This document provides supporting information to the IOC Capacity Development Strategy. It should not be considered as final. It will be submitted to IOC-XXVIII for adoption.
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1. BACKGROUND

1.1 IOC and Capacity Development

The Intergovernmental Oceanographic Commission (IOC) of UNESCO has a recognized and unique role in the UN system in relation to ocean science and the science base for ocean and coastal management. It is recognized through the United Nations Convention on the Law of the Sea (UNCLOS) as the competent international organization in the fields of Marine Scientific Research (Part XIII) and Transfer of Marine Technology (Part XIV). Its status as a body with functional autonomy within UNESCO has been carefully designed to provide an efficient platform for coordination, information and sharing of knowledge to contribute to sustainable and peaceful development.

Enabling Member States to participate in and benefit from its programmes and actions has been a major goal of IOC’s activities since its beginning, which translated into a number of resolutions and documents. They included the development of a UNESCO/IOC Comprehensive Plan for a major assistance programme to enhance the marine science capabilities for developing countries (IOC/INF-612\(^1\), 1985), the development of an IOC Training, Education and Mutual Assistance Programme (TEMA) Strategy (TEMA-V/7, 1991) and Action Plan (TEMA V/9\(^2\), 1991-1995) as well as observations and experiences of TEMA implementation, 1984-1994 (IOC-XVIII/Inf.2\(^3\), 1995). IOC Criteria and Guidelines for the Transfer of Marine Technology (IOC/INF-1203\(^4\)) its implementation plan (IOC/INF-1212\(^5\), 2005) and IOC Principles and Strategy for Capacity-building (IOC/INF-1211\(^6\), 2005), were adopted in 2003.

Since its establishment in 1960, IOC has built up a rich tradition of providing technical training, scholarships and fellowships, initially through the IOC’s TEMA (Training, Education and Mutual Assistance), and more recently through its Capacity Development section.

1.2 The Context

IOC’s Capacity Development activities were reviewed by the Assembly at its 26th session (IOC-XXVI/3\(^7\)) in 2011. The review led to decisions calling for special attention on:

- sustaining existing capacity to develop management procedures and national policies in marine sciences as well as the establishment of regional training centres (IOC-XXVI/3, §61);

\(^1\) See: [http://unesdoc.unesco.org/images/0006/000630/063061eo.pdf](http://unesdoc.unesco.org/images/0006/000630/063061eo.pdf)

\(^2\) See: [http://www.unesco.org/ulis/cgi-bin/ulis.pl?database=ged&mode=e&sc1=1&sc2=1&by=3&look=basic&req=2&no=88297](http://www.unesco.org/ulis/cgi-bin/ulis.pl?database=ged&mode=e&sc1=1&sc2=1&by=3&look=basic&req=2&no=88297)


- developing capacity of the Member States to effectively participate in and benefit from all areas of IOC's work for the maintenance of healthy ocean ecosystems (IOC-XXVI/3, §117);
- focusing on the growing needs of Africa and other regions including Small Island Developing States (SIDS) to foster public awareness and education (IOC-XXVI §147);
- responding to the growing Capacity Development needs of Member States (IOC-XXVI, §193) especially for the transfer of technology/cooperation for implementing Parts XIII and XIV of UNCLOS and the effective participation of Member States in regular assessment processes (e.g. World Ocean Assessment).

4 Further, the Rio+20 Outcome document *The Future we Want* recognizes, in its paragraphs 160 and 269-276, "the importance of building capacity of developing countries to benefit from the conservation and sustainable use of oceans and seas and their resources". In addition this document emphasizes "the need for transfer of technology taking into account IOC’s Criteria and Guidelines on the transfer of marine technology*. IOC’s Criteria and Guidelines on the transfer of marine technology (CGTMT) are meant to contribute to Article 271 of UNCLOS. Marine technology according to these guidelines refers to “instruments, equipment, vessels, processes and methodologies required to produce and use knowledge to improve the study and understanding of the nature and resources of the ocean and coastal areas.”

5 The CGTMT further describes a list of marine technology types, and also identifies a set of criteria for Transfer of Marine Technology (TMT) as well as guidelines for implementation of TMT by IOC. Furthermore, Capacity Development actions need to reinforce gender equality. Reference is also made to (i) the on-going negotiation related to the Sustainable Development Goals (SDG), in particular the proposed ocean SDG proposed by UN MS on *Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development, and its target on CD: 14.a increase scientific knowledge, develop research capacities and transfer marine technology taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular SIDS and LDCs;* (ii) Outcome document A/CONF.223/3 of the third International Conference on Small Island Developing States (Samoa 2014) and its paragraph 58 (f) *To undertake marine scientific research and develop the associated technological capacity of small island developing States, including through the establishment of dedicated regional oceanographic centres (...)

6 The Regular Process through UNGA resolution 65/37 A §200 (December 2010 has expressed the need to start building capacity of Member States for the conduct of integrated marine assessments as a key priority. IOC has been requested to provide technical and scientific support to the World Ocean Assessment (WOA) including in Capacity Development areas. Marine assessments are an essential decision support mechanism for the ocean planning and policy framework.

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7 It should be noted also that IOC has a long tradition of collaboration with other organizations within the United Nations (WMO, UNEP, UNDP, FAO, IMO, IHO) and outside (SCOR, ICES, PICES, POGO, IOI) as well as bilateral cooperation with specific Member States.

1.3 Steps towards the new strategic plan for capacity development

8 The IOC made a voluntary Commitment at the Rio+20 Conference (Brazil, 20–22 June 2012) on ‘Building Global Capacity for Marine Sciences, Observation and Transfer of Marine Technology’. This commitment was aimed at conducting a global and regional assessment of capacity development needs in the fields of marine scientific research, observation and data management within IOC Member States with focus on Developing States and Small Island Developing States (SIDS). The survey was conducted via national coordinating bodies for liaison with IOC in cooperation with the IOC Secretariat, its programmes and actions, the IOC regional Sub-Commissions and decentralized offices as well as the UNESCO National Commissions. Other qualified national and international experts as well as networks of other intergovernmental organizations also contributed to the survey.

9 Detailed results are given in IOC document IOC/INF-1313, Baseline Study for an Assessment of National Capacities and Needs in Marine Research, Observation and Data/Information Management).

10 The assessment and the results of interviews on regional priorities as identified through the different IOC Sub-Commissions and relevant bodies show that requirements and priorities for capacity development varies from region to region, and that Capacity Development (CD) interventions need to adapt to regional priorities.

11 In many Member States, especially of Africa and SIDS, the affairs of the oceans and seas are still an emerging concept. Their capability to conduct ocean sciences is still limited. The scientific and technical capability to make the best use of transfer of marine technology is still lacking due to the low level of resources and priority given to ocean research. Accordingly, their awareness and their capability to effectively participate in and benefit from IOC programmes and actions as well as the global regular processes are low.

12 Many Member States have initiated actions to strengthen national capacities in the field. These actions go hand in hand with the efforts towards developing national strategies for oceans and coasts and seeking a more active role in international efforts for promoting knowledge about the oceans and their sustainable use. The emergence of the concept of blue economy (or ocean based economies) has also created in many developing nations incentives for focusing economic development plans on the exploitation and management of marine resources (for e.g. African Union strategy for oceans and seas-Horizon 2050) and to develop human institutional capacities needed to underpin these plans.

13 The forty-seventh Session of the IOC Executive Council approved the establishment of the Global Ocean Science Report (GOSR). The Global Ocean

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Science Report (GOSR) is envisaged to provide an overview on nations’ (i) investments, (ii) resources, and (iii) scientific productivity in ocean science. It would 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 research interest, technological developments, capacity building needs and overall trends.

14 Because of its unique position within the UN system, the IOC is well placed to play a significant role in supporting its Member States in this special phase of their national development as it relates to the oceans. While continuing to make available the most effective of its current programmes and actions in CD to Member States, the IOC should explore new actions that better align CD interventions and Transfer Marine Technology (TMT) with national priorities. Furthermore, this provides an opportunity to promote “partnerships” rather than “simple assistance” in CD interventions and north-south and south-south cooperation. Accordingly within this goal, IOC could take a lead in integrating existing CD programs from UN or NGO organisations to optimize CD on a global scale.

15 In addition this strategy proposes reinforcement of gender equality and promotion of the role of women in IOC activities.

16 Through Decision IOC-XXVII/Dec.5.5.1 11 (Development of a New Capacity Development Strategy) the IOC Assembly (2013) established the Intersessional Working Group for the Development of IOC Capacity Development Strategic Plan (The full text of the Decision is available in Annex II).

17 The Forty-seventh Session of the Executive Council (2014) took note of the “Draft Capacity Development Strategy”, reconstituted the Intersessional Working Group for the IOC Capacity Development Strategy, with the Vice-Chairperson Prof Adoté Blim Blivi responsible for capacity development as Chairperson, and revised the Terms of Reference (see Annex III). The Council requested the Executive Secretary to include the Draft Strategic Plan for Capacity Development on the agenda of the IOC Assembly at its 28th session in 2015, and Member States to consider funding (as necessary) and supporting the activities leading to the formulation and adoption of the final version of the Capacity Development Strategy.

18 IOC Circular Letter 2531 (21 August 2014) invited Member States to designate members to the intersessional working group by 15 September 2014. This deadline was later extended to 15 October 2014. Member States who designated members of the working group are Angola, Argentina, Aruba, Australia, Belgium, Benin, Brazil, China, Colombia, Costa Rica, Cote d’Ivoire, Cuba, Dominican Republic, Egypt, France, Gambia, Germany, Ghana, India, Islamic Republic of Iran, Japan, Republic of Korea, Mauritius, Mozambique, Panama, Peru, Portugal, Saudi Arabia, Senegal, Suriname, United Republic of Tanzania, Thailand, Togo, Trinidad and Tobago, Turkey, United States, Venezuela.

2. STRATEGIC ANALYSIS (SWOT)

In this chapter we provide a brief SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis. The results of this analysis have been used to guide the identification of the expected results and outputs of the strategic plan.

Strengths and Weaknesses are determined by internal factors while Opportunities and Threats are determined by external factors.

<table>
<thead>
<tr>
<th>INTERNAL</th>
<th>EXTERNAL</th>
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<tbody>
<tr>
<td>Strengths</td>
<td>Weaknesses</td>
</tr>
<tr>
<td>IOC has a long tradition and experience in human resource development</td>
<td>IOC does not have the financial resources required to fulfill the needs of the CD beneficiaries</td>
</tr>
<tr>
<td>IOC has a well developed bottom-top regional structure which is fit for purpose to conduct CD activities</td>
<td>While IOC regional commissions are effective mechanisms they are not equally developed in the three regions</td>
</tr>
<tr>
<td>IOC has a wide range of communities of practice and partner institutions with experts who can provide training and education</td>
<td>Regional sub-commissions and global programmes are not always working together effectively.</td>
</tr>
<tr>
<td>IOC’s mandate of ocean research, observation, early warning services, sustainable management and governance, assessment information for policy provide an excellent framework for multi-disciplinary and inter-disciplinary approach</td>
<td>IOC does not have a dedicated CD section and as such, no dedicated IOC CD staff (dealing with all IOC programmes)</td>
</tr>
<tr>
<td>- Courses do not train sufficient numbers of trainees for each country</td>
<td>National coordination mechanisms not always existing or effective</td>
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</table>

Figure 1: SWOT table

12 The IODE programme does have a training coordinator, based at the IOC Project Office for IODE, Oostende (Belgium).
13 Taking into account that 70% of the IOC Member States are Low-income (<$1045 GNI / capita), Lower-middle-income (GNI/capita between $1046 and $4125) or Upper-middle-income economies (GNI/capita between $4126 and $12,745), while 30% are High-income economies (GNI/capita > $12,745) the need for capacity development assistance is still considerable.
3. EXISTING CAPACITY DEVELOPMENT STRATEGIES OF IOC REGIONAL SUB-COMMISSIONS AND GLOBAL PROGRAMMES

3.1 Regional Sub-Commissions

3.1.1 IOC AFRICA

21 Within the framework of IOCAfrica the “Capacity Development Needs – concept note” has been prepared (2014).

22 The Strategic Plan for the IOC Sub-Commission for Africa and the Adjacent Island States for 2014-2021 notes:

“The elements of the capacity development programme should include the following:

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

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

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

23 Responding to the requirements of international instruments and Member States, the IOC Sub-Commission for the Western Pacific (WESTPAC), rooted in the most densely populated area with significant social and economic reliance on ocean and coasts, is committed to developing and enhancing the capacities of young scientists, institutions and countries in the Western Pacific and adjacent regions for marine scientific research, observations, and services.

24 The WESTPAC’s RTRC initiative, developed with numerous experiences and lessons learnt from previous efforts on capacity development in the region, provides a self-driven approach tailored to the regional needs by building upon existing scientific specializations and expertise of national oceanographic institutes and universities in the region. The IOC/WESTPAC further emphasized the guiding principle for WESTPAC Capacity Building efforts to foster North-South and South-South collaboration, and to link trainings to the attainment of research goals addressing critical challenges to sustainable development in the region.

25 The Vision for WESTPAC’s capacity development is to envision a future wherein Member States in the Western Pacific and adjacent regions are empowered with effective governance for a healthy ocean, building on strong scientific understanding and systematic observations of the changing climate and ocean ecosystems, which embodies:

- Development of “IOC Regional Network of Training and Research Centres on Marine Science” through the establishment of IOC Regional Training and Research Centres (RTRCs) in national marine research institutes and/or universities, and provision of regular trainings on the specialization focus of these Centres to young scientists mainly from developing nations within and outside the region;
- Conduct of a series of topic-specific trainings in Member States on a rotation basis;
- "Training Through Research" through the engagement of early career scientists into WESTPAC research programs;
- Establishment of a “WESTPAC Best Young Scientist Award” and a “WESTPAC Young Scientist Travel Grant” to nurture young science leaders and facilitate international exposure of young scientists.

26 Recommendations of the 9th WESTPAC International Scientific Symposium (Nha Trang, Vietnam, 22-25 April 2014) and the UNESCO-ASEAN Framework Agreement for Cooperation (2014-2018), stressed the need for WESTPAC to continuously develop this regional network of RTRCs aiming to strengthen regional and national capacity in a sustainable and systematic manner with guiding principles to foster North-South and South-South collaboration, and to develop training programs leading to the attainment of research goals.

3.1.3 IOCARIBE

27 The present IOCARIBE Medium Term Strategic Science Plan (2006-2015) has been developed to fulfil Recommendation IOC/SC-IOCARIBE–VI.10 “Evaluation and Upgrading the Scientific Research and Training Component in the Regional Projects” of the Sixth Session of the Sub-Commission for the Caribbean and Adjacent Regions (San José, Costa Rica from 26 to 29 April 1999).
The Science Plan takes into consideration the document “Annotated Outline for the Scientific Plan” as a result of the First Workshop to formulate the Scientific Plan (Veracruz, Mexico, 1–3 December 1999); the document “Framework for the IOCARIBE Strategic Science Plan and Related Services 2001-2010” prepared during the IOCARIBE Ad-hoc Group of Experts Workshop to Formulate the Strategic Science Plan 2001–2010 (Manzanillo, Colima, Mexico, 14–16 November, 2001); the document “IOC Ocean Sciences Section: Perspectives and Expected Results” (IOC/INF-1206,2005) and Recommendations adopted by Member States during the VI, VII, and VIII Sessions of the IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE) (San Jose, Costa Rica, 26–29 April, 1999, Veracruz, Mexico, 25–28 February 2002 and Recife, Brazil, 14–17 April 2004).

The objectives of the IOCARIBE Strategic Science Plan are to: (i) support strategic planning of IOCARIBE Member States in relation to the development of its marine sciences, oceanic observations and associated services; (ii) facilitate a coherent management of regional programmes related to the marine-coastal environment and its resources; (iii) strengthen scientific basis for supporting IOC's regional programmes. The plan identifies the following Main Lines of Action: Oceans and Climate; Ocean Ecosystem Science; Marine Science for Integrated Coastal Area Management; and Extreme and Dangerous Natural Events.

SIDS are particularly vulnerable and at high risk concerning climate change and natural hazards. Often they are the first to feel the effects of global environmental problems, due to their often small size, isolated locations. It is clear that most SIDS countries are keenly aware of the importance of the marine environment and its resources to their sustainable development and economic stability. SIDS countries, however, are sometimes constrained by weak institutions and administrative processes and need enhanced human, technical, and financial resources to develop and implement cross-cutting approaches to the planning and management of oceans and coasts.

On the issue of coastal policy, the Mauritius Strategy called for integrated coastal management policies supported by the management of coastal ecosystems, including coral reefs, the implementation of networks of marine protected areas, and called for support from the international community to address the issue of coral. IOCARIBE has been instrumental in strengthening and enhancing the capacity of Caribbean SIDS to implement the Mauritius Strategy and other Conventions and protocols like the Convention on Biological Diversity, and the Cartagena Convention.

The increasing impacts of climate change coupled with the fact that these SIDS have very little or no access to the means to adapt to climate change places an enormous burden on their limited human and financial resource. Often, SIDS governments have had to divert precious budgetary resources to address damage caused by increases in extreme events. Such events as hurricanes and floods cause damage in excess of 20% of GDP in many SIDS.

IOCARIBE Capacity Building Strategy is built and focused through its programme development (e.g. GOOS, Tsunami, CLME, IODE). Capacity building should address the Member States needs and be implemented through the regional programmes. IOCARIBE strength and main instrument is the networking of scientists / experts and institutions.
The Sub-Commission strategy stresses the importance of Capacity-building Pilot Programmes addressing training needs in close partnership with ICAM, LME, HAB-ANCA, IBCCA, GLOSS, IODE, ODINCARSA, GOOS, JCOMM, COOP, CEOS, WMO, UNDP, UNEP and other organizations and programmes on available operational products, remote sensing data and numerical model outputs.

34 As well, it points out the importance of regional networks of scientists and stakeholders participating in Pilot programmes that should facilitate to nucleate a Regional Resources Hub where they could continue working together and creating products specifically for regional communities.

35 It is also underlined the need for carrying out country-specific programmes. Particularly, in the IOCARIBE Region where countries capacities for marine scientific research are asymmetrically developed. Special attention should be given to building-up institutional and legal frameworks, mutual assistance, and transfer of technology. Given the diversity of countries’ capacity, it is clear that small countries do not have the same level of expertise.

36 The Capacity Building efforts implemented in the IOCARIBE Region should focus in strengthening the institutions to ensure a long lasting capacity.

37 IOCARIBE SIDS actively participated in the UN SIDS Conference (September 2014 Samoa). UN Member States formally adopted the Small Island Developing States Accelerated Modalities of Action – or SAMOA Pathway. SIDS nations have identified addressing the gap in ocean science capacity as a prerequisite for sustainably managing the vast ocean spaces and resources under their national jurisdiction. This is a strong call to IOC to respond to SIDS requests and should be integrated into the IOC Programmes and IOC Capacity Development Strategy.

### 3.2 IOC Global Programmes

#### 3.2.1 IOC/GOOS (Global Ocean Observing System)

38 GOOS is led by IOC and co-sponsored by WMO, UNEP, and ICSU. The IOC Assembly approves the GOOS Work Plan. The capacity development activities of GOOS are rooted in IOC Resolution XXVI-8 which considered “the need to increase the number of IOC Member States active in GOOS implementation, and to develop their capacity to participate in and benefit from GOOS”, and decided to recommit to GOOS, building on existing achievements, by, amongst other objectives “reinforcing global participation through increased extrabudgetary support for capacity development, especially in Africa, Small Island Developing States and Least Developed Countries.”

39 One mechanism for implementation of GOOS at the regional level is through Regional Alliances. These identify, enable, and develop sustained GOOS ocean monitoring and services to meet regional and national priorities, aligning the global goals of GOOS with the need for services and products satisfying local requirements. The last revision of the GOOS Regional Policy (IOC/INF-1308, 2013) identifies the GRAs as assessing “regional readiness and capacity in [defining requirements, observing networks, and data streams], and the overall performance of the system in providing users with fit-for- purpose data and information products.” The GRAs have embarked on surveys of observing and
modelling capacity, which will help shape future projects focused on developing capacity.

![Figure 2: The GOOS Regional Alliances](image)

40 The GOOS Steering Committee has also been exploring cooperation with the individual human capacity programmes led by the Partnership for Observation of the Global Ocean (POGO, [http://www.ocean-partners.org/training-and-education](http://www.ocean-partners.org/training-and-education)) in order to mutually reinforce efforts focused on institutional capacity through GRAs with the extensive programmes of POGO related to ocean observing. A formal strategy is difficult to establish in the absence of the substantial core funding that capacity development requires. Projects and activities have been developed in an opportunistic manner based on a balancing of the objectives of the programme and the objectives of donors.

3.2.2 IOC/IODE (International Oceanographic Data and Information Exchange)

41 Because there are no formal academic education programmes on oceanographic data management, the IODE programme has a long history of providing technical training. IODE also organizes technical training on marine information management (as practiced by marine science librarians).

42 IODE has not developed a documented strategy but implements its capacity development through two methodologies:

- Development of regional ocean data and information networks (ODINs): these project-based initiatives provide an integrated CD package including equipment, training, seed funding for operational activities, and networking of data/information centres in a regional consortium. The first region where the ODIN concept was implemented was Africa: ODINAFRICA (1989-2015) where it proved very successful. In other regions such as ODINCARSA (Latin America), ODINECET (European countries in economic transition), ODINCINDIO (IOCINDIO region) and ODINWESTPAC (WESTPAC) regions similar initiatives were established but with varying success. The limiting factor was funding: whereas a reliable long-term donor could be found for ODINAFRICA (Government of Flanders, Kingdom of Belgium) this was not (yet) possible for the other regions.
Development of the **OceanTeacher Academy** (OTA) and **OceanTeacher Global Academy** (OTGA)\(^\text{14}\): through the OceanTeacher Academy project (2009-2013) IODE developed a web-based technical training platform. The OceanTeacher learning management system was initially developed as a training system for ocean data managers (working in ocean data centres), marine information managers (working in marine science research libraries) as well as for marine researchers who wish to acquire knowledge on data and/or information management. In addition, OceanTeacher is increasingly being used for training in other related disciplines. The URL is [http://www.oceanteacher.org](http://www.oceanteacher.org). Experience collected over 5 years revealed a few weaknesses of OTA: (i) number of students trained per country is too small; (ii) travel time can be very long; (iii) courses taught in English only; and (iv) insufficient focus on locally relevant issues.

The OceanTeacher Global Academy Project will develop a global training centre network and utilize this network to increase national capacity in coastal and marine knowledge and management. It will do so by (i) promoting the establishment of Regional Training Centres and fostering their close collaboration through advanced information technology; and (ii) further developing the OceanTeacher Learning System. It is expected that approx. 10 regional training centres will become operational in 2015 (United States, Colombia, Belgium, Senegal, Kenya, Mozambique, South Africa, India, China and Malaysia). While they will focus on training related to data and information management within the framework of the 4 year project, the RTCs and training platform can be utilized for courses related to other areas of the IOC mandate, depending on the locally available expertise. Substantial support is received from the Government of Flanders for the IOC Project Office for IODE and for the OTGA project.

### 3.2.2.1 IOC/IODE/OBIS (Ocean Biogeographic Information System)

Capacity development related to the Ocean Biogeographic Information System (OBIS) is integrated in the OBIS Strategic Plan: *Strategic Plan for the Ocean Biogeographic Information System, including resource requirements*.

“OBIS would help to advance expertise and technical capacity of IOC member states and the oceanographic community as a whole to collect, manage and share/publish marine biogeographic data (operational biogeography). This is an area in which IODE already excels (through IODE’s projects such as Ocean Teacher Academy and Ocean Data Standards and Best Practices), and one that OBIS can substantially contribute by providing training in biodiversity data management. If successful this could also result in an expanded OBIS network to include less represented geographic regions or new taxonomic areas which will enhance both access to new data and/or further the application of data by organizations that do not currently possess the ability to use the data.”

OBIS identified two major CD needs, i.e. (i) capacity to collect, manage and publish biodiversity data (data providers) and (ii) skills on how to access, analyse and interpret data and use the tools to generate information and indicators for national, regional and global reporting processes (data users/information providers).

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46 To respond to these specific CD needs the OBIS strategic plan proposes the following activities and targets:

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<tr>
<th>Performance indicator</th>
<th>Benchmarks</th>
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<tr>
<td><strong>Increase the institutional and professional capacity in marine biodiversity and ecosystem data collection, management, analysis and reporting tools, as part of IOC-UNESCOs International Oceanographic Data and Information Exchange (IODE)’s Ocean Teacher Global Academy (OTGA)</strong></td>
<td>Course material will be uploaded to the online OTGA Learning Platform. At least two biodiversity training courses will be organised at the OBIS project office in Oostende on a yearly basis. One for data providers (OBIS nodes) and one for data users.</td>
</tr>
<tr>
<td>Increased Nr of scientists and data managers trained in standards and best practices of biological data collection, sample processing, data management (including quality control), data storage and sharing, and data publication processes.</td>
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<tr>
<td><strong>Provide information and guidance on the use of biodiversity data for education and research and provide state of the art web services to society including decision makers (“contribution to Ocean Literacy”).</strong></td>
<td>Information maps, graphics and education packages will be made available online at <a href="http://www.iobis.org/node/328">http://www.iobis.org/node/328</a> (Lessons using OBIS). Provide listing of these uses on the OBIS website.</td>
</tr>
<tr>
<td>Increased Nr of information packages available for educators and scientists using marine biodiversity data for education or research</td>
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<tr>
<td>Increased use of marine biodiversity data for regional and global ocean management and governance (use of OBIS by identification of MPAs, CBD EBSAs, FAO VMEs, Marine Spatial Planning, Species Conservation acts, National reporting and resource management.)</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 3: OBIS activities and targets**

### 3.2.3 IOC/HAB (Harmful Algal Blooms)

47 Capacity development related to the Harmful Algal Bloom programme is integrated in the IPHAB strategy: *IPHAB Principles for capacity enhancement in research on and management of harmful algal events.*

48 “The following principles are drafted to guide the development, coordination and implementation of a broad variety of international, regional and in-country capacity enhancing activities in relation to harmful algae and phycotoxins, and the associated impacts on sea food safety, public health, aquaculture, fisheries, tourism, drinking water, environmental impacts etc. (HA).

1. **HA capacity enhancement is focussed and addresses the prioritised needs of the governments and institutions of the trainees.** [The implication of this principle is that with limited resources, capacity enhancement cannot and should not address every need].

2. **All capacity HA enhancing interventions are imbedded in the larger mandate to promote international cooperation on protection of the marine environment and preservation of human life and property in the ocean and coastal areas and work towards sustainable development.**

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III. HA capacity enhancement is based on the concept of “Community-based, participatory action research” which requires that the HA trainers offer services only at the request of the host community and that the services are created as a collaboration between the HA trainers and the stakeholders. In most cases this would involve communities that require assistance in sustainable resource management or resource capacity building, rather than new research avenues for the HA trainers. Thus the program and activity of the HA trainers must be structured in such a way that the target group acquires a clear realisation that they have the sole responsibility for their own capacity-building and a high probability of a sustained program after the contribution of the HA training activities cease to be requested. This means that they will:
   a. Identify areas for collaboration.
   b. Seek partners through clearer enunciation of the requirements,
   c. Review and reconstruct the terms of reference through stakeholder consultation, and
   d. Seek funds to co-finance the capacity enhancement in a business mode – (that is, return a product that is beneficial to the public).

IV. HA capacity enhancement interventions are structured and have enduring long-term impacts. This requires contributions that lead to sustainable, community-based management and research. The ultimate goal is to achieve independence of the community from the HA training group.

V. HA capacity enhancement focuses on developing management, operational and research capabilities.

VI. HA capacity enhancement is approached in a holistic, community participation manner. Depending on the type of intervention, decision-makers, directors of institutes, scientists, technicians, and the public are involved. The community has the final ownership of the outcome of the activities.

VII. Interventions are seen and treated as investments. Therefore, the executing agency will maintain appropriate contact with strategic partners, collaborating institutions, key decision makers, sponsors/funding organisations, thought leaders in relevant scientific disciplines, and participants.

VIII. HA capacity enhancement will optimise limited resources and reduce/eliminate duplication and overlap. This will include liaising closely with other agencies that also provide capacity enhancement services to improve coordination and increase efficiency.

IX. Different agencies are invited to share information on their list of trainees. IOC database of HAB capacity building is offered for consultation at any time to inquire about whether individuals have received previous training, where and when.”

3.2.4 IOC/MPR (Marine Policy and Regional Coordination)

49 While IOC/MPR does not have a CD strategy or plan as such, it implements a substantial number of training activities related to a wide variety of topics related to Integrated Coastal Area Management (ICAM) and Marine Spatial Planning (MSP), Integrated marine assessments as well as training activities in the context of the GEF-funded Large Marine Ecosystem (LME) programme.

50 Because the emphasis of the ICAM Programme is on ‘building capacity of IOC Member States in coastal management’, all ICAM interventions have a strong focus on technical training for scientists and coastal managers and hands-on delivery of tools and products through regional and national projects. As such the development of tools and guidelines is usually accompanied by a training
component or module to build capacity through IOC regions. Examples of the regional MPR projects with strong capacity development emphasis include:
- ACCC Regional Project on Coastal Adaptation in West Africa
- SPINCAM indicator development for South East Pacific countries (Flanders)
- Marine Spatial Planning methodology development and technical support to Vietnam, Brazil, Canada, and US
- PEGASO Mediterranean Assessment and Indicator Development (European Commission FP7)
- Training Courses in marine assessments in West Africa and South East Asia, Africa.

In recent years, the increasing role of IOC through MPR in the LME projects is leading to the establishment of a technical LME secretariat based in IOC in 2015. The role of this secretariat (initially funded through a GEF grant for 3 years) will be to provide technical and training support to GEF projects on LMEs, coastal management and marine protected areas, and their stakeholders. Building on a Capacity development need survey that was conducted in 2014 for GEF LME/ICM and MPA projects, a training programme has been formulated and will be implemented through IOC and other project partners. These will include:
- Increased collaboration, twinning and learning exchanges South-to-South between the GEF LME, MPA and ICM projects, and North-to-South partnerships with non-GEF marine and coastal initiatives (e.g. Seascapes) to build capacity and develop training and education materials.
- Training of GEF LME/ICM/MPA practitioners in new techniques and approaches for ecosystem-based assessment, management and governance practices for ecosystem and mitigation of effects of climatic variability and change in LMEs.

Overall, the following capacity development priorities have been identified for IOC/MPR:

### IOC/MPR — Capacity development priorities

<table>
<thead>
<tr>
<th>ECOSYSTEM BASED-MANAGEMENT</th>
<th>TECHNICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEGRATED COASTAL AREA MANAGEMENT</td>
<td>MARINE SPATIAL PLANNING</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>LARGE MARINE ECOSYSTEMS</th>
<th>DATA AND INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Methods and strategies for sustainable management.</td>
<td></td>
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<tr>
<td>3. Methodologies for evaluation of Coastal ecosystem goods and services.</td>
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<tr>
<td>4. Coastal physical characterization, impact assessment and natural risks (including climate change).</td>
<td></td>
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<tr>
<td>5. Approaches to coastal hazards mitigation.</td>
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<tr>
<td>6. Ecosystem-based adaptation to address climate change impacts in the coast.</td>
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<tr>
<td>7. Socio-economic analysis and coastal human impacts.</td>
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</table>

<table>
<thead>
<tr>
<th>DECISION SUPPORT TOOLS</th>
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</thead>
<tbody>
<tr>
<td>1. Data compilation and OGC services.</td>
</tr>
<tr>
<td>2. Zoning and spatial conflict analysis.</td>
</tr>
<tr>
<td>3. Digitalization of proposals, conversion to OGC services for web dissemination.</td>
</tr>
<tr>
<td>4. Personalization of web-viewers and atlases. (API/HTML5, Smart Atlas, etc.)</td>
</tr>
<tr>
<td>5. Web viewers development for dissemination and public participation: Licensed software architecture and &quot;tiles&quot;: Google maps, Bing — OpenstreetMap Open source generic clients: (Html5)</td>
</tr>
</tbody>
</table>

**Thematic**

1. Concepts, policies, international experiences and best practices on marine spatial planning.
2. Techniques for Marine ecosystem goods and services valuation.
3. Marine environmental characterization risks and impacts (including climate change).
5. Methodologies for step by step approach to the formulation of MSP plans.
6. Methodologies for evaluation and monitoring of MSP.
### 7. Elaboration of recommendations and actions plans for ICAM.

| Development and use of ecological, socio-economic and governance indicators to support coastal management/MSP processes |
| Methodologies for the conduct of integrated marine assessments |
| Coastal and marine protected areas’ management and planning |
| Assessing coastal and marine biodiversity |
| Environmental economic analysis: Sectorial and integrated approach (Fisheries, Energy, Maritime Transportation, Tourism, etc.) |
| Financing incentives and co-funding initiatives |
| Coastal and Marine Governance, Legal framework coordination and improvement |
| Stakeholder engagement, conflict resolution and negotiation skills in coastal management /MSP |
| Communication tools and strategies in the context of coastal and marine management and planning |
| Scenario development for planning and integrated management |

Other needs identified by Member states

**Figure 4: IOC/MPR CD priorities**

### 3.2.4.1 IOC/MPR and the World Ocean Assessment

53 Following the 2002 World Summit on Sustainable Development in Johannesburg, South Africa, the United Nations set up a regular process to review the environmental, economic and social aspects of the world’s oceans and seas. The outputs will be a series of World Ocean Assessments, building on the many assessments already carried out by States and international organizations.

54 The aim is to provide a sound, scientific basis for decisions at the global level on the world’s oceans and seas, and a framework for national and regional assessments and management decisions.

55 The task of the first cycle of the Regular Process (2010 to 2014) was to produce the first World Ocean Assessment. To this end, the UN General Assembly has created an Ad Hoc Working Group of the Whole to oversee and guide the Regular Process, and a Group of Experts to carry out the assessments within the framework of the Regular Process. In addition, a much larger pool of experts has been created to assist the Group of Experts in conducting the assessments and to provide effective peer-review to ensure the high quality of the outputs. Since the Working Group meets once a year, a Bureau consisting of 15 Member States 16 representing the regional groups of the United Nations was established for the intersessional periods of the Ad Hoc Working Group of the Whole.

56 Following the adoption in 2012 of the Terms of Reference and Methods of Work for the Group of Experts as well as the Outline of the First Global Integrated Marine Assessment (World Ocean Assessment, WOA-I), the Group of Experts

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16 African States: Ghana, Kenya, Tanzania; Asia-Pacific States: China, Republic of Korea, Sri Lanka; Eastern European States: Bulgaria, Estonia, Ukraine; GRULAC: Argentina, Chile, Ecuador; Western European and other States: Greece, Spain, USA (at the date of 26/03/2013)
supported by the Pool of Experts have engaged in the drafting of the WOA chapters with the aim to deliver these for peer-review in the summer of 2014.

57 In line with resolution A/RES/68/70 of 9 December 2013 on Oceans and the Law of the Sea, inviting IOC and other agencies to provide technical and scientific support to the Regular Process, IOC has continued to engage in the World Ocean Assessment in the following manner:
- In the area of Communication: With initial letters of support and funds in cooperation with UNEP/GRID-Arendal, a communication portal and a dedicated website has been developed for use by the Group of Experts and contributors to the report. Between 2012 and 2014, financial support has been provided by the IOC to an amount of USD 30,000 thanks to contributions from France and Belgium (Government of Flanders).
- In the area of Assessments: IOC is leading a number of marine assessment products and databases that are available to the Group of Experts and will be integrated into the World Ocean Assessment. In particular, the contribution of the GEF Transboundary Water Assessment Programme (TWAP) implemented by UNEP and IOC, to prepare an indicator-based assessment of the world’s Large Marine Ecosystems and Open Ocean areas. This project which will deliver this year its results in the form of technical reports and a web-based portal, has been implemented in close coordination with the WOA Group of Experts with a view to make this information available to writers and contributors.
- In the area of Capacity Building: UNEP and IOC have continued to support Member States in the organization/facilitation of workshops. Technical and financial support has been provided to Member States for the organization of workshops, held in accordance with the Guidelines for Workshops adopted by the General Assembly in resolution 66/231 of 24 December 2011. These workshops were hosted by the Governments of Chile, China, Belgium, the United States of America, Mozambique, Australia, Côte d'Ivoire and most recently India.
- Following the needs identified during these workshops some Regional Scientific and Technical Capacity Building Training Seminar were held in Bangkok, Thailand, 17–19 September 2012 and Maputo 17 to 19 April, 2013 for the COBSEA/NOWPAP/WESTPAC regions as well as the Nairobi Conventions respectively.
IOC is also committed to assist the Group of Experts of the Regular Process in finalizing production of the report of the First Global Integrated Marine Assessment with the technical editing of the publication among others. IOC is providing support to DOALOS to hire an editor for the whole WOA report.

3.2.5 IOC Tsunami Programme

58 Four Intergovernmental Coordination Groups (ICGs) for Tsunami Warning and Mitigation System have been established in the Pacific Ocean (IOC Resolution XV-61965), the Caribbean (IOC Resolution XXIII-13, 2005), the Indian Ocean (IOC Resolution XXIII-15, 2005) and the North Eastern Atlantic and Mediterranean Sea (IOC Resolution XXIII-14, 2005). The Terms of Reference of these four systems include explicitly Capacity Building elements. For example the Terms of Reference of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS) include: “To promote the establishment and further development of national tsunami warning and mitigation capacities” and “to promote implementation of relevant capacity-building”.
59 All four systems have developed and approved either Implementation Plans or a Medium Term Strategy that provides policy guidance including specific chapters on capacity building.

60 For example, the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS) Medium Term Strategy (2014-2021) does include among four other foundational elements, the Capacity Building foundational element that reads:

61 “An effective tsunami warning and mitigation system requires ongoing capacity building and training to support all three strategic pillars. Capacity building activities must be carried out continuously and forever in the three strategic pillars. Each Member State must be able to understand its risk and know ways in which they can mitigate the hazard, provide warning to its populations in a timely manner, and be able to carry out awareness and preparedness activities to sustain knowledge and ability-to-respond across generations.

62 The building of national human resource capacities that can develop, guide and lead these activities in each country is essential. Substantial experience, knowledge, and best practices have been accumulated over the years by Member States and this should be shared widely through trainings and workshops. Training courses and national, cross-sector and inter-regional workshops are excellent ways in which to build these skill sets and at the same time, support networking between countries during a real event.

63 As these skills are developed over time, trainings should be regularly conducted, and also be continually refreshed as new methods, technologies, and practices are identified. An example of regular training already available within the PTWS is the ICG/ITSU Training Programme organised by ITIC for PTWS Member States since the 1970s; such a programme (and others) can be expanded and/or customized to encompass and meet the needs of all countries.

64 The Indian Ocean Tsunami Warning and Mitigation System (IOTWS) Implementation Plan approaches Capacity Building as a cross-thematic element. The IOTWS Implementation Plan is structured to reflect the ICG and its Working Groups (WG), WG1, WG2, WG3, WG4, WG5 and WG6. After a status summary, details are condensed in the System Status Chapter which shows Action Plans for all components of the system. Capacity building is explicitly addressed to highlight the importance of training and extend the basis of the people involved in operating the system at all levels. Parts of the Implementation Plan are not yet as detailed as required, reflecting the fact that this is a work in progress.

65 This structured and tailored approach to the definition of Capacity Building elements of the Tsunami Programme, combined with the annual or biannual discussion on priorities and means inside each of the Intergovernmental Coordination Groups (ICGs) translates in a very comprehensive set of CB activities.”

66 To complete its CB elements and tools the structure of the Tsunami Programme includes a relevant role for the Tsunami Information Centers (TICs). As an example, between 2005 and 2014 (through September) the International Tsunami Information Center (ITIC) hosted by NOAA (USA) has delivered Tsunami Capacity Building activities, ranging from 2-days to 1-week trainings, to 2575 beneficiaries. The Jakarta Tsunami Information Center (JTIC), which is evolving into an Indian Ocean Tsunami Information Center (IOTIC) to encompass
the full region, does have a similar record of CB activities in the cluster area of the UNESCO Jakarta Office.

67 A key partner in the development of capacities for the tsunami programme has been the European Union. In total between 2010 and 2015 UNESCO and ECHO have implemented so far approximately 4 million euros towards building resilience and preparedness at community level and building national policies for effective and sustainable early warning systems and risk reduction educational tools. Equally important, the UN Economic and Social Commission for Asia and the Pacific (UN ESCAP), has provided dedicated support to the activities of the IOTWS in the order of ~10 USD millions in the period 2005-2015.

3.2.6 GLOBAL OCEAN SCIENCE REPORT

68 The Global Ocean Science Report (GOSR) envisages providing an overview of (i) investments, (ii) resources, and (iii) scientific productivity in Ocean Science. Ocean Science, as used in this document, includes all research disciplines related to the study of the ocean: physical, biological, chemical, geological, hydrographic, health, and social sciences, as well as engineering, the humanities, and multidisciplinary research on the relationship between humans and the ocean. Ocean science seeks to understand complex, multi-scale social-ecological systems and services, which requires observations and multidisciplinary and collaborative research.

69 The report will be mainly divided in two parts: firstly, a quantitative comparison, of e.g., bibliometrics and secondly a qualitative section, which addresses actions in capacity building, technology transfer, as well as national strategies and plans for ocean sciences under the national and global perspective. A chapter highlighting the contribution of marine science to the development of ocean policies and sustainable development, considering examples of past, current, and emerging issues in ocean science will complete the GOSR.

70 The final assessment will deliver an overview on where and by whom ocean science is conducted addressing the key aspects of ocean science regarding sustainable development and blue growth. The report will help to optimize the sustainable use of marine resources, to encourage capacity-development and transfer of technology marine environment, and to facilitate international cooperation in coastal and global marine research and management. In brief, the GOSR will provide information on where the science capacity exists to address the challenges raised by the World Ocean Assessment.

3.3 IOC/WMO JCOMM

71 The WMO-IOC Joint Technical Commission for Oceanography and Marine Meteorology adopted version 1 of its JCOMM Capacity Building Strategy\(^\text{17}\). This was replaced by the “JCOMM Capacity Development Principles\(^\text{18}\) last revised by JCOMM-IV (2012). The principles are as follows:

(i) The primary objective of JCOMM capacity-development is to enhance the implementation of the overall JCOMM Programme through


enhancing capacity in all Members/Member States to contribute to and benefit from the programme;

(ii) The Activity Leader on Capacity-Development, as a member of the JCOMM Management Committee, should work with the PA coordinators and the Secretariats to revise the JCOMM Capacity Development Principles that builds on existing capacity-development work in both WMO and IOC, to implement a range of JCOMM focused capacity-development activities;

(iii) Specific JCOMM-focused capacity-development activities should be implemented by the respective PAs and included in their respective workplans;

(iv) JCOMM capacity-development activities should aim to fill-in gaps and avoid overlapping at national, regional and international levels. It is highly desirable that national partners from both JCOMM themes (i.e., oceanography and marine meteorology) be involved so the complementary and “symbiotic” benefits of JCOMM are clearly demonstrated;

(v) JCOMM capacity-development will make particular efforts for continuous professional development, in line with ongoing development of competency requirements;

(vi) JCOMM capacity-development will aim, where possible, for a “train the trainer” approach to help ensure continuity by countering staff turnover/brain drain problems and to promote the wide spread of knowledge and practices;

(vii) JCOMM Capacity Development activities should endeavour to utilize existing methods, courses, tools and other capacity development aids, particularly those of the WMO and IOC;

(viii) At the regional level, JCOMM capacity-development will develop programmes and projects that follow WMO and IOC;

(ix) At the regional level, JCOMM capacity-development will develop, preferably, medium to long term programmes and projects that will result in national structural and embedded capacity that can be sustained by national funding sources;

(x) Creating awareness in the minds of the public and policy makers is essential for raising national and international support;

(xi) JCOMM capacity-development activities will include assessment of feedback regarding the satisfaction and requirements of users of JCOMM observations, products and services.

(xii) Capacity Development will be based on and provide feedback to the development and update of the Guides and Manuals that are maintained by WMO and IOC,

(xiii) Capacity Development activities should respond to expressed Member/Member State priorities that are related to JCOMM programmes, and strive for relevance, local ownership, sustainability, efficiency and focus.

The document further states that a number of aims of the JCOMM Capacity Development Principles can be achieved through education and training.
Capacity-Development activities will be implemented using a wide variety of methods, tools and resources that are currently available within WMO (including its 35 Regional Training Centres (RTCs) and Components) and the IODE of IOC (including the IODE OceanTeacher and regional ODIN Structures), or which will need to be developed by JCOMM and its parent bodies. It identifies the following types of education and training activities: (i) training courses; (ii) training tools; (iii) workshops; (iv) travel and study grants; (v) projects for capacity development; (vi) communication and outreach tools.

As a way of documenting and monitoring JCOMM Capacity Development activities, the use of the IOC-IODE Alumni database to record all JCOMM capacity-development events and alumni is recommended. This will assist in tracking JCOMM training course participants and in assessing the long-term impact of the training provided.

The JCOMM Capacity Development website (http://www.jcomm.info/CD) can be used to provide Members / Member States an overview of JCOMM Capacity Development activities, particularly those initiated and directly supported by the Members / Member States.

4. EXISTING CD STRATEGIES/PROGRAMMES OF PARTNER ORGANIZATIONS

4.1 World Meteorological Organization (WMO)

The World Meteorological Organization (WMO) (http://www.wmo.int) adopted a “Capacity Development Strategy” (approved by EC-64). It is summarized here:

Capacity Development Vision: Stronger NMHSs to meet society’s need for information on weather, climate and water for the safety and well-being of people throughout the world.

Capacity Development Mission: To facilitate a holistic and integrated approach to sustainable Capacity Development of NMHSs especially in developing countries, LDCs and SIDSs through: advocacy, education and training, outreach, partnerships and resource mobilization, demonstration and pilot projects, service delivery and research.

Strategic Objectives and Strategic Approaches
1. Objective 1: Define required capacities and identify deficiencies
2. Objective 2: Increase visibility and national ownership
3. Objective 3: Optimize knowledge management
4. Objective 4: Reinforce resource mobilization and project management
5. Objective 5: Strengthen global, regional and sub-regional mechanisms
6. Objective 6: Increase education and research opportunities

An implementation plan is also available from http://www.wmo.int/pages/prog/dra/CDS.html

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It is noted that WMO also developed a network of global and regional Training Centres in support of Capacity Development (see http://www.wmo.int/pages/prog/dra/CDS.html).

81 It is noted further that WMO and IOC/IODE are now collaborating on capacity development through sharing of expertise (e.g. WMO provided lecturers for the Train-the-trainer Course held at the IOC Project Office for IODE, 19-23 January 2015) and IOC/IODE was invited to be a member of the WMO steering committee for the WMO Global Campus.

4.2 Partnership for Observation of the Global Oceans (POGO)

82 POGO (http://www.ocean-partners.org/) does not have a formal CD strategy yet but is planning to develop such a document in 2015, as part of the overall POGO strategy.

83 POGO has an extensive “Training and Education”20 programme that includes:
- POGO-SCOR Visiting Fellowships
- POGO Visiting Professorship Programme
- NF-POGO Centre of Excellence in Observational Oceanography
- Austral Summer Institute
- UCT Postgraduate Bursary
- Research Cruise Training
- Alumni Network

84 POGO and IOC collaborate, inter alia, through the provision of lecturers and course materials for a data management course (IOC/IODE) within the framework of OceanTeacher.

4.3 Scientific Committee on Oceanic Research (SCOR)

85 SCOR does not have a CD statement or strategic plan but has an active range of capacity development activities21.

86 SCOR established (in 2007) its Committee on Capacity Building (Chaired by Venu Ittekot). The terms of reference are as follows:
(i) Provide direction for SCOR’s capacity-building activities: participation of scientists from developing countries and countries with economies in transition in SCOR activities (e.g., guidelines for WG proposals), the POGO-SCOR Fellowship Program, travel grants (e.g., guidelines for grants), and provision of reports to libraries in developing countries.
(ii) Guide and assist SCOR Executive Director in development of new capacity-building activities, particularly the Regional Graduate Networks of Oceanography activity.
(iii) Assist SCOR-sponsored projects and working groups in developing and implementing their capacity-building activities.
(iv) Help SCOR arrange funding for existing and new capacity-building activities.

20 http://www.ocean-partners.org/training-and-education
21 http://www.scor-int.org/capacity.htm
(v) Assist SCOR in interacting with regional and international groups related to capacity building in ocean sciences, such as the ICSU regional centres, START, IOC regional programs, etc.

87 SCOR capacity development activities include (i) travel support; (ii) SCOR Visiting Scholars programme; (iii) Ocean CB portal (in which is included the Summer Schools Portal, hosted by IOC/IODE\(^\text{22}\)); (iii) POGO-SCOR Fellowships; and (iv) Regional Graduate Networks.

### 4.4 International Ocean Institute (IOI)

88 IOI (http://www.ioinst.org/) is preparing and implementing a new Capacity Development strategy on Ocean and Regional Governance with special emphasis on developing countries. This includes five training centres in Brazil, Canada, Malta, South Africa and Thailand... Through its programmes, the IOI Network promote sustainable use of ocean space and resources through awareness creation, education, information dissemination, research and community initiatives. Through the organization of a series of Leadership Seminars, IOI identifies the implications of sustainable development with a focus on regional seas.

89 IOI has thousands of alumni of its training programmes worldwide, many of whom are in influential, decision-making positions in their home countries or the UN system. Alumni databases are maintained through IOI-Canada and IOI headquarters in Malta.23

90 The OceanLearn programme of IOI organizes courses on a variety of topics such as marine protected areas, biodiversity & tropical coastal tourism, managing marine pollution, ocean governance, etc.

### 4.5 UN-DOALOS

91 The IOC established a partnership with the Division for Ocean Affairs and the Law of the Sea, United Nations (UN-DOALOS).

92 On the occasion of the 2012 United Nations Conference on Sustainable Development (Rio+20 Conference), as indicated in the outcome document “The Future We Want”, States recognized “the importance of building the capacity of developing countries to be able to benefit from the conservation and sustainable use of the oceans and seas and their resources” and in this regard emphasized “the need for cooperation in marine scientific research to implement the provisions of UNCLOS and the outcomes of the major summits on sustainable development, as well as for the transfer of technology, taking into account the Intergovernmental Oceanographic Commission (IOC) Guidelines for the transfer of marine technology”.

93 The partnership between the IOC and UN-DOALOS aims to strengthen the capacity of States, in particular of developing countries, including SIDS, to implement UNCLOS and thus promote and facilitate the conduct of marine scientific research and effective dissemination of data, samples and research results in accordance with UNCLOS. The partnership consists of a needs-driven

\(^{22}\) [http://www.oceansummerschools.org/](http://www.oceansummerschools.org/)

training project to be delivered through training courses at the regional level, in particular also in the various SIDS regions, in partnership with other interested organizations; as well as through an internet portal for marine scientific research professionals. The training will focus on the legal, technical and scientific aspects relating to marine scientific research with a view to promoting a consistent application of the relevant provisions of UNCLOS. The target audience of the activities will be government officials who are policy makers and/or administrators, and scientists and technical staff.

94 In addition, as an inclusive project, the partnership is expected to facilitate interactions between government officials and scientists, including as representatives from developing coastal States and researching States. Furthermore, it is expected to lead to an improved knowledge of the marine environment. By applying the acquired knowledge to management and decision-making, this partnership will contribute to sustainable development.

4.6 UNITED NATIONS

95 At its 69th session (December 2014), the United Nations General Assembly expressed its appreciation to IOC's Ocean Teacher Academy for its contribution to Capacity Building and noted the expansion towards a global academy through the establishment of regional training centres. (See also other paragraphs of the 69th UNGA resolution, part II on Capacity-building, which are of relevance to the IOC Capacity Development Strategy.)

24 See paragraph 29 of the annual omnibus resolution on oceans and the law of the sea (UNGA Resolution A/RES/69/245).
25 Other paragraphs of the 69th UNGA resolution, part II Capacity-building, are of relevance to the IOC Capacity Development Strategy:
paragraph 12: Calls for capacity-building initiatives to take into account the needs of developing countries, and calls upon States, international organizations and donor agencies to make efforts to ensure the sustainability of such initiatives;
paragraph 15: Calls upon States and international institutions, including through bilateral, regional and global cooperation programmes, technical partnerships and fellowships, to continue to support and strengthen capacity-building activities, in particular in developing countries, in the field of marine scientific research by, inter alia, training personnel to develop and enhance relevant expertise, providing the necessary equipment, facilities and vessels and transferring environmentally sound technologies;
paragraph 18: Emphasizes the need to focus on strengthening South-South cooperation as an additional way to build capacity and as a cooperative mechanism to further enable countries to set their own priorities and needs and to foster actions to implement such cooperation;
paragraph 25: Acknowledges the importance of capacity-building for developing States, in particular the least developed countries and small island developing States, as well as coastal African States, for the protection of the marine environment and the conservation and sustainable use of marine resources;
paragraph 26: Recognizes that promoting the voluntary transfer of technology is an essential aspect of building capacity in marine science;
paragraph 27: Encourages States to use the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, and recalls the important role of the secretariat of that Commission in the implementation and promotion of the Criteria and Guidelines;
Furthermore, the Ocean Teacher Global Academy is a direct response to the need expressed in the United Nations Convention on the Law Of the Sea (UNCLOS), Article 276, with regard to the establishment of regional training centres, in order to stimulate and advance the conduct of marine scientific research, particularly by developing States, and to foster the transfer of marine technology. This call was reiterated in the outcome document of the Third International conference on SIDS held in Samoa in September 2014.

In its Resolution A/RES/69/245, the UNGA “Expresses its appreciation for the contribution of the Intergovernmental Oceanographic Commission to capacity-building through its Ocean Teacher Academy training system, which has provided training in ocean data and information management to more than 1,300 students and professionals from more than 120 countries, and takes note of the setting up of the Ocean Teacher Global Academy, operating through a network of regional training centres, which builds capacity and promotes expertise available in developing countries”.

4.7 IAEA

IOC is working closely with IAEA, namely on HAB CD. This cooperation is part of the IOC-IAEA-UNEP MoU (currently under renewal).

Under this cooperation framework individual participants and IAEA Project Participants are trained at the IOC HAB Centre (Copenhagen, Denmark) on a regular basis. HAB provides the training component of HAB species identification to IAEA regional project courses.

HAB attends the IAEA Capacity Development project planning workshops as advisor (Caribbean, SE Asia and South Pacific regional projects).

IAEA and HAB cooperate on HAB data compilation and organise joint data compilation training workshops. These link with DC, DIPS (OBIS-HAEDAT)) IAEA fund most of the activities fully.

Details on the joint HAB-IAEA training activities can be found in the IOC calendar.

4.8 GEF

The project called “Strengthening Global Governance of Large Marine Ecosystems and Their Coasts through Enhanced Sharing and Application of LME/ICM/MPA Knowledge and Information Tools” or the GEF LME: Learn Project will improve global ecosystem-based governance of Large Marine Ecosystems and their coasts by generating knowledge, building capacity, paragraph 39: Encourages the competent international organizations, the United Nations Development Programme and international financial institutions and funds to consider expanding their programmes within their respective fields of competence for assistance to developing countries and to coordinate their efforts, and recognizes the funding available from the Global Environment Facility as well as other funds allocated for projects relating to oceans;

26 quote paragraph 29 of UNGA Resolution A/RES/ 69/245
harnessing public and private partners and supporting south-to-south learning and north-to-south learning. A key element of this improved governance is mainstreaming cooperation between LME, MPA, and ICM projects in overlapping areas, both for GEF projects and for non-GEF projects.

104 This Full-scale project plans to achieve a multiplier effect using demonstrations of learning tools and toolboxes, to aid practitioners and other key stakeholders, in conducting and learning from GEF projects.

105 Although the project has a global scope, it will operate through the LME, ICM and MPA projects and the broad network of public and private sector organizations that are engaged in the projects. The GEF LME: Learn project will allow the exchange of best environmental practices and improve socio-economic benefits at national and local levels through building the institutional capacity of host nations to stem the loss in ecosystem goods and services. By improving coastal and marine management and governance practices, the project will improve ecosystem health and subsequently ecosystem services, such as seafood security and shoreline protection, and human well-being, such as livelihood opportunities, incomes and standards of living. The implementation of the capacity development activities would rely on the strengths of Partnerships, using and modifying existing training materials and filling gaps with others as needed.

106 The major outcomes associated with the project component are as follows:
- Increased collaboration and learning exchanges South-to-South between the GEF LME, MPA and ICM projects, and North-to-South and South-to-North partnerships with non-GEF marine and coastal initiatives (e.g. Seascapes) to build capacity and develop training and education materials.
- GEF LME/ICM/MPA practitioners trained in new techniques and approaches for ecosystem-based 5-modular assessment, management and governance practices for ecosystem and mitigation of effects of climatic variability and change in LMEs.
- Increased capacity of GEF LME, ICM and MPA project staff and practitioners, to address the new ecosystem-based governance priorities in GEF6 built through portfolio learning, partnerships, and training.

107 High priority areas for short-term training have been identified in a dedicated survey as:
- Ecosystem management and governance
- Integrated ecosystem assessment
- Quantitative skills
- Fisheries
- Technical skills
- Cross-cutting subjects

4.9 European Commission

108 The IOC and the European Commission (EC) are cooperating in areas of governance and research within the IOC mandate. Furthermore, the IOC and the EC share a common view on the importance of creating capacity in developing countries. IOC can serve as a bridge to foster international cooperation with other regions of the world (e.g. in the implementation of the MSFD in the Mediterranean and Black Sea).
109 The convergences between the two organisations' objectives are clear and there is scope for strengthening cooperation and exchanges on Marine and Maritime policy and in the context of IOC’s Three Expected Results and EC priorities and Directives. IOC has been leading the promotion of this practical approach to ocean governance over the past 15 years: its 2009 Guide to Marine Spatial Planning has become the international standard for the implementation of Marine Spatial Planning and the main reference for the European Commission to develop the most recent marine policies, including the improvement of institutional capacities of the EU Member States.

110 The EU Marine Strategy Framework Directive (MSFD) provides a framework for an ecosystem-based approach for sustainable use of marine goods and services by human activities. IOC and the EC are cooperating in the implementation of the UN Regular process for global reporting and assessment of the state of the marine environment and MSFD. Both processes could be nested and metrics for the descriptors harmonized.

111 Some of the currently ongoing projects with a CD component where IOC partners with the EC are listed as follows:

1) IOC has closely worked with the EU in Tsunami Early Warning and Mitigation Systems, in the North-eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS). However, there has been also European membership in all Intergovernmental Coordination Groups for Tsunami Early Warning Systems through Overseas Territories, in the Pacific, Caribbean and Indian Ocean. The Hazard mitigation work of the IOC also includes capacity development and training courses, supply of equipment, educational materials for youth of different ages, modelling inundation maps, tsunami detection buoys, etc. Having successfully implemented the project ‘Tsunami Information Centre for the North-Eastern Atlantic and Mediterranean (NEAMTIC)’ and working now on the NEAMWave14, the IOC hopes to continue its collaboration with the EC in this important area, possibly within the recently approved pilot project on natural disasters. The project NEAMTIC had the following objectives:
   • Make citizens, especially youth, aware of risks of floods from the sea in coastal areas, such as tsunamis, storm surges and strong swells
   • Acquire knowledge on and practicing safe behaviour;
   • Identify, share and disseminate good practices in plans, methods and procedures to strengthen preparedness for sea-level related hazards, including mitigation through integrated coastal zone management approaches;
   • Fostering linkages between the European Commission and the IOC on intergovernmental and transnational actions to develop the NEAMTWS.

112 IOC participated in the EC-funded project PEGASO28 (People for Ecosystem-based Governance in Assessing the Sustainable Development of Ocean and Coast), which aimed to develop coastal and marine sustainable management and planning tools in the Mediterranean and the Black Sea to support the

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27 North-eastern Atlantic, Mediterranean and connected seas Tsunami Information Centre (NEAMTIC)
EC DG ECHO, Preventions and Preparedness Programme (2010-2013). The project funded by the European Commission Directorate General for Humanitarian Aid & Civil Protection (DG ECHO) was coordinated by IOC-UNESCO
28 People for Ecosystem-based Governance in Assessing Sustainable Development of Ocean and Coasts (PEGASO) EC Seventh Framework Programme (2010-2014)
Mediterranean Integrated Coastal Zone Management Protocol. PEGASO fostered internal capacity (http://www.pegasoproject.eu/training) to ensure that the team members engaged effectively with each other in this complex, multi- and trans-disciplinary project. The consortium built and enhanced capacity in the end-user communities, so that the outcomes of the project were implemented, sustained and lead to improved management and policy practices within the study region.

113 The IOC/IODE is a partner in the SeaDataNet Project, which aims at achieving a standardised system for managing the large and diverse data sets collected by the oceanographic fleets and the automatic observation systems in Europe and surrounding seas. The SeaDataNet infrastructure network enhances the currently existing infrastructures, which are the national oceanographic data centres of 35 countries, active in data collection. The networking of these professional data centres, in a unique virtual data management system provide integrated data sets of standardized quality online. An important component of the project is dedicated to CD in order to allow data exchange and interoperability across all European (and beyond) ocean data providers, where IOC/IODE assumes a relevant role. The training courses are available online through the OceanTeacher Learning Platform.

Horizon 2020 EC Funding

114 In the context of the European Horizon 2020 Research Framework, IOC is participating in other projects which include a strong component of capacity development and training, mainly to facilitate the involvement of stakeholders in policy processes linked with coastal and marine waters and biodiversity.

115 1) The AQUACROSS project seeks to expand current knowledge and foster the practical application of the ecosystem-based management (EBM) concept for all aquatic (freshwater, coastal, and marine) ecosystems (as a continuum) by contributing to the development of robust and cost-effective responses integrated management practices, and innovative business models addressing current and future changes in major drivers and pressures, integrated management practices, and innovative business models such as green and blue infrastructures.

116 2) The IOC (GOOS) is a partner in the EC RTD Horizon 2020-funded AtlantOS project, which focuses on transforming Atlantic ocean observing activities into a fit-for-purpose system delivering societal benefit. The project includes a student exchange scheme led by the Alfred Wegener Institute (AWI), which will focus on developing actionable local ocean services from existing Atlantic Ocean observations and forecast systems.

117 3) IOC is a partner in the project “HAB-ILITY, Harmful Algal Blooms – International, Learning, Innovation, Transferring for Young researchers ETN”29.

118 All EU states are obliged to monitor toxin levels in shellfish and algal cells in aquaculture sites. HAB-ILITY ETN (Harmful Algal Blooms – International, Learning, Innovation and Transferring for Young researchers) proposes to act within an international and global space, proposing learning through research as an effective strategy to ensure, in the near future, the development of novel approaches for emerging topics related with HABs that may favour technological

innovations and knowledge transfer and the future employability of young researchers in the community to better predict and manage HABs.

119 HAB-ILITY proposes to work along 3 scientific work-packages (WPs) integrating 12 ESRs in particular fields of HAB research. The first WP focuses on understanding the ecology of HABs and oceanographic tools will be developed for better detection and forecasting of blooms. The second WP studies the toxin production and detection for more efficient detection of regulated and emerging toxins. The third WP will assess the socio-economic impact of HABs and mitigation.

120 Several scientists in the proposal are involved in European and international working groups ensuring a proper focus on current research priorities. Furthermore, several scientists in the HAB-ILITY network are involved in official monitoring programs and participation of non-academic organisations has been considered in order to provide hosting and training closer to societal needs and facilitate the future employability of ESRs.

5. OTHER OPPORTUNITIES FOR COLLABORATION IN CAPACITY DEVELOPMENT

121 It is recommended to investigate collaboration opportunities with other organizations such as CSM, IAEA, African Union, UNEP, UNDP, FAO, PICES, ICES, SMART, etc. UNESCO established MoU with ASEAN.
Appendix I

Decision IOC-XXVII/Dec.5.5.1
Development of a New Capacity Development Strategy

The Assembly,

Taking note of the outcome document of the United Nations Conference on Sustainable Development Rio+20 whereby the UNSD recognizes the importance of building the capacity of developing countries to be able to benefit from the conservation and sustainable use of the oceans and seas and their resources,

Having examined document IOC-XXVII/2 Annex 10,

Decides to set up an Intersessional Working Group for Developing a Draft Strategic Plan for Capacity Development with the annexed Terms of Reference;

Agrees that the regular budget for these activities will be considered as part of the overall IOC Programme and Budget resolution XXVII/DR.(6.1, 6.2);

Requests:
(i) the Executive Secretary to include the Strategic Plan for Capacity Development as an item on the Agenda of the Executive Council at its 47th session in 2014; and
(ii) Member States to consider funding and supporting the activities leading to the formulation and adoption of the Strategic Plan for Capacity Development.

Annex to IOC-XXVII,Dec.5.5.1

Draft Terms of Reference for the Intersessional Working Group for the Development of IOC Capacity Development Strategic Plan

PURPOSE

The Intersessional Working Group will develop a Capacity Development (CD) Strategic Plan for IOC. This plan will then be implemented through partnership with Member States, donors, UN Agencies, global financial institutions and the private sector.

TERM

The Intersessional CD Strategy Group will be constituted at the 27th IOC Assembly and will operate until the 47th IOC Executive Council in 2014.

FUNCTIONS

(a) Review documents given below to identify the relevant components that should be considered in an IOC CD strategy along with an outline of the strategy document

- IOC-XXVII/2 Annex 10 – Development of a New Capacity Development Strategy (2013);
IOC Capacity Development Strategy - Annexes

- IOC/INF-1313 – Baseline Study for an Assessment of National Capacities and Needs in Marine Research, Observation and Data/Information Management (2013);
- IOC/INF-1211 – IOC Principles and Strategy for Capacity Building (2005);
- IOC/INF-1276 – Empowering Developing Countries to Sustainably Use Their Coastal Resources (Self Driven Capacity Building) Closure Report of the SIDA Funded Project (2010);
- IOC/ABE-LOS VIII/8 – Practices of States in the Fields of Marine Scientific Research and Transfer of Marine Technology: an update of the 2005 analysis of Member State responses to Questionnaire No 3 (2008);
- IOC/INF-612 – UNESCO/IOC Comprehensive Plan for a Major Assistance Programme to Enhance the Marine Science Capabilities of Developing Countries (1985);
- Documents produced by IOC subsidiary bodies and sister organisations;
- Other documents relevant to this exercise.

(b) **Incorporate elements arising from the following considerations**

- Recent UN Conference outcome documents, especially Rio +20’s Outcome document “The Future we Want” and resolutions requesting actions in capacity development;
- The present High Level Objectives of IOC and its mandate as well as existing IOC programmes;
- Lessons learned from previous CD plans of IOC (Success stories and implementation problems);
- Gaps identified through prior assessments and surveys of capacities and needs requirements;
- Regional priorities as identified through the different IOC sub-commissions and relevant bodies and other IOC regional subsidiary bodies;
- Existing capacity development initiatives of Member States, other UN agencies and competent international organisations, for example, POGO and SCOR, with a view to developing partnerships, create synergies and avoid duplication;
- The problem faced by developing countries in not being able to retain qualified staff because of inadequate research infrastructure;
- Gender Equality, Priority Africa, SIDS and LDCs;
- The regional requirement for capacity as priorities may not be global.

(c) **Identify**

- IOC’s existing CD strengths and IOC’s unique intergovernmental CD niche
• The essential elements/pillars of IOC’s CD draft strategy (IOC-XXVII/2 Annex 10), consistent with IOC’s Medium Term Strategy, that will complement international CD partner development contributions;

• The need for a consistent level of extra-budgetary funding;

• Priorities for actions in relation to available resources focussing on specific geographical areas and specific science areas for effective and efficient capacity development, and informed by IOC’s regional bodies;

(d) Prepare a report for consideration of the 47th IOC Executive Council in 2014

COMPOSITION

• The Vice-Chairperson of the IOC for Group V, Prof. Adoté Blim Blivi will serve as Chairperson and the Deputy Executive Secretary of the Commission, Dr Mitrasen Bhikajee will be the Technical Secretary of the Intersessional Working Group;

• The Working Group will be open to all IOC Member States;

WORKING ARRANGEMENTS

• The Working Group will conduct the majority of its business by electronic means;

• 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 Executive Council;

• The Group will provide a report on all its activities to the 47th session of the Executive Council;

• Relevant documents would be made available before the Group meeting, in due time; and

• The Group will follow procedures for IOC Subsidiary Bodies, seeking to formulate its conclusions and recommendations through consensus.
Appendix II

EC-XLVII/Dec. 6.1

IOC Capacity Development Strategy

The Executive Council,

Having considered document IOC/EC-XLVII/2 Annex 7,

Takes note of the “Draft Capacity Development Strategy” presented in the document;

Decides to reconstitute the Intersessional Working Group for the IOC Capacity Development Strategy, with the Vice-Chairperson responsible for capacity development as Chairperson, and with the Terms of Reference as annexed to this decision;

Instructs the Chair of the Intersessional Working Group for the IOC Capacity Development Strategy to submit the final draft of the IOC Capacity Development Strategy and associated documentation as referred to in the Annex to this decision to the IOC Assembly for adoption at its 28th session in 2015;

Requests:

(i) the Executive Secretary to include the Draft Strategic Plan for Capacity Development on the agenda of the IOC Assembly at its 28th session in 2015;

(ii) Member States to consider funding (as necessary) and supporting the activities leading to the formulation and adoption of the final version of the Capacity Development Strategy.

Annex to EC-XLVII/Dec. 6.1

Terms of Reference for the Intersessional Working Group
for the IOC Capacity Development Strategy

PURPOSE

The Intersessional Working Group will develop the final draft of the IOC Capacity Development Strategy and associated documentation. This strategy will then be implemented through partnerships with Member States, donors, UN Agencies, global financial institutions and the private sector.

TERM

The Intersessional Working Group for the IOC Capacity Development Strategy, constituted at the 47th IOC Executive Council in 2014, will operate until the 28th session of the IOC Assembly in 2015.

FUNCTIONS

(d) To organize a review of the draft of the IOC Capacity Development Strategy document, as submitted to the 47th session of the IOC Executive Council (2014), by IOC Sub-Commissions, Regional and Technical Committees and other (relevant) subsidiary bodies of the IOC, to seek their advice and input to further improve the document.
(e) To identify, through consultations with the IOC Member States and IOC Sub-Commissions, Regional and Technical Committees and other (relevant) subsidiary bodies of the IOC and major programmes, elements of a draft work plan to be considered subsequent to the adoption of the Strategy.

(c) Prepare a document for consideration by the IOC Assembly at its 28th session in 2015 including the final draft of the IOC Capacity Development Strategy and preliminary elements of a draft work plan.

COMPOSITION
- The Vice-Chairperson of the IOC for Group V, Prof. Adoté Blim Blivi will serve as Chairperson;
- The Working Group will be open to all IOC Member States, IOC Secretariat members responsible for IOC Sub-Commissions, Regional and Technical Committees and other (relevant) subsidiary bodies of the IOC.

WORKING ARRANGEMENTS
- The Working Group will conduct the majority of its business by electronic means;
- The Chairperson may convene a face-to-face meeting, funded by Member States and/or extra-budgetary funding;
- The Group will follow procedures for IOC Subsidiary Bodies, seeking to formulate its conclusions and recommendations through consensus.
## Appendix III

**BIBLIOGRAPHY**

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Appendix III

LIST OF ACRONYMS

ACCC: Adaptation to Climate Change - Responding to Coastal Change and its human dimensions in West Africa through integrated coastal area management
AMT: Atlantic Meridional Transect
ANCA: Algas Nocivas en el Caribe y Regiones Adyacentes (Harmful Algae in the Caribbean and Adjacent Regions)
ASEAN: Association of Southeast Asian Nations
ASI: Austral Summer Institutes
AWI: Alfred Wegener Institute (Germany)
BSCR: Black Sea Regional Commission
CAP: Complementary Additional Programme (UNESCO)
CBD: Convention on Biological Diversity
CD: Capacity Development
CEDAW: Convention on the Elimination of all Forms of Discrimination against Women
CEOS: Committee on Earth Observation Satellites
CGTMT: (IOC’s) Criteria and Guidelines on the Transfer of Marine Technology
CLME: Caribbean Large Marine Ecosystem
COBSEA: Coordinating Body on the Seas of East Asia
CPD: continuous professional development
DIPS: Development of Information Products and Services for Ocean Assessments (DIPS-4-Ocean Assessments)
HAEDAT: meta database of the Harmful Algal Information System
EBM: Ecosystem-Based Management
EBSAs: Ecologically or Biologically Significant Marine Areas (related to CBD)
EC RTD: European Commission – Directorate General for Research and Innovation
EC: European Commission
EU: European Union
FAO: Food and Agriculture Organization of the UN
FIO-SOA: First Institute of Oceanography - State Oceanic Administration
GEAP: UNESCO Priority Gender Equality Action Plan
GEF: Global Environment Facility
GLOSS: Global Sea Level Observing System
GOOS: Global Ocean Observation System
GOSR: Global Ocean Science Report
GRAs: GOOS Regional Alliances
HAB: Harmful Algal Bloom
HLO: High Level Objective(s)
HQ: (IOC) Headquarters
IAEA: International Atomic Energy Agency
IBCCA: International Bathymetric Chart of the Caribbean Sea and the Gulf of Mexico
ICAM: Integrated Coastal Area Management
ICES: International Council for the Exploration of the Sea
ICSU: International Council for Science
IHO: International Hydrographic Organisation
IMO: International Maritime Organization
IOC MTS: IOC Medium Term Strategy
IOC RTRC-ODC: UNESCO/IOC Regional Training and Research Centre on Ocean Dynamics and Climate
IOC RTRC: IOC Regional Training and Research Centre(s)
IOC: Intergovernmental Oceanographic Commission of UNESCO
IOC/MPR: Marine Policy and Regional Coordination Section of the IOC
UNDP: United Nations Development Programme
UNEP: United Nations Environment Programme
UNITWIN: UNESCO Chairs Programme
UNESCO: United Nations Educational, Scientific and Cultural Organisation
UNGA: United Nations General Assembly
VMEs: Vulnerable Marine Ecosystems
WESTPAC: IOC Sub-Commission for the Western Pacific
WMO: World Meteorological Organization
WOA: World Ocean Assessment