**Item 6.1 of the Revised Provisional Agenda**

**Summary**

Pursuant to Decision 5.5.1 of the IOC Assembly at its 27th Session, this document has been prepared by the Intersessional Working Group for Developing a Draft Strategic Plan for Capacity Development, mindful that a more detailed action plan for the implementation of this strategy should complete a comprehensive Strategic Plan for Capacity Development.

The present document contains an analysis of the strengths, weaknesses, opportunities, and threats involved in the strategy and the list of participants to the meeting of the intersessional working group at UNESCO Headquarters on 10–11 December 2013.

**Financial and administrative implications:** The intersessional working group may be reconstituted to continue its work with new terms of reference. It will work through consultations by email until the 28th Assembly in 2015 when a consolidated CD Strategic and Action Plan will be presented. No budget is required for this activity.

The proposed decision(s) is referenced EC-XLVII/Dec.6.1 in the Action Paper (document IOC/EC-XLVII/2 Prov.)
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BACKGROUND

IOC AND CAPACITY DEVELOPMENT

The IOC has a recognized and unique role in the UN system in relation to ocean science and the science base for ocean 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 and benefit from its programmes and actions has been a major goal of IOC’s activities since its existence, 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, 1985), the development of an IOC Training, Education and Mutual Assistance Programme (TEMA) Strategy (TEMA-V/7, 1991) and Action Plan (TEMA V/9, 1991-1995) as well as observations and experiences of TEMA implementation, 1984-1994 (IOC-XVIII/Inf.2, 1995). IOC Principles and Strategy for Capacity-building (IOC/INF-1211, 2005), its implementation plan (IOC/INF-1212; 2005) and the IOC Criteria and Guidelines for the Transfer of Marine Technology (IOC/INF-1203) were prepared in 2005.

On this line, the IOC has been implementing the Transfer of Marine Technology through its targeted capacity development activities within its global and regional programmes and actions as well as in cooperation with its partners within and outside of the UN system (e.g. http://www.ioc-cd.org/index.php/activities). These interventions cover marine assessment and monitoring methodologies, IODE-related ocean data and information exchange, network and documents, OceanTeacher academy as well as other interventions in IOC programmes in marine biology and ecology. Regional subsidiary bodies and regional programmes have been successful in obtaining grants and facilitating professional exchanges to training programmes related to the implementation of these activities. Though primarily focused on “government-mandated” institutions in developing countries and their directors, the Closure Report of the SIDA-funded project (IOC/INF-1276, Empowering Developing Countries to Sustainably Use Their Coastal Resources) provides an example for IOC’s Capacity Development efforts.

THE CONTEXT

IOC’s Capacity Development activities were reviewed by the Assembly at its 26th session (IOC-XXVI/3) 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); 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); and 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. WOA).

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” and emphasizes “the need for transfer of technology taking into account IOC’s Criteria and Guidelines on the transfer of
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.” Furthermore, Capacity Development actions need to pay adequate attention to gender equality.

**STEPS TOWARDS THE NEW STRATEGIC PLAN FOR CAPACITY DEVELOPMENT**

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 nations 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. 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.

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 CD interventions need to adapt to regional priorities. In many Member States, especially of Africa and SIDS, the affairs of the oceans and seas need to be treated as an emerging theme. Their capability to practice ocean sciences is still inadequate or just beginning with the consequence that the scientific and technical capability to make the best use of transfer of marine technology is still lacking. Accordingly, their awareness and their capability to effectively participate in and benefit from IOC programmes and actions as well as global regular processes are low. Many countries are however turning their attention to the practice of ocean sciences, and many have initiated actions to enhance 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. Because of its unique position within the UN system, the IOC is well placed to play a significant role in supporting the 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 marine technology transfer 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.

In addition to the above dealing with the necessity of Capacity Development in Africa, Small Island Developing States and Least Developed Countries, adequate attention is to be given to gender equality in the proposed strategy development.
THE NEW STRATEGIC PLAN

VISION AND MISSION

VISION

Build Member States capacities for scientific understanding and systematic observations of the changing world ocean climate and ecosystems to underpin sustainable development and global governance for a healthy ocean and global, regional and national management of risks and opportunities from the Ocean.

MISSION

IOC’s Medium-Term Strategy, 2014–2021 (IOC/INF-1314) considers capacity development as a cross cutting function to develop institutional capacity in IOC functions such as Ocean research, Observing system/data management, Early warning services, Assessment and information for policy as well as Sustainable management and governance and taking into account the High Level Objectives:

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

UNESCO Major Programme II, Natural Sciences, in its approved programme, 2014-2017 (37 C/5), promotes the generation and sharing of knowledge in relation to natural resources, and capacity-building through international scientific collaboration for protecting and sustainably managing the ocean and coasts. The proposed implementation includes the coordination of monitoring activities, the production of scientific assessments, catalyzing international collaborative projects, capacity-building, and the designation of site-specific examples of sustainable development.

The above two documents form the core of the current Strategy’s mission, which is:

To promote knowledge and capacity of Member States:

- to bolster scientific understanding of ocean and coastal processes to improve the management of the human relationship with the ocean,
- to reduce the risks and impacts of ocean-related hazard, to take climate change adaptation and mitigation measures, and to develop and implement policies for healthy ocean ecosystems,
- to reinforce and further develop Member States’ institutional capacities to protect and sustainably manage ocean and coastal resources.

and

To enable Member States to collectively achieve the following high-level objectives (HLOs) within the IOC Medium-term Strategy, 2014–2021.
THE FOUR PILLARS

The assessment of the current capabilities and needs of developing countries and SIDS identified a number of areas where Capacity Development interventions will be needed to achieve the above mission. They included the need to strengthen national institutions, individual skills and knowledge and national science-policy frameworks in the short and long term as well as dedicated outreach and implied actions in the following areas: Ocean Sciences Education, Transfer of knowledge, research and training, Infrastructure for research and observations, Ocean Policy development, Ocean Observation, outreach.

ACADEMIC AND TECHNICAL (PROFESSIONAL) QUALIFICATIONS

Developing an active marine science community in Member States which can advise on the management of its ocean and coasts. This core of scientists can also assist their government officials during negotiations in oceanographic matters. They can provide technical and scientific information to advise the disaster risk reduction agencies about oceanic extreme events. The availability of qualified professionals will allow Member States to make the best use of IOC Capacity Development interventions and technology transfer. By getting involved in Capacity Development they will ensure that capacity in Member States is retained and further developed in their field of expertise. The currently available expertise in ocean research in developing countries lies in universities and technical institutions, which should benefit from CD interventions to strengthen their capabilities in human resources and infrastructure. Identified pools of expatriate ocean experts could also contribute to CD.

MARINE POLICY

Supporting Member States in developing and implementing ocean science policies that support marine management and sustainable development goals so that the foundations for sustainable marine management are embedded in Member States’ governance structures and practices. There is a need in some Member States to enhance awareness among a broader community of the government officials, members of the academia as well as other related stakeholders on the role of ocean as a development factor, its socio-economic functions as well as the range of tools for ocean science policy development offered by IOC’s programmes and actions. Such measures need to have a dedicated outreach that goes beyond the current channels of communication and involves national centres and universities involved in ocean research and observations.

INFRASTRUCTURE

Building on and enhance short-term Capacity Development interventions such as technical training opportunities through the development of new infrastructures for marine scientific research and the strengthening of existing ones. Lack of infrastructure also hinders sea-based training programmes. Overall, there is a need for technical advice and support in the development and provision of infrastructures for marine scientific research by sharing best practices and standards from international scientific and technical community (i.e. interface to GOOS and role of Earth Observations). Although this is part of technology transfer as defined in the IOC Criteria and Guidelines of Marine Technology Transfer, this remains an essential component for building national capacities.

USE OF OCEANTEACHER

The pillar is the well-established short training courses and workshops already being offered by IOC though OceanTeacher, GOOS, Tsunami and Ocean Science programmes as well as Capacity Development activities by technical commissions like the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM). These short courses targeted at
government staff have been very successful in building capacity in the different programmes of IOC.

**CAPACITY DEVELOPMENT STRATEGY: ACTIONS**

In order to achieve the above mission, new actions are required to:

- encourage improvement of formal academic and technical qualifications in Member States,
- support Member States in policy development and implementation,
- encourage local infrastructure development in Member States, and
- further expand and enhance IOC’s technical training curricula.

Proposed actions within each of the four pillars should take into consideration that the available capacity is different among Member States within regions and between regions; Thus they have to be prioritized accordingly. A Member State with a strong ocean science base, in a particular region, could play a substantial role in building capacity in that area.

**ACADEMIC AND TECHNICAL (PROFESSIONAL) QUALIFICATIONS**

Higher Education in Ocean Science and Technology

- Encourage countries to invest more in ocean education to strengthen universities and technical institutions and support students by making more scholarships available.
- Conduct assessment of available short- and long-term scholarship/fellowship programmes for students and other professional (both academic and technical), in particular, those which address needs of LDCs.
- Develop information about scholarships; create a web-based programme for enhanced access to such scholarship programmes, including an active outreach to the university community through government/IOC liaison.
- Request Member States to expand transboundary/regional/international scholarship/fellowship programmes, which include incentives for retaining expertise within home country/region.
- Identify opportunities for UNESCO chairs to effectively support the programme.
- Include the use of regional training centres (Category II centres, IOC Partnership Centres (e.g. those in China, India and Russian Federation).

Professional Exchanges

- Conduct assessment of available intra- and interregional student and professional exchanges in marine sciences and services, in particular in priority IOC thematic areas.
- Consider resumption of learning through research programmes; Consider learning by doing, e.g. internships on ships, etc.
- Consider opportunities for student and young professional engagement in IOC programmes/meetings/workshops to expand their engagement in world class science and the international community of science/experts.
- Broker interaction between expatriate experts and developing countries; liaise with Member States to create a roster of expatriate experts.
Retired Professionals

- Assess current national and international experience (e.g. Partnership for Observation of the Global Oceans–POGO, Scientific Committee on Oceanic Research-SCOR, Scientific Committee on Antarctic Research-SCAR as well as institutions in Member States) in utilizing retired academics and professionals in teaching and professional training.

- Identify opportunities to engage retired teachers and professionals in informal university programmes as well as IOC programmes and subsidiary bodies.

- Identify mechanisms to expand and enhance existing or develop new programmes, mindful of an appropriate role for IOC and through partners.

Ocean Policy

- Focus on assistance related to the contribution of marine science/services to national ocean/sustainable development strategies and goals.

- Emphasize CD actions for ensuring local ocean services (for food security, coastal safety) to show the link between science and socioeconomic benefits; provide advice on establishing national ocean service organizations.

- Make available/broker information, assistance, and tools to help Member States requesting support to develop their ocean sciences and technology plans.

- Foster communication between science and the development of national communities on how science/services make essential contributions to achieving national development goals.

- Develop and share an IOC presentation on how marine science/services are of direct benefit to national development goals.

- Explore developing training programmes in the Science to Governance approach (e.g. joint workshops, exchanges).

- Explore contributing expertise and information on ocean sciences and services through UNESCO (e.g. country programming documents) to help the countries to develop their own national (ocean) science and technology plans and ultimately its ocean policy. These can feed the national development strategy.

- Foster communication between ocean sciences and society.

Infrastructure

- Review IOC’s contributions in the field of transfer of marine technology in respect of the IOC Criteria and Guidelines for such transfer; and identify areas of IOC’s existing strengths and areas where further actions may be needed.

- Continue to inform and instruct the Member States on the IOC Criteria and Guidelines on the Transfer of Marine Technology.

- Develop some short “IOC lessons learned” demonstrating how IOC has already made major inroads to implement this strategy (e.g., tsunami and International Oceanographic Data and Information Exchange (IODE) programmes and).

- Revisit the “IOC Criteria and Guidelines” and evaluate their appropriateness based on current needs and capabilities.
• Assess in detail the needs of SIDS with their unique and emerging ocean and coastal contexts.

• Consider assistance in developing need requirements of Member States and broker resource mobilization for infrastructure (e.g. Global Ocean Observing System (GOOS) and earth observation systems).

• Coordinate with Member States which have ship capabilities for participation of scientists from developing countries.

USE OF OCEANTEACHER

• Develop an outreach strategy for OceanTeacher (OT) to expand its visibility to its user communities, collaborators in program development and expert teachers.

• Advertise OceanTeacher courses/contents widely among Institutions of Higher Education, by global mailings, e.g. monthly announcing website new contents (recommendation to have dedicated communication with Academia).

• Develop OceanTeacher pilots to engage regional training centres as hubs for university and professional collaboration; explore opportunities for academic and professional accreditation.

• Formalize CD training activities in all IOC programmes and subsidiary bodies by integrating them fully in OceanTeacher including targets for content development and training connected with regional training centres, and expert identification.

• Ensure that each IOC programme and region/Ocean Data and Information Network (ODIN) develop training courses to be delivered through OceanTeacher and that relevant programmes are developed to address regional needs.

• Develop a mechanism for OceanTeacher to facilitate regional centre coherence, quality control and evaluation to promote effective CD within regions and shared learning between regions.

• Identify opportunities for and encourage UNESCO chairs to effectively support OceanTeacher.

• Liaise with local/regional partners and actors (e.g. Ministries of Education) while developing OceanTeacher beyond data management.

• Develop and expand partnerships with user community which currently manages complementary programmes, e.g., WMO, SCOR, POGO and others.

PARTNERSHIPS

For all elements of the proposed strategy for capacity development, opportunities are available in a number of international organizations including those within the UN system, non-governmental organizations, academic institutions, civil society and other stakeholders:

• Develop and expand partnerships for current complementary programmes like COMET/WMO, POGO SCOR.

• Take advantage of the opportunities for CD activities within the Global Environment Facility Project on “Strengthening Large Marine Ecosystem governance”, which will be coordinated by IOC in collaboration with the United Nations Development Programme through the International Secretariat for the project established at the IOC Headquarters.

• Involve where appropriate private sector and national civil society partners.
## TIMELINE

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<tr>
<th>ACTION</th>
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<tbody>
<tr>
<td>1 CD survey in a sample of 20 countries</td>
<td>March 2013 - Completed</td>
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<tr>
<td>2 Presentation of CD Strategic Plan concept at IOC Assembly</td>
<td>June 2013 – Completed</td>
</tr>
<tr>
<td>3 Setting up of a sessional Working Group for Developing a Draft Strategic Plan for CD</td>
<td>26 June to 5 July 2013 - Completed</td>
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<tr>
<td>4 Establishment of an Intersessional Working Group for Developing a Draft Strategic Plan for CD</td>
<td>July 2013 to March 2014 – Completed</td>
</tr>
<tr>
<td>5 Preparation and circulation of Draft CD Strategic Plan to Member States</td>
<td>Through website- Completed</td>
</tr>
<tr>
<td>6 Consideration of Draft CD Strategic Plan by IOC Executive Council</td>
<td>July 2014</td>
</tr>
<tr>
<td>8 Circulation of consolidated Draft Strategic and Action Plan for Capacity Development to Member States</td>
<td>January 2015</td>
</tr>
<tr>
<td>9 Consideration of Draft Strategic and Action Plan for Capacity Development by the Assembly</td>
<td>June/July 2015</td>
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## EVALUATION

The implementation of the Strategic Plan will be evaluated by a committee to be set up by the Assembly upon its completion.

The Global Ocean Science Report (GOSR), if approved by the IOC Member States, will provide a monitoring mechanism for the implementation of the IOC Capacity Development Strategy. GOSR aims at providing systematic baseline information for assessing and reporting the level of capacity, investments, and needs of nations in ocean science, observation and services. If implemented at regular intervals (every 4/5 years), it would allow to detect trends, gaps and needs in CD and therefore would guide the overall IOC investment in Capacity Development.
ANNEX 1: ENVIRONMENTAL SCANNING OF STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS (SWOT ANALYSIS)

**OPPORTUNITIES**
- The growing international requirement for ocean services and data.
- The increasing investment of Member States in ocean science and services.
- Opportunity to engage with non-state actors for activities in ocean science.
- Member States can contribute on education, infrastructure, policy and general outreach from their previous experience.
- IOC has an effective global network available for fast communication.

**STRENGTHS**
- IOC is the only UN organization with its primary mandate in ocean science.
- IOC can draw on the expertise of the best research institutes and agencies in oceanography.
- The IOC network is global and most coastal States are members of IOC.
- Several organizations linked to the ocean are partners of IOC.
- UNESCO considers IOC programmes as its top agency-wide priorities.
- IOC has the possibility of furthering its message within the UNESCO network.
- Member States strongly support IOC in the UNESCO Governing Body meetings.
- Experience acquired by IOC in implementing programmes in ocean science and climate change.
- IOC’s regional subsidiary bodies and offices allow a more effective action at a local scale.

**WEAKNESSES**
- Requirements are enormous and out of proportion in relation to available resources.
- Some Member States have yet to effectively prioritize ocean science and services in their sustainable development planning.
- Limited awareness of the broad range of activities of IOC in some Member States.

**THREATS**
- The decrease in funding and staff undermines IOC’s leadership.
- The challenge of maintaining IOC’s unique niche in the expanding number of partners.
- The world economic situation leads to decreased contributions from Member States to global programmes.
- In a few countries, movement of qualified ocean scientists from governmental positions (available for IOC coordination) to the private sector.
## SWOT MATRIX

<table>
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<tr>
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<th>STRENGTHS</th>
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<tr>
<td><strong>OPPORTUNITIES</strong></td>
<td><strong>S-O Strategies</strong>&lt;br&gt;<strong>Pursue opportunities that fit IOC’s CD’s strength</strong>&lt;br&gt;Mobilize, under the coordination of IOC, Member States’ research institutions and organizations, regional bodies and global financial agencies.</td>
<td><strong>W-O Strategies</strong>&lt;br&gt;<strong>Overcome weaknesses to pursue opportunities</strong>&lt;br&gt;Involve regional subsidiary bodies and offices, in order to improve capacity and act at a local scale.&lt;br&gt;Develop an action plan, identifying different stakeholders and their tasks, in order to have a clear definition of participation of different Member States and organizations.</td>
</tr>
<tr>
<td><strong>THREATS</strong></td>
<td><strong>S-T Strategies</strong>&lt;br&gt;<strong>Ways to use our strength to reduce vulnerability to external threats</strong>&lt;br&gt;Develop (old and new) low-cost strategies of capacity-building;&lt;br&gt;Discuss the potential of ocean’s activities as an important sector of social and economic development.</td>
<td><strong>W-T Strategies</strong>&lt;br&gt;<strong>Defensive plan to prevent weaknesses from making IOC’s CD plan susceptible to external threats</strong>&lt;br&gt;Collaborate and partner with organizations having mandates which are close to IOC’s.</td>
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## ANNEX 2 - LIST OF PARTICIPANTS - MEETING OF THE INTERSESSIONAL WORKING GROUP FOR THE DEVELOPMENT OF IOC CAPACITY DEVELOPMENT STRATEGIC PLAN

10-11 December 2013
UNESCO HQs, Room VI, 09:00-17:30

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<th>Country</th>
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1 Canada and Portugal contributed to the Strategic Plan through written comments although they did not participate in this meeting.
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