book. It reflects the efforts of many Brazilians to bring a precious commodity to the nation: the real meaning of wealth which lies at our feet, perhaps unnoticed. It is for this reason that the former Independent National Commission on the Oceans (CNIO) decided to issue the first edition of the book “O Brasil e o Mar no Século XXI – Relatório aos Tomadores de Decisão do País” (“Brazil and the Sea in the 21st Century – a Report to Decision Makers of the Country”), printed in 1997.

The second edition, enlarged and updated, was printed in 2010, under the responsibility of Cembra. Alike the original edition, this second one was also addressed to the Country's decision-makers.

The virtual edition came a few years later. It seeks to make “Brazil and the sea in twenty-first century – a Report to Country Decision Makers” a live publication to be updated at intervals no greater than two years. It can be found at the site www.cembra.org.br.

The idea of issuing a digital edition in English arose last year during the 41st Session of Cembra's Executive Coordination Commission. This edition aims to increase the visibility of the book, principally in international organizations concerned to the seas such as Intergovernmental Oceanographic Organization of UNESCO (UNESCO-IOC), International Maritime Organization (IMO), World Meteorological Organization (WMO), International Hydrographic Organization (IHO), among others, and also for foreign delegations visiting Brazil. Indeed, it took us a great effort in order to make it ready on time to be presented in this 28th Session of IOC Assembly.

We hope you enjoy reading, and may learn a little bit more about “the Brazilian Sea”, this great space we proudly call “Blue Amazon”.

Malaysia

Malaysia joins the Delegation from France in congratulating the outstanding efforts by the secretariat in organising the first ever Science Day.

3.1 Statement of the Chairman on the State of IOC

China

Then I would like to thank Dr. Byun, particularly, not only for his very important statement, which could give us a very clear picture that what we did in the past, where we are now and how we should address the problems and make IOC stronger in the future, but also for your very hard work in the past years as IOC Chair. I believe all the representatives here from member states could understand how your work is important to IOC. In particular, I should thank you very much to you for your wonderful introduction to 2 Chinese hosted meetings. It brings all our wonderful communication during above-mentioned functions to my mind and your speech in the 4th Ocean-related Meeting and Qingdao meeting was impressive. Thank you again for your kind support to us.

From your statement and other discussion among member states, to be honest, I found that IOC stands in a very key cross, to left or right, it is a question. That's also one of our most important topics in the coming several days. All of our colleagues are thinking about the future of IOC, thinking about how to enhance capacity building and the possibility of polishing some policy on relevant programs. Although none of the questions is easy, we believe we would find the right answers through our cooperation and joint efforts. To reach this goal, it is necessary that keeping in thinking and talking, to explore more valuable comments, meanwhile we should do more pragmatic work. The future of IOC is in our hands.

Here, I would like to reiterate China's position. As what we did before, we would like to work with all other member states, to support the Chair of IOC continuously to make more contribution to the IOC related cooperation.

France

Merci à la délégation britannique pour son analyse sur l'avenir de la commission océanographique intergouvernementale qui est largement partagée par la délégation française. Nous partageons aussi largement ce qui vient d'être dit par les délégations des États-Unis et du Portugal, aussi je ne répéterais pas les points qu'ils ont soulignés. La France est attachée à ce que les politiques publiques reposent sur des bases scientifiques solides, aussi nous soutenons les activités de la COI au sein de l'UNESCO. De ce point de vue la France souhaite que la COI soit plus ambitieuse sur le plan scientifique, ce qui bénéficiera à tous les pays membres.

La France s'associe à la République populaire de Chine pour vous remercier pour la qualité de l'exercice de votre présidence.

Cette année 2015 est particulière puisque la France accueille la COP21 en décembre. Or l'océan joue un rôle majeur au sein du système Terre en ce qui concerne la biosphère, le stockage du carbone ou encore son rôle dans le cycle énergétique.

Conséquence directe du changement de la composition chimique de l'atmosphère, l'acidification des océans est susceptible d'entraîner une extinction massive des espèces marines comme cela s'est passé il y a 250 millions d'années à la limite permien/Trias. Il faut noter que les températures dans la bande tropicale avaient alors atteint de 50 à 60°C.

Comme Madame la directrice générale l'a rappelé, le ministre des affaires étrangères est venu ouvrir la journée mondiale des océans ici à l'UNESCO. Cela marque l'importance que la France attache à l'océan dans toutes ses composantes et comme je l'ai déjà dit, nous sommes très attachés à une COI ambitieuse sur le plan scientifique

Republic of Korea

I also would like to take this opportunity to express my sincere appreciation to the chair's leadership to engage member states into close collaboration by hosting series of regional forums during the last 4 years. As mentioned in the chair's report, the forums were held in four IOC's regional Groups, Group II, III, IV, and V for the discussion on the future of IOC as well as ocean observation and services, with the financial support from the Republic of Korea. These forums provided good opportunities for the member states to establish stronger regional network. I believe that this initiative has raised significantly the IOC's profile in the regional societies.

In this regard, the Korean government is willing to support continuously the IOC Chair's initiative of strengthening close regional networks within the IOC framework by providing financial support.

United Republic of Tanzania

Tanzania wishes to express its appreciation for your full participation in the Workshop on Sustained Ocean Observation and Services and the IOCAfrica biennial meeting in April, 2015 in Nairobi despite your busy schedule.

We appreciate very much your love and interest in Africa which is clearly seen in the way you have supported Africa and IOCAfrica. The words of wisdom that you gave us during your visit will be a guidance to us as Africa.

IOCAfrica is very young and needs to be supported as it is growing. We believe you will continue to support Africa and IOCAfrica.

3.2 Report by the Executive Secretary on Programme and Budget (2014–2015) Implementation

Canada

Canada congratulates the IOC for delivering an extensive program of work within the limitations of its budget. With the increasing recognition of the importance of oceans and the need for ocean information, and the continuation of tight budgets, matching the IOC program with the budget will continue to be a challenge for the foreseeable future.

For its part, despite its own financial challenges, Canada continues to maintain observing systems for physical and biogeochemical variables on the east coast of Canada, in the Labrador Sea and in the eastern North Pacific and contributes data regularly to IOC sponsored databases and other relevant international databases. Through the EU-funded Atlantos project, Canada is working to strengthen observing systems in the North Atlantic.

Canada is investing significantly in preparedness and response strategies and this is strengthening our national system to deliver local to regional scale oceanographic predictions.

Of note, we have recently completed a first survey of ocean acidification on the eastern Canadian seaboard and similar survey work on the Pacific, including preliminary information on potential impact on harvested species.

Our Aquatic Climate Adaptation Program has relied on decades of sustained observations to complete risk assessments in four major areas and to develop vulnerability analyses to support decision-making.

We continue to partner with the US for tsunami preparedness on east and west coasts and operates a network of gauges. We have established a new potential source for tsunamis off the Queen Charlotte Islands.

Canada's scientists are leaders in the deployment of interdisciplinary cable observatories and with other nations we have recently formed an expert group to exchange on best practices in cabled observatories. Our cabled network in the eastern end of the Northwest Passage is being used to predict ice conditions.

Canada's Ocean Tracking Network is one of the first Associated Data Units of the IODE, the only one globally that provides animal-base telemetry data.

In addition to the work being done to deliver programs within the framework of the IOC, Canada has a history of providing leadership to the oceans community. Neil Campbell was an early visionary when it came to international ocean science, more recently, Savi Narayanan was a leader in the development of IOC and Wendy Watson Wright has just stepped down as Executive Secretary. Like the IOC, Canadian ocean science is going through its own challenges, yet we intend to continue to lead and support IOC programs.

Chile

Permítame expresar nuestras felicitaciones por la manera eficiente y eficaz de la Secretaría de la COI en la ejecución del presupuesto 2014-2015.

A pesar de las dificultades financieras, la COI ha podido mantener una capacidad operacional importante y esto se debe a los esfuerzos desplegados para la implementación programática.

Chile quiere destacar y al mismo tiempo agradecer a la Secretaria de la COI por el permanente apoyo brindado para la continuidad del Programa de Tsunamis, de especial interés para Chile, pese a la complicada situación financiera que afecta a la Comisión. Es de conocimiento global el impacto que los tsunamis pueden infringir en los estados costeros y solo un esfuerzo conjunto y coordinado puede procurar minimizar sus efectos. En este contexto el mejoramiento de los sistemas de alerta y la educación de la sociedad potencialmente afectada debe seguir siendo una altísima prioridad, no solo para los países potencialmente en riesgo, sino que también para la COI. Su compromiso y efectividad en este campo constituyen para la COI un sello de excelencia y visibilidad único en el sistema internacional.

China

From the report, we happy to know, IOC is operating a lot of activities within a positive budget of last year. From my view, those activities and practices show the great efforts and strong leadership of IOC in the global climate changing and marine scientific research, sustainable of oceans of the world as well. And these practices are very important for sustainable development of IOC. That's my first point.

My second point is that the capacity building is very important both to member states and the future of IOC. It is a good start for us to discuss the IOC Capacity Building Development Strategy.

My third point is that we should encourage the regional sub-committees of IOC to play more active role in engaging and organizing relevant cooperation, as we found that the regional sub-committees have had so many great work in every areas. We suggest Executive Secretary to consider any possibility of appointing the Head of WESTPAC Office to an appropriate level in order to leverage higher lever political commitments in the region.

My last but the most point is that like what we did before, China would like to work closely with you, along with the Secretariat and other member states for the future of IOC. Meanwhile, Dr. Ryabinin, we also believe IOC will have a great success with your competent leadership.

France

Nous tenons à souligner l'importance que la France attache à travailler sous l'égide de la COI dans la plupart des sujets mentionnés par le secrétaire exécutif mais avec une nécessaire ambition renouvelée pour l'avenir. Ainsi la France contribue par exemple :

- aux observations spatiales ;
- aux observations in-situ, TAO et Pirata, JCOMMOPS, ARGO ;
- aux dispositifs d'alerte pour les tsunamis Atlantique Nord-Est et Méditerranée, Pacifique, Caraïbe et océan Indien ;
- au programme GEBCO ;
- océanographie opérationnelle et Mercator ;
- et plus généralement à la recherche dans toutes les sciences portant sur les océans.

Nous souhaitons une nécessaire ambition renouvelée mais il est aussi nécessaire d'accroître la visibilité de la COI. A ce titre, il serait utile de mettre en avant 3 à 4 axes force tournés vers des enjeux de sociétés, la prévention des risques liés aux tsunamis pouvant être un exemple.

India

It can be seen from the report that IOC has made considerable progress in implementation of various programs despite having considerable budget constraints. The report also highlighted the progress made by 3 sub-commissions WESTPAC, IOCCARIBE, IOCAFRICA and Regional Subsidiary bodies of IOC.

India would like to continue its support on the programmes like ocean observation systems, Tsunami early warnings, capacity building, operational oceanography, ocean data management, etc. Delegation would like to take the opportunity to thank to IOC, SCOR, and IGOOS for several efforts being made towards launching of the IIOE-2 through organizing an International Symposium during November 26 to 4th of December 2015 in Goa, India,

This endeavour will be greatly benefited from coordination support by Perth Project Office of IOC and active participation of IOCAFRICA and WESTPAC. As mentioned in the report of Executive Secretary, with the support of IOC/UNESCO an International Training Centre for Operational Oceanography (ITCOcean) has been established in Hyderabad, India. The Centre conducted 11 training programmes in the area of operational oceanography. A total of 297 trainees, mainly from the Indian Ocean rim countries and Africa were trained in various areas

Regarding the World Ocean Assessment, India hosted the UN workshop during 27-29 January 2014, to facilitate the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects, organized by UN- DOALOS. The workshop was attended by 38 delegates.

Kenya

For Kenya, the IOC is a high-priority and an important platform for the promotion, development and coordination of marine scientific research as well as capacity development of Member States. We therefore welcome the proposed additional funding to the IOC in the draft programme and budget and its use for strengthening capacity development programmes and the regional sub-commissions.

The IOC must also be able to respond to key emerging challenges and opportunities. In this regard, we must ensure that the IOC is well positioned to support Member States achieve the Sustainable Development Goals. This is also important for the future of IOC.

To position itself as a leader in marine science, the IOC must have a strong regional presence so as to enhance collaboration with Member States. The IOC Sub-Commission should therefore be supported by adequate human and financial resources to enable them effectively engage with Member States. The IOC Sub-Commission for Africa and Adjacent Island States, for example, has played an important role in promoting international cooperation and capacity development. However, the capacity of the Secretariat of the Sub-commission to support member states needs to be reinforced.

Kenya also appreciates the on-going efforts to strengthen IOC activities in WESTPAC and IOCARIBE. In this regard, we are convinced that interregional collaboration should be strengthened as there are many opportunities for sharing of good practices.

Finally, Kenya would like to place emphasis on the importance of the youth. We encourage the IOC to further engage with the youth and promote youth participation through youth-targeted initiatives. The IOC has an important role to play in promoting the awareness, understanding and appreciation of the marine environment.

Philippines

As the report points out, the demand for the IOC across the globe is growing, especially as we look forward to the Post-2015 Sustainable Development Agenda, with a dedicated Goal 14 on the oceans. Despite severe financial constraints, the IOC has undertaken reforms to make itself more efficient and responsive, and the Philippines highly appreciates these measures.

As an archipelagic state located in the center of the world's marine biodiversity, we attach great importance to the IOC. We support its unique role in fostering international cooperation in ocean sciences and capacity-building. We are an active member of the WESTPAC, and find great merit in working together to further strengthen the IOC's global programmes on ocean acidification and effects on coral reefs; harmful algal blooms, tsunami warning system; and the global ocean observing system. We also take note of the value and seek continued support of regional programmes that address more specific needs and complement global initiatives.

We congratulate the IOC for the successful hosting of World Ocean's Day here in UNESCO, which highlighted the crucial role of the oceans in combating climate change. This year is a defining moment for the international community, with the COP 21 taking place in Paris later this year. We have the opportunity to position the IOC strategically at the heart of sustainable development.

The IOC's capacity-building strategy is the vehicle to do so. In a spirit of solidarity, we must promote the capacity of developing and least developing member countries, especially the most vulnerable small island developing states, to benefit from ocean science. Equitable access to marine technology must be a priority, if we are to attain the SDGs.

The Philippines aims to further contribute to the enhancement of the IOC's role as a unique platform for international cooperation on ocean science in support of sustainable development. For this reason, we have submitted our candidature to the Executive Council, and hope for the valuable support of all member states.

Republic of Korea

I would like to express my sincere gratitude for the efforts of Executive Secretary in preparing and presenting the comprehensive report on the recent IOC activities and budgetary situation. Even though the current situation is posing difficulties on the program delivery, it is indeed crucial that IOC should be engaged in global challenges and provides solutions and scientific explanations to the society. I believe that IOC can manage to bridge the gap between the growing expectation from society and the limited resources. In this regard, I would like to point out that the IOC headquarter needs to increase communication with the regional subsidiary bodies and the member states in order to find more resources and to co-design the programs that meet the societal needs.

The Republic of Korea will continue to extend its efforts for the regional and global cooperation in consideration of the IOC framework. I strongly believe that the successful implementation of IOC programs relies on active participation of Member States and also on the close regional and global collaboration. In this context, I would like to reaffirm that Korean government will continue commitment to the IOC/WESTPAC and also to the other IOC's global projects which will raise the IOC's profile in the regional and global communities.

Finally, as we all aware, 2015 is a monumental year that marks the establishment of Post-2015 Development Agenda which are integrated as Sustainable Development Goals(SDGs). In the face of a lot of global challenges for the oceans, seas and marine resources as well as climate change, securing the leading role in the post-2015 development agenda within the competitive UN system becomes more important in responding to the call for sustainable development. In this regard, my delegation wish to underline that IOC should protect and promote IOC's values and reflect them on the post-2015 agenda. The Korean Government will continue to support the IOC's efforts on this.

USA

The challenges facing the IOC are familiar to us all, and we hope the United States' commitment and support are evidenced by our support to JCOMM and with ocean carbon, as well as investment in national capabilities such as GOOS that support IOC priorities. Other financial resources need to be found to contribute to IOC programs. We have also increased our spending on the ocean acidification work to the benefit of all IOC participants. It was in this very forum we were reminded of the decline of the TAO array due to the retirement of our ship. We have been able to restore TAO, and continue to support IOC by working on a long term strategy for the Tropical Pacific Observing System. The solutions we seek include addressing IOC program niche and priorities in the Working Group on the Future of the IOC and finding ways

to move forward with IOC activities, projects and programs, including through extra-budgetary funding where feasible.

United Republic of Tanzania

For Kenya, the IOC is a high-priority and an important platform for the promotion, development and coordination of marine scientific research as well as capacity development of Member States. We therefore welcome the proposed additional funding to the IOC in the draft programme and budget and its use for strengthening capacity development programmes and the regional sub-commissions.

The IOC must also be able to respond to key emerging challenges and opportunities. In this regard, we must ensure that the IOC is well positioned to support Member States achieve the Sustainable Development Goals. This is also important for the future of IOC.

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Kenya also appreciates the on-going efforts to strengthen IOC activities in WESTPAC and IOCARIBE. In this regard, we are convinced that interregional collaboration should be strengthened as there are many opportunities for sharing of good practices.

Finally, Kenya would like to place emphasis on the importance of the youth. We encourage the IOC to further engage with the youth and promote youth participation through youth-targeted initiatives. The IOC has an important role to play in promoting the awareness, understanding and appreciation of the marine environment.

GEBCO

The delegate of GEBCO Guiding Committee also wishes to thank IOC and its Secretariat for their support for GEBCO activities, especially through the very talented members of GEBCO, nominated by IOC.

The past year GEBCO experienced incredible progress. New global gridded bathymetric database GEBCO 2014 grid, was released at the end of 2014. New world map of the sea floor, GEBCO World Map 2014 was also published, and ever successful capacity building of GEBCO is continuing to provide GEBCO with new generation ocean mapping scientists, to name a few.

The visibility of GEBCO has been greatly increased, and appreciated by, for example, Tsunami community.

To fulfill the recent requirements to GEBCO, GEBCO Guiding Committee is planning to extend its focus to shallow water bathymetry, to be used by, for example tsunami and ecosystem communities.

Mr. Chairman, the Delegate of GEBCO Guiding Committee has to note that IOC and its member states have been, not only the largest users of GEBCO products, but also the largest contributors to create GEBCO products, by contribution of man power and knowledge provided through GEBCO members, and also contribution of bathymetric data from IOC member institutions. The Delegate of GEBCO Guiding Committee would say that 80 percent of production of GEBCO products depends on IOC side members.

3.3.1 IOC Sub-Commission for the Western Pacific: 10th Session of WESTPAC, 12–15 May 2015, Phuket, Thailand

China

WESTPAC has been working very closely with member states in the region. China believes the WESTPAC practices fully demonstrated the importance of IOC Regional Subsidiary Bodies to IOC. So, China would express our sincere thanks to Dr. Somkiat, all WESTPAC Officers, and WESTPAC Advisory Group for their strong leadership and guidance provided over the last intersessional period.

It has been a great pleasure for China to have been engaging in many WESTPAC programs, working together with all other countries in the region.

China would reiterate its commitment to supporting WESTPAC by making voluntary contribution, providing regular trainings in the IOC Regional Training and Research Center on Ocean Dynamics and Climate and other training facilities, conducting joint research, and hosting WESTPAC workshops and symposium with a

view to enhancing marine science capacity of developing countries and advance knowledge to underpin the sustainability of marine and coastal resources in the region.

China fully understands the present challenges that WESTPAC need to address in order to meet the ever-increasing requirement of member states in the region. Considering this situation, we suggest that it's necessary to upgrade the WESTPAC Office to a higher grade in order to keep the momentum of WESTPAC and make greater contribution and achievement in the future.

Indonesia

Indonesia also would like to appreciate all states members in the region for collaborative works and supporting each other, and Indonesia would keep the spirit and continue to pay more attention supporting the program on human capacity building with establishment the Training and Research Centre For Tropical Marine Biodiversity, and would like to request IOC Sub-Commission for WESTPAC to support it.

Indonesia would like to involve in all new proposed projects /programs established by the IOC Sub-Commission for WESTPAC, especially on the project/program on Indo-Pacific Ocean Environment Variation and Air-Sea Interaction.

Japan

ES participation in the Session made very much positive impacts on our future plans and activities, particularly on the issue how we can improve the relationship between IOC global programmes and WESTPAC projects and related activities.

Japan has actively been participating in WESTPAC from very beginning stage of WESTPAC, even before WESTPAC. Considering the importance of WESTPAC activities for the promotion of ocean sciences and services in the region, not only for the region but also for global programs at regional level, since 1970s Japan continuously contributes to WESTPAC through Japan Fund in Trust, in addition to the regular budget contribution to UNESCO. More recently, Japanese government provides 113,000 USD every year as JFIT. Japan will continue this budgetary contribution together with other non-budgetary contributions.

WESTPAC office in Bangkok has been doing a lot to actively implement all the WESTPAC projects and programme. Having considered that the work done by the Office and our Technical Secretary have been enormous, Japan like to ask the IOC Secretariat and ES to consider to upgrade the position of WESTPAC office.

Finally Japan likes to emphasize the importance of WESTPAC as a regional subsidiary body not only for the region but also for over all IOC activities. The WESTPAC is with no doubt a part of and under the IOC. So along this line Japan would strongly encourage WESTPAC member states to keep the present level of activities and participation, and even enhance them, as driving force for over all IOC activities including global ones at the regional level.

Kenya

The presentation has clearly demonstrated that there are many opportunities for sharing of good practices. Kenya further appreciates that some of the activities of WESTPAC are aimed at fostering south-south and north-south-south collaboration. We therefore kindly invite WESTPAC to strengthen interregional cooperation to enable other sub-commissions learn from the experience of WESTPAC.

Malaysia

Malaysia is pleased to be associated with the Western Pacific chapter and congratulates the Chair of Westpac for his excellent stewardship despite limited financial resources. As an active member of WESTPAC, Malaysia has been giving and will continue to give its full support to IOC-UNESCO and IOC-WESTPAC programmes:

- i. By providing the coordinating mechanisms through our National Oceanography Directorate of the Ministry of Science, Technology and Innovation;
- ii. By creating platforms for capacity building and participation in Oceanography and Marine Science related training and projects through the established COEs and RTRCs; and
- iii. By organising along with aspirations of IOC-WESTPAC; World Oceans Day and Coral Triangle Day.

These activities will certainly boost the importance of initiatives mooted by the WESTPAC at the regional and national levels.

We are pleased to inform that Malaysia celebrated World Oceans Week from 8th to 14th June recently, World Oceans Day which falls on the 8th of June and Coral Triangle Day on the 9th of June. This week-long celebration consists of five (5) major events targeting students, professionals, experts, policy makers and the public at large.

We wish to express our sincere gratitude to the French Governments for their generous support and cooperation in co-organising the International Symposium on Technologies for Sustainable Management of Marine Resources and Climate Change Issue and the filming of a documentary movie titled Oceans.

I would also like to inform that at the ASEAN level, the officials are presently in Bangkok, Thailand finalising the ASEAN Plan of Action on Science, Technology and Innovation (APASTI: 2016-2025) of which the oceanography and marine science features among the work programmes.

Finally, Malaysia supports the proposal by Kenyan Delegate that there be inter-regional cooperation among the Sub-commissions.

Philippines

The Philippines expresses its deep appreciation to the Government of Thailand for hosting and supporting the WESTPAC Office, the Government of Vietnam for hosting and co-organizing the 9th WESTPAC International Scientific Symposium (22-25 April 2014, Nha Trang, Vietnam), the Government of China for hosting the IOC Regional Training and Research Center on Ocean Dynamics and Climate, as well as to all other WESTPAC Member States for their financial and in-kind support provided to WESTPAC diverse activities.

Republic of Korea

The Republic of Korea has been actively participating in IOC-WESTPAC's mission, being involved in a number of activities. For example, Korea has played a major role in the DRMREEF project which is aiming to enhance the capacity of member states with regard to conservation of marine biodiversity and cooperative management of the marine biological resources in the coral reef areas.

Again, as a Vice-Chair of WESTPAC, I would like to extend my deep appreciation to the Government of Thailand for hosting and supporting the WESTPAC Office, the Government of Vietnam for hosting the 9th WESTPAC Scientific Symposium, the Government of China for operating the IOC Regional Training and Research Center on Ocean Dynamics and Climate, as well as to all other WESTPAC Member States for their financial and in-kind support.

Finally, I would like to draw the IOC Member states' attention to the WESTPAC's wonderful achievements and contribution in terms of enhancement of IOC visibility in the society, and also to the significant role of the IOC-WESTPAC Office who is making such accomplishment possible. In this regard, I would like to ask the IOC Executive Secretary to consider any possibility of upgrading the IOC-WESTPAC Office in order to respond to the ever-increasing demand of new activities from the Member States.

Before I conclude my intervention, I would like to refer to the decision regarding WESTPAC in the action paper and propose addition of a couple of paragraphs to the decision to fully reflect the achievements of WESTPAC, which I have submitted to the secretariat in close consultation with the WESTPAC officers and the member states. I would like to ask the secretariat to display the new text of decision on the screen for further discussion and consideration of the Member States.

Thailand

Special gratitude are conveyed to the Vietnamese Government for hosting the Ninth WESTPAC International Scientific Symposium last year, and to the Chinese Government for the operation of the IOC Regional Training and Research Center on Ocean Dynamics and Climate during the years 2011 to 2014, with regular trainings provided for other developing countries, both within and outside the Region. We highly appreciate the renewed commitment of China to the Regional Training and Research Center during the next 6-year period, from 2015 to 2020.

As a Member State of WESTPAC, we are deeply impressed with the accomplishment WESTPAC has made over the last intersessional period. Thailand has been actively participating in the WESTPAC activities, and utilizing the outcomes and outputs of these programs in order to serve our national activities and needs.

The Government of Thailand would like to express our full satisfaction over, and great appreciation for the excellent function of the WESTPAC Office, especially to the head of the office, Mr. Wenxi Zhu, who has been working very hard and dedicating himself to serve all Member States in the Region. His outstanding

performance has clearly presented a good image of IOC to all Member States. Thailand would therefore strongly support the request of the WESTPAC's Chair reporting to the IOC to consider the possibility of promoting head of the WESTPAC Office to an appropriate level.

3.3.2 IOC Sub-Commission for the Caribbean and Adjacent Regions: 13th Session of IOCARIBE, 25–28 May 2015, Merida, Mexico

Dominican Republic

Para la República Dominicana, la Comisión Oceanográfica Intergubernamental lleva a cabo una tarea fundamental y desempeña una función ampliamente reconocida en las ciencias del mar. Consideramos que la UNESCO debe fortalecer el presupuesto de la COI en el nuevo Programa de Presupuesto, sin menoscabo de los recursos extrapresupuestarios que se puedan obtener.

Reconocemos la labor que realiza IOCARIBE a través de Sistema de Alerta Temprana de Tsunamis y otras Amenazas Costeras para el Caribe, y el gran apoyo que realiza en nuestros países para el desarrollo de capacidades, en especial en los Pequeños Estados Insulares del Caribe. En ese marco, valoramos el Proyecto DIPECHO realizado en nuestro país.

Al igual, agradecemos a IOCARIBE de elegir a la República Dominicana, como país piloto en el Proyecto “Sobre el Pronóstico de Inundación Costera para el Caribe CIFDP-C”, desarrollado por la OMM y la COI dentro del marco de trabajo de JCOMM, el cual contará con el apoyo técnico del Centro de Huracanes de Miami y el apoyo financiero de la OMM y USAID.

En cuanto a la Decimotercera Reunión Intergubernamental de la Subcomisión de la COI para el Caribe y Regiones Adyacentes IOCARIBE (SC-IOCARIBE-XIII), realizada en México, felicitamos los resultados obtenidos, e instamos a la COI de fortalecer la Secretaría de IOCARIBE en Colombia.

Apoyamos las actividades ICG-IOCARIBE-EWS, en especial los esfuerzos que realiza en los Ejercicios de Alerta de Tsunamis en el Caribe y los sistemas de observación y mitigación de riesgo para atenuar los efectos de un posible Tsunami; así como los programas en la investigación marítima, la prevención y reducción de la contaminación marina que es parte de los Objetivos del Desarrollo Sostenible.

Por último, felicitamos el Proyecto del FMAM titulado “CLME+: Catalizando la Implementación del Programa de Acción Estratégica (PAE) para el Manejo Sostenible de los Recursos Marinos Vivos Compartidos de los Grandes Ecosistemas Marinos del Caribe y de la plataforma del norte de Brasil”, que apoya el manejo de los recursos marinos vivos compartidos del mar caribe, para el mejoramiento de la gobernanza y del manejo sostenible de la pesca. Apoyamos los planes de desarrollo de mares compartidos. En este contexto, considerando que nuestras relaciones con Haití, país con quien compartimos la isla Hispaniola, constituyen un eje central de su política exterior, la República Dominicana reafirma su voluntad de ampliar y fortalecer el trabajo con Haití, en todo lo concerniente a la protección de las costas, de los ecosistemas marinos y el impulso al desarrollo de proyectos conjuntos.

Kenya

We note that both IOCARIBE and IOCAFRICA share certain challenges but also successes and opportunities. For example, IOCARIBE has underscored the importance of capacity development for the region which is also the case for IOCAFRICA. Kenya therefore sees a real opportunity for collaboration between the two sub-commissions as a means for sharing of experiences and lessons learnt.

USA

The presentation shows renewed regional commitment to the Global Environment Facility project which will catalyse the implementation of the large marine ecosystem program; and we welcome the development of a new draft GEF project on coastal management in Latin America. IOC's global and regional programs are partners in co-designing programs, for example a GOOS Coastal pilot project, IODE Regional Global Academy located in Colombia, capacity development, and a renewed focus on Ciguatera in parallel with the new IOC IPHAB Ciguatera Strategy. The Caribbean Early Warning System is also a successful example of co-design, having established a robust seismic and sea level network and a commitment to build capacity to provide warning at the community level. We are also concerned with the ability to sustain a regional Caribbean Tsunami Information Center, and look forward to discussing this under the tsunami agenda item. The United States welcomes the recent proposed reinforcement of the IOCARIBE program through support of its Secretary and the expanded Colombian support to IOCARIBE's staff.

Venezuela (Bolivarian Republic of)

Aprovechamos para dar las gracias por el reconocimiento transmitido a nuestro país, entre otros de la región, por los aportes realizados en la compilación y publicación de la Carta Batimétrica Internacional del Mar Caribe y el Golfo de México.

Con relación a la recomendación a los países miembros del IOCARIBE de apoyar y participar en las actividades de la subcomisión y en los ejercicios de Alerta de tsunamis, queremos señalar que Venezuela apoya esta recomendación, que se evidencia, al haber participado en los cuatro Simulacros conjuntos Caribe Wave organizados hasta la fecha, y los cuales han contribuido significativamente a sensibilizar a las poblaciones costeras en nuestro país.

Y con igual disposición, informar que desde ahora nos aprestamos a tomar parte en el Quinto ejercicio de simulacro conjunto del Caribe 2016, así como a trabajar y colaborar con todos nuestros avances obtenidos, en materia de prevención de desastres naturales, de datos biológicos, red de mareógrafos, estaciones para detección de tsunamis, centro de información oceánológica y nuestras evaluaciones de los elementos físico-químicos, en los programas que adelanta la subcomisión, que son de gran interés para nuestro país.

GEBCO

GEBCO appreciates and congratulates the progress made by IOCARIBE on the International Bathymetric Chart of the Caribbean Sea - IBCCA.

IBCCA is one of the most advanced Regional bathymetric mapping programmes in GEBCO, and GEBCO's Sub Committee on Regional Undersea Mapping, SCRUM, takes care of IBCCA and provides scientific, technical and human network and capacity building supports.

Mr. Chairman, GEBCO continues its supports to IOCARIBE on IBCCA through GEBCO's SCRUM.

3.3.3 IOC Sub-Commission for Africa and the Adjacent Island States: 3rd Session of IOCAFRICA, 13–15 April 2015, Nairobi, Kenya

China

We have very good cooperation with IOCAFRICA and its member states in the past years. Particularly, we held the 2nd China-African Marine Science & Technology Forum from 9-10 April in Nairobi, Kenya. China would like to express our sincere appreciation to IOC Secretariat, IOCAFRICA, Kenya government, and the Chair of IOCAFRICA, and Mika, the head of regional office of IOCAFRICA, without your work and support, there would not be such fruitful outcomes in the forum.

The forum had made a lot of progress in promoting Sino-African cooperation on marine issues. We are encouraged by the enthusiasm and deeply engagement of our African counterparts. If we could read the outcome documents of the forum, we could find that the topics focus on marine S&T and beyond. We discussed some very rich areas, in which both China and our African colleagues were interested, from capacity building to human resource training, from ocean observation to blue economy. A joint coordination committee was agreed to be established to coordinate the implementation and evaluation of outcomes. It is really a pragmatic progress for China and IOC cooperation.

Meanwhile, we also notice that more work should be done in China –Africa cooperation under IOC framework; including making our cooperation more focus, explore more resources to carry out our ambitious initiatives. But China would like to continue to work with IOCAFRICA and other stakeholders to strengthen our cooperation. Due share of China's contribution to IOC will be used to capacity building in Africa. The China-Africa Marine S&T Fora would be held for further steps in the future regularly. The marine Scholarship of Chinese government will also be given to the developing country including African member states. More and more pragmatic cooperation between China and African member states are encouraged to be initiated and proposed. Generally speaking, working with IOCAFRICA would be one of priorities of China's policy to IOC cooperation.

India

We wish to compliment the Chair of IOCAFRICA for clear and excellent presentation indicating the progress on implementation of programs of IOC of common interests to the members states of the region.

India appreciates IOCAFRICA for sponsoring the trainees from the member states in the capacity building training activities being conducted under the frame work of International Training Centre for Operation oceanography.

India would like to thank IOCAFRICA for expressing commitment to take active part in various scientific programs of the Indian Ocean being planned under IIOE-2

Lastly IGOOS would be greatly benefited by active participation of IOCAFRICA.

Kenya

Kenya appreciates the role of the IOC Sub-Commission for Africa and Adjacent Island States in promoting international cooperation and capacity development. The Sub-Commission also has an important role to play in raising the visibility of the IOC in the region. However, Kenya reiterates its call for the strengthening of the Secretariat of the Sub-Commission for it to effectively support Member States of the region in the marine related programmes.

We also wish to highlight that the Assembly of Heads of State and Government of the African Union acknowledged that the ocean is essential for sustainable development and that the ocean should play a critical role in the Post-2015 Development Agenda. To this end, the Assembly of Heads of State and Government declared 2015-2025 as the Decade of African Seas and Oceans. In this decision lies an acknowledgement of the invaluable contribution of the ocean and coasts to the development of the region. Kenya therefore encourages the IOC Secretariat to build on the opportunity provided by this decision to strengthen engagement with Member States in the region. We particularly see this as a real opportunity to enhance the visibility of IOC in Africa.

South Africa

The accomplishments of IOCAFRICA thus far, would not have been possible if it was not for the generous and continuous support of our partners and collaborators. Contributions from China, Republic of Korea, The Flanders Government, Kenya, South Africa and Nigeria are much appreciated. South Africa urges all Member States to continue their support to the IOCAFRICA towards the development of the activities that have been outlined. The good cooperation that exists between WESTPAC and IOCAFRICA should be commended, and strengthened where possible.

The formation of the Sub-Commission, was a step in the right direction in-line with Africa being a priority within the UNESCO and IOC. Further support of various forms would be crucial if the Sub-Commission is to succeed. IN our role as the current Chair of IOCAFRICA, South Africa will increase its support and visibility of the work of the subcommission in Africa through engaging our partners to get African member states to undertake the spectrum of ocean research required to advance the development agenda of the Africa as oceans present a new challenge that has been unexplored in a sustainable manner. South Africa, during focused programmes like IIOE2, is looking at ways of supporting the countries along the east coast of Africa to meaningfully participate and contribute to global ocean programmes.

The future of the IOC is closely linked to its visibility at a national and regional level. To that effect we believe that the strengthening of IOCAFRICA and all other subcommissions must be taken as a priority by the Executive Secretary. As a result we should link the IOC priorities with its programme and budget that should translate to the activities undertaken by the subcommissions and other subsidiary bodies thorough re-prioritisation.

We hope that IOC, its member states and partner organizations will continue to increase their support for IOCAFRICA.

United Republic of Tanzania

IOCAfrica is doing well but because it's the youngest Sub-Commission whenever it is possible, it should learn from other Sub-Commissions that are performing successfully like the WESTPAC. We believe IOC has heard our prayers we made during our intervention to the Executive Secretary report.

To ensure sustainability of IOCAfrica Tanzania wishes to encourage member States of IOCAfrica to join hands and increase their support to IOCAfrica.

Finally, we would like to express our appreciation to all those who have supported IOCAfrica in any ways and means. Some of them have been mentioned by the IOCAfrica Chair and other Delegations. We believe that they will continue to support IOCAfrica and Africa and to strengthen cooperation because of their love to Africa and commitment to its success.

3.5 Report of the IOC (2014–2015) to the Thirty-Eighth General Conference of UNESCO

Kenya

Kenya wishes to make reference to the report that was submitted to the 37th session of the General Conference of UNESCO held in 2013. The report included useful information under the heading – challenges and lessons learnt.

We found this information particularly useful as it highlighted important issues that require the attention of Member States. This enables Member States make interventions targeted at addressing the challenges and therefore make inputs aimed at strengthening the visibility and impact of the IOC.

Based on this experience, Kenya proposes that the report to be submitted to the 38th General Conference of UNESCO concludes with a brief section on challenges and lessons learnt.

4. The Future of IOC

Australia

Australia welcomes the ongoing healthy discussion amongst member states on the mechanics and modalities of enabling the IOC to evolve in an ever changing scientific, societal and institutional landscape.

The IOC must have ways by which it can adapt and embrace these change and identify a way forward which continues to allow the IOC to perform its critical role in the UN system.

Australia in particular would like to congratulate the Chair of the Intersessional WG, Professor Peter Haugen, on the Future of the IOC on his active and strong leadership and would welcome continued involvement in this intersessional working group.

Australia would also like to congratulate the UK on their preparation of their Policy Brief 13 an 'An evaluation of the Intergovernmental Oceanographic Commission's role in global marine science and oceanography'.

Australia also commends the Secretariat and Members who prepared an excellent Annex to the resolution. However, we recommend that the annex should commence with the role of IOC and that "at the 28th Assembly of the IOC, MS have resolved to enhance the role of IOC in the emerging risk and opportunities of the world's oceans as a unique intergovernmental body with a strong scientific mission." Also, the paragraphs toward the end may be better at the commencement, as well as being repeated at the end of statement because they go to the heart of our reinvigorated mission.

Australia commends the decision before the Assembly for its adoption.

Canada

The three areas identified: rationalization of IOC's relationships with other organizations, sharpening and clarifying IOC's identity and enhancing flexibility and adaptability of IOC's governance provide a good framework around which to base change. Canada is pleased that the IOC has already taken steps to enhance the IOC in those areas, such as the Science Day to increase the visibility and discussion of science issues during the Assembly, and allocating new funding to enhancing IOC's engagement with UN agencies and to strengthen observations and data. We urge the IOC to move forward to define the details of the next steps so that substantive decisions may be taken at the 49th Session of the IOC Executive Council next year. Canada continues to urge the IOC to prioritize its activities within the context of the medium-term strategy and focus on its core mandate of coordinating and promoting standards for ocean observations and data. This is the unique characteristic feature of the IOC and provides the foundation for implementing science-based policies for the global ocean. Making this a priority will not only clarify IOC's identity but ensure its relevance to members states and international organizations. As for the message to UNESCO governing bodies and UN organizations, we suggest that it be more outcome-driven, possibly using outcomes already achieved using IOC work, in order to impress on recipients what the IOC means for them.

Chile

Al igual que muchas Delegaciones que se han expresado antes de nosotros, nos preocupa el Futuro de la COI, especialmente en el contexto de la crisis financiera que afecta a la UNESCO. En este sentido, hacemos un llamado a la Secretaría de la UNESCO, a los países miembros del Consejo Ejecutivo y también a la Conferencia General, a reconocer el irremplazable papel de la COI, asegurar la continuidad de sus programas y a relevar su rol dentro del sistema de Naciones Unidas.

Uno de los aspectos esenciales de los que se ocupa la COI es el de los desastres naturales. Después del terremoto y el tsunami que afectó a Chile el año 2010, nuestro país ha contribuido con su experiencia a mejorar los sistemas de previsión y alerta temprana. Nuestra Delegación ha señalado en repetidas oportunidades que este tema es de naturaleza operacional. En este sentido, es imprescindible que la COI continúe trabajando en el desarrollo de capacidades, lo cual va en beneficio de los países más vulnerables a estos desastres naturales y a sus habitantes.

Finalmente, quisiera anunciar ante esta Asamblea, que el Gobierno de Chile está organizando la Conferencia "Our Oceans", que se efectuará entre los días 4 y 5 de octubre de este año, en la ciudad de Valparaíso. Esta conferencia abordará cuatro temáticas de gran relevancia a nivel internacional: áreas marítimas protegidas, pesca sostenible, polución marina y acidificación de los océanos. Nuestro Gobierno ha extendido invitaciones a altas autoridades mundiales a las que esperamos dar la bienvenida en Valparaíso.

China

The future of IOC is a vital topic for everybody here. Just as described in previous paper, all of us recognized that IOC faces some challenges, both internal and external, including the decline of our importance and visibility, competition from some other international organizations and NGOs, the lack of resources, the diversity of our current priorities, the imbalance development among member states and region and so on. We should address these above mentioned challenges step by step rather than reaching the goal in one step.

Firstly, identifying our priorities and concentrating our limited resources rather than expanding our tasks imprudently. We should communicate and coordinate with other relevant organizations meanwhile avoiding duplication.

Secondly, strengthening capacity building may be a good vehicle. A Chinese old saying said that "A good blacksmith needs to toughen himself up", If we talk about future, we should have enough capacity to welcome the future.

Thirdly, balancing the relationship among governments, scientists and industry. The government more active involvement would raise the profile of IOC and increase our opportunities to get resources. Scientists are the fuel of IOC cooperation. Meanwhile industry is a new topic for us. If we observe the other international organizations, we will find out that the engagement of private sectors may be a trend. We are not sure what role they would play in IOC cooperation, but this issue may be treated seriously by us.

In all, the future of IOC is our common future. China encourage more member states to involve into the relevant discussion and cooperation operated by and beyond the sessional working group to make more contribution to the future of IOC.

France

Il est important que la COI contribue au rayonnement international des sciences océanographiques. J'invite le secrétariat exécutif à organiser une conférence annuelle du plus haut niveau scientifique, rassemblant scientifiques et parties prenantes, qui se tiendrait alternativement dans chacune de nos 5 régions.

Par ailleurs dans l'antépénultième paragraphe plutôt que « industrie » il conviendrait « secteurs économiques ».

Malaysia

We echo the views expressed by the previous speakers and also appreciate the presence of UK delegation especially for sharing with us the assessment of IOC mandates and assessment, work programmes and more importantly the way forward to improve its effectiveness.

We very well welcome the Portugal's observation on the need to expand the inter-sessional meeting on the Future of IOC beyond the current two-year cycle. We concur that member countries should take ownership and champion the IOC future instead of delegating it to the secretariat. Otherwise we might have to rewrite the paper with the new title "We (still) have the (same / bigger) problems."

Let me focus on one topic that, i.e. "visibility." There is a general feeling that there isn't enough science (and here we mean IOC) in the media, in the public policy and the budgetary and development process. We have to continue communicating our story and we must communicate it well with people outside the IOC.

Finally, Mr Chair we should also ask ourselves whether we are in the position to address and leverage the newly emerging areas. For example, how Internet of things (IoT) would affects the IOC work programmes and have we raised our capacity in managing the 'big data' on oceanography and research on marine

science. And this calls for our engagement with people outside our fields, the ICT experts, economist, development planners, etc.

Turkey

When IOC was established in 1960, it was the only UN body dealing with oceanography. Now, we can list many institutions and international organizations having the marine environment and oceanography within their mandate.

In this context, the critical questions we should be asking ourselves, should be ; Can the IOC continue to deliver satisfactorily? How can we increase its effectiveness? What can be the role of IOC among other international organizations as an “Ocean science Coordinatory Body”?

In order to answer these questions, we should always remember the unique role of the IOC that is, being the intergovernmental ocean science organization focusing on coordination, dissemination of scientific ocean data which can underpin marine science policy and governance, including Tsunami Warning Systems.

Since science is the driving force of IOC, we should focus primarily on ways and means on capacity building as well as technical cooperation. This can be achieved through enhanced involvement of Member States. Active and fruitful cooperation of IOC with international organizations would be an asset. Dissemination of the results of existing collaborative activities, as well as the possible areas for cooperation, can provide valuable opportunities to member states to make contribution.

In addition to that, since the foundation of IOC, the challenges have been increasing and strengthening, such as water quality deterioration, diminishing biological diversity as well as climate change. We have to address these issues in a holistic, realistic and comprehensive way, since they are interlinked.

Finally, the role and the visibility of IOC should be increased. We believe that IOC includes sufficient experience and expertise. Therefore, IOC can serve also as global coordinator in the field of ocean science which includes data collection, evaluation, management and capacity building.

In this context, we support the decision proposal on providing a fully developed document by IOC Officers. Moreover, we believe that this document should also include a road map for Executive Council to prepare an action plan on the future of IOC. We also think the proposals presented by Portugal are also relevant. As for the message of IOC to be transmitted to other UN organizations we have not enough chance to study on wording. However, we believe that it covers the idea that we would like to emphasize.

USA

The US would like to offer thoughts on the elements raised in the draft as just presented, as well as highlight the need for inclusion of others. The work of the Commission should be followed by aggressive and functional intersessional work. We cannot continue to burden the IOC staff and officers; rather we must look to ourselves. We the IOC member states, need to own the IOC, which can we do by conducting critical business during the intersessional period. We need to continue to execute the IOC mission outside the halls of the Commission, by conducting cruises, deploying buoys, freely exchanging data, and providing warning services. The IOC is a unique asset in the UN system; we collect, collate and cooperate on science. While it is true other groups have been increasingly involved in these issues, none of them have the direct connection to the governments of all member states. We can, and need, to demonstrate that we are a functional partner within the UN system, and we can open the door through complying with our statutory mandates, for example Article 10, and through greater involvement with other UN partners, such as the partnerships we have with IHO through GEBCO, and the WMO through JCOMM. The US would also like to stress the importance of the intergovernmental function of the IOC; we not only coordinate science; we develop capacity and help normalize the distribution of scientific excellence around the world. The United States looks forward to further consideration of these documents, and to working with the Chair and others to provide further refinement of the text.

PICES

The North Pacific Marine Science Organization (PICES) notes that the assemblage of regional marine science organizations (some of which are also intergovernmental organizations) is now very complicated. There are IOC Regional Sub Commissions, regional science organizations (e.g. PICES, ICES, IASC and many others) and Regional Fisheries Management Organizations (RFMOs). RFMOs now have concerns about how climate change may impact the fisheries they manage. As a result, the historical gap between the interests of fisheries commissions and oceanographic commissions has been much reduced.

While there is quite good short term or *ad hoc* collaboration amongst some of these groups, there is very limited joint long term strategic planning and only modest levels of medium term integration of activities. PICES is currently working on better medium term planning with some of these organizations in our region.

Part of a successful transition to a future IOC will include a clear and coherent approach to these collaborations, including with organizations that are outside of the UN system. PICES would be pleased to participate in this discussion by correspondence intersessionally. We have some examples that may be instructive.

5.1 Status Report of the IOC Global Ocean Science Report (GOSR)

Argentina

En la sección "updated timeframe", donde se detallan las acciones que se llevarían a cabo, se menciona que en diciembre de 2015 se identificarían autores para los diferentes capítulos y que se formaría una junta editorial.

Respecto de esto, en primer lugar, quisiéramos apuntar que la designación de autores y la conformación de una junta editorial no estuvo prevista en la presentación del proyecto.

Entendemos que resulta especialmente relevante conocer como se prevería llevar a cabo esta identificación de autores para los capítulos individuales y como se preve que pudiera ser la conformación de la junta editorial, considerando que este trabajo incluye la elaboración de índices de ciencia y tecnología.

Entendemos también relevante la adecuada participación gubernamental en la toma de decisiones y monitoreo del proceso, así como en la designación de los expertos, ya que somos nosotros, los Estados Miembros, los que disponemos de los expertos y que dicha intervención es parte del concepto de pertenencia y propiedad de esta COI de la que tan frecuentemente hablamos.

Adicionalmente, quisiéramos conocer el monto del presupuesto regular que se solicita para esta actividad así como la finalidad precisa para la cual se lo requiere.

Australia

Under the guidance of the Australian National Marine Science Council, our Department of Industry and Science will collate the survey responses to be returned to the IOC. This should be completed by later in 2015. We apologise for the tardiness of our response, but would like to reiterate our earlier comments on the GOSR at the last Executive Council session, and agree with the concerns expressed by the UK and others. This is by no means a trivial exercise, and to do well, requires, for Australia, an extensive whole-of-Government, and even whole-of-community, response, which takes time and resources. We hope that the end result will eventually justify this major effort at the national level.

Brazil

Concerning Global Ocean Science Report, IOC has sent a questionnaire attached to CL 2560, with the purpose to compile information related to ocean sciences at global level for evaluation and record the level of training, investment, and needs of nations in ocean science, ocean observations and services. This is a necessary starting step to prepare the report. Incidentally, GOSR may be considered an excellent tool to assess the Member States' necessities concerning to capacity building. The gaps in scientific development may be seen as an indicator to identify capacity development needs, and it can be used as a starting point to strengthen the capacity of Member States in ocean science. It is for this reason that is very important to align GOSR with capacity building.

Canada

Mme Line Beauchamp, qui nous informera de la contribution du Québec à ce rapport :

- Informe que le territoire du Québec comprend un vaste milieu marin, qui s'étend sur plus de 153 000 kilomètres carrés et que le gouvernement du Québec est pleinement conscient de ses responsabilités quant à la préservation de son intégrité écologique ;
- Rappelle que c'est dans ce contexte que le gouvernement du Québec a soutenu la mise sur pied, en 2010, de la Chaire UNESCO de l'Université du Québec à Rimouski en analyse intégrée des systèmes marins, seule chaire UNESCO du genre au Canada, et que beaucoup d'efforts ont été déployés pour apporter la contribution du gouvernement du Québec à la réponse du Canada au Rapport mondial sur les sciences océanographiques ;

- Informe que le Gouvernement du Québec annoncera officiellement sous peu la première grande stratégie maritime du Gouvernement du Québec et qu'elle sera un projet de développement durable majeur qui mobilisera un grand nombre de partenaires au Québec et dans le monde;
- Indique qu'une des pièces maîtresses de cette stratégie est la recherche et l'innovation dans tous les domaines du secteur maritime et souligne à ce titre l'importance pour le Gouvernement du Québec de la collaboration scientifique avec les centres de recherche québécois, avec les organisations fédérales canadiennes dont l'Institut Maurice-Lamontagne et les organisations internationales, notamment dans les domaines du climat et des océans ;
- Souligne que le Gouvernement du Québec est fier d'accueillir à Montréal le Secrétariat de la Convention sur la diversité biologique, le Secrétariat de Future Earth, une plate-forme de collaboration en recherche sur le développement durable et les changements climatiques,), et le Secrétariat de la Commission de coopération environnementale de l'Accord de libre-échange nord-américain ;
- Indique que la Stratégie maritime du Québec permettra de construire des ponts de collaboration scientifique avec l'Institut nordique du Québec, créé en 2015 à l'Université Laval;
- Souligne que le Gouvernement du Québec entend s'inspirer des meilleures pratiques identifiées de la COI de l'UNESCO ;
- Annonce que le Gouvernement du Québec offrira à la COI le soutien de deux chercheurs, en 2015-2016, dans le cadre de stages d'une durée de six mois chacun. Ces stages s'inscriront sous le thème du développement durable et des enjeux dans le domaine maritime.

Cependant, nous avons noté des défis importants pour répondre complètement et exactement aux questions posées. Aussi, nous partageons les suggestions de recueillir les besoins des états membre en termes de développement des capacités et de se servir de ces informations pour orienter l'achèvement du rapport.

India

India appreciated the various efforts made by IOC for preparation of a comprehensive and elaborate questionnaire on GOSR. It is questionnaire important particularly to take stock of capacities for conducting marine scientific research which are useful in terms of climate change studies. India had submitted its report on 30th March 2015 through email but not reflected in the presentation. In view of the above, it is requested that the same may be incorporated in the final report.

Republic of Korea

Republic of Korea would like to contribute to the Global Ocean Science Report as this report aims to help the scientific community, the policy makers, and the funding agencies by providing information on the status of each nation's capacity in marine science.

One most important component that enabled ROK to complete the report smoothly and on time, is the operation of Korea oceanographic commission. According to the IOC's recommendation, Korea Oceanographic Commission was established.

Since then, KOC has been playing a major role in collecting and sharing information in KOREA but also in communication between IOC and the marine institutions within KOREA.

With this well managed focal point, Korea was able to complete GOSR within a short period of time. Korea will continuously support the GOSR initiative of IOC.

United Kingdom

The UK delegation appreciates that the information being gathered by the Global Ocean Science Report will be of value to the wider community.

As the presentation to delegations showed, the UK is a significant contributor to ocean research, indeed it is our high level of activity, and the large number of institutions involved, that has delayed our contribution, it is a significant task to compile a detailed response on a national scale. For example in the UK a large portion of ocean-related research in areas related to creation of national economic benefit is carried out by private sector operators for whom detailed records of capability are less available.

Having consulted with colleagues I can confirm that the UK delegation will endeavour to provide a response to IOC Circular Letter CL2560, and we will cooperate with the secretariat to do so.

USA

Similar to the points made by the United Kingdom, the US also found it difficult to provide meaningful answers to the questions as found in the questionnaire, and we will do our best to provide more detailed and more accurate information. Further, while the scale of the survey brings us to understand what capacities may exist in Member States, the US believes it would be even more beneficial, to have an understanding of Member States' need. By identifying the needs of Member States at a defined and refined level, all Member States could be in a position to help those in need of capacity development. For example, we should look to the work of WESTPAC; Member States in the region are helping address the needs of other Member States in the region because the needs are very well stated and very well known. If we were able to take a similar approach, for example in IOCAFRICA, where the IOC has heard clear articulation from the Vice Chair and Member States of the group, there are needs not yet quantified. If we are able to identify the needs and connect them with the donors and capacity available in this way, we would be in a position to advance the cause the survey seeks to achieve. The United States also suggests that we look to extra-budgetary funds based on scale, scope, and speed of progress.

PICES

The North Pacific Marine Science Organization (PICES) is pleased to be able to support this activity. In particular, we appreciate the data-driven approaches, which should provide the way to track changes over time. We believe that this will be a very useful report and look forward to its completion.

5.2 WMO-IOC-ICSU World Climate Research Programme (WCRP): Report and Review

Republic of Korea

Korea Delegation strongly agrees the activities of WCRP. We know that climate change is the most important problem in the world. In order to mitigate global and regional climate change, the strong cooperation and collaboration between many countries are essential. In relation to IPCC AR6, the Korea Meteorological Administration, KMA will support activities of WCRP by cooperation with U.K Met-office with joining to CMIP6 (Coupled Model Intercomparison Project phase 6). Korea Delegation also welcome WCRP-IOC collaboration project, and will actively participate in related projects and activities to mitigate global climate change.

PICES

North Pacific Marine Science Organization (PICES), the International Council for the Exploration of the Sea (ICES) and the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO) have recently completed the Third International Symposium on the Effects of Climate Change on the World's Oceans. This Symposium was held in Santos, Brazil with very strong support from the Oceanographic Institute of the University of São Paulo (IOUSP) and many Brazilian agencies.

Information from this conference was presented at recent World Ocean Day events and will be presented at the upcoming Our Common Future under Climate Change conference in advance of COP-21. This information includes new understanding that has emerged from recent research as well as identification of knowledge gaps.

We note that the WCRP was a co-sponsor for the first two symposia and we would welcome them back to the planning and support for the Fourth Symposium.

5.3 Second International Indian Ocean Expedition

Australia

Australia has a proud legacy of participation in the original IIOE in the 1960s with two ships active in the expedition, and a number of scientific papers relating to the south-eastern Indian Ocean subsequently published.

The Australian marine science community enthusiastically supports the IIOE-2 and is preparing to engage in Indian Ocean research across a range of scales, local to basin-wide, and across a range of disciplines. Australia has participated actively in initial international planning for the IIOE-2, with representatives on the science plan development team and the Interim Planning Committee.

Australia has formed a National Committee to coordinate its engagement in IIOE-2, which is supported by a breadth of scientific expertise, research infrastructure and observing systems. The Australian National Committee is currently preparing a national science plan across the six themes of the IIOE-2 Science Plan as a guiding document for participation and hopes to share this Plan with other countries at the launch of IIOE-2 in Goa.

Australia is well positioned to undertake research along its 20 000 km Indian Ocean seaboard as it has leading research agencies and Universities strategically located in Perth. There are also a number of deep water Ports along the Western Australian coastline suited for docking of research vessels.

In addition, Mr Chairman, the Assembly will recall that Australia has hosted and largely funded the Perth Programme Office of the IOC since 1998, and will continue to do so through the period of the IIOE-2 at least. We are pleased to note that it is suggested for the PPO to take the lead role for the IOC in providing its project office support for this major IOC activity, in complement to the International IIOE-2 Project Office that India has very generously offered to establish and fund in Hyderabad. Australia will do everything it can to ensure and if possible expand our continuing support for the PPO in this important role.

In conclusion, Australia, as a sponsor of the draft resolution on the IIOE-2, commends it to the Assembly for adoption, and is very encourage by the overwhelming support already shown by Member States during this discussion.

Australia appreciated the acknowledgement of Dr Peter Dexter for his outstanding work for IOC and JCOMM. I would like to make comment from both a personal viewpoint and from and Australian Bureau of Meteorology perspective.

I have known Peter personally for 40 of his 50 years in the field of oceanography. I have always been highly impressed with his scientific knowledge and supreme international policy skills. He is unique in the wide range of skills and abilities. It certainly was demonstrated within WMO as a member of that organisations Secretariat over many years and his strong role in oceanography.

It was during this time that he achieved something absolutely unique in the creation, birth and growth of JCOMM. Over several years countless terms of reference, Resolutions, and guidance documents were created, the vast majority of which were lead-authored by Peter. Peter, and his counterpart in IOC, Colin Summerhayes worked tirelessly for the first meeting in 2001 and, in Peter's case, for over a decade since to ensure JCOMM worked and delivered value to the oceanographic and marine meteorological communities. An amazing legacy of foresight that hard work.

Peter also worked closely with me in the early stages of the Indian Ocean Tsunami Warning System as well as the Pacific and his expertise and quick understanding of all things international was a key to its success.

Although this is Peter's last Assembly, I, and I am sure many others, will be calling on his experience and wisdom for many years to come, but we promise not to intrude too much on his exciting retirement.

China

China welcomes the regional and international efforts to celebrate the 50th Anniversary of International Indian Ocean Expedition (IIOE), particularly by proposing, promoting the 2nd International Indian Ocean Expedition (IIOE-2). IIOE is an important project for IOC, SCOR and the ocean science itself, which defines the international collaboration spirit for oceanography development. Considering the critical importance of Indian Ocean in the global ocean and climate system, noting the relatively low level scientific understanding on the Indian Ocean and weak science-based policy and governance in the region, keeping in mind the urgent and high demands from Indian Ocean rim countries for science-based service and management, China works closely together the international community to promote IIOE-2, particularly through its hosting 10th meeting of CLIVAR Indian Ocean Panel (IOP-10), the 4th meeting of Sustainable Indian Ocean Biogeochemistry Research (SIBER-4) and the 4th meeting of Indian Ocean Observing System Resource Forum (IRF-4), in Li-Jiang in July 2013, the hosting 2nd Planning Workshop of IIOE-2 and the 2nd Scientific Workshop on the Eastern Indian Ocean Upwelling Research Initiative (EIOURI) in Qingdao in Nov. 2013, and by sending the expertise to join the IIOE Science Plan development led by SCOR and join the IOC-led IIOE-2 Interim Planning Committee.

China supports IOC's strong leadership in developing IIOE-2 implementation through the smooth and efficient international cooperation and coordination. China calls for the high attention on the role of IOC regional subsidiary body, in particular the WESPTAC and IOCAFRICA, in implementing IIOE-2. China will actively consider its participation and support for IIOE-2 implementation, together with the international community, covering the scope of research, observation, application and capacity building. China did not show up in IIOE fifty years ago. Now we are ready to work together with all the member countries to promote the IIOE-2.

Indonesia

Indonesian delegation would like to thank India, Australia and other member states or organizations that have paid much attention on the second International Indian Ocean Expedition. We think that the expedition will be beneficial, not only for member states that are surrounded by Indian Ocean, but also for all IOC member states.

Indonesia would like to support and is willing to involve in any activities related to the program on the second International Indian Ocean Expedition, especially the human capacity development.

Indonesia would also like to suggest the Organizing Committee for this expedition to always update all information regarding this program not only to IOC member states, but also to other Organization or Body related with Indian Ocean Development, such as IORA (Indian Ocean Rim Association).

Japan

Japan would like to welcome the draft Science plan and also congratulate the development of Report entitled "Strategic framework for implementation of IIOE-2", prepared by Interim Planning Committee, IPC.

Japan actively participates in IIOE-2 by sending experts to IPC and several scientific meetings, and we are pleased to inform that we will send a research vessel to the eastern Indian Ocean in December this year, approximately 3 weeks after the launch of IIOE-2. This cruise is conducted under the framework of GOOS component, named the global ocean ship based investigation program GO-SHIP, and it will contribute to eastern ocean upwelling research initiative. We also have a couple of more plans of expeditions in the Indian ocean after 2016 including ship-based oceanography and deployment of Argo floats and moorings.

Finally, Japan would like to echo the voices of Germany and U.S.A. on the importance of data management. In order to avoid losing valuable data obtained in the period of IIOE-2, special care to data management has to be taken for successful implementation of IIOE-2.

Thailand

On behalf of Thai Delegation, We are impressed with a comprehensive presentation by the Interim-Chair of the committee for the IIOE-2. We would also like to thank SCOR, IOC, IOGOOS and the Indian Government to lead the development of the IIOE-2.

Thailand, as a member of IOC-WESTPAC, has continuously implemented projects and activities in the Andaman Sea and the Bay of Bengal under the framework of WESTPAC, and we will explore more possibility with WESTPAC to contribute to the IIOE-2.

United Kingdom

The UK was part of the first International Indian Ocean Expedition in the 1960s, carrying out significant programmes of work on board the old Royal Research Ship 'Discovery'. Many members of our marine science research community are enthusiastic about being able to participate in the new Expedition, subject to winning funding through the UK's peer review process.

In particular we see that this would be an excellent opportunity to demonstrate the technological advances that have been made over the last half century, particularly in autonomous surface and sub-surface vehicles, which are much less expensive to operate than traditional research ships, and are well-suited to knowledge transfer and capacity building under UNCLOS part XIV.

The UK commends Draft Resolution IOC-28 and will support its adoption.

USA

The US believes this is indeed an opportunity; if we look back in time to the first IIO experiment, many of the Member States in this room participated. The US was among them then, and we will participate again. The opportunities afforded this time are different however, and there are a good number of programs that will continue to operate throughout the period of IIOE2 that we can build upon, and which will help us address new challenges. The US commends the Interim Planning Committee on its efforts to formulate a strategic framework for IIOE-2 Implementation and we endorse the strategic framework as a coherent approach to carrying out the program, to further existing programs, and to create new ones. The challenges that exist today are physical, chemical and biological, and will shed light on what is a global process. IIOE2 also provides the opportunity to cultivate the next generation of young scientists, create relationships amongst graduate students from various nations, and help increase capacity not only for the countries surrounding the

Indian Ocean, but beyond. The US believes IIOE2 this will be a success. The US will be able to fund 5 of 7 GO-SHIP cruises that will take place in the 2016-2020 time period; there is increasing activity in Indonesian ThroughFlow; US Repeat Hydrography; GeoTraces; East Indian Ocean Upwelling Research Initiative; and, many other activities. This will be an active period and we would like to express thanks for the level of support that has been voiced around the room, including from India, Australia and Korea, and underscore the comments made by Germany. Data and information sharing not only have high value to the IOC, but to all member states.

GEBCO

Indian Ocean is one of the poorly understood areas in terms of sea bottom topography, or bathymetry.

Less than only 2% of the entire Indian Ocean sea floor, has been surveyed with modern survey technology, in terms of publicly available data. FYI global average is some 10 %.

GEBCO wishes to establish a strong connection and collaboration with IIOE-2 and IODE, in order to improve the understanding of the shape of the sea floor of the Indian Ocean.

6.1 United Nations World Ocean Assessment

China

Regular Process under the United Nations is recognized as one of the most important global mechanism to improve the marine science-policy interface, which reviews the state of the marine environment, including socio-economic aspects.

China would congratulate on the current achievements of the first cycle of the Regular Process, and welcome the delivering of the final report in September this year. China also appreciates the technique and scientific supports of IOC to the Regular Process from the very beginning.

In the first cycle, the Regular Process focuses on establishing a baseline. In subsequent cycles, it would extend to evaluating trends, and the need for time-series data and information, new findings and methodologies will be key priority of the Regular Process. Therefore, China would like to suggest IOC to enhance its contribution to the Regular Process in the future, by sharing competent data resources, scientific findings, experiences from other science-policy programs held by IOC, e.g. the Trans-boundary Water Assessment Programme (TWAP) etc.

China attaches great importance to the improvement of marine science-policy interface all along, and have put forward efforts to the implementation of the first cycle of the Regular Process. In the future, China will support the subsequent cycles of the Regular Process and similar global programmes, and will cooperate with all the member states for further achievements on marine environment protection and science-policy interface.

India

India has a regular program to monitor and assess the water quality of the Indian seas in various aspects of water quality, pollution, etc.

In fact, India had organised a regional workshop in Chennai in January 2014 but surprisingly that was not reflected in the report presented. India hosted the eighth workshop under the auspices of the United Nations in support of the regular process for global reporting and assessment of the state of the marine environment, including socioeconomic aspects, at Chennai, India on the 27 and 28 January 2014. This was in coordination with the Division of Ocean Affairs and the Law of the Sea (DOALOS), Office of Legal Affairs, United Nations. The workshop had participation from countries in the Northern Indian Ocean, Arabian Sea, Red sea, Gulf of Aden and ROPME / RECOF areas.

It was attended by 32 delegates in person and 6 delegates over video bridge. In addition, South Asia Co-operative Environment Programme (SACEP), Sri Lanka, joined the discussion through video bridge and sent two reports for consideration while making the inventory.

The topics covered include: Biophysics & Biogeochemistry, Biodiversity & Food Security and Socio-economics & Capacity building.

Our delegation is happy to inform the Salient Conclusions drawn from the meeting as follows:

- a) Recommendations of the Workshop to be followed up proactively. Interact with individuals from Member States through organization / questionnaire;

- b) The template with inventory of assessments to be sent across to all the participants and Member States of the region for updating;
- c) Data provided under various groups must be authenticated, especially, water quality data should be subjected to quality check;
- d) Summary of the report containing results and conclusion as per the Guidelines (for Workshops) shall be submitted by the Govt. of India to DOALOS.

Republic of Korea

Identifying how marine ecosystem interacts with human activities becomes important for maintaining the healthy and productive ocean. In addition, informing the decision makers about the status of ocean health and its function is of the most importance for planning and implementation of ecosystem based management.

The republic of Korea welcomed the World Ocean Assessment initiative and has been participating actively through attending a number of expert works, as a member of bureau, and contributing a voluntary trust fund.

By doing so, Republic of Korea was able to publish the National assessment Report last year!

6.2 Revised Terms of Reference of the General Bathymetric Chart of the Oceans (GEBCO) Guiding Committee

Brazil

Brazil attributes a high importance to the GEBCO Project. It is for this reason that, in our point of view, only severe budget constraints justify the reduction of the IOC's involvement in this project. Accurate Bathymetric Survey is very important for Oceanography, principally Physical and Geological Oceanography.

Then, Brazil supports the process of review of GEBCO Project in order to consider IOC's role and involvement in the project to be carried out by a review group, which will be comprised of external experts nominated by Member States along with the chairpersons of GLOSS, GOOS, IODE, JCOMM, TOWS-WG, IOCAFRICA, IOCARIBE and WESTPAC, during the intersessional period and manifest our will to participate in this group.

Canada

Canada supports the proposal being put forward by the Chair of the sessional GEBCO WG. The deletion of 1.4 in the terms of reference should not be impediment in advancing the efforts of GEBCO. Most importantly, it allows the GEBCO project to have the flexibility to expedite the valuable work with which it has been tasked.

Canada recognizes that the General Bathymetric Chart of the Ocean (GEBCO) has been a very successful collaboration between International Hydrographic Organization (IHO) and Intergovernmental Oceanographic Commission (IOC). It clearly demonstrates and supports the inter-dependency between sound scientific hydrography and spatial data management with the advancement of ocean knowledge and ocean research.

Canada is a Member of both IHO and IOC. Canada supports and appreciates the dedication that the International Hydrographic Bureau and IHO Member States have shown in their support of GEBCO. However, Canada believes that GEBCO is and will remain a valuable organization to further the goals and objectives of the IOC. In this regard, Canada fully supports the IOC Secretariat's Action Plan recommendation for a GEBCO review. Canada hopes this review will result in a renewed commitment of guidance and support for the GEBCO program from the IOC community.

Chile

Nuestra delegación quisiera agradecer la presentación del Mandato Revisado del Comité de Orientación Mixto Conjunto OHA-COI sobre el Mapa Batimétrico General de los Océanos (GEBCO).

Estimamos que este programa es parte fundamental de los trabajos de la COI, por cuanto permite generar productos de alto impacto y que son fundamentales para la comunidad oceanográfica.

Asimismo, queremos destacar la contribución de GEBCO a la visibilidad de la COI y a la necesidad de revitalizar la relación funcional de la COI con este programa.

Sr. Presidente, finalmente quisiera señalar que nuestra Delegación se suma al consenso para la aprobación del documento relativo al mandato revisado.

China

Given the importance of GEBCO cooperation to IOC, we keep in close communication with each other on the revising of GGC TOR/ROP in the past few days. To be honest, it is really a not easy job. China also has some concern on some paragraphs of the GGC TOR/ROP, but we tried our best to compromise with relevant parties. We are so glad to see that now the gap has been narrowed gradually.

Considering the practice of consensus building in IOC, we think it is vital to address all the member states' concern when we discuss the GGC TOR/ROP. Thus we support the proposal raised by Canada, to delete the current 1.4 item to make sure we could reach consensus on the documents. It is necessary for us to consider the partnership between IOC and IHO in GEBCO cooperation from a much far-sight view when we discuss this issue.

As other member states said, GEBCO is one of most important joint programs of IOC. It is true that IOC faces some problems in involvement of GEBCO. To reactive our role, China support to operate an intersessional working group to review the IOC's work on GEBCO.

For the structure of the reviewing working group, 1) we should take into account the regional balance; 2) we should guarantee the broad involvement of relevant IOC programs and region subsidiary bodies.

Meanwhile, we think the goal of revising the GGC TOR/ROP should be strengthening the effectiveness and efficiency of GCBCO under the guide of both IOC and IHO rather than weaken them. We cannot predict the result of reviewing, but we hope we could work towards this direction.

France

Comme l'a rappelé l'OHI précédemment, le projet GEBCO a vu le jour il y a plus de 100 ans, preuve que la cartographie des océans a très pu fédérer la communauté océanographique autour d'un objectif commun. Aujourd'hui, la plupart des projets de recherche sur les océans peuvent s'appuyer sur des données de qualité élaborée dans le cadre de cette initiative.

Le but de ces efforts de révision consiste à mettre tous les moyens humains et budgétaires en phase pour que ce projet réponde pleinement aux attentes environnementales, économiques et sociétales autour des océans.

Personne dans cette assemblée n'est prêt à accepter l'éventualité que nous disposions un jour d'une meilleure cartographie de Mars ou de la lune que de nos océans.

La France soutient donc la version du texte présentée en séance aujourd'hui, ainsi que les propositions d'amendement formulées par le Canada.

India

Our delegation appreciate the proposal on the terms-of-reference prepared by the inter sessional WG. Our delegation understands the importance of accurate bathymetry of the oceans for several purposes including that for the ocean models, tsunami models, etc. Hence, our delegation appreciate the collaboration of IOC with GEBCO and request IOC to extend the support for the mapping of ocean floor. In this regard, India will be willing to cooperate with GEBCO in mapping the international waters of Indian Ocean and would like to suggest a close collaboration with IIOE-2 programme office in coordinating the mapping of Indian Ocean basin during the IIOE-2 expeditions.

Japan

Japan would like to re-emphasize the importance of GEBCO, because it significantly contributes to all IOC programmes and projects by providing precise and high-resolution topographic data, in particular, for tsunami programme high-resolution bathymetric data are crucially important in calculating the tsunami propagation over the ocean basin and also in coastal shallow regions, for example.

During the last one year, IOC collected comments from Member States by a circular letter on this issue. We do appreciate all the efforts of Secretariats of both organizations of IHO and IOC to finalize the draft taking everything well into account. Japan considers that the proposed revised consolidated texts for TOR and ROP reflect well of our thoughts and are both quite reasonable. With regard to the new text of Para 9, Japan considers the originally proposed version as given in IOC-XXVIII/2 Annex 6 has better captured the ideas proposed by GEBCO that give some flexibility in its works. Japan will be more than happy if we could agree on the previous one, but Japan will also be happy to go along with the majority on this point because we need keep going with GEBCO implementation. Regarding ROP 1.4 Japan will be happy to have it as it is,

because the better involvement of youth and next generation is one of the key challenges for the IOC and UNESCO as well.

As we have had in depth discussion on the Future of the Commission, it is one of the essential components toward our brilliant future for IOC to enhance close cooperation and collaboration with partner organizations. IHO is certainly one of the most important partners for the IOC. GEBCO is an ongoing project as a joint activity of IHO and IOC based on our Memorandum of Understandings agreed several years ago. IOC needs to keep going with our partner organizations including IHO. Along this line, Japan emphasizes the importance of constructive, positive discussions in this regard toward our common goals.

Malaysia

Malaysia is both a member to IOC and IHO.

In our observation, due to financial constraints, IOC has ceased its funding assistance to GEBCO since 2010; during this period, IHO has been relentlessly supporting GEBCO related activities.

Therefore, Malaysia feels due to the importance of GEBCO project to IOC programmes, it should start to seriously seek extra budgetary funding support for GEBCO projects.

Probably as an interim measure, IOC or IHO might want to refocus the area of GEBCO studies of which are deemed detrimental to current environmental situation. In doing so probably IOC can seriously consider funding allocation.

Republic of Korea

We found one point unreasonable and problematic in the revised proposal of GEBCO ToR and RoP, the Rules of Procedure 1.4. In this regard, the Republic of Korea supports the suggestion of Canada, Germany, UK, China, Portugal, Turkey and many other member states who proposed the complete deletion of Rules of Procedure 1.4.

Turkey

For example International Commission for Scientific Exploration of Mediterranean (CIESM) has greatly benefited from GEBCO products for preparation international bathymetric charts of ocean overlay sheets for Mediterranean, such as bathymetry, seismic gravity, magnetic and soft sediments maps. Therefore, we think that IOC should continue to support GEBCO.

In addition, regarding the TOR of GEBCO we also support the Canada's proposal in the spirit of compromise.

GEBCO

GEBCO Guiding Committee appreciates IOC Assembly and its Chair, Intersessional WG and its Chair for their hard work to revise the ToR and RoP of GEBCO Guiding Committee.

GEBCO Guiding Committee will work hard to timely respond the requirement tasked to GEBCO under revised ToR/RoP.

Taking this opportunity GEBCO Guiding Committee wishes to inform that all the works of GEBCO are made by voluntary work of the members participating GEBCO project. The Chair of GEBCO Guiding Committee appreciates if the Member States understand this situation and further support the activity of GEBCO.

7.1.1 Global Ocean Observing System

Australia

GOOS is one of the most important IOC programs from a Canadian perspective. Canada contributes:

- Buoy data to the WMO Global Telecommunications System (GTS)
- Deploys ARGO floats and supplies data.
- Contributes to the Global Sea Level Observing System (GLOSS)
- The Oceans Tracking Network (OTN) is a Canadian-led contribution.
- Monitoring programs on the eastern Canadian shelf and slope (AZMP), in the Labrador Sea (AZOMP) and in the NE Pacific (line P). Data from these programs are contributed to IODE databases (i.e. GOSHIP, Climate database)

Canada notes with appreciation the voluntary contributions of the US, EU and Australia to support the GOOS biogeochemical and biology / ecosystem panel and also notes the fragility of this support. Canada urges that sustainable strategies be developed to sustain these panels so that these important variables for ocean health and management benefit from the same standardization and coordination that the physical and climate variables benefit from.

Canada

Australia has been a strong supporter of and contributor to GOOS from its inception, and we will continue to maintain this support into the future, within the limits of our resources.

This being said, however, we need to point out that the current Australian support for GOOS Biology is for 2 years only, and sadly there is a high likelihood that continuation of this support will not be feasible. We would emphasise that this commitment was provided as a vital contribution to starting the mission of the next Biology Panel and cannot be seen as an ongoing contribution. However, there do exist other possibilities for some alternative support, and we will keep the GSC informed on this issue.

At the same time, Australia will continue its contributions in a number of key roles in GOOS, in particular: Co-Chair SC, Deputy Chair GRA Council, Co-Chair Biology Panel, Co-Chair OOPC, Member of the SC.

Mr Chairman, we must also caution that there continues to be some fragility around funding for our operational contribution to GOOS. The Australian Integrated Marine Observing System has recently been re-funded for 2015-16 with the promise of this or marginally more in 2016-7, and the potential for a 7-year commitment subject to a Government review of Research Infrastructure, due to be handed down soon. However none of this is yet secure.

Despite these concerns, Mr Chairman, we would reiterate that Australia remains a strong supporter of and hopefully contributor to GOOS in the years to come.

India

India would continue to promote augmentation of Ocean observation network for augmentation of met-oceanographic data from the Indian Ocean under the framework of IOGOOS primarily through national, regional, and bi-lateral programmes.

India has established a comprehensive Ocean Observing System consisting of moored data buoys, Argo floats, Gliders, Ship based measurements, Drifters, Current meter moorings, ADCP moorings, wave rider buoys, XBT transects, besides making measurements through conventional methods. Govt. of India has committed to support these observing systems and maintain them as long term observing systems as a contribution to Indoos, meeting the objectives of GOOS.

In addition, we would like to inform that India continues to work with NOAA USA in maintaining the Research Moored Array of Africa-Asia-Australia Monsoon Analysis and prediction, RAMA, in the Indian Ocean. Till now, 70% of the planned 46 moorings envisaged under this programme have been established. India contributes to this programme by providing 60 days of ship time every year and by providing other logistic support. These moorings deployed in the tropical Indian Ocean and the ones deployed by India in the upper Indian ocean are providing surface Met ocean parameters and subsurface parameters like temperature, salinity and currents at different depths. India is also committed to strengthen the satellite missions for ocean applications. The data from OCM, OSCAT, Saral Altika are being shared with all researchers. However, there are a number of challenges being faced currently in the implementation of Observation network the major ones being vandalism of moored buoys and piracy in the western Arabian Sea because of which we are unable to establish the planned moorings in that region.

Mr. Chairman, India is committed to continue to support the IndOOS of IOGOOS and also continue to host Secretariat of IOGOOS. Indian Ocean basin during the IIOE-2 expeditions.

Japan

Japan greatly appreciates the work of GOOS Steering Committee to develop a direction of internationally coordinated ocean observations. GOOS is one of the most important frameworks in IOC, to construct and enhance international cooperation and coordination on ocean research, observations, and data exchange.

Japan has been actively participating in GOOS through the various international programs such as Argo, the Global Ocean Ship-Based Hydrographic Investigations Program (GO-SHIP) and the Global Sea Level Observing System (GLOSS). In addition, Japan plays a leading role in NEAR-GOOS through the operation of the regional database, and it will be our pleasure to host the next NEAR-GOOS coordinating committee in Japan this year. We wish to continue our contributions to GOOS in the future.

Republic of Korea

The GOOS Project is key to implementing the IOC Medium-Term Strategy for 2014-2021 and achieving the priority goals. The Republic of Korea has also been contributing to the GOOS Project by participating in the GOOS Regional Alliance, IODE, JCOMM and so forth. However, in order to practically achieve the objectives of the GOOS Project, more active participation from the Member States is required, and efforts are needed to make the achievements benefit all Member States. In addition, it is necessary to activate the area where practical cooperations are not properly taking place due to national peculiarities or differential capabilities. The Republic of Korea will continue to support the activities of the GOOS projects.

Thailand

We do concern about the role of ocean on climate change and ocean process, as it has various impacts on coastal marine ecosystems, such as coral bleaching, hypoxia, storm surge, as well as its impacts on livelihood on coastal community and economy of country.

Thailand works very closely with the WESTPAC Member States in SEAGOOS as the host for the SEAGOOS office and Chair.

The SEAGOOS's Project serves not only the Member States, but also contribute and work with the neighbouring region, such as monsoon research, ocean forecasting, and ocean acidification.

Thailand will ensure our strong contribution to the project and programme of SEAGOOS and support the collaboration of SEAGOOS with the GOOS at global level.

Turkey

As we all know, the continuous time series of data from the ocean is the most important parameter for ocean science and global climate change.

In this regard, GOOS activities play significant role at global level on coordination of collecting and presenting data in a user friendly way amongst countries.

We believe that regional efforts and alliances are the critical for GOOS activities to be implemented more efficiently.

In this context, we would like to say that Turkey has recently deployed 5 more ocean observation buoys in the Black Sea, Aegean Sea and Eastern Mediterranean. In addition to these stations, two HF radar systems were deployed at the Black Sea entrance of the Strait of Istanbul to measure the surface currents, waves and winds and 5 ARGO floats were also deployed in Black Sea and Eastern Mediterranean as well.

Ocean Observation is defined as one of the High Level Objectives of Turkish Marine Research Strategy Document which was approved by the Council of Ministries in September 2014.

Through national marine research institutes, we have been also continuing to support the regional GOOS activities and working in close collaboration with other regional initiations and countries. We would like to express our commitment that Turkey will be continuing to contribute to GOOS activities in the future.

USA

We note that Dr. Byun's opening statement and Professor Blivi's interventions have emphasized that each of the regional workshops on operational oceanography focused on the central role of GOOS to IOC programs and the high priority for capacity building to deliver the benefits of GOOS globally. The US commends GOOS for its work in recent years to reorganize its program around the Framework for Ocean Observing. In particular the advent of "development projects" such as TPOS2020 and DOOS has engaged the scientific community and expanded the breadth and innovation in GOOS. The United States agrees that communication is a critical mechanism to inform Member States and the UN system of IOC's fundamental role in ocean observations and science for sustainable development. These efforts require that member states invest directly and locally in the diversified secretariat efforts that support the projects. We would also like to thank Zdenka Willis of the U.S. Integrated Ocean Observing System for her leadership of the GOOS Regional Alliances which are documenting the capabilities and needs of the GOOS Regional Alliances. Currently NOAA contributes around 50% of all in-situ open ocean observations to help the world better understand climate variability, improve climate predictions, and provide critical information for policy- and decision-making. While driven primarily by climate research and operational needs, observations supported by the United States address many other requirements, including weather, fisheries, energy, transportation, safety, and national defense. The US/NOAA will strive to continue to maintain its contributions to GOOS programs (Argo, Global Drifting Buoys, Ocean-SITES, the VOS/XBT program, and others). The US National

Science Foundation and NOAA will continue to collaborate on implementing the US contributions to the Global Ocean Ship-based Hydrographic Investigations Program (GO-SHIP).

PICES

North Pacific Marine Science Organization (PICES) has initiated an Advisory Panel on North Pacific Coastal Ocean Observing Systems.

This expert group will:

1. Develop and advise about best practices for coastal ocean observing systems
2. Convene workshops/sessions to engage those involved in coastal ocean observing systems from around the North Pacific;
3. Advise on linkages between coastal and open ocean observing systems.

One focus area will include cabled observatories, which are an important emerging technology for sustained observations and research.

There is an opportunity for IOC participation through *ex-officio* membership.

7.1.2 WMO-ICSU-IOC-UNEP Global Climate Observing System (GCOS)

Canada

Recent efforts, by the Department of Fisheries and Oceans Canada's Climate Adaptation Program, highlights the importance of climate data. This program relied on decades of sustained observations to complete risk assessments for each of Canada's three Oceans and a fourth assessment on its major inland waters. The subsequent vulnerability analysis was used to identify the Department's most climate sensitive decisions. By consulting stakeholders about the decisions they needed to make to adapt to climate change, we were able to better target our resources and the development of adaptation tools. Canada notes and applauds the collaborative nature of GCOS. The need for standardized and integrated global climate data sets has never been greater.

7.1.3 Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM)

Australia

Australia recognizes that JCOMM has made, and will continue to make, a major contribution to IOC across all of IOC's high level objectives. We note that some relevant new JCOMM activities of importance to Member States, to further emphasise those presented by Prof Pinardi in her report, include new observing system initiatives such as instrumented submarine cables and gliders, (as demonstrated during the panel discussion on the science day), ocean forecasting, a range of Capacity Development activities in observations and services, and the Coastal Inundation Forecast Demonstration Project. Australia also expresses its appreciation to China for establishing and operating the CMOC. In this context, Australia supports the draft text and draft Decisions.

We note that JCOMM has important activities in the Indian Ocean, in terms of the in situ observing systems, product development and service delivery. As we all know, the IIOE-2 is a major scientific endeavour, with likely legacy benefits across the board, including for JCOMM, and it also provides a great platform for JCOMM to demonstrate what it is capable of in supporting a major project of a parent Organization. We hope that JCOMM will be able to strengthen its involvement in the IIOE-2, in the development of the implementation plan, from the initial stages next year, and as this expedition develops and grows over the ensuing half decade.

China

We appreciate the valuable support from New Zealand, Australia, Japan, Korea, US and other Member States. As the key component of Marine Climate Data System (MCDS), CMOCs will support to the effectively integration of global oceanographic and marine meteorological observations of real-time, near-real-time, and delayed mode, and the operational availability of the data, metadata and information. China has worked closely with JCOMM since it formally submitted Statement of Commitment to WMO and IOC in Feb. 2012. We would like to take this opportunity to express once again our great thankfulness to WMO, IOC, and JCOMM for the guidance and assistance to us. Especially, we highly appreciate the valuable comments and

suggestions from the representatives of member states on the development of CMOC/China at the JCOMM side event at the margin of Assembly.

Here, I would like to reaffirm the willingness of China to establish CMOC/China. Chinese government will continue to support the development of CMOC/China, to promote the effective integration of global oceanographic and marine meteorological data and their free and open access, to promote the implementation of MCDS, and to provide effective services to the member states.

Secondly, China is also operating another working infrastructure under JCOMM framework, namely Asia-Pacific Regional Marine Instrument Center (RMIC for short), in which a lot of capacity building activities were held. The contribution and involvement of other member states is appreciated very much. China also would like to encourage member states to participate the RIMC cooperation more actively. Meanwhile given there will be 6 RMICs around the world, how to strengthen the coordination and communication among these bodies, to share the information, experiences and resources, and avoid duplication should be considered by JCOMM, may be a task force could be built in JCOMM to guide the development of RMICs. We particularly welcome and look forward the guidance of IOC

Japan

Japan highly appreciates the support provided by the IOC Secretariat and Member States to JCOMM activities in the time of financial difficulties. JCOMM plays key roles in coordinating international ocean services, observations, and data management. Japan considers that continuous supports should be provided to JCOMM activities in close cooperation with WMO.

Japan would like to welcome the establishment of a Centre for Marine-Meteorological and Oceanographic Climate Data (CMOC) at the National Marine Data and Information Service (NMDIS) in China. We hope that CMOC will be operated successfully under the cooperation with International Oceanographic Data and Information Exchange (IODE).

New Zealand

New Zealand recognises and commends the huge steps forward IOC and WMO have made with the inception and evolution of JCOMM and the functionality it now provides for operational Met-Oceanographic activities. Firstly, we would like to add our acknowledgement to those noted on Friday for the legacy of Dr Peter Dexter and his role in enabling JCOMM and in leading and advising it.

Regarding ongoing JCOMM evolution, we particularly note two points.

The first is that one of the pillars of JCOMM is the observation and data infrastructure that underpins it. It has been noted that the majority of contributing networks still depend on research funding and that the lack of sustained funding models for the networks continues to be a risk for the system. We share this concern and the consequent need for member states to make provisions for long-term operational expenditure that support these networks and data management systems.

The second is the benefits that ensue from stimulating and co-ordinating efforts at the regional level. In this regard the regional GOOS alliances, Ocean Data and Information Networks, the growing network of WMO-IOC Regional Marine Instrument Centres (RMICs), and also the concept of a network of Centres for Marine-Meteorological and Oceanographic Climate Data (CMOCs) are to be encouraged and supported. On the latter we support the initiative of China in putting forward the proposal for a CMOC at the National Marine Data and Information Service (NMDIS) of the State Administration in Tianjin and look forward to its establishment and full implementation.

Republic of Korea

Korean Delegation continues its strong support for JCOMM. Korea acknowledge its critical role to bridge meteorological and oceanographic communities, and in particular, to develop oceanographic and marine services for society.

Korean delegation welcomes the JCOMM initiative to endeavor standardization of various marine observation and data through regional efforts. So, Korean Delegation welcome CMOCs of China and Morocco's proposal for a RMICs for RA 1 region, and will actively participate in related activities to share marine technologies.

Republic of Korea is also supporting the activities and endeavors to develop capacity building program.

In particular, the Korea Meteorological Administration, KMA provides various educational and training courses for example, ICT, ODA, KOICA program to those developing countries every year. However, most of

participants requires to help them establish an operational ocean prediction system which they can actually produce practical forecasts for currents, waves and storm surges and so on.

Therefore, Korean delegation would like to emphasize to have interests for capacity building program to build an operational ocean prediction system tailor-made for each developing countries through the assistance of the nations possessing operational ocean forecasting systems.

7.2.1 International Oceanographic Data and Information Exchange: 23rd Session of IODE, 17–20 March 2015, Bruges, Belgium

Canada

Canada praises the leadership of the IODE Secretariat for its recent discussions on the future of IODE in Bruges. We also wish to acknowledge the contribution of Canada's Mr. Bob Keeley to those discussions.

Our delegation wishes to acknowledge the recent successes of the Ocean Data Portal Project and to reconfirm Canada's commitment to allocate leadership from the Department of Fisheries and Oceans Canada to this important project.

Canada is pleased to host a National Ocean Data Centre and applauds the development of the Associate Data Units, including the recent addition of Canada's Ocean Tracking Network. The ADUs are a welcome addition to the data management community and will help to ensure broader adherence to standards for data collection, management and exchange. ADUs will be very useful in funneling non-standard data, like biodiversity data, into managed databases like OBIS".

Chile

Permítame agradecer por la presentación de este informe. Se aprecia que las agendas de las reuniones de IODE consideran algunos temas que bien podrían priorizarse para centrarse en los tópicos propios de la razón de existir de este Comité, así como también se aprecia una atomización de grupos de expertos que hacen compleja y poco eficiente su control y administración. Es por ello que concordamos con la necesidad de llevar a cabo un estudio que genere las bases para una reestructuración de IODE para que este se focalice principalmente en su rol principal sin la necesidad de abarcar otras líneas que afecten su efectividad y eficiencia

India

The NODC of India, designated as Responsible national Oceanographic Data Centre (RNODC) for the Indian Ocean by IODE, is mandated with acquisition and archival of multi-disciplinary marine data, which receives voluminous oceanographic data in real time, from a variety of both in-situ and remote sensing observing systems.

The RNODC provides data and information on physical, chemical, and biological oceanographic parameters on spatial and temporal domains being collected, as part of IndOOS that is vital for research and operational oceanography.

RNODC also serves as, Regional Argo Data Centre, and also the regional data centre and clearing house for the Indian Ocean region for the IOGOOS Programmes. A special data centre to mirror the OBIS data also has been set at the data centre.

As part of the IODE/IOC's Ocean Teacher Global Academy, INCOIS/India jointly conducted a training programme on "Ocean Colour Remote Sensing- Data Processing and Applications" during November 2014. India has also agreed to be one of the regional training nodes for the Ocean Teacher Global Academy.

India would like to continue to support the activities of IODE and continue to participate actively in the programmes on data management and capacity building.

Japan

Japan has been continuously and actively participating in the international oceanographic data and information exchange (IODC) since the 1960s. IODE is certainly one of the flagship programmes of IOC. It is quite timely for IODE to start discussions on restructuring its projects and governing structure, taking fully into account the present emerging requirements to IODE in oceanographic data and information management.

Japan would like to raise the issue which Japan has repeatedly pointed out in the previous General Assemblies and Executive council meetings. While IODE seriously needs to consider how to meet the recent requirements from marine science and service communities regarding oceanographic data and information management, IODE should continue to pay well attention to the function of secure archive of ocean data and information, as the essential task of IODE.

Malaysia

Malaysia has been giving and will continue to give its full support to IODE activities in Ocean Data Information Network for the Western Region (ODINWESTPAC), cooperation in the area of capacity building, coastal management, ocean observation, advancement of technologies and innovations in marine science and oceanography.

Notwithstanding the scarcity of fund to IOC programs and acknowledging of late the calamities seems to occur at the Western Pacific Region, Malaysia is of the opinion that rendering and sharing of recent data and not historical data should be in perpetuity with scientist from Western Pacific Regions so that meaningful model or necessary studies can be undertaken.

South Africa

We would like to thank the outgoing co-chairs for the initiatives of bringing training to the regions and further urge engagement with the member states in the respective regions to customize the training for the regional needs. We believe it is a good initiative for member states to utilize a common platform for their marine data and information exchange and management.

We would particularly like to thank the IODE for the recent ICAN-7 workshop that was hosted in Cape Town. We believe the workshop was successful and we will reap the fruits of this training in the near future.

We also welcome the initiative to set up the Regional Training Centres, such as the one earmarked for South Africa and believe consultation and cooperation in this regard is vital in order to make these training centres very effective and functional towards producing relevant products to inform policymakers.

The IODE's OceanTeacher Global Academy comes at the time when South Africa is establishing an Operational Oceanography Training Centre in Cape Town, and we would endeavour to rationalize these two initiatives in order to enhance capacity Development in our region.

Turkey

Because an effectively coordinated and managed data and information is the keystone for the success of the high level objectives stated in the IOC Mid-term Strategy, it is very crucial for IOC to continue its support to IODE with an increasing degree.

We would like to put a special emphasis on the importance of the regional networks of IODE, since they are very efficient way for capacity building, data and information management at the regional level which enables IODE to success its global objectives.

In this context, with a close collaboration with ODINBLACKSEA countries, we believe that BlackSea oceanographic data and information network will be enhanced within the next two years period and we have already started working on this issue.

Finally, we believe that IODE must be the global umbrella on ocean data and information management and must be promoted globally.

GEBCO

Because GeBCO does have a function of data management, GGC wishes to strengthen its relationship with IODE.

POGO

The Partnership for Observation of the Global Oceans (POGO) has enjoyed a fruitful and mutually beneficial relationship with IODE for many years. The NF-POGO Centre of Excellence in observational oceanography has included a module on data management since 2009, initially at the Bermuda Institute of Ocean Science and, as of this year, at the Alfred Wegener Institute for Polar and Marine Research in Germany. POGO is also interested in collaborating with IODE in the establishment and use of its Regional Training Centres.

Resources are becoming more scarce, in particular for capacity building. There also seems to be a growing number of fragmented and sometimes duplicative activities carried out by different organisations. There is therefore an urgent need for us to communicate and work together to pool our resources and make more efficient use of them. POGO strongly believes that working more closely with IOC and its project offices for IODE and GOOS to coordinate our efforts would be beneficial to all parties as well as to the community at large.

This process has already been initiated through platforms such as Oceans United and Blue Planet, which bring together many organisations involved in marine science, ocean observations, capacity building, public outreach and ocean literacy. We invite IOC and its projects to continue to participate in these forums and to work with POGO to improve the coordination of our activities.

8.1.1 Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System: 26th Session of ICG/PTWS, 22–24 April 2015, Hawaii, USA

Chile

Chile ha participado de manera activa e ininterrumpida en el Sistema de Alerta contra Tsunamis del Pacífico desde sus orígenes. Nuestro país ha trabajado intensamente con el apoyo de nuestro Gobierno y también se ha beneficiado de la transferencia de experiencia y el apoyo de la comunidad internacional para el establecimiento de un sistema nacional que emplea alta tecnología, el que continuaremos desarrollando y perfeccionando.

Chile quiere poner su experiencia en esta materia crítica, a disposición de los países que se encuentren progresando en el establecimiento de sus sistemas nacionales de Alerta contra Tsunamis.

China

China would like to express appreciation to the progress and achievements made by the ICG-PTWS in the past intersessional period. As a member state of ICG/PTWS, China believes that close coordination and cooperation among the Member States could help build stronger and more sustainable regional tsunami warning system. In this regard, China was seeking approaches to make more contributions to the PTWS and collaborating with the South China Sea Member States to build the SCS sub-regional tsunami warning and mitigation system. And we are glad to see that the SCS Member States have actively involved and made contribution to the system. This year in February, the 4th SCS Regional Working Group Meeting was hosted by Indonesia BMKG. The performance indicators and the SCS tsunami advisory products were discussed and some of them were confirmed and approved.

In the past year, the ICG/PTWS and IOC secretariat gave strong support to the establishment of the SCS tsunami warning and mitigation system. This year, a high-level experts meeting, which is initiated and co-sponsored by IOC secretariat and SOA, will be held in China with the main purpose of clarify potential seismic sources and assess tsunami risk and hazard in the SCS region. The outcomes of this meeting will serve to articulate the tsunami hazards and identify existing observational gaps in this region.

Finally, we would like to request the ICG/PTWS and IOC secretariat continue support to the establishment of a SCS tsunami warning and mitigation system under the framework of ICG/PTWS.

Colombia

Colombia agradece y felicita las presentaciones realizadas por los directores regionales de los sistemas de alerta que muestran el gran trabajo que ha realizado la IOC a lo largo del mundo y también la visibilidad que este programa le da a nuestra organización. Es algo que las personas cuando hacen los ejercicios anuales de simulacro o los científicos cuando desarrollan sus modelos reconocen por igual: el gran papel que tiene la IOC. Tuvimos la oportunidad de participar en la celebración de los 50 años de PTWS y también en el Caribe EWS y recordamos la importancia que se dio al apoyo de la creación de capacidades nacionales en los países de las distintas regiones, también recordamos que los países queríamos conocer en esas reuniones el proyecto del centro de asesoramiento al que se refiere el numeral tres para entender su vinculación y diseño de enlaces con los países, las organizaciones regionales y subregionales ya existentes. La respuesta en esas reuniones fue que el proyecto se encontraba en diseño y construcción y que sería presentado en el futuro, razón por la cual me permito sugerir que en la redacción de este numeral reemplace "Welcomes" por "taking note".

Japan

Japan recognizes the 50th anniversary of the Pacific Tsunami Warning and Mitigation System, and appreciates the long-standing efforts of everybody involved in maintaining seismic and sea level monitoring networks and providing tsunami information.

Japan also congratulates the Pacific Tsunami Warning Center (PTWC) on the completion of its transition to new enhanced products in October 2014.

Japan is pleased to inform member states that the Northwest Pacific Tsunami Advisory Center (NWPTAC) also plans to enhance its products, as reported by the ICG/PTWS chair, with a 2018 target for complete transition. Japan will proceed with its development of enhanced products reflecting the requirements of member states.

Republic of Korea

Korea delegation would like to inform member states that the Korea Meteorological Administration, KMA is carrying out the research project to prepare for large-scale Tsunami from the Pacific Ocean. In this regard, the KMA is developing the prediction system of Tsunami when earthquakes occur in the Pacific Ocean, which uses the latest unstructure grid model such as FVCOM and will be completed at the end of the 2016.

So, Korea would like to suggest that each country under the influence of Tsunami share the experiences regarding the establishment and operation of the Tsunami warning system to effectively response to Tsunami. If it is needed, Korea will provide other countries affected by Tsunami in the Pacific ocean with outcomes from our Tsunami prediction system.

Thailand

As a result of the Indian Ocean Tsunami in December in 2004, Thailand has suffered the loss of lives and economic. Since then, we have developed a multi-hazard National Disaster Warning Center since early 2005.

We installed siren warning towers for more than 300 units and also deployed tsunameters in the middle of the Andaman Sea and in the EEZ zone of Thai waters. The data has been sharing through the IOC tsunami warning communities.

Thailand realized the importance of the vigilant efforts of tsunami and other natural disaster warning. We reaffirm our commitment to continue supporting and active participating in the Indian Ocean Tsunami Warning Systems.

8.1.2 Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System: 10th Session of ICG/IOTWS, 24–26 March 2015, Muscat, Oman

Australia

Australia notes many achievements in the last 10 years for IOTWS, CARRIBE EWS and NEAM TWS and 50 years of PTWS, as recognised by commemorative conferences and symposiums that highlight remaining gaps and future directions.

Australia strongly supports the added regional focus by IOTWS, PTWS, CARIBE EWS and NEAMTWS towards developing community awareness and preparedness to ensure appropriate and effective community responses to tsunami warnings, as identified as an area requiring additional activity by various conference and symposium reviews.

Australia is supportive of the importance of the sustainability of all these early warning systems and we note the concerns expressed by all ICGs in this regard.

Australia will continue to provide funding support to the ICG/IOTWS Secretariat as well as ongoing funding and maintenance of the extensive seismic, deep ocean tsunami buoys and sea level networks in the Indian Ocean and the Pacific Ocean.

Australia also notes the outcomes of final roundup session of German-Indonesia cooperation on Tsunami Early Warning System 2005 – 2014 (24-27, March 2014, Jakarta, Indonesia) and welcomes the offer of GFZ to continue to support the IOTWS.

Australia welcomes and encourages the development of performance indicators for all aspects of tsunami warning and mitigation systems to be able to better monitor status and determine resource requirements across all activities, including risk assessment, warning, disaster management and community preparedness. This is for not only tsunami warning information itself, but also the support and development of mitigation measures (whilst not monitoring country performance per se, but programme performance at supporting national efforts as is appropriate). Australia also recognises the engagement of Member states and their communities in preparedness.

The TOWS-WG has proven to be a very successful and essential mechanism for ensuring coordination and information exchange, leading to mutually beneficial developments and harmonisation of tsunami warning systems across the world.

The strong support of the IOC Secretariat has been essential throughout the last 10 years, especially Mr Tony Elliott for the ICG/IOTWS. Australia also recognises the outstanding work of the Chairs of the ICG/IOTWS, including Mr Rick Bailey.

Australia congratulates the TOWS Working Group under the leadership of IOC Vice-chair Professor Michida, its Task Teams, and all four Intergovernmental Coordination Groups involved in the development, harmonisation and implementation of tsunami warning and mitigation systems around the world.

Whilst much work still remains in building community preparedness and the further development of tsunami warning capabilities for all four tsunami warning and mitigation systems in support of the Sendai Framework for Disaster Risk Reduction 2015-30, there have been many achievements and milestones, as recognised by the International Conference to Commemorate the 10th Anniversary of the Indian Ocean Tsunami and the International Tsunami Symposium Commemorating 50th Anniversary of the Pacific Tsunami Warning and Mitigation System: Making the Pacific Ready for the Tsunami Threat".

India

India has been making important contributions to the IOTWS by establishing seismic & sea-level networks, setting up of a tsunami warning centre, serving as one of the Tsunami Service Providers of IOTWS, contributing to capacity building initiatives of the IOTWS by hosting SOP workshops, contributing to the Communications tests and Wave exercises and through the active involvement in the regional & global tsunami warning initiatives led by the IOC.

India recognizes the challenges faced by the IOTWS at this critical juncture as it is important to maintain the warning systems at same levels. On the occasion of the completion of 10 years of Indian Ocean Tsunami, Government of India is committed to maintain the tsunami warning system, its subsystems like sea level gauge network, seismic network, tsunami buoy network, etc. as permanent observing systems.

The tsunami early warning center at INCOIS in India has been multiplied as a multi-hazard early warning centre by integrating the storm surge prediction system utilizing the same infrastructure and sea level monitoring stations. We shall be glad to help the member states in developing multi-hazard warning systems in their countries.

We believe that, the tsunami early warning systems around the world are successful due to the coordination and leadership provided by IOC. We would like to argue that the same level of coordination and leadership should remain in place at same level in future also.

Indonesia

Indonesia would like to continue the supports and involve in any activities related to the program on the IOTWS, particularly in issue on increasing the resilience of maritime nation for sustainable development as well as improving the Capacity Building for Tsunami detection warning that lead by the BMKG (Indonesian Agency for Meteorology, Climatology and Geophysics).

Malaysia

Malaysia would like to take this opportunity to inform that Malaysia has enhanced the Malaysian Tsunami Early Warning System by developing the Decision and Dissemination Support System (DADs) for the issuance of bulletins and alerts to the disaster management agencies and the media within 10 minutes from the time of the earthquake event.

The dissemination of earthquake information and tsunami warning is done via various channels such as SMS, hotline, internet including the social media, e-mail, phone and telefax. All earthquake information and warnings are also posted on the Malaysian Meteorological Department's website and the National Security Council Disaster Portal.

By the end of 2014, Malaysian Meteorological Department has installed another 30 sirens throughout the country making a total of 53 sirens in the Siren Network. By the end of 2015, another 8 seismic weak motion stations will be added to the existing 17 stations.

Apart than that, a total of 13 tsunami drills have been conducted by Malaysia since 2006 including taking part in the IOWave Exercises.

In 2012, the National Security Council has produced a National Tsunami Disaster Management SOP and a National Earthquake Disaster Management SOP to manage earthquake and tsunami disasters in the country. Various institutions of higher learning and universities have also undertaken studies on tsunami such as Resiliency to Tsunami Disaster Through Community-Based Disaster Preparedness and Development of Tsunami Emergency Response Plan.

Malaysia will continue to ensure that all disaster warnings can be disseminated effectively and timely to the public. This will require continuous upgrading and expansion of the various monitoring, analysis and decision-making systems as well as close cooperation of all disaster management agencies.

ESCAP

The United Nations Economic and Social Commission for Asia and the Pacific - ESCAP – is very pleased to partner with IOC-UNESCO in building resilience to tsunamis and other coastal hazards. Since 2005, ESCAP through its Multi-Donor Trust Fund for Tsunami, Disaster and Climate Preparedness has worked with IOC-UNESCO to support the strengthening of tsunami early warning especially in the Indian Ocean. In this regard, we were proud to be among the partners supporting the establishment of the Indian Ocean Tsunami Warning and Mitigation System - the IOTWS. This regional support has been complemented by multiple initiatives to strengthen tsunami warning capacities at the national level, in Bangladesh, Indonesia, the Maldives, Myanmar, the Philippines, and Sri Lanka, to name a few countries.

The ESCAP Trust Fund was established in 2005 with generous support from Thailand and Sweden. Later, Bangladesh, Germany, India, Japan, Nepal, the Philippines and Turkey have all joined as donors.

Since the Indian Ocean tsunami in 2004, the ESCAP Trust Fund has supported several projects implemented by IOC-UNESCO, to strengthen SOPs for tsunami early warning, to prepare and implement guidelines for tsunami exercises, and to generate greater awareness of tsunami risk. Let me briefly highlight a few ongoing initiatives where ESCAP and IOC-UNESCO have been working together to support member States in building resilience.

Leading up to the IOTWS becoming operational in 2011, IOC-UNESCO and ESCAP partnered to train 20 countries in developing SOPs for effective end-to-end warning and response, with an emphasis on establishing smooth communication lines between countries and agencies. ESCAP also provided funding for two IOC-UNESCO projects documenting the 1945 Makran Tsunami, in which over 4,000 people died, and raising awareness of the tsunami risk in the Makran region. Most recently, ESCAP through its Trust Fund has supported IOC-UNESCO to revise and expand its guidelines on tsunami risk assessment and to develop detailed training modules on tsunami exercises. These tools have already been piloted in Bangladesh, Myanmar and Timor-Leste, and are available for further roll-out.

A particular priority for the ESCAP Trust Fund has been to strengthen cooperation between those working on tsunamis and those working on other coastal hazards, and to bridge the gaps between scientists more involved in the monitoring and forecasting and the disaster managers more involved in the preparedness and response. In this regard, we are pleased that the Sendai Framework guiding global disaster risk reduction efforts for 2015-2030 includes a global target on multi-hazard early warning, which the entire early warning community can rally around. We are aware of scientific and operational challenges of realizing multi-hazard risk assessment and early warning systems. Nonetheless, it is a task underscored in the Sendai framework, and we at ESCAP would like to take up this challenge in collaboration with UNESCAP and WMO in coming days.

Last month, the UN member States in Asia and the Pacific came together for the annual session of ESCAP. One of the resolutions, adopted by the member States, requested ESCAP to support regional strategies to implement the Sendai Framework on Disaster Risk Reduction.

Further, the resolution requested the geographic scope of the Trust Fund to be expanded to cover countries in the Pacific. This is a great opportunity to share innovations and good practices from one sub-region to the

other, and to strengthen disaster resilience in some of the most vulnerable and exposed countries in the world.

In closing, I would like to commend IOC-UNESCO and its member States on the remarkable progress made in strengthening early warning systems, especially “upstream” monitoring and communication networks, since the Indian Ocean Tsunami in 2004. Going forward, in line with priorities in the Sendai Framework, we need to pay particular attention to the status of warning systems “downstream” at the local level, at “the last mile”, to make sure that the most vulnerable people receive timely warning information that they know how to act upon. According to new research undertaken ESCAP, this is where the most important gaps are found today.

8.1.3 Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions: 10th Session of the ICG/CARIBE-EWS, 19–21 May 2015; Sint Maarten, Kingdom of the Netherlands

Brazil

Brazil attributes a high importance to the regional efforts done to improve early warning system and preparedness and has actively participated of the exercises carried out in the last years. All the agencies involved in this matter at the national level will continue to work in a coordinated manner and will identify, among four institutions, the one best fitted to act as our Tsunami National contact and Tsunami Warning focal Point (TWFP). We hope to be able to communicate such an appointment soon.

Meanwhile we manifest our will to keep participating of the exercises being carried in the Caribbean Region.

Dominican Republic

La República Dominicana comenzaba tímidamente sus primeros pasos en materia de alertas de tsunami en el 2006. En el año 2008, se crea la Unidad de Alerta de Tsunami, y se instala el primer MAREÓGRAFO, con la ayuda y supervisión de los expertos de la Red Sísmica de Puerto Rico. A partir de ese momento, y con el apoyo de la COI, se ha recorrido un largo camino, caracterizado sobre todo, por el continuo aprendizaje de los técnicos que conforman la Unidad y por el esfuerzo para llevar la información a la población.

Con el apoyo y el financiamiento de la UNESCO, se ha trabajado con diferentes comunidades del país, en el programa Acción Tsunami, enfocado en la preparación, mitigación y respuesta ante un tsunami. Se han realizado mapas de inundaciones y mapas de desalojo de comunidades en RIESGO. En ese marco, apoyamos las acciones realizadas por CARIBE-EWS, y la felicitamos por la creación de datos para la red, donde se pueden emitir boletines en menos de 5 minutos, y los tsunamis pueden ser detectados en un lapso de 5 a 30 minutos.

En el interés de educar a nuestras comunidades para que estén preparadas ante la eventualidad de un Tsunami, se han desarrollado varios programas de formación a estudiantes de nivel básico, nivel medio y estudios superiores; se han realizado talleres de capacitación a los maestros; y se han ofrecido charlas a las diferentes empresas y organizaciones de carácter público y privado. De igual manera, se logró incluir dentro de los libros de textos un tema sobre las alertas de tsunami, lo que representa un gran avance en la educación del estudiantado dominicano.

Otro logro ha sido la creación de los Procedimientos de Operación Estándar en caso de Tsunamis, un manual que nos indica los pasos a seguir por la institución, relativos a quién, qué, cuándo, dónde y cómo se responderá ante el surgimiento de un tsunami que pueda afectar la República Dominicana.

Nuestra participación en el ejercicio CARIBE WAVE 2015 ha sido de gran beneficio, porque ha puesto al descubierto nuestros puntos fuertes, y los débiles para mejorarlos. Un logro fue la instalación de un nuevo sistema para emitir los boletines de manera automatizada, con el financiamiento de la Autoridad Marítima Colombiana (Centro Nacional Alerta de Tsunami).

La República Dominicana ha sido también beneficiaria de los adiestramientos del Centro de Información de Tsunamis en el Caribe (CTIC), por cuanto respaldamos el trabajo que realizan, e instamos a que se busquen los fondos necesarios para que continúe su labor.

Para finalizar queremos agradecer a la COI por el apoyo ofrecido, en el fortalecimiento del sistema de alerta de tsunami, y en especial felicitar la ardua labor que realiza el señor Bernardo Aliaga, Secretario Técnico de ICG / CARIBE-EWS en beneficio de nuestros países.

Venezuela

Durante los últimos 10 años Venezuela ha venido trabajando de manera continua en este Grupo de Trabajo de la COI para dar sus aportes en pro de la creación del Sistema de Alerta contra los Tsunamis y otras Amenazas Costeras para el Caribe.

Por otra parte, dentro de este Grupo hemos adquirido fortalezas, como la creación de un Plan de Operaciones para la Planificación del Ejercicio de Simulacro en nuestras costas, a través de la participación en los cuatro Ejercicios de Simulacro de Tsunami para el Caribe, denominados Caribe Wave, donde la educación a las poblaciones costeras, la integración de equipos multidisciplinarios en materia de Gestión de Riesgos, con el apoyo de las máximas Autoridades, han sido una llave fundamental para el éxito de los mismos.

En este sentido, reiteramos nuestro apoyo e interés en que el Sistema de Alerta contra los Tsunamis y otras Amenazas Costeras para el Caribe se mantenga y fortalezca.

Nos hacemos eco de la necesidad de la implementación de cursos de preparación y fortalecimiento de capacidades a través del Centro de Información de Tsunamis en el Caribe (CTIC).

Al respecto, manifestamos nuestro apoyo a dicho Centro que fue establecido en el año 2013 para en Barbados, el cual tiene una función esencial en la región y un gran potencial para realizar proyectos de preparación a las comunidades caribeñas en materia de riesgos costeros. No obstante, vemos con preocupación la continuidad de su funcionamiento por falta de financiamiento sostenido, por lo que proponemos que se dé prioridad a este tema a fin de tener una solución oportuna.

Venezuela cuenta con fortalezas en materia de educación para la prevención sísmica, con el programa Aula Sísmica y la Red Sismológica Nacional Satelital, que representa un aporte en el mejoramiento de los umbrales de captación de un sismo en el Caribe y regiones adyacentes, además continuamos avanzando en la adquisición de equipos para medición de nivel del mar, a fin de fortalecer las bases para la implantación del Centro de Alerta de Tsunami para el Caribe.

Para la República Bolivariana de Venezuela, la educación y la capacidad de nuestras comunidades son prioritarias y estamos dispuestos a compartir y transmitir las capacidades desarrolladas hasta ahora, en pro de salvaguardar la vida en el planeta.

8.1.4 Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas: 11th Session of ICG-NEAMTWS, 12–14 November 2014, Nicosia, Cyprus

Turkey

Timely and accurate Tsunami forecasts are very important for mitigation of tsunami related hazards.

In this context, as one of the candidate Tsunami Service Provider for Northeast Atlantic, Mediterranean and Connected Seas, Turkey have been supporting related activities at the governmental level by designating Bogazici University, Kandilli Observatory and Earthquake Research Institute KOERİ, for Tsunami and Earthquake Observations, Research, Forecast, and establishment of necessary infrastructure and implementation. KOERİ is disseminating Tsunami alert messages at regional and national level in NEAM Region since 2012.

On the other hand Prime Ministry Disaster and Emergency Management Authority of Turkey is responsible for dissemination of the information provided by KOERİ at national level.

In addition Turkey acknowledges the efforts and support from Member states and European Commission to NEAMTWS activities, and requests full time technical secretarial support to NEAMTWS by IOC.

United Kingdom

Since the last IOC Assembly the UK has worked much more closely with the Caribbean EWS, recognizing that we have 6 overseas territory small island developing states in the region, and we are currently in the process of providing additional tide gauges for Anguilla and Turks and Caicos in partnership with our good friends in NOAA.

We are also trying to bring resources from the private sector into play by discussing the provision of extra training and support for the region from the cruise ship industry – a challenge when some in that industry fail to acknowledge the reality of a tsunami threat in the Caribbean, showing that IOC's expert advocacy and outreach are very much needed.

There are still gaps in how to respond to warnings once received – last week I received a request from a British Overseas Territory for help on how to alert the public at night, how to deal with preserving public order, how to designate evacuation zones, and how best to educate the public. I know that the excellent work being done by the community of regional emergency responders will help the UK enable that Territory to receive the training it needs, however as stated in the CARIBE EWS presentation we would urge that the IOC secretariat explore ways to continue funding the Caribbean Tsunami Information Centre CTIC, who are a valuable part of the capability in the region.

The UK also welcomes the considerable progress that NEAMTWS has made in recent years, especially given the particularly challenging circumstances presented by the geophysical nature and general complexity of the region.

The UK particularly appreciates the contribution that the IOC Secretariat has made, including the securing of funding from the European Commission, the developing engagement with civil protection agencies, and the support for the work done on a multi-hazard approach. NEAMTWS is at a crucial stage and its continued success is very dependent on continuity and full-time secretariat support. The UK requests that ways be explored to allow continuation of a full time secretariat post."

8.2 Global Coordination of Warning and Mitigation Systems for Ocean Hazards (TOWS-WG)

France

La France apprécie les progrès réalisés ces dernières années dans la mise en place des systèmes d'alerte aux tsunamis dans les quatre bassins, ainsi que les activités menées par les groupes de coordination. Elle souligne l'importance de l'activité menée par le groupe de coordination global, ainsi que des équipes spéciales sur les aspects opérationnels, les méga-séismes et, la prévention et la préparation, et suggère que ces groupes et ces équipes spéciales soient maintenus dans le futur.

La France est d'accord avec l'ensemble des éléments proposés par le groupe TOWS pour compléter et modifier le glossaire tsunami. Elle souligne aussi son accord pour adopter les propositions de normes relatives aux mesures du niveau de la mer avec la possibilité d'adaptation locale, notamment pour les bassins de petite dimension.

La France propose d'accueillir la prochaine session du groupe de coordination du Pacifique en Polynésie française en 2017. C'est un moment important pour la France puisque cela correspond au 50^{ème} anniversaire du centre d'alerte tsunami à Tahiti.

Le nombre d'activités du groupe NEAM ne fait qu'augmenter depuis que quatre centres sont opérationnels, avec une nécessaire coordination, un suivi de l'ensemble des informations, le centre d'information NEAMTIC, ainsi que les exercices. Il est nécessaire qu'une personne à plein temps assume le rôle de secrétariat technique.

Nous allons proposer le CENALT pour être accrédité par la COI d'ici à la fin de l'année et nous allons poursuivre le développement du réseau instrumental sur les quatre bassins. Enfin, nous apprécions tout particulièrement la mise en place en 2013 du centre d'information sur les tsunamis de la Caraïbe.

USA

The United States commends each of the warning systems for their accomplishments in preparedness and protection to citizens worldwide. The United States remains committed to efforts on tsunami warnings, preparation and technology transfer around the globe. We encourage all Member States to join in keeping this global network functional, including in particular the requests made for the Caribbean region.

GEBCO

The Chairman of GEBCO Guiding Committee wishes to assure GEBCO's full support in providing most updated bathymetric data set, which is necessary and essential to calculate the speed and direction of the propagation of Tsunami, to all the ICG Tsunami Warning Systems, as required.

It is appreciated that GGC is informed of any activities of Tsunami groups so that a member of GEBCO may participate and exchange information, which will ensure to improve the GEBCO products.

8.3 Harmful Algal Blooms: 12th Session of the Intergovernmental Panel on Harmful Algal Blooms (IPHAB), 28–30 April 2015, UNESCO, Paris

Australia

Australia endorses the decision in the Action Paper and in particular recommends approval of the 2016/17 IPHAB work plan. The main decisions of interest to Australia are those that largely relate to strategies to progress significant directions for HAB research and Management. These include:

(i) HABs in a Changing World: A Global Approach to HAB Research to Meet Societal Needs: GlobalHAB; (iii) The Task Team on a Global Strategy on Ciguatera for Improved Research and Management; (viii) The Task Team on Harmful Algae and Fish Kills; (v) and The Task Team on the development of a Global HAB Status Report.

Australia notes that the Asia/Pacific region is one of increasing incidence of algal blooms and their harmful consequences, and welcomes and congratulates Dr. Gires Usup on his election as the new Chair of IPHAB.

Canada

Le Canada appuie fortement la poursuite des travaux de longue date du panel sur les mortalités de poissons (décision IPHABXII.8) et sur les biotoxines (décision IPHABXII.3). En accord avec les tendances mondiales, nous avons constaté des augmentations des impacts sur nos opérations d'aquaculture sur nos côtes Atlantique et – surtout – Pacifique. Le besoin de développement de standards de détection et de bien informer les gestionnaires militent en faveur de poursuivre ces activités. Nous appuyons aussi l'élaboration d'un rapport sur l'état global des algues toxiques en vue d'informer les politiques nationales et internationales. Canada continuera d'être actif dans les comités pertinents avec la COI et la CIEM.

Colombia

Para nosotros es muy importante que se siga manteniendo el apoyo con recursos a estos trabajos por las implicaciones que se han señalado sobre la salud de las comunidades costeras. Diseñamos un espacio de nivel simposio en el Seminario Internacional de Ciencias del Mar que llevaremos a cabo en Santa Marta en el mes de octubre de 2015 y allí invitamos a todos los Estados interesados para que generemos un mayor número de personas y científicos marinos informados sobre este tema alrededor del mundo. Colombia y sus instituciones seguirán apoyando los esfuerzos internacionales en la investigación oceánica y acciones recomendadas a los pobladores en el tema HAB.

France

Nous sommes face à un enjeu majeur de santé publique et de sécurité alimentaire lié à la production de neurotoxines par certains espèces par exemple de diatomées ou de dinoflagellés. Même s'il est clair que certains épisodes sont liés aux activités humaines comme l'utilisation d'engrais, d'autres ont une origine naturelle. Il nous semble donc important que la COI poursuive la coordination des travaux scientifiques sur les efflorescences et nous poursuivrons la mobilisation de la communauté scientifique française sur le sujet.

India

India has taken up a major programme on detection and monitoring of Harmful Algal Blooms in the Bay of Bengal and Arabian Seas using Satellite, In-situ and ship-based observations. The frequency and severity of occurrence of High-biomass events have been ever increasing in the Indian seas. While several of these instances do not result in toxicity, they are known to be detrimental to the coastal ecosystems by causing anoxia and resulting in fish kills. Satellite data are processed operationally to identify high-bio mass events using data from India's Ocean Colour Monitor sensor of Oceansat. Optical and biogeochemical time-series datasets are routinely collected at 8 coastal transects along the Indian coastline, which are used for calibration and validation of ocean colour data sets that are used for operational monitoring of high-biomass events. An algorithm has been developed for detection of Noctiluca blooms using satellite data. Indian has been working closely with US-NOAA on this aspect. India will be happy to associate with IPHAB.

Japan

Japanese delegation appreciates the progress of research and capacity development activities implemented by the GlobalHAB Programme and also regional HAB projects such as WESTPAC-HAB which has been collaborating each other for a long time. Japan also continues supporting IOC-HAB program not only by Japan Fund in Trust but also by sending researchers to training workshops as lecturers and to the task teams as members including a social scientist. For example, Intergovernmental Panel, and Task Team on

Harmful Algae and Fisk Kill. Recently, one Japanese member of biotoxin task team has established systems to provide toxin standards for management and research purposes to member states upon request.

Two questions arise from the decisions. The first question is concerning the Decision 1: HABs in a changing world. GlobalHAB will collaborate with intergovernmental organizations and their subgroups such as WESTPAC-HAB. It is requested for the IP-HAB to clarify what kind of specific approach or activity plan will be taken for the collaboration.

The second question is on the Decision 2: Regional HAB Programme development. It is necessary for the IP-HAB to explain what kind of relationship between regional HAB activity and IOC regional subsidiary bodies will be established through implementing global programs.

Malaysia

Malaysia has been actively involved in Inter-Governmental Panel Harmful Algal Bloom (IPHAB) through the National Oceanographic Directorate.

For many years HABs and shellfish toxicity in Malaysia were considered problems unique to the west coast of Sabah due to algal toxins in paralytic shellfish poisoning (PSP). Further studies have shown that this problem is not peculiar to West Coast of Sabah only. Malaysia is actively carrying out studies on the characterization of HAB species using conventional and molecular approaches.

Malaysia would like to see training workshops on non-paralytic toxin detection in the region. Malaysia observes, current training courses organized by the IOC are often either too limited in the number of seats available or too expensive to attend. Therefore, Malaysia would be willing to host such workshops, as Malaysia has the necessary instrumentation for the purpose. This could be made use of by the IOC to hold a toxin workshop for the SEA region.

Thailand

First of all we would like to stress the importance of documentation. The report should be uploaded as early as possible for the Member States to have a chance to consult with the relevant organizations in their countries. In this assembly, the IPHAB document was just distributed yesterday, only in hard copy.

The Thai government has continuously allocated budget for coastal monitoring programs on harmful algal blooms through the Department of Marine and Coastal Resources, with regular trainings and workshops on relevant issues.

We have been actively participating in the regional HAB programs under WESTPAC for more than 25 years, as we are well aware that harmful algal blooms have significant impact on livelihood of coastal community and national economy. We also have very close collaboration with the marine bio-toxin research group in WESTPAC and International Atomic Energy Agency through the regional coordinators.

We appreciate an effort of IPHAB to provide activities at regional and global levels. Nevertheless, the Member States could not support a duplicate work under the same organization of the IOC. In this case, the regional level should be taken into account as the first priority.

To avoid such duplication with the existing activities in the regional subsidiary bodies of the IOC, we strongly recommend that the communication and collaboration between global program and regional subsidiary bodies of IOC be improved.

We learnt from our delegate who participated in the twelfth session of IPHAB that the communication and engagement of the regional programs into the global plan was requested to be taken into serious discussion. We therefore request the IPHAB to seriously consider this issue.

9.1 Report of the Intersessional Working Group for the Development of the IOC Capacity Development Strategy

Australia

Australia has a long record of supporting the IOC's capacity development initiatives in marine, climate and oceanographic issues and is actively engaged in related capacity development programs and activities particularly within the Indian Ocean and Western Pacific Oceans, including through its support of the IOC's Perth Programme Office and the office of the Secretariat for the Indian Ocean Tsunami Warning and Mitigation System.

In this regard, the Australian Bureau of Meteorology has recently been successful in obtaining funding through the Australian Department of Foreign Affairs and Trade to support an IIOE-2 capacity development workshop in collaboration with the Indian Ocean Rim Association (IORA). The project will help facilitate greater engagement of IORA countries in IIOE-2. The Bureau, also with the support of the Australian Government, is also preparing a proposal to the IORA Secretariat to further build upon this initiative and develop a program of capacity development activities in partnership with IORA which will focus upon educating stakeholders on the ocean observing system infrastructure, research and data being enhanced through IIOE-2, how it can be acquired and the ways in which it can be used for socio-economic benefit.

Australia congratulates the IOC Intersessional Working Group and its Chair for their deliberations and development of the IOC Capacity Development Strategy for 2015-2021 and was pleased to participate in this group. The strategic capacity development framework provides a sound basis from which the IOC can develop an implementation plan and translate the core recommendations into actions. Australia will continue to actively contribute and support the IOC in this continued program of work.

In conclusion, Australia supports the adoption of the IOC Capacity Development Strategy, and commends the draft Resolution to the Assembly for its adoption.

China

As the first sentence of the Strategy said, capacity building is an essential tenant of IOC's mission. China would like to support to endorse the IOC Capacity Building Development Strategy, as further amended during this Assembly.

Secondly, according to the draft resolution, the IOC Primary Subsidiary Bodies should develop its own work plans, China encourages the active involvement of global programmes and Regional Subsidiary Bodies to this work, particularly, suggests that the IOC Headquarter to strengthen coordination among different Primary Subsidiary Bodies.

In general, China will reiterate our continuously support to the relevant work on Capacity Building Strategy. Besides continuously distribute some parts of our contribution to capacity building, China also would like to plan and carry out more capacity building programs through the IOC-related mechanism in China, including CMOCC China, IOC-RTRC ODC center, Asia-Pacific Regional Marine Instrument Center(RMIC) , IOC PTWS SCSTAC to make more contribution to the capacity building of IOC.

France

Très attachée au développement des capacités, et active dans ce domaine, notamment par les actions de l'institut de la recherche pour le développement, la France soutient la position exprimée par le Portugal qui mentionnait l'intervention de la Tunisie, à savoir développer un plan de mise en œuvre ambitieux et concret en matière de développement des capacités.

India

India would like to be involved with the CD activities of IOC and also ready to address the issues flagged in the report on IOC Capacity Development strategy for 2015-2021. The doors of International Training Centre for Operational Oceanography (ITCOcean) in Hyderabad, India, Following the signing of Memorandum of Agreement (MoA) between the Ministry of Earth Sciences, Government of India and the IOC, on 4 July 2013, are open to conduct specialised training programmes specially aimed at operational oceanography and the capacity building activities during IIOE-2.

Till date, the Centre has conducted 12 training programmes aiming at capacity development in the areas of operational oceanography. More than 300 trainees, mainly from the Indian Ocean rim countries and Africa, were trained in the areas of Remote Sensing and Potential Fishing Zones, Ocean State Forecasting, Processing of Ocean Colour Data and their applications, Ocean Climate and Modelling, Standard Operating Procedure for Tsunami Warning and Emergency Response, etc.

Fifty two trainees from 22 countries in addition to the trainees from India attended the training courses of durations varying from one to two weeks. One of the training course on "Ocean Colour Data, Processing and Applications" was co-sponsored by Ocean Teacher Global Academy of IODE and another was co-sponsored by the International Centre for Theoretical Physics, Italy. The International Training Centre for Operational Oceanography (ITCOcean) also will act as one of the Regional Training Centre of Ocean Teacher Global Academy of IODE and have also established a remote class room to facilitate the participation in the training programme from distant locations.

In addition, India organized meetings on “Enhancing Regional Cooperation Mechanisms on Marine Pollution Preparedness and Response in SACEP region” in Chennai together with SACEP and NORAD of Norway another training programme on Sustainable tourism, Coastal area risk management and reef monitoring in association with SAARC Coastal Zone Management Centre (SCZMC) in Maldives.

Japan

Ce plan concerne, en particulier, les formations durables et systématiques des ressources humaines au niveau national, régional et mondial, dans le domaine de l'océanographie, pour le moyen terme compris entre cette année et l'année 2021. Lors de sa 190^e session en 2012, le Conseil exécutif de l'UNESCO a adopté la conception de la science de la durabilité au service de la société, proposée par le Japon, dans le plan stratégique de l'UNESCO pour le moyen terme, soit la période 2014-2021. Cette conception intégrée à la science naturelle ainsi qu'aux sciences sociales et humaines est clairement inscrite dans le paragraphe 54 du document 37/C4 de l'UNESCO. La conception de la science de la durabilité est aussi comprise dans le plan stratégique de la COI pour le développement des capacités. Cette démarche est nécessaire pour la création d'une société durable, riche d'un océan gardé en bonne santé, grâce au développement des capacités humaines.

En novembre 2014, le Japon et l'Office de WESTPAC ont organisé à un atelier sur les possibilités d'établir un centre régional de la formation et des recherches de la COI avec les états membres de WESTPAC désireux de créer ce centre et le secrétariat de la COI (IOC RTRC en anglais). Cet atelier a conseillé d'établir ce centre pour la science de la durabilité de la côte et de la mer au Japon, et le réseau de ces centres au sein de WESTPAC.

Se basant sur ce plan, le Japon va non seulement continuer à contribuer au développement des capacités des sciences de la mer au sein du WESTPAC et de la COI par diverses activités, y compris par le Fonds fiduciaire du Japon (JFIT) mais aussi par le développement du centre régional de la formation et des recherches de la COI pour la science de la durabilité de la côte et de la mer au Japon, et aussi par le développement du réseau de ces centres au sein de WESTPAC.

La délégation japonaise est très satisfaite des décisions prises et des discussions riches et productives menées au sein du groupe de travail chargé d'établir ce plan. Je félicite Monsieur Peter Pissiersens du secrétariat de la COI et tous les participants de ce groupe, ainsi que ceux de l'atelier qui s'est tenu au Japon. Pour finir, je tiens à féliciter le président du groupe, le Professeur Adoté Blim Blivi, le président de WESTPAC, Docteur Somkiat Khokiattiwong, le secrétariat de la COI, Monsieur Peter Pissiersens, ainsi que le chef de l'Office de WESTPAC, Monsieur Wenxi Zhu, pour leur énorme travail.

Kenya

We concur that capacity development is an important component of IOC's mandate.

Kenya further welcomes the proposals contained in the revised corrigendum including the mention made to the importance of the Post-2015 Development agenda.

Kenya also appreciates the reference made to the need to establish an effective coordination and communication mechanism between the secretariats of the regional sub-commissions and the global programmes. This will foster sharing of good practices, experiences and lessons learnt.

Kenya also welcomes efforts to promote the participation of youth in marine science and observation. As part of its capacity development, the IOC has an important role to play in promoting the awareness, understanding and appreciation of the marine environment. The IOC should therefore promote youth participation through youth-targeted initiatives such as the young scientist award highlighted in the strategy.

Finally, to contribute to capacity development, Kenya will use a Research Vessel generously donated by the Flanders Government, to promote offshore research not only in Kenya's Exclusive Economic Zone (EEZ) but also in the region, therefore giving an opportunity for young researchers to develop deep sea research experiences in their environments and therefore effectively put into practice lessons learnt for sustainable development.

Republic of Korea

This report identifies capacity development as the primary catalyst for IOC to achieve its current four high level objectives.

We think this strategy meet the requirement of IOC's leading role in responding to the call from the post-2015 development agenda for sustainable development of the oceans, seas and marine resources.

We would like to recommend that the secretariat make constant exertions to assess the performance outcome of the strategy by stages, in order to compensate its weak points.

With regard to this agenda, my delegation would like to share some useful information with Member States. As you may aware and as mentioned in the IOC Chair's report, we have been implementing the Yeosu project to support developing countries in ocean science since 2011. This project is entering on its second phase for more substantial help and sustainable development by providing Ocean Science ODA (Official Development Assistance) focused on capacity development combined with equipment, technology-transfer, education and national ocean policy.

United Republic of Tanzania

Tanzania believes that if the strategy would be implemented effectively, IOC visibility at national level within Member States would increase tremendously. Similarly, the capacities of Member States would be enhanced. We are very pleased with the proposed Strategy and we strongly support the proposed Resolution which includes its adoption. Finally, the Delegation of Tanzania wishes to urge all Member States to support the proposed IOC Capacity Development Strategy and its implementation.

USA

The US welcomes the plan as an opportunity to reinvigorate implementation of a core IOC mission. The US will continue its capacity building efforts through GOOS and the tsunami program among other efforts. Key to implementation will be IOC's proactive engagement of existing and new partners to have an impact at scale. We also believe that the strategy's implementation must tap UNESCO's strengths in education. The US agrees with Tanzania that the opportunity for capacity development is ours, the member states, to fully realize. Identification of priority national and regional capacity gaps, which are key barriers to achieving strategic national ocean science goals, must be one of our first steps to mobilize early robust implementation.

10.1 UN Coordination and Contribution to Ocean Governance

France

Vous avez mentionné la conférence « Our common future under climate change » organisée à la fois par la communauté scientifique française qui en a été à l'initiative et la communauté internationale. A ce jour, nous avons près de 2000 inscriptions confirmées. Par ailleurs pour souligner l'importance de cette conférence dans le cadre de la préparation de la COP21, le Président de la République française en assurera l'ouverture.

Indonesia

Indonesia as the largest archipelagic state would like to support the intergovernmental negotiations on the post 2015 development agenda which clearly reflect the growing acknowledgement of the importance of maritime issues, after we have seen a number of global initiatives on seas and oceans discussions and collaborations.

We would like also to inform the Director-General and the IOC member states that recently during the 60th commemoration of the Asian-African Conference 2015, on April 21, Indonesia is organizing a meeting with the Small Island Developing States (SIDS), Archipelagic and Oceanic Countries in order to strengthen the negotiation regarding Goal 14 from documents sustainable development goals (SDGs) 2015-2030. This is to implement programs related to the maritime sector and maintain sustainable marine livelihood as well as establish the cooperation through a maritime forum.

Indonesia would like to continue the supports, while presently Indonesia is also being prepared to become the Chairman of the Indian Ocean Rim Association (IORA) for the period 2015-2017.

Japan

Japan would like to express our views on the outcome of the UN Conference on Small Island Developing States in Samoa, and the development of a new UN legal agreement related to the conservation and sustainable use of marine biological diversity beyond national jurisdiction, commonly called BBNJ.

Japan is acutely aware of the importance of sustainable development particular to small island states, including overcoming vulnerabilities. Japan held the Seventh Pacific Islands Leaders Meeting, or PALM 7, in Fukushima in May of this year and the leaders agreed to strengthen further marine cooperation, including

marine scientific research and observation. Japan has cooperated with western Pacific island countries through WESTPAC activities.

Japan believes that the leadership of UNESCO/IOC is indispensable for cooperating appropriately with small island states.

Japan is also acutely aware of the importance of the conservation and sustainable use of marine biological diversity within and beyond areas of national jurisdiction, and therefore Japan will continue to contribute to solving these issues.

New regulations that may be derived from BBNJ's discussions will, however, need to be created in line with a commonly understood scientific and technical basis.

It is important to deepen scientific knowledge of the high seas and the seabed, a "region that is the least understood" in order to form such a common scientific and technical basis. This is also indispensable for the development of humankind and very important for robust decision-making. Japan believes that more vigorous implementation of marine scientific research in areas beyond national jurisdiction should be promoted in order to realize the goal of conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction.

Japan believes that UNESCO/IOC's leadership is hence indispensable in order to address BBNJ issues in an appropriate manner based on scientific knowledge. Japan hopes that IOC members pay particular attention to BBNJ discussion trends and give appropriate advice to your governments from a scientific perspective.

New Zealand

It is encouraging to hear about IOC's engagement in the setting of sustainability goals as follow up to the RIO+20 conference. These are critical pathways to our future.

New Zealand is very supportive of the Sustainable Development Goals, especially including number 14, the Oceans Goal. We note the particular reference in that goal to: *... improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular SIDS and LDCs*".

New Zealand supports IOC's involvement with the Inter-Agency and Expert Group on Sustainable Development Goal Indicators in developing an indicator framework: for the monitoring of the goals and targets of the post-2015 development agenda, and to support its implementation. In this endeavour we are mindful of the need for these indicators to be meaningful to, and measureable by, SIDS and LDCs, and we call upon IOC to ensure this focus is maintained.

Further, following the UN Conference on SIDS in Apia in September 2014, the draft action plan is under development and we look forward to an early finalisation of the plan as a workable and achievable plan, noting particularly the actions to mitigate ocean threats of sea-level rise, ocean acidification and tsunamis.

United Kingdom

The UK agrees with Argentina's point about IOC's role as science lead within UNCLOS and strongly supports raising and enhancing the profile of IOC within the UN family. We note that as recently as 2nd June the UN General Assembly published a Draft Resolution on the "Development of an international legally-binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction". These sort of resolutions presents an excellent opportunity for the IOC to assert its role at the highest UN level.

In particular, IOC can play a key role as an 'honest broker' transferring knowledge from regional level into supporting the UN's global sustainable development goals – taking care to ensure that IOC's branding and legacy is maintained as knowledge passes through the system. For example, Europe's Marine Strategy Framework Directive is empowering Member States to identify environmental targets and indicators to achieve Good environmental status by 2020. IOC, through partnership can act as a conduit, working with Europe to build upon that lead for wider global benefit.

10.2 Integrated Coastal Area Management Programme (ICAM)

India

India has set up a Project Directorate to demonstrate application of GIS, Remote Sensing, Environmental Impact Assessment and Mathematical Modelling in the evaluation of sectoral impacts caused by each sectors like Ports and Harbours, Waste disposal etc. on other sectors. Appropriate tools are used for

development of integrated management solutions to minimise cross impacts, for sustainable development of economic activities in the coastal marine areas and sustain the resources.

India has a major mission to:

- Develop and improve capability to understand the critical coastal parameters, processes and phenomena, which have significant societal, economic and environmental benefits.
- Provide scientific and technical support for coastal states for implementing the Integrated Coastal and Marine area Management concept and ecosystem-based management for sustainable use of resources.

GEBCO

In regard to SPINCAM which was introduced by Mr. Barbieri, GEBCO Guiding Committee is pleased to inform the assembly that one of the regional mapping programmes of GEBCO, i.e. IBCSEP is underway, and much better coastal bathymetric information is expected to come out and will benefit the SPINCAM.

Also any such coastal management programmes may benefit from updated GEBCO programmes. GGC is pleased to be approached by such programmes.

10.3 International Polar Partnership Initiative

Argentina

En ocasiones anteriores mi delegación, junto con otras, ha manifestado que el desarrollo del Concepto de una IPPI debe incluir necesariamente la coordinación y consulta con las Partes Consultivas del Tratado Antártico, manifestando que el concepto de la IPPI parece desconocer lo actuado en el marco del Sistema del Tratado Antártico y que la misma podría resultar en superposiciones y/o duplicaciones de esfuerzos tanto en materia ambiental como científica en la Antártida. Cuestiones que quisiéramos reiterar en esta Asamblea.

En la decisión 6.4 del 47 Consejo Ejecutivo se incluyó un punto a efectos de requerir al Secretario Ejecutivo que trabaje para que el concepto de IPPI se desarrolle en coordinación y consulta con las Partes Consultivas del Tratado Antártico.

Asimismo, allí se indicó que la participación de la COI es solo en el desarrollo del documento conceptual y no, aún en la Iniciativa.

Cabe tener presente la plena vigencia del Sistema del Tratado Antártico, que se estructura sobre la base del Tratado Antártico (vigente desde 1961) y la eficacia con que dicho sistema ha logrado abordar los diversos asuntos suscitados en relación con la Antártida desde hace más de medio siglo.

En lo referente a cuestiones ambientales, el Protocolo al Tratado Antártico sobre Protección del Medio Ambiente (Protocolo de Madrid) tutela todos los aspectos vinculados con la preservación del ambiente en el continente antártico. Asimismo, desde aquel año, se reúne anualmente el Comité para la Protección del Medio Ambiente (CPA), grupo de expertos que se ocupa específicamente de cuestiones relacionadas con la protección ambiental antártica y asesora a la Reunión Consultiva del Tratado Antártico (RCTA).

Australia

The report by the Executive Secretary and draft text provide an accurate description of the International Polar Partnership concept and give a reasonable account of how IOC might consider contributing to, and benefiting from the initiative.

The proposed modality of engagement is similar to that agreed by WMO at the recent 17th Congress, namely to seek representation in relevant working mechanisms of IPPI should they become established. We therefore support the draft text and draft decision.

Canada

The Arctic is undergoing rapid environmental, ecological and socio-economic change and is a strategic long-term priority for the Government of Canada. We invest considerable resources to fill critical data gaps in order to support responsible development, environmental protection and social development in the Arctic. Canada is an active member of the Arctic Council.

Canada is certainly supportive of increased coordination of research initiatives and of enhancing sustained observations in the Arctic, and will be a key player in initiatives that relate to the Arctic.

We agree with the position of the WMO on IPPI and support the Secretariat's direction to align with the WMO who is an essential partner in this initiative. Following that path will lead to a much stronger and well developed initiative.

Canada would like to see the IPPI concept narrow its focus to find a niche that separates, and compliments, the numerous Arctic initiatives that are already in play, or are being considered.

For clarity, it should articulate what it is not, and to identify more precisely the resource requirements for the IOC and members states.

Colombia

Colombia realizó la expedición a la Antártica en el verano 2014 - 2015, usando un buque construido en los astilleros de Colombia. Desarrolló y recolectó datos para 8 proyectos de investigación en oceanografía, mamíferos marinos, hidrografía, ingeniería y otros. Participaron en estos proyectos de toma de datos 20 investigadores de 16 instituciones colombianas y esta expedición contó con el apoyo de varios países que son miembros Consultivos del Tratado Antártico. Fue presentada la expedición y el Programa Antártico Colombiano en la reunión que ocurrió en Bulgaria hace dos semanas, en donde se reunieron los países consultivos con la presencia de Colombia y varios observadores. También se reunieron alrededor de 4 instituciones que hacen parte del Tratado Antártico. Lo que encontró Colombia en esa reunión fue una sofisticada organización, inclusive la IOC participó como observador en ella. Lo que hay es organización con gran tradición, grandes aciertos, con unos proyectos de investigación importantes que están realizando las países desarrollados como los que se encuentran en desarrollo. Lo que vimos en esa reunión por parte de la delegación de Colombia fue acierto en el manejo de los temas antárticos y una gran comunidad y cooperación internacional de todos los países.

Por eso, de alguna manera sorprende algunas de las conclusiones presentadas en el IPPI, en la que recuerdo en alguna de las ayudas que se trataba de la preocupación por la manera como se están manejando las zonas polares. Déjenme contarles que los países, muchos de ellos en esta sala, que estuvieron en Bulgaria, están haciendo un gran trabajo de investigación que tiende a mejorar con el tiempo y que presenta las mismas inquietudes que estamos teniendo aquí; es decir, la mejora del sistema de observación, la mejora en la toma de datos batimétricos y otros proyectos de investigación, tal vez de un calado mas profundo del que estamos conversando en esta reunión. Por lo tanto, yo celebro estos cambios que estoy observando en pantalla a la iniciativa, porque lo que pediría Colombia es que se estudie de manera profunda el documento y se verifique en frente de las partes del Tratado Antártico e inclusive las países que estamos llegando como observadores".

Denmark

The Danish delegation fully supports the involvement of IOC in the International Polar Partnership Initiative, and would encourage the executive secretary to consider to use this involvement to emphasize the important role that the polar oceans both regionally and globally in the climate system.

Specifically we would enquire if the executive secretary has considered the potential role of the IOC in the planning and execution of WMO's Polar Prediction Project initiative - the year of polar prediction in 2017-2019. An active involvement of IOC in the YOPP in the early planning could facilitate that the increase in atmospheric monitoring activity expected in this period may be supplemented by oceanic sensors, and ensure the involvement of the IODE in these activities.

France

Les zones polaires jouent un rôle majeur dans le changement climatique, nous soutenons depuis de nombreuses années, et en partenariat avec de nombreux pays ici présents, la recherche dans les zones polaires. Aussi nous sommes en faveur de la proposition du secrétariat exécutif relative à IPPI.

India

Our delegation understands the role and response of cryosphere in climate change. Integrated studies on glaciology, biogeochemical processes and ice core records from Antarctic, Arctic and Himalayas are necessary to unfold this relationship and response. India has taken up extensive research in the Polar regions and would like to support the initiatives of IPPI in coordinating such efforts by member states.

For studies on Sea ice-ocean climate interaction, monitoring of polar sea ice using high-resolution satellite data using satellite microwave sensors & ground Surveys have already been initiated by India. Similar studies have also been initiated to study Polar precipitation and atmospheric processes. They include, the

regular observations of clouds and precipitation at the Indian station, Maitri on a long-term basis, variability in precipitation in different time scale, simulation of precipitation using a regional atmospheric model, etc.

Microbial diversity is also being monitored on a regular basis at both Indian camps in Antarctica, Maitri and Bharati.

Against the backdrop of the climate sensitivity of the fjord system, India has also initiated an ambitious program on long-term monitoring of the Kongsfjordenfjord by deploying an Ocean-Atmosphere mooring system and repeat transects to measure physical and biogeochemical parameters on a seasonal scale. Mr. Chairman, we are collaborating on this project with Norway and will be happy to expand this partnership with more member states. Because of the activities done by India in Arctic, we are invited as an observer by the Arctic council.

Japan

Since the International Geophysical Year, or IGY, in 1956, Japan has established research bases such as the Showa Station in East Antarctica and has observed the atmosphere, the cryosphere, the geosphere, the biosphere and the oceans in a comprehensive manner.

In April, Japan held the Arctic Science Summit Week, or ASSW in Toyama, with the participation of nearly 700(seven hundred) international researchers. During the conference, we summarized several overarching messages as "there needs to be a greater sense of urgency among decision-makers and awareness by the general public regarding the global importance of changes taking place in the Arctic" and "increased international scientific cooperation, including contributions from non-Arctic states are required."

This year Japan also began a new national research project named Arctic Challenge for Sustainability, or ArCS. ArCS enhances comprehensive studies through multi-disciplinary collaboration among the natural and social sciences and aims to deliver robust scientific information to policy makers, industry, users, and other stakeholders for decision making and problem solving.

Japan agrees to the IPPI concept, which understands and predicts changes in the polar environment that affects the global system by strengthening observational research in the polar region. Japan believes that concrete action and a financial foundation for IPPI, role-sharing and cooperation with the existing framework for polar research should be considered as we enter the stage of IPPI implementation.

Japan believes that, in order to conduct initiatives such as IPPI in a sustainable manner, it is important to build a framework involving not only researchers but also stakeholders and to raise from the private sector research funding that has the potential to benefit from polar development, rather than relying only on government.

The polar region is where the impact of climate change is the most severe in the world. Japan believes therefore that it is important to enhance research observation at the polar region.

Japan will also contribute actively and continuously to projects related to the polar region.

Malaysia

Malaysia congratulates the proponent(s) of the International Polar Partnership (IPPI), the World Meteorological Organisation (WMO) for coming out with this initiative, trying to coordinate those working on polar issues to identify synergies and effectively use existing resources to address important issues of common interest; Facilitate research to address interaction of human and biophysical systems on many timescales; and Develop a nuanced understanding of the human and natural processes in the poles that directly relate to the future of people around the world.

Since the multitude and complexity of physical and biogeochemical processes in Polar Regions are still not fully understood, and these relate to the rest of the globe, the approach taken by this initiative is very timely.

We also see this initiative as an important follow up from the International Polar Year (IPY) 2007-2008. If it has not been done, we wish to suggest, the industrial group should be engaged to get inputs towards strengthening the concept of this IPPI. This initiative should emphasise on the need to transform research results undertaken in Polar Regions into tangible and recognized products of societal value, as it is important towards sustaining investments in polar research. Reporting Procedures for IOC-XXVII – page 2

As Scientific Committee on Antarctic Research (SCAR) member country, Malaysia is pleased to note that SCAR as a body of the International Council for Science dealing with Antarctic science was consulted in the formulation of this initiative. We wish to support this initiative and look forward to participate in the IPPI.

Malaysia is also pleased to inform that the next SCAR Open Science Conference and Delegates Meeting in 2016 will be held in Kuala Lumpur from 19-31 August.

Republic of Korea

Recently many countries are considering that the polar is critical to the environment of the earth and also is getting more important for the world economy.

Thus, we know that many countries including Korea established long term strategic plans for polar region which includes the specific plan to cooperate with other countries and develop their infrastructures.

Korea is also making strategic plan every 5 year and it includes broad co-operation with other countries and international organizations.

In this regard, IPPI is going to be more useful to countries, which are focusing on developing their cooperation plans to deal with polar issues

Having said that, in order FOR IPPI to give member states more detailed platform to cooperate internationally such as sharing the information and infrastructure, doing joint activities.

I believe that there should be more effective, practical and centralized ways for member states ON IPPI.

If we implement IPPI in the above mentioned way (direction), many countries will benefit from IPPI in making their plans and achieving their goals.

For this, Korea will support and willingly join the efforts to make frame work and implementation plan.

ANNEX VI

IOC MEMORIAL LECTURES

This year the IOC Anton Bruun and N.K. Panikkar Memorial Lectures were part of a first-ever IOC Ocean Science Day Programme that took place the day preceding the Assembly opening on 17 June 2015. The overall objective was to improve decision makers' understanding and awareness of current challenges and emerging issues, through lectures and panel discussions with eminent experts. Presentations and debates focused on the linkages between ocean health and human wellbeing, the potential of the latest advancements in monitoring technology, current scientific challenges in the Arctic and the legacy of the International India Ocean Expedition. See the full [programme](#) and more information and photos on that day [here](#).

A. THE A. BRUUN MEMORIAL LECTURE, 2015

Oceans, Health and Wellbeing: the Next Frontier (17 June 2015)

Prof. Lora E. Fleming

*Professor and Director
European Centre for Environment and Human Health
University of Exeter Medical School, UK*

Professor Fleming is a health physician and epidemiologist with over 2 decades of experience and expertise in a wider range of environment and occupational exposures and human health. She is currently a Professor, Director of the European Centre of Environment and Human Health (www.ecehh.org), and Chair of Oceans, Epidemiology and Human Health at the University of Exeter Medical School (Truro, Cornwall, UK); and Professor Emerita in both the Miller School of Medicine and the Rosenstiel School of Marine and Atmospheric Sciences of the University of Miami (USA) where she was Co-Director of the NSF NIEHS Oceans and Human Health Centre.

Abstract

In the European Union, 22 of 28 Member States have a coastline, and two thirds of European frontiers are coasts with approximately 218 million people (43%) living in coastal regions. The so called "EU Blue Economy" currently represents an estimated 5.4 million jobs and a gross added value of approximately €500 billion per year, with 75% EU external trade and 37% internal trade within the EU via the seas and oceans. There is growing evidence that the sustainability of ocean ecosystems and the health and wellbeing of humans are inextricably linked, and that how we interact with oceans and seas will significantly influence our future on Earth. Since the emergence of modern humans, the oceans have provided a source of culture, livelihood, expansion, trade, food and other resources. However, the rapidly increasing global population and the continuing alterations of the coastal environment are placing increasing pressure on coastal seas and oceans. Adverse human impacts (e.g. growing pollution) affect not only sustainability and quality of marine ecosystems, but also both directly and indirectly, human health. Yet, there is also enormous potential to promote human health and wellbeing through interactions with marine environments, as well as fostering pro-environmental behaviours promoting their restoration and preservation. The study of oceans and human health is inherently interdisciplinary, bringing together the medical, natural and social sciences, as well as diverse stakeholder communities (including fishers, recreational users, private enterprise, and policy makers). The history, policies, and known and potential risks and

benefits of oceans and human health, provide insights into new areas and avenues of global cooperation with the potential for collaboratively addressing the local and global challenges of our interactions with the oceans, both now and in the future.

Powerpoint presentation:

http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/Bruun_Lecture_June_2015_Fleming_8.pdf

B. THE N.K. PANIKKAR MEMORIAL LECTURE, 2015

From the Indian Ocean to the World Ocean and back in 50 years
(17 July 2015)

Dr John Field

*Marine Research Institute, University of Cape Town; Rondebosch 7701
South Africa*

Dr John Field is Emeritus Professor and Deputy Director of the Marine Research Institute at the University of Cape Town, where he studied and obtained his Ph.D. in quantitative marine ecology. He has served as President of the Scientific Committee on Oceanic Research (1996-2000), and chair of the Joint Global Ocean Flux Study (JGOFS) and deputy chair of GLOBEC. He has also served on the advisory committee to the minister responsible for fisheries management in South Africa. He is best known for his work with Richard Warwick and Bob Clarke on analysing ecological community patterns, the philosophy behind Plymouth Routines in Multivariate Ecological Research (PRIMER), and for his seminal paper on the “microbial loop” and the role of microbes in pelagic ecosystems.

Abstract

This talk salutes the memory of Dr N.K. Panikkar who led the Indian programme of the International Indian Ocean Expedition (IIOE) and soon became Director of the then new National Institute of Oceanography in Goa in 1966. The talk outlines some personal memories, as a young graduate student, of Cruise 7 of RV *Anton Bruun* during the IIOE in 1964. Three months as part of the IIOE in the south west Indian Ocean changed the life of this graduate student, being introduced to several leading established scientists and some up and coming young ones, who passed on new ideas, techniques and enthusiasm. The instrumentation of the 1960s is described briefly and contrasted with the present technologies such as satellite remote sensing and other oceanographic revolutions of the late 20th century that allow us an instantaneous global view of the ocean's surface. The turn of the century SCOR-IOC study to forecast Ocean Science in 2020 is revisited, and the potential for IIOE-2 is discussed in the light of new technology, bearing in mind some of the geo-political constraints that apply.

Powerpoint presentation:

http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/Panikkar_Lecture_Field_June_2015_compressed.pdf

ANNEX VII

RESULTS OF ELECTIONS AND LIST OF IOC MEMBER STATES

I. Officers

Chair (by acclamation)	Dr Peter Haugan (Norway)	Group I
Vice Chairs (by acclamation)	Mr Stephen Peter Hall (UK)	Group I
	Dr Alexander Postnov (Russian Federation)	Group II
	Mr Ariel Hernan Troisi (Argentina)	Group III
	Dr Somkiat Khokiattiwong (Thailand)	Group IV
	Dr Ashley Johnson (South Africa)	Group V

II. Seats on the Executive Council

Electoral Group I: (after a ballot)	Belgium, Canada, Denmark, France, Germany, Portugal, Turkey, USA
Electoral Group II: (by acclamation)	Poland, Ukraine
Electoral Group III: (by acclamation)	Brazil, Chile, Colombia, Cuba, Ecuador, Grenada, Mexico, Peru
Electoral Group IV: (by acclamation)	Australia, Bangladesh, China, India, Japan, Pakistan, Philippines, Republic of Korea
Electoral Group V: (after a ballot)	Cote d'Ivoire, Egypt, Kenya, Morocco, Senegal, Tanzania, Togo, Tunisia

Member States of the Commission (147)
(as of 24 June 2015)

AFGHANISTAN	(11 March	1991)	LIBYA	(11 March	1974)
ALBANIA	(26 January	1993)	MADAGASCAR	(Dec. 1965/Oct.	1967)
ALGERIA	(Jul. 1964/Nov.	1965)	MALAYSIA	(Jul. 1964/Nov.	1965)
ANGOLA	(26 October	1982)	MALDIVES	(20 May	1987)
* ARGENTINA	(Before November	1961)	MALTA	(Oct. 1969/Nov.	1971)
* AUSTRALIA	(Before November	1961)	MAURITANIA	(Before November	1961)
AUSTRIA	(Oct. 1962/Jun.	1964)	MAURITIUS	(Oct. 1969/Nov.	1971)
AZERBAIJAN	(27 January	1998)	* MEXICO	(Before November	1961)
BAHAMAS	(29 January	1979)	MONACO	(Before November	1961)
* BANGLADESH	(29 October	1982)	MONTENEGRO	(04 October	2011)
BARBADOS	(18 December	1985)	* MOROCCO	(Before November	1961)
* BELGIUM	(Before November	1961)	MOZAMBIQUE	(08 April	1981)
BELIZE	(22 September	1995)	MYANMAR	(07 June	1988)
BENIN	(23 October	1986)	NAMIBIA	(25 April	2001)
* BRAZIL	(Before November	1961)	NETHERLANDS	(Before November	1961)
BULGARIA	(Oct. 1967/Dec.	1969)	NEW ZEALAND	(Nov. 1961/Sep.	1962)
CABO VERDE	(20 August	1984)	NICARAGUA	(17 November	1977)
CAMEROON	(Nov. 1971/Nov.	1973)	NIGERIA	(Nov. 1971/Nov.	1973)
* CANADA	(Before November	1961)	NIUE	(01 March	2011)
* CHILE	(Before November	1961)	* NORWAY	(Before November	1961)
* CHINA	(Before November	1961)	OMAN	(16 November	1982)
* COLOMBIA	(Oct. 1967/Dec.	1969)	* PAKISTAN	(Before November	1961)
COMOROS	(08 February	2000)	PALAU	(24 March	2014)
CONGO	(Nov. 1961/Sep.	1962)	PANAMA	(Oct. 1967/Sep.	1969)
COOK ISLANDS	(25 Jan.	2006)	PAPUA NEW GUINEA	(10 April	2006)
COSTA RICA	(28 February	1975)	* PERU	(Dec. 1965/Oct.	1967)
* COTE D'IVOIRE	(Before November	1961)	* PHILIPPINES	(Oct. 62/Jun.	1964)
CROATIA	(24 December	1992)	* POLAND	(Before November	1961)
* CUBA	(Before November	1961)	* PORTUGAL	(Oct. 1969/Nov.	1971)
CYPRUS	(05 December	1977)	QATAR	(20 July	1976)
CZECH REPUBLIC	(20 June	2005)	* REPUBLIC OF KOREA	(Before November	1961)
DEMOCRATIC PEOPLE'S			ROMANIA	(Before November	1961)
REPUBLIC OF KOREA	(31 October	1978)	* RUSSIAN FEDERATION	(Before Nov.	1961)
DEMOCRATIC REPUBLIC	(23 April	2010)	SAINT KITTS AND NEVIS	(28 June	2011)
OF THE CONGO			SAINT LUCIA	(14 September	1992)
* DENMARK	(Before November	1961)	SAINT VINCENT AND		
DJIBOUTI	(6 January	2006)	THE GRENADINES	(21 January	2013)
DOMINICA	(21 September	1999)	SAMOA	(10 April	1978)
DOMINICAN REPUBLIC	(Before November	1961)	SAUDI ARABIA	(14 June	1978)
* ECUADOR	(Before November	1961)	* SENEGAL	(Oct. 1967/Sep.	1969)
* EGYPT	(Oct. 1969/Nov.	1971)	SERBIA	(23 May	2005)
EL SALVADOR	(16 February	1993)	SEYCHELLES	(27 February	1979)
ERITREA	(12 November	1993)	SIERRA LEONE	(19 April	1974)
ESTONIA	(10 March	1992)	SINGAPORE	(Dec. 1965/Oct.	1967)
ETHIOPIA	(05 March	1976)	SLOVENIA	(16 June	1994)
FIJI	(09 July	1974)	SOLOMON ISLANDS	(11 May	1982)
FINLAND	(Before November	1961)	SOMALIA	(10 July	1974)
* FRANCE	(Before November	1961)	* SOUTH AFRICA	(Oct. 1967/Sep.	1969)
GABON	(26 October	1977)	SPAIN	(Before Nov.	1961)
GAMBIA	(30 August	1985)	SRI LANKA	(Jun. 76/Jan.	1977)
GEORGIA	(09 July	1993)	SUDAN	(26 August	1974)
* GERMANY	(Before November	1961)	SURINAME	(21 January	1977)
GHANA	(Before November	1961)	SWEDEN	(Jul. 1964/Nov.	1965)
GREECE	(Oct. 1962/Jun.	1964)	SWITZERLAND	(Before Nov.	1961)
* GRENADA	(10 November	2009)	SYRIAN ARAB REPUBLIC	(Oct. 1969/Nov.	1971)
GUATEMALA	(Dec. 1965/Oct.	1967)	* THAILAND	(Before Nov.	1961)
GUINEA	(01 May	1982)	TIMOR-LESTE	(19 October	2005)
GUINEA-BISSAU	(26 January	1984)	* TOGO	(22 October	1975)
GUYANA	(20 July	1977)	TONGA	(03 January	1974)
HAITI	(23 March	1976)	TRINIDAD & TOBAGO	(Oct. 1967/Sep.	1969)
HONDURAS	(15 March	2012)	* TUNISIA	(Before Nov.	1961)
ICELAND	(Oct. 1962/Jun.	1964)	* TURKEY	(Nov. 1961/Sep.	1962)
* INDIA	(Before November	1961)	TUVALU	(20 June	2011)
INDONESIA	(Oct. 1962/Jun.	1964)	* UKRAINE	(Nov. 1961/Sep.	1962)
IRAN, Islamic Republic of	(03 June	1975)	UNITED ARAB EMIRATES	(02 June	1976)
IRAQ	(Oct. 1969/Nov.	1971)	* UNITED KINGDOM OF GREAT BRITAIN &		
IRELAND	(07 November	1978)	NORTHERN IRELAND	(Before Nov.	1961)
ISRAEL	(Before November	1961)	* UNITED REPUBLIC OF		
ITALY	(Before November	1961)	TANZANIA	(Oct. 1967/Sep.	1969)
JAMAICA	(Oct. 1967/Dec.	1969)	* UNITED STATES OF		
* JAPAN	(Before November	1961)	AMERICA	(Before Nov.	1961)
JORDAN	(06 April	1975)	URUGUAY	(Before Nov.	1961)
KAZAKHSTAN	(24 March	2005)	VANUATU	(2 September	2013)
* KENYA	(Nov. 1971/Nov.	1973)	VENEZUELA,		
KIRIBATI	(10 May	2012)	Bolivarian Rep. of	(Oct. 1962/Jun.	1964)
KUWAIT	(13 November	1974)	VIET NAM	(Before Nov.	1961)
LEBANON	(Oct. 1962/Jun.	1964)	YEMEN	(22 May	1960)

ANNEX VIII

LIST OF DOCUMENTS

Document Code	Title	Agenda Items	Languages available
WORKING DOCUMENTS			
IOC-XXVIII/1 Prov. Rev.	Revised Provisional Agenda	2.1	E F R S
IOC-XXVIII/1 Add. Prov.	Provisional Timetable	2.1, 2.4	E only
IOC-XXVIII/2 Prov.	Provisional Action Paper	All	E F R S
IOC-XXVIII/2 Annex 1 and Addendum	Report of the IOC Executive Secretary on the work accomplished since the previous session (July 2014–May 2015) – Executive Summary and full report	3.2	E F R S
IOC-XXVIII/2 Annex 2	Report on Budget Execution (2014)	3.2, 11.1	E F R S
IOC-XXVIII/2 Annex 3	Draft Programme and Budget for 2016–2017	3.4, 11.1	E F R S
IOC-XXVIII/2 Annex 4	Report of the Chair of the Intersessional Working Group on ‘The Future of the IOC’	4.	E F R S
IOC-XXVIII/2 Annex 5	<i>Cancelled. See IOC/INF-1331</i>		
IOC-XXVIII/2 Annex 6	Revision of Terms of Reference and Rules of Procedure for GEBCO Guiding Committee	6.2	E F R S
IOC-XXVIII/2 Annex 7	Review of the Role and Involvement of the IOC in the General Bathymetric Chart of the Ocean (GEBCO) Project	6.2	E F R S
IOC-XXVIII/2 Annex 8 and Addendum	IOC Capacity Development Strategy for 2015–2021	9.1	E F R S
IOC-XXVIII/2 Annex 9	Concept: International Polar Partnership Initiative (IPPI), 2015 revision	10.3	E F R S
IOC-XXVIII/4 Prov.	Provisional List of Documents (<i>this document</i>)	2.4	E F R S
IOC-XXVIII/5 Prov.	Provisional List of Participants (<i>to be issued during the Session</i>)	--	E/F/R/S
IOC-XXVIII/6	Draft Report of the Intergovernmental Oceanographic Commission (2014–2015) to the 38th General Conference of UNESCO	3.5	E F R S
REPORTS OF IOC AND COOPERATIVE BODIES REQUIRING ACTION			
IOC/EC-XLVIII/3s	Executive Summary Report of the Forty-eighth Session of the IOC Executive Council, Paris, 16 June 2015	2.1, 11.4	E F S R
IOC/WESTPAC-X/3s	Executive Summary Report of the Tenth Session of the IOC Sub-Commission for the Western Pacific (WESTPAC), 12–15 May 2015, Phuket, Thailand	3.3.1	E F S R
IOC/SC-IOCARIBE-XIII/3s	Executive Summary Report of the Thirteenth Session of the IOC Sub-Commission for the Caribbean and Adjacent Region (IOCARIBE), 25–28 May 2015, Merida, Mexico	3.3.2	E F S R
IOCAFRICA-III/3s	Executive Summary Report of the Third Session	3.3.3	E F S R

Document Code	Title	Agenda Items	Languages available
	of the IOC Sub-Commission for Africa and the Adjacent Island States (IOCAFRICA), 13–15 April 2015, Nairobi, Kenya		
IOC-XXVIII/RSB/3s	Executive Summary Report of the Regional Subsidiary Bodies meeting (Paris, 15 June 2015)	3.3.4	E F R S
IOC/GOOS-SC-IV/3s (GOOS-212 ES)	Executive Summary Report of the 4 th Meeting of the Global Ocean Observing System Steering Committee, Townsville, Australia, 24–26 May 2015	7.1.1	E F R S
IOC/IODE-XXIII/3s	Summary Executive Summary of the IOC Committee on International Oceanographic Data and Information Exchange, Twenty-third Session, Bruges, Belgium, 17–20 March 2015	7.2.1	E F R S
IOC/IODE-XXIII/3	Report of the IOC Committee on International Oceanographic Data and Information Exchange, Twenty-third Session, Bruges, Belgium, 17–20 March 2015	7.2.1	E only
IOC/ICG/PTWS-XXVI/3s	Executive Summary Report of the 26th Session of the Intergovernmental Coordination Group for the for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS-XXVI), Hawaii, USA, 22–24 April 2015	8.1.1	E F R S
ICG/IOTWS-X/3	Summary Report of the 10th Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS-X), Muscat, Oman, 24–26 March 2015.	8.1.2	E (<i>summary in F R S</i>)
IOC/ICG/CARIBE-EWS-X/3s	Executive Summary Report of the 10th Session of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions, Philipsburg, Sint Maarten, 19–21 May 2015, Kingdom of the Netherlands	8.1.3	E F R S
IOC/ICG/NEAMTWS-XI/3	Report of the 11th Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North Eastern Atlantic, the Mediterranean and Connected Seas, Nicosia, Cyprus, 12–14 November 2014	8.1.4	E F R S
IOC/TOWS-WG-VIII/3	Report of Eighth Session of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG), Morioka, Japan, 12–13 March 2015,	8.2	E (<i>summary in F R S</i>)
IOC/IPHAB-XII/3s	Executive Summary Report of the Twelfth Session of the IOC Intergovernmental Panel on Harmful Algal Blooms, UNESCO Headquarters, 28–30 April 2015	8.3	E (<i>summary in F R S</i>)

INFORMATION DOCUMENTS

IOC-XXVIII/Inf.1	Working Arrangements for the session	2.4	E only
IOC-XXVIII/Inf.2	Programme of the IOC Ocean Science Day,	2.4	E only

Document Code	Title	Agenda Items	Languages available
	2015, including the Presentation of the IOC A. Bruun Memorial Lecture and N.K Panikkar Memorial Lecture 2015		
IOC-XXVIII/Inf.3	Statement of the Chair on the State of the IOC, 2015	3.1	E only
<i>WMO document</i>	Joint WMO Bureau-IOC Officers Meeting - Informal consultative mechanism, Geneva, 28 January 2015	3.1	E only
IOC/EC-XLVII/2 Annex 1	Report of the IOC Executive Secretary on the work accomplished since the previous session (June 2013–May 2014)	3.2	E only
IOC/INF-1322	Update on the Status of IOC Subsidiary Bodies, 2015	3.3	E only
IOC Workshop Report, 270	Second China-Africa Forum on Marine Science and Technology, 9–10 April 2015, Nairobi, Kenya	3.3.3	E only
IOC/INF-1321	Global Ocean Science Report: Progress, challenges, prospects	5.1	E only
IOC/INF-1323	World Climate Research Programme (WCRP): Year 2015 Report	5.2	E only
IOC/INF-1324	Strategic Framework for Implementation of the Second International Indian Ocean Expedition – Report of the IOC Second International Indian Ocean Expedition (IIOE-2) Interim Planning Committee	5.3	E (summary in F R S)
<i>SCOR document</i>	Draft Science Plan for the Second International Indian Ocean Expedition (IIOE-2) – A Basin-wide Research Program Science Plan (version 1)	5.3	E only
IOC/INF-1331	IOC Contribution to World Ocean Assessment and other ocean assessment processes (IPBES, TWAP), 2015	6.1	E only
IOC/INF-1325	GEBCO Guiding Committee Report, 2013–2015	6.2	E only
IOC/INF-1326	GCOS Planning and Implementation, 2015	7.1.2	E only
IOC/INF-1327	Report by the co-presidents of Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM)	7.1.3	E only
JCOMM-MR-117	General Summary of the 11th Session of the JCOMM Management Committee, 20 – 23 October 2014, Geneva Switzerland	7.1.3	E only
Cg-17/Doc. 4.2.3(3) (WMO document)	Marine Climate Data System (MCDS); draft Resolution 4.2.3(3)/1	7.1.3	E only
Cg-17/Doc. 2.5(8) (WMO document)	Report by the Co-Presidents of the Joint WMO-IOC Technical Commission for Oceanography And Marine Meteorology	7.1.3	E only

Document Code	Title	Agenda Items	Languages available
MAN-11/BM.5.1	A Strategy for JCOMM, 2012–2017 (June 2014, version 3)	7.1.3	E only
IOC/BRO/2015/2	The Indian Ocean tsunami warning and mitigation system 10 years after the Indian Ocean tsunami: achievements, challenges, remaining gaps and policy perspectives: summary statement (International Conference to Commemorate the 10th Anniversary of the Indian Ocean Tsunami, Jakarta, 2014)	8.1.2	E only
IOC/INF-1320	GEOHAB Scientific Summary for Policy Makers on Harmful Algal Blooms, 2015	8.3	E only
IOC/INF-1328	Update on IOC Contribution to United Nations initiatives (2015)	10.1	E only
IOC/INF-1330	UN Coordination: a potential role for IOC under a new UNCLOS implementing agreement on biodiversity in areas beyond national jurisdiction	10.1	E only
IOC/INF-1329	Progress in the implementation of the Integrated Coastal Area Management (ICAM) Strategy, including marine spatial planning and Large Marine Ecosystems	10.2	E only
IOC-XXVIII/Inf.4	Response of the IOC Chair on behalf of the IOC Member States to the Self-Assessment Questionnaires	11.2	E only
196 EX/23.Part V (and INF.5) (UNESCO documents)	New audits by the External Auditor, Part V: interim report on the audit of the governance of UNESCO and dependent funds, programmes and entities	11.2	E F R S (E F)
IOC-XXVIII/NOM/Inf.1	Updated listing of the IOC electoral groups and listing of the distribution of seats on the Executive Council among the electoral groups	11.3	E only
IOC-XXVIII/NOM/1	List of candidates for Elections	11.3	E only
IOC-XXVIII/NOM/2	Report of the Chair of the Nominations Committee	11.3	E only
REFERENCE DOCUMENTS			
IOC/EC-XLVII/3	Report of the Forty-seventh Session of the IOC Executive Council, Paris, 1–4 July 2014	--	E F S R
IOC-XXVII/3	Report of the Twenty-seventh Session of the IOC Assembly, Paris, 26 June–5 July 2013	--	E F S R
IOC Workshop Report, 250	The Future of IOC toward next 10 years and its implication for Member States, Varna, Bulgaria, 19 March 2012	4.	E only
IOC Workshop Report, 254	Consultation on Scientific and Technical Aspects of Sustained ocean Observations and Services, Rio de Janeiro, Brazil, 5 March 2013	4.	E only
IOC Workshop Report, 261	Indo-Pacific Ocean Forum on Charting the Future of Sustained Ocean Observations and Services, Bangkok, Thailand, 25-28 November 2013	4.	E only

Document Code	Title	Agenda Items	Languages available
Future-13-14/Inf.1	IOC Electoral Group 1 Consultation on the Future of the IOC, Utrecht, The Netherlands, 26-27 May 2014	4.	E only
IOC Workshop Report, 269	Forum on Sustained Ocean Observations and Services in IOC Group V (Africa and Arab countries)	4.	E only
UK National Commission for UNESCO Policy Brief 13	An evaluation of the Intergovernmental Oceanographic Commission's role in global marine science and oceanography	4.	E
GCOS-181	Synthesis report of the GCOS Review Board	7.1.2	E only
WMO-IOC/JCOMM-4/3	Summary Report of the 4th Session of the WMO-IOC Joint Technical Commission for Oceanography and Marine Meteorology, Yeosu, Republic of Korea, 28–31 May 2012	7.1.3	E F S R
IOC/EC-XLVII/Inf.3	Audit of the Governance of UNESCO and dependent funds, programmes and entities – compilation of documents	11.2	E only
191EX/16 Part IV (UNESCO document)	Follow-up to the independent external evaluation of UNESCO. Part IV: Follow-up to the report of the Joint Inspection Unit on the management and administration of UNESCO	11.2	E F R S

ANNEX IX

LIST OF PARTICIPANTS

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

Email: ymichida@aori.u-tokyo.ac.jp
(Also representing Japan)

Chair

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(Also representing Korea)

VICE-CHAIR

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Head of CGILE/DR
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Ministry of High Education and Research
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Fax: +228 221 85 95
E-mail: bliviadoteblim@gmail.com
(Also representing Togo)

Vice-Chair
Dr Peter HAUGAN
Professor
University of Bergen,
Geophysical Institute
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N-5007 Bergen
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(Also representing Norway)

Vice-Chair

Dr Yutaka MICHIDA
Member of Japanese National Committee for
IOC / Professor
Atmosphere and Ocean Research Institute,
The University of Tokyo
c/o Office of DG - Japanese National
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Vice-Chair

Dr. Atanas PALAZOV
Director
Institute of Oceanology, Bulgarian Academy of
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Bulgaria
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(Also representing Bulgaria)

Vice-Chair

Mr Frederico Antonio SARAIVA NOGUEIRA
Captain (Ret)
Diretoria de Hydrografia e Navegação
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24.048-900 Niteroi-Rio de Janeiro
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Fax: +5521 2189 3088
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(Also representing Brazil)

Former Chair

Mr Javier Armando VALLADARES
Advisor in public and private sector in
Argentina and in the region
Instituto Tecnológico Buenos Aires (member of
the Board)
Jonas Salk 3627
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II. MEMBER STATES OF THE IOC/
ETATS MEMBRES DE LA COI/ ESTADOS
MIEMBROS DE LA COI

Afghanistan / Afghanistan / Afganistán

Head of Delegation

S. Exc. Monsieur Ambassadeur M. Kacem
FAZELLY
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Alternate

Ms Khadija AMIRI
Second Secretary
Permanent Delegation of Afghanistan to
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Algeria / Algérie / Argelia

Alternate

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**IV. REPRESENTATIVES & OBSERVERS
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ANNEX X

ACRONYMS

ADU	Associate Data Unit (IODE)
Add.	Addendum
ADG	Assistant Director-General
ANCA	Working Group on Harmful Algae in the Caribbean and Adjacent Regions
BBNJ	Marine Biological Diversity in Areas Beyond National Jurisdiction
C/5	Programme and Budget (UNESCO)
CAP	Complementary Additional Programme
CARIBE-EWS	Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions
CATAC	Central America Tsunami Advisory Centre
CG	WMO Congress
CD	Capacity development (IOC)
CFP	Ciguatera Fish Poisoning
CIFDP-C	Coastal Inundation Forecasting Project in the Caribbean
CLME	Caribbean Large Marine Ecosystem
CMOC	Centres for Marine-Meteorological and Oceanographic Climate Data
COP	Conference of the Parties
CSK	Cooperative Study of the Kuroshio and Adjacent Regions
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organization
CTIC	Caribbean Tsunami Information Centre
DART	Deep-ocean Assessment and Reporting of Tsunamis Project
DCDB	Data Centre for Digital Bathymetry
DDG	Deputy Director-General (UNESCO)
DG	Director-General (UNESCO)
DR	Draft Resolution
EC	Executive Council
EEZ	Exclusive Economic Zone
ECHO	European Commission Humanitarian Office
ECV	Essential Climate Variables
EOV	Essential Ocean Variables
GCOS	Global Climate Observing System
GEBCO	General Bathymetric Chart of the Oceans (IHO-IOC)
GEF	Global Environment Facility
GEO	Group on Earth Observations
GEOHAB	International Science Programme on the Global Ecology and Oceanography of Harmful Algal Blooms
GEOSS	Global Earth Observation System of Systems
GFCS	Global Framework for Climate Services
GLOSS	Global Sea-Level Observing System
GOOS	Global Ocean Observing System
GOSR	Global Ocean Science Report (IOC)
GRA	GOOS Regional Alliances

HAB	Harmful Algal Blooms
IBC	International Bathymetric Chart
IBCCA	International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico
ICAM	Integrated Coastal Area Management Programme (IOC)
ICAN	International Coastal Atlas Network
ICG	Intergovernmental Coordination Group (for regional tsunami warning systems) (IOC)
ICM	Integrated Coastal Management
ICSU	International Council for Science
IFAG	Intersessional Financial Advisory Group (IOC)
IHO	International Hydrographic Organization
IIOE	International Indian Ocean Expedition
INCOIS	Indian National Centre for Ocean Information Services
INF	Information documents (IOC)
IOCCP	International Ocean Carbon Coordination Project
IOCAFRICA	IOC Sub-Commission for Africa and the Adjacent Island States
IOCARIBE	IOC Sub-Commission for the Caribbean and Adjacent Regions
IODE	International Oceanographic Data and Information Exchange (IOC)
IOGOOS	Indian Ocean GOOS
IOTWS	Indian Ocean Tsunami Warning and Mitigation System (IOC)
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPHAB	Intergovernmental Panel on Harmful Algal Blooms
IPON	Indo-Pacific Ocean Observations and Services Network
IPPI	International Polar Partnership Initiative
ITU	International Telecommunication Union
JCOMM	Joint Technical Commission for Oceanography and Marine Meteorology
JCOMMOPS	JCOMM in situ Observations Programme Support Centre
LDC	Least Developed Countries
LME	Large Marine Ecosystems
MoU	Memorandum of Understanding
MPA	Marine Protected Area
MSP	Marine Spatial Planning
NEAMTIC	Tsunami Information Centre for the North-Eastern Atlantic, the Mediterranean and Connected Seas
NEAMTWS	Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas
NMDIS	National Marine Data and Information Service
NOAA	US National Oceanic and Atmospheric Administration
NTWC	National Tsunami Warning Center
NWPTAC	Northwest Pacific Tsunami Advisory Center
OA	Ocean Acidification
OBIS	Ocean Biogeographic Information System (IOC)
ODIN	Oceanographic Data and Information Network
ODINAFRICA	Ocean Data and Information Network for Africa

ODINCARSA	Ocean Data and Information Network for the Caribbean and South America Regions
OOPC	Ocean Observations Panel for Climate
ORV	Oceanographic Research Vessel
PEGASO	People for Ecosystem Based Governance in Assessing Sustainable Development of Ocean and Coast (European Union project)
PICES	North Pacific Marine Science Organization
POGO	Partnership for Observation of the Global Oceans
PROVIA	Programme of Research on Climate Change Vulnerability, Impacts, and Adaptation
PTWC	Pacific Tsunami Warning Center
PTWS	Pacific Tsunami Warning and Mitigation System
REP	Report (UNESCO documentation)
RMIC	Regional Marine Instrument Centre
ROP	Rules of Procedure
RP	Regular Programme (UNESCO budget)
RSB	Regional Subsidiary Bodies (IOC)
RTRC	IOC Regional Training and Research Centres
SBSTA	Subsidiary Body for Scientific and Technological Advice
SC	Steering Committee
SCOR	Scientific Committee on Oceanic Research
SDG	Sustainable Development Goal
SIDS	Small Island Developing States
SOA	State Oceanic Administration (China)
SPINCAM	South-East Pacific Data and Information Network in support to Integrated Coastal Area Management
TNC	Tsunami National Contact
TOR	Terms of Reference
TOWS-WG	Working Group on Tsunamis and Other Hazards related to Sea-Level Warning and Mitigation Systems
TSP	Tsunami Service Providers
TT-MOWIS	Task Team on Integrated Marine Meteorological and Oceanographic Services for WMO Information System (WIS)
TWAP	Transboundary Waters Assessment Programme
UN	United Nations
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Educational, Scientific and Cultural Organization
WCRP	World Climate Research Programme
WESTPAC	IOC Regional Secretariat for the Sub-Commission for the Western Pacific
WG	Working Group
WHO	World Health Organization
WIGOS	WMO Integrated Global Observing System
WIS	WMO Information System
WMO	World Meteorological Organization
WOA	World Ocean Assessment (UN)
ZNG	Zero Nominal Growth

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14. Second Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions, Havana, 1986	E, F, S
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19. Fifth Session of the IOC Regional Committee for the Southern Ocean	E, F, S, R
20. Eleventh Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Beijing, 1987	E, F, S, R
21. Second Session of the IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean, Arusha, 1987	E, F
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24. Twenty-second Session of the Executive Council, Paris, 1989	E, F, S, R
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26. Third Session of the IOC Committee on Ocean Processes and Climate, Paris, 1989	E, F, S, R
27. Twelfth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Novosibirski, 1989	E, F, S, R
28. Third Session of the Sub-Commission for the Caribbean and Adjacent Regions, Caracas, 1989	E, S
29. First Session of the IOC Sub-Commission for the Western Pacific, Hangzhou, 1990	E only
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38. Thirteenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Baja California, 1991	E, F, S, R
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42. Second Session of the IOC Regional Committee for the Central Eastern Atlantic, Lagos, 1990	E, F
43. First Session of the Joint IOC-UNEP Intergovernmental Panel for the Global Investigation of Pollution in the Marine Environment, Paris, 1992	E, F, S, R
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53. Fourteenth Session of the International Co-ordination Group for the Tsunami Warning System in the Pacific, Tokyo, 1993	E, F, S, R
54. Second Session of the IOC-FAO Intergovernmental Panel on Harmful Algal Blooms, Paris, 1993	E, F, S
55. Twenty-seventh Session of the Executive Council, Paris, 1994	E, F, S, R
56. First Planning Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Melbourne, 1994	E, F, S, R
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61.	Third Session of the IOC-WMO Intergovernmental WOCE Panel, Paris, 1995	E only
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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
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69.	Fourth Session of the IOC Regional Committee for the Central Eastern Atlantic, Las Palmas, 1995	E, F, S
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71.	Sixth Session for the IOC Regional Committee for the Southern Ocean and the First Southern Ocean Forum, Bremerhaven, 1996	E, F, S,
72.	IOC Black Sea Regional Committee, First Session, Varna, 1996	E, R
73.	IOC Regional Committee for the Co-operative Investigation in the North and Central Western Indian Ocean, Fourth Session, Mombasa, 1997	E, F
74.	Nineteenth Session of the Assembly, Paris, 1997	E, F, S, R
75.	Third Session of the IOC-WMO-UNEP Committee for the Global Ocean Observing System, Paris, 1997	E, F, S, R
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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
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95.	Seventh Session of the IOC Sub-commission for the Caribbean and Adjacent Regions (IOCARIBE), Mexico, 2002	E, S
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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	E only
105.	Thirty-seventh Session of the Executive Council, Paris, 2004	E, F, S, R
106.	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*
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*

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
147.	Forty-third Session of the Executive Council; Paris, 8–16 June 2010	E, F, R, S
148.	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, Istanbul, Turkey, 11–13 November 2009 (* Executive Summary available separately in Ar, E, F, S & R)	E*
149.	Seventh Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North Eastern Atlantic, the Mediterranean and Connected Seas, Paris, France, 23–25 November 2010 (* Executive Summary available separately in Ar, E, F, S & R)	E*
150.	Sixth Session of the Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean Sea and Adjacent Regions, Santo Domingo, Dominican Republic, 26–29 April 2011 (* Executive Summary available in E, F, S & R)	E*

151.	Twenty-fourth Session of the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System, Beijing, China, 24–27 May 2011 (*Executive Summary in E, F, S & R included)	E*
152.	Twenty-first Session of the IOC Committee on International Oceanographic Data and Information Exchange, Liège, Belgium, 23–26 March 2011 (*Executive Summary available separately in E, F, S & R)	E*
153.	Eighth Session of the IOC Sub-Commission for the Western Pacific (WESTPAC-VIII), Bali, Indonesia, 10–13 May 2010 (*Executive Summary available separately in E, F, S & R)	E*
154.	Tenth IOC Intergovernmental Panel on Harmful Algal Blooms, Paris, France, 12–14 April 2011 (*Executive Summary available separately in E, F, S & R)	E*
155.	Forty-fifth Session of the Executive Council, Paris, 26–28 June 2012 (*Decisions available in E, F, S & R)	E*
156.	Seventh Session of the Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean Sea and Adjacent Regions, Willemstad, Curacao, 2–4 April 2012 (*Executive Summary available in E, F, S & R)	E*
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164.	Eleventh Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North Eastern Atlantic, the Mediterranean and Connected Seas, 12–14 November 2014, Nicosia, Cyprus (*Executive Summary available in E, F, S & R)	E*
165.	Twenty-sixth Session of the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS-XXVI), Hawaii, USA, 22–24 April 2015 (*Executive Summary available in E, F, S & R)	E*
166.	Tenth Session of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS), Philipsburg, Sint Maarten, Kingdom of the Netherlands, 19–21 May 2015 (*Executive Summary available in E, F, S & R)	E*
167.	Tenth Session of the IOC Sub-Commission of the Western Pacific (WESTPAC-X), Phuket, Thailand, 12–15 May 2015	E
168.	Twenty-eighth Session of the Assembly, Paris, 18–25 June 2015	