IODE Steering Group for the OceanTeacher Global Academy project (SG-OTGA-I)

First Session (online)
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1. OPENING OF THE MEETING

The meeting was opened by Ms Claudia Delgado, IODE Training Coordinator, who outlined the meeting objectives. She informed the Group that, as the SG members are from countries across 22 time zones, it was not possible for everyone to meet in real time. As such, the meeting was conducted asynchronously so each day the agenda items listed for that day would be discussed, starting with pre-recorded presentations and followed by online discussion. Online discussion fora were used to discuss each agenda item and to ask questions. The fora were monitored by the OTGA Secretariat and remained open during the entire meeting.

The objectives of the Steering Group meeting are:

- To introduce the Regional and Specialized Training Centres
- To introduce the OTGA Project and Guidelines to all partners
- To agree on the project work plan for 2021, including proposed courses and sharing of work package tasks
- Designate the SG Chair (or Co-chairs)

1.1 WELCOME BY THE DONOR REPRESENTATIVE

Mr Gert Verreet from the Flanders Department of Economy, Science and Innovation, Belgium welcomed all participants. He explained that one of the main objectives of the UN Ocean Decade is to enhance the delivery of ocean science and this can be achieved through capacity development. The Decade Implementation plan describes capacity development as an essential tenet of the Decade. It has the ultimate aim of achieving evenly distributed capacity across the globe, across generations, and across genders and thus reversing asymmetry in knowledge, skills and access to technology. The combined impact of capacity development efforts under the Decade must be exponentially greater than the sum of its parts and current individual efforts and thus accelerate a fundamental shift in the way the ocean is perceived and managed. This increase will result both from an increased number of efforts, but also from enhanced coordination and focus of efforts.

The Government of Flanders approved the funding of the OTGA-2 project in December 2019 and this is part of a series of efforts from the Flanders-UNESCO Trust Fund for Science (FUST) to support the organization of capacity development activities within the IOC of UNESCO.

He wished the online meeting all the success and is looking forward to hearing about the decisions and outcomes from the meeting.

1.2 ADOPTION OF THE AGENDA AND TIMETABLE

The Steering Group adopted the agenda and timetable. All documents and presentations were made available online through the OceanTeacher meeting site https://classroom.oceanteacher.org/course/view.php?id=583. Each day new agenda items were made available. Day One of the meeting covered agenda items 1 to 5, Day Two covered agenda items 6 to 8 and Day Three covered agenda items 9 to 11. The agenda is attached as Annex I.
1.3 INTRODUCTION OF PARTICIPANTS

Participants provided video introductions which were uploaded to the meeting forum. The full list of participants is available as Annex IV.

2. INTRODUCTION TO THE OCEANTEACHER GLOBAL ACADEMY PROJECT

This agenda item was introduced by Mr Greg Reed, OTGA2 Project Manager, who firstly provided background to the OceanTeacher Global Academy project. The first OceanTeacher Global Academy Project, from 2015 to 2019, built on the legacy of decades of training delivered by IODE and its predecessor project, the OceanTeacher Academy. The major development for OTGA was the change in approach from a single Training Centre at the IOC Project Office for IODE in Oostende, Belgium, to a network of Regional Training Centres around the world in Colombia, China, India, Iran, Kenya, Malaysia, Mozambique and Senegal. This new approach enabled the use of the technical capacity already existing in the regions (including trainers, experts, facilities) as well to increase the number of courses organized and people trained in the regions. The use of information and communications technology was promoted to enable invited experts to contribute to courses remotely and to link 2 classrooms following the same course (using videoconferencing).

The second OceanTeacher Global Academy Project (OTGA-2) commenced on 1 April 2020 and the project is funded by the Government of Flanders, Kingdom of Belgium and the duration of the project is 3 years, from 2020 to 2023. OTGA-2 will build on the legacy of the first OTGA project and will develop a portfolio of training courses to meet the needs of IOC and other partners. These courses will be delivered online or in a face to face environment. Given the restrictions on travel due to COVID 19 it is expected that courses for the next twelve months will be delivered online.

Mr Reed outlined the objectives of the OTGA2 project which are to:

- Develop a portfolio of packaged courses related to needs of IOC and other partners
- Deliver courses F2F and/or online and/or blended learning, on demand
- Designate Specialized Training Centres (topic focused) and Regional Training Centres (regionally focused)
- Focus on training needs of the 2030 Agenda and its SDGs
- Facilitate CD within the framework of the UN Decade of Ocean Science
- Further develop and implement quality procedures and maintain ISO certification as a learning services provider to ensure the highest quality of training is delivered by OTGA
- Increase number of self-funded participants attending OTGA courses to 50%
- Contract development of new course content to lessen reliance on voluntary effort

OTGA will contribute to the UN Decade of Ocean Science for Sustainable Development through the implementation of capacity development through the transfer of marine technology, ocean literacy, education and training. OTGA will also contribute to the UN Sustainable Development Goals so as to conserve and sustainably manage ocean and
marine resources by 2030 and to build the scientific and institutional capacity needed to achieve the SDGs.

OTGA fully supports the implementation of the IOC Capacity Development Strategy (2015-2021) and will address all the identified outputs, namely:

- Human resources developed
- Access to physical infrastructure established or improved
- Global, regional and sub-regional mechanisms strengthened
- Development of ocean research policies in support of sustainable development objectives promoted
- Visibility and awareness increased
- Sustained (long-term) resource mobilization reinforced.

OTGA will also support the training activities of all IOC programmes, contributing to the sustainable management of oceans and coastal areas. There will be greater involvement by the IOC Regional Sub-Commissions and Regional Committees and these regional bodies will have a role to ensure the capacity development needs of the regions are being met by supporting the Regional and Specialized Training Centres.

Mr Reed informed the Group that 16 RTCs and STCs have been selected to deliver regional and specific training topics. These are:

<table>
<thead>
<tr>
<th>Department of Marine and Fisheries Sciences (DMFS), University of Ghana</th>
<th>Institute of Oceanography and Environment (INOS), Universiti Malaysia Terengganu, Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia Agency for Meteorology, Climatology and Geophysics (BMKG), Indonesia</td>
<td>Centre for Marine Research and Technology (UEM), Mozambique</td>
</tr>
<tr>
<td>UNESCO/IOC Project Office for IODE, Belgium</td>
<td>Marine and Coastal Research Institute in Colombia (INVEMAR), Colombia</td>
</tr>
<tr>
<td>International Training Centre for Operational Oceanography (ITCOOcean), India</td>
<td>University of Uruguay (UdelaR)/University of Santa Catarina (UFSC), Uruguay/Brazil</td>
</tr>
<tr>
<td>Escuela Superior Politécnica del Litoral (ESPOL), Ecuador</td>
<td>Universidade de Aveiro, Portugal</td>
</tr>
<tr>
<td>Kenya Marine and Fisheries Research Institute (KMFRI), Kenya</td>
<td>National Marine Data and Information Service (NMDIS)/National Center of Ocean Standards and Metrology (NCOSM), China</td>
</tr>
<tr>
<td>Escuela de Ciencias del Mar, Argentina</td>
<td>International Tsunami Information Center (ITIC), USA</td>
</tr>
<tr>
<td>University of Bergen, Norway</td>
<td>Pacific Community (SPC), Fiji</td>
</tr>
</tbody>
</table>

OTGA-2 will build partnerships beyond UNESCO/IOC to position itself as the training platform for ocean-related topics within the UN and beyond. Partners will include:

- International Hydrographic Organization (IHO)
- World Meteorological Organization (WMO)
- Partnership for Observation of the Global Ocean (POGO)
- Alfred Wegener Institute for Polar and Marine Research (AWI)
- European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)
- UN Division for Ocean Affairs and the Law of the Sea (DOALOS)
- European Marine Observation and Data Network (EMODnet)
- European Marine Board (EMB)
In conclusion, Mr Reed described the direct benefits expected from the OTGA-2 Project and these include:

- Increased training opportunities to broaden the knowledge-base, skills and competencies of IOC Member States;
- Increased cooperation between Regional and Specialized Training Centres and other regional training institutions;
- Increased quality of training programmes and resources offered by Regional and Specialized Training Centres;
- Increased interaction with IOC Programmes, Sub-Commissions, Regional Committees and Project Offices;
- Reduced overall cost of training allowing more persons to receive quality training;
- Reduced environmental impact of training due to reduced travel and increased options for reuse of training resources.

Ms Noer Nurhayati (STC-Indonesia) and Ms Paula Sierra (RTC-Colombia) remarked that collaboration between RTCs and STCs is one way to share experiences and can assist in the development of some Centres. Some Group members requested that the presentations PPTs be made available.

3. IOC CAPACITY DEVELOPMENT

3.1 IOC CAPACITY DEVELOPMENT STRATEGY

This agenda item was introduced by Mr Peter Pissierssens, IOC Capacity Development Coordinator. He explained that capacity development has always been a major element of IOC’s activities. The main delivery mechanism has been the regional sub-commissions and regional committees. Over the past 60 years the three sub-commissions have themselves defined strategic plans or statements addressing capacity development. In addition, the global programmes have focused on capacity development. GOOS developed regional alliances, IODE its ocean data and information networks and its OceanTeacher programme; HAB adopted its principles for capacity development; the tsunami programmes regularly organizes training courses, as does the MPR section. In addition, the IOC partner organizations such as WMO, POGO, SCOR, IOI, UN-DOALOS, IAEA, GEF and the European Commission have their own capacity development strategies and programmes.

Mr Pissierssens introduced the IOC Capacity Development Strategy which was adopted by the 28th Session of the IOC Assembly in 2015. The Vision Statement of IOC’s Capacity Development Strategy:

*Through international cooperation, IOC assists its Member States to collectively achieve the IOC’S high-level objectives (HLOs), with particular attention to ensuring that all Member States have the capacity to meet them.*

The Mission Statement of IOC’s Capacity Development Strategy:

*The IOC will undertake relevant actions to assist Member States with developing and sustaining the necessary capacity to undertake activities necessary to*
achieve the IOC vision at the national level as well as at the international cooperation level.

Mr Pissierssens outlined the strategy which has six outputs, each addressing an essential component that, together, will lead to long-term sustained capacity in our member states. These outputs will be generated through a number of targeted activities and related actions that are made possible through inputs such as funding, human resources and institutional resources. A dedicated web site has been set up (http://www.ioc-cd.org) and the IOC Group of Experts on CD was established in 2017 and the first meeting was held in 2018. The second meeting is planned in October 2020. In September 2020 the 2nd CD needs assessment survey was launched, and this will be discussed in detail in agenda item 3.2.

Mr Pissierssens concluded that capacity development is a key activity of the IOC but is not distributed equally at the regional level so there is a need to assist CD based on well-defined and well documented needs assessments.

3.2 IOC CAPACITY DEVELOPMENT NEEDS ASSESSMENT SURVEY

This agenda item was introduced by Ms Johanna Diwa, IOC Capacity Development Consultant. She explained that the second IOC Capacity Development Needs Assessment Survey was launched on 2nd September at https://www.surveymonkey.com/r/KN885MK and is open until 1st February 2021. Invitations were sent to more than 9,000 email addresses from the Ocean Expert database and to IOC national focal points, IOC CD focal points, ECOPs, etc. The survey has been designed to assess the capacity development requirements and needs in ocean science related issues and to contribute to addressing capacity needs related to the UN Decade of Ocean Science for Sustainable Development 2021-2030. Ms Diwa outlined some initial responses from the survey and requested that SG members further promote the survey in order to solicit more responses to allow statistically relevant analysis.

Some SG Members sought clarification on the survey responses. Ms Diwa explained that results so far are raw data and the responses still have to be reconciled before running the analysis. The results of the analysis will be shared after the survey is closed. Molly Powers (RTC-Pacific) asked if it would be possible to access sub-regional data from only the Pacific Islands and not the entire WESTPAC region, as the needs of the Pacific Islands vary from the larger and often more developed Asian countries.

4. CERTIFICATION AS LEARNING SERVICES PROVIDER

This agenda item was introduced by Mr Greg Reed. He informed the Group that the UNESCO/IOC Project Office for IODE in Oostende, Belgium and host of the OceanTeacher Global Academy, is a certified learning services provider having met the requirements of the International Standard ISO 29990:2010 and was accredited by the Belgian Accreditation Body (BELAC) having satisfied the requirements of the International Standard. Subsequently the Project Office has successfully completed external audits in 2019 and again in early 2020. This certification applies to the delivery of all learning services through the OceanTeacher Global Academy that support the objectives of the IOC and its programmes. It is valid for 3 years and recognizes the
quality of learning opportunities offered by OTGA, through the IOC Project Office for IODE, and the high standard of quality learning services that support IOC programmes.

The standard has now been withdrawn by ISO and replaced by a new standard: *ISO 29993:2017 Learning services outside formal education — Service requirements* and the Project Office is now moving towards compliance with ISO 29993 and will apply for certification in 2021.

Mr Reed explained the benefits of certification which include:

- Ability to align the various elements of learning services for the purpose of improving the effectiveness, efficiency and transparency of the learning services, including information provided to learners, learner needs analysis, course design, assessment and evaluation,
- Enhancing the credibility of learning services provided through the OceanTeacher Global Academy and promoting the Project Office and OTGA as a learning services provider to funding agencies
- It provides a model for improving learning services, and
- It provides an internationally recognized instrument that demonstrates the reliability and quality of learning services.

The benefits of certification to the learner include:

- An improved learning environment
- Providing information about the criteria for assessment
- Providing resources, including trainers with appropriate competencies
- Making informed decision about the acquisition of learning services by specifying requirements on the information to be provided to the learner, and
- Assisting learners to select learning services that are appropriate to their goals.

The Project Office conducts an annual internal audit of the management system with the purpose of assessing the effectiveness of the management system and to identify processes that require improvement as a mechanism to ensure that the management system meets the requirements of the International Standard. To ensure compliance with the ISO certification, all training courses carried out by the RTCs and STCs will be regularly audited. The audit checklist is used to ensure that each course complies with the guidelines on how to structure and organize a course as described in the OceanTeacher Global Academy Course Management Guidelines. The results of the course audits are conveyed to the RTC or STC to ensure continual improvement of the learning service.

Molly Powers (RTC-Pacific) requested clarification on ISO certification and how does this apply to courses delivered by RTC/STC. Mr Reed advised the IOC Project Office for IODE is a certified learning services provider which means that OTGA courses that follow the Course Management Guidelines will meet the requirements of ISO standard. An ISO Learning Services logo can be used on the course flyer and other documentation to indicate the course follows the standard. Laura Kong (STC-ITIC) asked if the ISO 29990 and 29993 documents available for download. Mr Reed advised these documents are copyright and must be purchased from ISO.
5. INTRODUCTION TO ONLINE TEACHING AND LEARNING

A series of three presentations from Dr. Madalina Ungur (Learning and Learning Technologies Consultant, EUMETSAT). These presentations were:

- Part 1: What is online learning. This presentation defines online learning and provide some examples.
- Part 2: The learning in online learning. The focus of this presentation is on the learner, that is, the person who does the learning and what does online mean for the learner and how best to design experiences that facilitate learning, motivate, engage and support learners.
- Part 3: How to get started with online learning. The focus of this presentation is the instructor, subject matter expert or designer who is looking to get started with designing and implementation of online learning.

The Group congratulated Dr. Ungur on the excellent presentations and requested copies of the PowerPoint presentations. Mr Reed noted that the links provided to e-learning resources have been added to the meeting site and the presentations will be made available after the meeting.

6. INTRODUCTION OF REGIONAL AND SPECIALIZED TRAINING CENTRES

Representatives of each RTC/STC provided a presentation focusing on:

- A description of the RTC or STC;
- The ability to deliver online only training;
- Proposed OTGA course outline and contents;
- Any other issues to be discussed.

All presentations have been uploaded to the meeting site.

Ms Noer Nurhayati (STC-Indonesia) noted the overlap in Tsunami training proposed by STC-ITIC and STC-Indonesia and the possibility of collaboration between the two centres. Ms Delgado (OTGA) commented on the excellent presentations and noted the recurrence of some topics, for example Ocean Acidification and MSR/Ocean Governance, in the courses proposed by the RTC/STC and these should be given priority.

7. TRAINING REQUIREMENTS IDENTIFIED BY IOC PROGRAMMES AND REGIONAL SUBCOMMISSIONS

Proposed OTGA training courses to support IOC Programmes and Regions were discussed. Presentations were made by:

(i) IOC Tsunami Unit. Mr Bernardo Aliaga (IOC) outlined the training priorities identified by the Tsunami Unit in discussions with the STC ITIC and with IOTIC (hosted by the STC Indonesia). Mr Aliaga confirmed the immediate need for training is Tsunami Awareness. Tsunami Early Warning Systems and TEMPP (Tsunami Evacuation Maps, Plans and Procedures) continue to be a priority identified by STC ITIC and with IOTIC. IOTIC has also identified Tsunami Ready, a community-based recognition process, as a priority. Tsunami Hazard and Risk Assessment is the last priority as it requires physical presence for the training.
(ii) **International Oceanographic Data and Information Exchange (IODE).** Ms Claudia Delgado introduced IODE’s training needs which include topics related to data and information management, OBIS, ICAN, OceanInfoHub and Ocean Best Practices.

(iii) **Ocean Sciences: Harmful Algal Blooms (HAB).** Mr Henrik Enevoldsen (IOC) provided a brief overview of the capacity development needs, activities and challenges for improved monitoring and management of harmful algal events. He noted that priorities/needs are set by the IOC Intergovernmental Panel on HABs (regional HAB groups) and regional subsidiary bodies. Specific priorities for national and institutional capacity development are set by institutions and governments. IOC HAB courses include basic to advanced level international courses and courses held in-country or in regions are adapted to specific needs. OceanTeacher is used as the platform for e-learning and training is partially self-funded by the participants.

(iv) **Ocean Sciences: Ocean Acidification (OA) and Blue Carbon (BC).** Ms Kirsten Isensee (IOC) and Ms Katherina Schoo (IOC) provided an overview of two courses planned for 2021. A training course on Ocean Acidification will be developed, with assistance from partners in GOA-ON and other leading experts. The OA course will be available online and the format will include a combination of pre-recorded lectures, reading material, quizzes, videos for case studies and technical set-ups (experimental set-ups, measurement set-ups). Some interactive components and webinars are planned for the more advanced parts of the course; access to some of the advanced modules will be by invitation. Another priority training topic is Blue Carbon and the role of nature-based solutions to mitigate climate change. The Ocean Science Section is currently working with the OTGA Secretariat in order to develop a training course on Coastal Blue Carbon and this will be done in close collaboration with the IOC Expert Groups and the relevant Blue Carbon networks.

(v) **IOC Sub Commission for Africa and the Adjacent Island States (IOCAFrica).** Mr Mika Odido (IOCAFrica) noted that the IOCAFrica work programme (2019-2021) identified capacity development as an important plank of the IOCAFrica programme with the following priorities identified: comprehensive survey of capacities available for marine science and technology in the region, setting up a regional hub for Clearing House mechanism for transfer of marine technology, strengthening collaboration between academic and research institutions, supporting regional centres to offer training on priority topics identified by the Sub commission. He outlined the priority topics for capacity development which include data analysis and data assimilation, ocean forecasting and prediction, mapping and marine spatial planning, ocean literacy and communications, data collection and processing, marine biodiversity, climate change adaptation, climate variability, application of GIS and remote sensing to ocean science, and sea level data analysis and applications.

(vi) **IOC Sub-Commission for the Western Pacific (WESTPAC).** Mr Somkiet Khokiatitiwong, representing WESTPAC, expressed that the Sub-Commission has been attaching great importance to capacity development, developed and adopted various tools/approaches to serve the needs of member states in the region as part of the IOC Capacity Development Strategy (2015-2021). Emphasizing the importance of “training through research” to develop research capacity of individuals and institutions in the region, he briefed the meeting on two long-term capacity development practices that the Member States in the region have been...
supporting: (1) conduct of a series of topic and country-specific trainings in Member States on a rotation basis to address countries’ specific development challenges, and (2) the development of a Regional Network of Training and Research Centres (RTRCs), in which currently 5 RTRCs are established based on common priorities of member states in the region, and building on the expertise of host institutes. These practical trainings through hands on training, and close link to international collaborative programmes are emphasized to ensure that the trainees could effectively apply acquired knowledge in their home countries. The WESTPAC region has rich marine biodiversity and complexity of ocean and atmospheric processes that can generate impacts to marine ecosystem, including anthropogenic impacts on marine pollution. WESTPAC needs support for a wide range of biological, chemical and physical oceanographic capacity development to further fulfil implementation of UN Decade of Ocean Science. This includes conventional/molecular taxonomy/E-DNA, analytical technique and quality control of anthropogenic pollutants, visualization and integration of ocean processes, and operation and implantation of oceanographic instruments.

All presentations have been uploaded to the meeting site.

Mr Udaya Bhaskar (RTC-India) noted there were topics presented that could provide opportunities for collaboration between RTCs and STCs which would benefit learners. Mr Bernardo Aliaga (IOC) also noted the possibility of developing tsunami training capabilities in collaboration with RTC-Ecuador and STC-ITIC on common tsunami topics.

Ms Laura Kong (STC-ITIC) agreed that cooperation on tsunami training topics between the centres would build upon existing and past efforts in South America. She noted that if resources are constrained (people, time, funding) then topics must be prioritized. The STC-Indonesia, RTC-Pacific and RTC-India also expressed interest to collaborate on development and delivery of tsunami training.

8. OTGA OPERATIONS

8.1 OTGA WEBSITE AND ELEARNING PLATFORM (MOODLE LMS)

This agenda item was introduced by Ms Claudia Delgado, IODE Training Coordinator, who reviewed the process for organizing and managing training courses within the framework of the OTGA Project.

She described the OTGA Website and eLearning Platform, which uses Moodle LMS. Moodle is a free and open-source software learning management system (LMS) that provides an integrated system to create personalised learning environments. Moodle provides a collaborative learning environment that can include resources such as course information, handouts, presentations, video and web links and activities such as discussion fora, assignments, online tests and quizzes, online submission of assignments by the learners, and subsequent online grading by the facilitators. She introduced two forms that are used when planning courses, (i) Course Proposal form and (ii) the Lesson Plan form. In addition, the Orientation Compass can be used as a guide through the many facets of designing a training course.
Ms Delgado informed the SG that all material used during a course should be accessible from the OTGA Moodle platform (https://classroom.oceanteacher.org/). This includes presentations, documents, images, videos, assignments and activities. All documents should be uploaded to the Moodle course. It is important to engage learners interactivelly during the course and Moodle provides different options such as forums, chat room, assessments and multimedia. The use of formatting options such as images, colour and videos will improve the design of the course page and enhance the learning experience. Include activities and resources that visually engage, such as video and images. The use of diagrams, charts and graphs can aid processing of text-based information. Assessments allow the learner to demonstrate the understanding they have developed for the lesson or topic and demonstrate to the facilitator the knowledge that has been gained. Moodle provides a number of options for assessing learners including assignments, lessons, forums, questionnaires, quizzes and chat and these are referred to as Activities. It should be noted that all OTGA content is covered by the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 (CC BY-NC-SA 4.0) licence. This license lets others remix, adapt, and build upon your work non-commercially, as long as they credit you and license their new creations under the identical terms (see https://creativecommons.org/licenses/by-nc-sa/4.0/).

8.2 OTGA MANUALS AND FORMS

Ms Delgado introduced the forms and templates to be used when organising OTGA courses. Templates provide a common look and feel for all project documents. The OTGA Course Management Guidelines contains full information about the forms and templates to be used, including course certificate for participation or completion, course flyer, official invitation (for face to face courses), feedback survey.

8.3 OTGA COURSE ORGANIZATION PROCEDURES

Ms Delgado explained the practical aspects when organizing a training course. The OTGA Course Management Guidelines describe the process for organizing and managing training courses within the framework of the OTGA Project and has been
produced primarily for the OTGA RTC/STC coordinators but can also be used as a guide for organizing and hosting other training courses. These guidelines are intended to support the RTC/STC network by:

- Providing guidelines on how to plan and design a course;
- Providing guidelines on how to use the OceanTeacher Learning Management System;
- Providing guidelines on administrative procedures for organizing OTGA courses.

9. OTGA PROJECT DOCUMENT AND PROJECT IMPLEMENTATION

9.1 OTGA PROJECT WORK PACKAGES

Mr Greg Reed outlined the OTGA project work packages. The project will be implemented around five interrelated work packages, as follows:

WP1: Project Coordination. The objective of this Work Package is to monitor the implementation of the project workplan and project deliverables including the human resources essential for the successful implementation of the project.

WP2: Project Technical Support. The objective of this Work Package is to support the delivery of the Learning Services, including the online application for courses, remote participation in courses and, above all, an up to date, fully functioning e-Learning Platform.

WP3: Training course content creation. The objectives of this Work Package are to (i) design and develop new course contents to address the capacity needs of the different IOC Programmes, (ii) revise and update existing training resources, (iii) adapt the above for possible exclusive online (distance) learning, and (iv) organise webinars on selected topics.

WP4: Training course activities. The objectives this Work Package are (i) provision of classroom and online training courses, and (ii) provision of support to learners during online courses. This work package will include the provision of travel grants to facilitate learner attendance at regional courses. It is expected that most learners will be self-funded however some support will be made available in the form of travel grants. These travel grants will be limited to 5-10 per Training Centre/year.

WP5: Outreach, communication and project evaluation. The objectives of this Work Package are (i) implement an effective communication and dissemination plan for the project, (ii) provide support towards the project evaluation, and (iii) ensure the Steering Group provides guidance for the successful implementation of the Project. This work package includes the communication and engagement activities and the promotion of the OceanTeacher

Nominations were called for work package leaders to ensure the performance and progress of the work package with regard to the overall work plan. The responsibilities of the work package leaders will be:

- monitoring the progress of the WP against time and budget allocations, ensure that the work package fulfils the objectives listed as milestones and deliverables
• alerting the Project Manager in case of delay or default in the performance of the Work Package
• deliver an annual progress report to the Steering Group

The **Group confirmed** the following Work Package leaders:

- WP1: OTGA Secretariat (Mr Greg Reed)
- WP2: RTC-Colombia (Ms Paula Sierra)
- WP3: STC-ITIC (Ms Laura Kong)
- WP4: RTC-India (Mr Udaya Bhaskar)
- WP5: STC-Argentina (Mr Ariel Troisi)

### 9.2 OTGA GOVERNANCE AND STEERING GROUP TERMS OF REFERENCE

Mr Greg Reed informed the Group that OTGA is a project established by International Oceanographic Data and Information Exchange (IODE). IODE is a programme of the Intergovernmental Oceanographic Commission of UNESCO and its purpose is to enhance marine research, exploitation and development, by facilitating the exchange of oceanographic data and information between participating Member States. The OceanTeacher Global Academy project will be managed by a Steering Group which will report to the IODE Committee or the IODE Management Group, on an annual basis.

The OTGA Project should have a Terms of Reference and the Steering Group Terms of Reference, including the Objectives and Membership, which must be approved by the IODE Committee (or the IODE Management Group).

Mr Reed introduced the proposed project Terms of Reference and Steering Group Terms of Reference and membership. The **Group unanimously agreed** to the proposed Project Terms of Reference and Steering Group Terms of Reference as described in Annex II.

### 9.3 BUDGET REVISION

Mr Reed presented the OTGA budget by outcome, output and activity. The budget comprises two outcomes, each with three outputs. These are:

| Outcome 1. Increased capacity and skills by ocean specialists to use standards and best practices tools towards achieving SDG 14 | Output 1. Learners empowered to apply the skills learned, and influencing the implementation and use of standards and best practices | Activity 1. Organize and host training courses relevant to the Region  
Activity 2. Provide travel grants to facilitate learner attendance at training courses  
Activity 3. Monitor the use of common standards and best practices in IOC programmes |
|---|---|---|
| Output 2. Production of new knowledge and training resources | Activity 1. Design and develop new course content to address the capacity needs of IOC Programmes  
Activity 2. Liaise with content providers on course design and presentation  
Activity 3. Upload training |
<table>
<thead>
<tr>
<th>Outcome 2. Regional and Specialized Training Centres can efficiently develop and manage the training programme</th>
<th>Output 2. Support Training Centres to develop new training topics and incorporated into training programmes into university curricula</th>
<th>Output 3. Increase awareness and understanding by Member States on the benefits of supporting and promoting OTGA and its network of Training Centres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output 1. Increase the capacity of Regional and Specialized Training Centres to develop and implement relevant training programmes</td>
<td>Activity 1. Provide project governance framework through a steering group</td>
<td>Activity 1. Participate in conferences, meetings to promote OTGA</td>
</tr>
<tr>
<td>Activity 1. Establish and promote an Alumni Network Activity 2. Establish and maintain a community forum Activity 3. Publish a regular CD newsletter</td>
<td>Activity 2. Survey Training Centre staff skills to manage a training programme Activity 3. Create and deliver training courses for training Centre staff Activity 4. Update and publish OTGA Guidelines Activity 5. Provide approved templates for outreach material with common look and feel</td>
<td></td>
</tr>
</tbody>
</table>

Some SG members requested more information about the process of allocating funds to the RTC/STCs. Mr Reed explained the major activities for RTC/STC budget allocation are for travel grants for learners to attend face to face events, the development of course content, and university accreditation of courses.

(i) Travel grants. The donor has indicated they would like to see RTC/STC become more sustainable with less reliance on support for travel and more reliance on self-funded participation. This may be difficult for some regions where learners rely on support so the budget provides for travel grants of up to USD5000 per face to face course to be allocated to international participants to cover travel and accommodation costs. For each course the RTC/STC will prepare a budget, based on the estimated travel costs and accommodation for eligible international participants, which will be submitted to the Project Office for approval. A contract for services will be signed between UNESCO and the RTC/STC. The final contract payment will be based on receipts for cost incurred. Travel and accommodation bookings can be made and paid by either the Project Officer or the RTC/STC and that needs to be discussed for each course.
(ii) Course content development. Approved courses may require new course content, so there is a budget for development of content. This would be through a UNESCO contract for services. The contract can be with the RTC/STC or other subject matter experts (organization or individuals). If the contract is with another organization or individual then it is a UNESCO requirement to ask for three quotes. The IOC programmes will often have a list of SMEs which can be contacted.

(iii) There is a budget allocation to provide support for Training Centres to liaise with local and regional university for course accreditation.

It was noted that, the COVID-19 pandemic did not allow the full implementation of the Project since its start (April 2020) and given the current pandemic circumstances it is not considered to be safe to organise international F2F (classroom) training in 2021, or at least until a WHO recognised vaccine is widely available.

It was noted that, as the project has been delayed in commencing due to COVID-19, and as only online training is planned until at least mid-2021, the budget for year one will be underspent. The budget foreseen for travel grants will be moved to later in the project implementation when international travel is considered safe and some of the budget allocated for travel grants may be re-allocated for content development.

10. OTGA WORKPLAN FOR 2021

All RTCs and STCs were requested to nominate training courses to be delivered in 2021 to be included in the project work plan. Given the ongoing travel restrictions due to COVID-19, the focus should be on developing and delivering online courses. Fifty-nine courses were proposed by the RTC/STCs to be delivered in 2021, as listed in Annex III. It was agreed OTGA Secretariat will identify common/recurrent topics and will consult with the IOC Programmes and Regional sub commissions to identify priorities and define a shortlist of training courses to be organised across the network based on those priorities as well as feasibility (Action: OTGA Secretariat). RTC/STCs will be requested to nominate which course(s) can be held in the first half of 2021 and will be virtual, as no travel is foreseen for this period. A Course Proposal form must be submitted for each course (Lesson Plans are not required until courses are confirmed). RTC/STCs will also be requested to confirm if courses will use existing content or if new content will be developed (Action: All RTC/STCs).

11. CLOSING

Given that some discussions during the virtual meeting were still ongoing and needed to be addressed, it was decided to extend the meeting until the end of the week, i.e. until the end of the 9th October 2020.

11.1 REVIEW OF THE MAIN DECISIONS AGREED DURING THE MEETING

The following decisions and actions were agreed by the Group:

- RTCs and STCs to explore opportunities to collaborate and to share experiences and assist in the development of Centres.
- Powerpoint presentations from the meeting to be made available to the Group (these are now available at agenda item 11 on the meeting site).
• Ms Diwa (IOC Capacity Development Consultant) to share results of the analysis from the IOC Capacity Development Needs Assessment Survey after the survey is closed. Ms Diwa to provide analysis for sub-regional Pacific Islands (not part of WESTPAC region). (Action: IOC Capacity Development Consultant).
• Copies of the Online Teaching and Learning presentations and links to resources to be made available to the Group (these are now available at agenda item 5 on the meeting site).
• The Group confirmed the project Work Package leaders: WP1: RTC-Belgium; WP2: RTC-Colombia; WP3: STC-ITIC; WP4: RTC-India; WP5: STC-Argentina
• The Group unanimously agreed to the proposed Project Terms of Reference and Steering Group Terms of Reference
• The OTGA Secretariat to consult with IOC programmes and regions, to discuss priorities (Action: OTGA Secretariat)
• RTC/STCs to nominate which course(s) can be held in the first half of 2021 (Action: All RTC/STCs)

11.2 ADOPTION OF THE WORK PLAN AND SUMMARY REPORT
The summary report, including the proposed work plan, will be circulated to the SG for comment (Action: All RTC/STCs; OTGA Secretariat).

11.3 DESIGNATION OF SG CHAIR
One nomination for Chair of the Steering Group was received. The Group unanimously accepted Mr Udaya Bhaskar (RTC-India) as SG Chair.

11.4 NEXT OTGA SG SESSION
The next SG-OTGA session is planned to be held in September 2021. The meeting may be a virtual meeting or a face to face meeting depending on travel restrictions in place at the time.
ANNEX I. AGENDA OF THE MEETING

1. OPENING OF THE MEETING.
2. INTRODUCTION TO THE OCEANTEACHER GLOBAL ACADEMY PROJECT
3. IOC CAPACITY DEVELOPMENT
4. CERTIFICATION AS LEARNING SERVICES PROVIDER
5. INTRODUCTION TO ONLINE TEACHING AND LEARNING
6. INTRODUCTION OF REGIONAL AND SPECIALIZED TRAINING CENTRES
7. TRAINING REQUIREMENTS IDENTIFIED BY IOC PROGRAMMES AND REGIONAL SUBCOMMISSIONS
8. OTGA OPERATIONS
9. OTGA PROJECT DOCUMENT AND PROJECT IMPLEMENTATION
10. OTGA WORKPLAN FOR 2020-21
11. CLOSING OF MEETING
ANNEX II. OTGA TERMS OF REFERENCE

Proposed Terms of Reference of the IODE OTGA Project

Objectives

The objectives of the OceanTeacher Global Academy (OTGA) are to ensure that Member States’ institutional capacities are reinforced to protect and sustainably manage ocean and coastal resources. This will be achieved by:

(i) Promoting the establishment, and assisting with the start-up, of Regional Training Centres (RTC) and Specialized Training Centres (STC) that will plan, organize and implement training courses that are of relevance to, and serve needs within their region;

(ii) Promoting the use of local experts as lecturers and training assistants by the OTGA Regional Training Centres and Specialized Training Centres;

(iii) Promoting the collaboration between the OTGA Regional Training Centres and Specialized Training Centres by enabling (through advanced information technology) lecturers from multiple regions to contribute lectures;

(iv) Further developing the OceanTeacher Learning Management System to cover multiple IOC (and associate) programmes.

Proposed Terms of Reference of the IODE Steering Group for the IODE OTGA Project

Objectives

The SG-OTGA will have the following Terms of Reference:

(i) Monitoring progress of the project;

(ii) Reviewing and selecting courses to be organized under project funding;

(iii) Assessing performance of the OTGA RTCs/STCs;

(iv) Assessing performance of OTGA Instructors and Facilitators;

(v) Reporting to the Governing Bodies of participating IOC programmes;

The Steering Group will meet virtually at least once a year. Other (online) meetings will be organised as needed. A face-to-face meeting can be organised every year if global health conditions allow. The Steering Group will make decisions by consensus.

Membership

The Steering Group will be composed, *inter alia*, of:

(i) A representative of each OTGA RTC/STC;

(ii) Relevant IOC Training Coordinators (e.g., IODE, IOC, etc.) or representatives of concerned IOC programmes;

(iii) Heads of IOC Sub-Commission Secretariats (Africa, Caribbean, WESTPAC);

(iv) Project Manager;

(v) Invited experts;

(vi) Representative of the IODE Secretariat
<table>
<thead>
<tr>
<th>RTC/STC</th>
<th>IOC Programme</th>
<th>Course name</th>
<th>Date</th>
<th>IOC Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTC Belgium</td>
<td>Marine Policy and Regional Coordination</td>
<td>Communicating ocean science for maximum impact in the context of the Ocean Decade</td>
<td>2021</td>
<td></td>
</tr>
<tr>
<td>RTC Belgium</td>
<td>Marine Policy and Regional Coordination</td>
<td>Embracing indigenous and local knowledge in ocean science</td>
<td>2021</td>
<td></td>
</tr>
<tr>
<td>RTC Belgium</td>
<td>Marine Policy and Regional Coordination</td>
<td>Co-designing the science we need for the ocean we want: Transdisciplinary, inter- and collaborative research that connects scientists and end-users</td>
<td>2021</td>
<td></td>
</tr>
<tr>
<td>RTC China</td>
<td>Ocean Data Portal for the WESTPAC region</td>
<td></td>
<td>2021</td>
<td>WESTPAC</td>
</tr>
<tr>
<td>RTC China</td>
<td>Marine standards and Metrology</td>
<td></td>
<td>2021</td>
<td>WESTPAC</td>
</tr>
<tr>
<td>STC Indonesia</td>
<td>Ocean Forecasting System</td>
<td></td>
<td>2021</td>
<td></td>
</tr>
<tr>
<td>RTC Ecuador</td>
<td>Ocean Science/Acidification</td>
<td>Coastal hazards and tools for their study</td>
<td>2021</td>
<td></td>
</tr>
<tr>
<td>RTC Ecuador</td>
<td>Ocean Science/Acidification</td>
<td>Ocean Acidification</td>
<td>2021</td>
<td></td>
</tr>
<tr>
<td>RTC Pacific</td>
<td>QGIS for coastal fisheries</td>
<td></td>
<td>2021</td>
<td></td>
</tr>
<tr>
<td>RTC Pacific</td>
<td>Ocean science to services: Introduction to the Pacific Portal</td>
<td></td>
<td>2021</td>
<td></td>
</tr>
<tr>
<td>RTC Mosambique</td>
<td>Oceanographic instrument deployment, maintenance and return to service</td>
<td></td>
<td>2021</td>
<td>IOCAfrica</td>
</tr>
<tr>
<td>RTC Mosambique</td>
<td>Oceanographic data acquisition, processing and management</td>
<td></td>
<td>2021</td>
<td>IOCAfrica</td>
</tr>
<tr>
<td>RTC Malaysia</td>
<td>Marine GIS and Remote Sensing Applications for Coastal Zone Management</td>
<td></td>
<td>2021</td>
<td>WESTPAC</td>
</tr>
<tr>
<td>RTC Malaysia</td>
<td>Marine GIS</td>
<td></td>
<td>2021</td>
<td>WESTPAC</td>
</tr>
<tr>
<td>RTC Malaysia</td>
<td>Marine Spatial Planning</td>
<td></td>
<td>2021</td>
<td>WESTPAC</td>
</tr>
<tr>
<td>RTC Malaysia</td>
<td>Integrated Data Analysis for Upwelling Studies</td>
<td></td>
<td>2021</td>
<td>WESTPAC</td>
</tr>
<tr>
<td>RTC Ghana</td>
<td>The plankton of the Gulf of Guinea</td>
<td></td>
<td>2021</td>
<td>IOCAfrica</td>
</tr>
<tr>
<td>RTC Ghana</td>
<td>Marine pollution monitoring and assessment</td>
<td></td>
<td>2021</td>
<td>IOCAfrica</td>
</tr>
<tr>
<td>RTC Ghana</td>
<td>Fishing vessel traffic data analyses for fisheries management</td>
<td></td>
<td>2021</td>
<td>IOCAfrica</td>
</tr>
<tr>
<td>RTC Ghana</td>
<td>Fisheries statistics and data collection</td>
<td></td>
<td>2021</td>
<td>IOCAfrica</td>
</tr>
<tr>
<td>RTC Belgium</td>
<td>IOOE</td>
<td>Best Practices for Ocean Observation</td>
<td>2021</td>
<td>IOCINDIO</td>
</tr>
<tr>
<td>RTC Belgium</td>
<td>IOOE</td>
<td>Discovery and Use of Operational Ocean Data Products and Services</td>
<td>Jun-21</td>
<td>IOCINDIO</td>
</tr>
<tr>
<td>RTC India</td>
<td>MSP/Marine Policy/Law of the Sea</td>
<td>Coastal Vulnerability Mapping and analysis using QGIS</td>
<td>Sep-21</td>
<td>IOCINDIO</td>
</tr>
<tr>
<td>RTC India</td>
<td>Ocean Color Remote Sensing - Data, Processing and Analysis</td>
<td></td>
<td>Nov-21</td>
<td>IOCINDIO</td>
</tr>
<tr>
<td>STC Argentina</td>
<td>MSP/Marine Policy/Law of the Sea</td>
<td>Outer limit of the continental shelf and UNCLOS</td>
<td>Mar-21</td>
<td></td>
</tr>
<tr>
<td>STC Argentina</td>
<td>Ocean Science/Acidification/Climate/Observations</td>
<td>Circulation, water masses in SW Atlantic and ecological impact</td>
<td>2nd Quarter 2021</td>
<td></td>
</tr>
<tr>
<td>STC Argentina</td>
<td>GOOS/ICB</td>
<td>Sea ice and iceberg observer</td>
<td>3rd Quarter 2021</td>
<td></td>
</tr>
<tr>
<td>STC Argentina</td>
<td>Ocean Science/Acidification/Climate/Observations</td>
<td>Satellite oceanography</td>
<td>4th Quarter 2021</td>
<td></td>
</tr>
<tr>
<td>STC Argentina</td>
<td>MSP/Marine Policy/Biodiversity</td>
<td>Ballast water and biofouling</td>
<td>4th Quarter 2021</td>
<td></td>
</tr>
<tr>
<td>RTC Kenya</td>
<td>MSP/Marine Policy/Biodiversity</td>
<td>Fundamentals of ocean mapping</td>
<td>1st Quarter 2021</td>
<td></td>
</tr>
</tbody>
</table>

**ANNEX III. PROPOSED WORK PLAN 2021**
<table>
<thead>
<tr>
<th>RTC Country</th>
<th>Program Area</th>
<th>Course Title</th>
<th>Start Date</th>
<th>End Date</th>
<th>IOCArea</th>
</tr>
</thead>
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<tr>
<td>RTC Kenya</td>
<td>Ocean Science/Acidification</td>
<td>Ocean acidification</td>
<td></td>
<td>2nd Quarter 2021</td>
<td>IOCAfrica</td>
</tr>
<tr>
<td>RTC Kenya</td>
<td>Marine GIS</td>
<td></td>
<td></td>
<td>4th Quarter 2021</td>
<td>IOCAfrica</td>
</tr>
<tr>
<td>RTC Kenya</td>
<td>Larval fish identification and early life history science</td>
<td></td>
<td></td>
<td>3rd Quarter 2021</td>
<td>IOCAfrica</td>
</tr>
<tr>
<td>STC Indonesia</td>
<td>GOOS</td>
<td>Ocean Forecast System</td>
<td></td>
<td>6 weeks</td>
<td>WESTPAC</td>
</tr>
<tr>
<td>STC Indonesia</td>
<td>Tsunami</td>
<td>Tsunami Ready - TEMPP (Tsunami Evacuation Map)</td>
<td></td>
<td>6 weeks</td>
<td>WESTPAC</td>
</tr>
<tr>
<td>RTC Belgium</td>
<td>IODE/OIH</td>
<td>OceanInfoHub: Implementing schema.org for marine data (in the context of ODIS and OIH)</td>
<td>Q2/Q3 2021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTC Cono Sur</td>
<td>MSP</td>
<td>Marine Spatial Planning</td>
<td></td>
<td>2nd or 3rd quarter 2021</td>
<td></td>
</tr>
<tr>
<td>RTC Portugal</td>
<td>several, depending on the topic</td>
<td>Other courses and activities for 2021 and beyond will be defined later this year, after the confirmation of the regional RTC consortium.</td>
<td></td>
<td>2021 and beyond</td>
<td></td>
</tr>
<tr>
<td>RTC Portugal</td>
<td>Law of the Sea</td>
<td>Deep sea mineral resources</td>
<td>Apr-21</td>
<td></td>
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<tr>
<td>RTC Portugal</td>
<td>GOOS</td>
<td>Observational oceanography and online resources for analysing marine ecosystems</td>
<td>Mar-21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTC Portugal</td>
<td></td>
<td>Applications of ocean colour remote sensing</td>
<td>Oct-21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTC Portugal</td>
<td>Ocean literacy</td>
<td>Marine Spatial Planning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTC Portugal</td>
<td></td>
<td>The ocean we need for the future we want – Ocean Literacy for media professionals: journalists, policy makers, stakeholders in the maritime sector, other professionals linked to the sea</td>
<td>July-21</td>
<td></td>
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<tr>
<td>RTC Colombia</td>
<td>IDC Blue Carbon and MAPCO</td>
<td>Blue Carbon and Ecosystem-Based Adaptation</td>
<td></td>
<td></td>
<td>IOCARIBE</td>
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<tr>
<td>RTC Colombia</td>
<td>IODE OBIS</td>
<td>OBIS Course following the perspectives from IODE</td>
<td>Jun-21</td>
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<td>IOCARIBE</td>
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<tr>
<td>RTC Colombia</td>
<td>MSP</td>
<td>Marine GIS</td>
<td>Aug-21</td>
<td></td>
<td>IOCARIBE</td>
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<tr>
<td>RTC Colombia</td>
<td>MSP-KZM</td>
<td></td>
<td>Oct-21</td>
<td></td>
<td>IOCARIBE</td>
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<tr>
<td>RTC Colombia</td>
<td>MPA</td>
<td></td>
<td>Nov-21</td>
<td>4th quarter 2021/early 2022</td>
<td>IOCARIBE</td>
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<tr>
<td>RTC Colombia</td>
<td>Ocean Science/Acidification</td>
<td>Ocean Acidification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RTC India</td>
<td>Tsunami</td>
<td>Multi Hazard vulnerability mapping</td>
<td>Aug-21</td>
<td>1st quarter 2021</td>
<td>IOCINDIO</td>
</tr>
<tr>
<td>STC ITIC STC Indonesia</td>
<td>Tsunami</td>
<td>Tsunami Awareness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STC ITIC STC Indonesia</td>
<td>Tsunami</td>
<td>Tsunami Early Warning Systems</td>
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<td>2nd quarter 2021</td>
<td></td>
</tr>
<tr>
<td>STC ITIC STC Indonesia</td>
<td>Tsunami</td>
<td>TEMPP (Community Tsunami Evacuation Maps, Plans, and Procedures, IOC MG 82)</td>
<td></td>
<td>4th quarter 2021/1st quarter 2022</td>
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<tr>
<td>STC ITIC STC Indonesia</td>
<td>Tsunami</td>
<td>Tsunami Warning and Emergency Response Standard Operating Procedures (IOC MG 76)</td>
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<td>2nd or 3rd quarter 2021</td>
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</tr>
<tr>
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<td>Tsunami</td>
<td>Tsunami Ready (IOC MG 74)</td>
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<tr>
<td>STC ITIC STC Indonesia</td>
<td>Tsunami</td>
<td>Tsunami Warning Center Staff Basic Competencies</td>
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<td></td>
<td></td>
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<tr>
<td>STC ITIC STC Indonesia</td>
<td>Tsunami</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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