

# **Report of the First Workshop of the second round of regional workshops held under the auspices of the United Nations in support of the second cycle of the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects**

**Koror, Palau, 8– 9 August 2018**

## **I. Summary of discussions**

The present document provides a summary of the discussions, and information emanating from the regional Workshop in support of the second cycle of the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects (Regular Process), covering the region of the North Pacific. The Workshop was held in Koror, Palau from 8 to 9 August 2018.

The presentations, discussions, as well as the Chair's and Joint Coordinator's summary of the Workshop are synthesized under the following overarching topics: (a) Presentation on the outline for the second world ocean assessment and the preliminary timetable and implementation plan for the preparation of the second world ocean assessment; (b) Presentation on the review of the outcome of the Workshop for the North Pacific, held in Bangkok in November 2017; (c) Consideration of the intended structure of the various chapters (and sections of chapters) of the second world ocean assessment; (d) Consideration of selected chapters and sections of chapters in the light of the structure of the outline for the second world ocean assessment, including possible chapter frameworks; (e) Consideration of important issues in other chapters and discussion of issues on other chapters; (f) Discussion on integrated assessments covering environmental, social and economic aspects; and (g) Consideration of learning points/needs and resources that may be relevant to the inventory of capacity-building opportunities relevant for the Regular Process being compiled and maintained by the secretariat, and to the multi-stakeholder dialogue (case studies of good practices) and capacity-building partnership event, to be held in early 2019. The annexes to the present summary provide other details of the Workshop and its outcomes, including the agenda and list of participants.

## **II. Background**

The programme of work for the period 2017-2020 for the second cycle of the Regular Process, developed by the Ad Hoc Working Group of the Whole on the Regular Process (Ad Hoc Working Group of the Whole)<sup>1</sup> and endorsed by the General Assembly,<sup>2</sup> includes in the activities for 2018 the holding of a second round of regional workshops to, *inter alia*, support the development of the second world ocean assessment by enabling the collection of regional-level data and the meeting of relevant members of writing teams.<sup>3</sup> The “Guidelines for the second round of Workshops in 2018 to Assist the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects” developed by the Group of Experts of the Regular Process give guidance to the arrangements of the workshops. The Guidelines provide for, *inter alia*, the purpose, objectives, participants and outputs of the workshops, as well as for the

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<sup>1</sup> See the attachment to A/71/362.

<sup>2</sup> See General Assembly resolution 71/257, paragraph 299.

<sup>3</sup> See paragraph 8 (h) of the Programme of Work 2017-2020, attachment to A/71/362.

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various operational and administrative considerations on their implementation. The Guidelines are provided in Annex 1 of the present report.

In accordance with the Guidelines, the objectives of the second round of workshops are to:

(a) Support the development of the second world ocean assessment by enabling the collection of regional-level information and data for the preparation of the second world ocean assessment and to enable relevant members of writing teams for specified chapters to meet, and to interact with experts from the region in the fields covered by those chapters;

(b) Enable the regional experts to better understand the approaches of the Regular Process and to develop their skills in integrated assessment, covering environmental, social and economic aspects;

(c) Enable the writing teams for the chapters selected for the workshop with the help of the Joint Coordinators and the members of the Group of Experts of the Regular Process (“the Group of Experts”) who are present, to discuss the structure of their chapter, its relationship with the other chapters of the outline for the second world ocean assessment (“the outline”) and responsibilities for developing the chapter text;

(d) Provide opportunities for the members of the Group of Experts present to highlight important issues within the outline other than those of the selected chapters, in order to broaden understanding of the full range of the Regular Process;

(e) Consider what learning points / needs and resources may be relevant to the inventory of capacity-building needs and opportunities relevant for the Regular Process being compiled and maintained by the secretariat, and to the multi-stakeholder dialogue (case studies of good practices) and capacity-building partnership event, to be held in early 2019;

(f) Consider what capacity-building steps might be taken, both at global and regional levels, in relation to the issues covered by the selected chapters.

### **III. Conduct of the Workshop**

The Workshop was held under the auspices of the United Nations, represented by the Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs, which also serves as the secretariat for the Regular Process, and hosted by the Republic of Palau. It was held at the Palau International Coral Reef Center (PICRC) in Koror, Palau. The Workshop was conducted in accordance with the draft agenda (Annex II).

The Workshop was chaired by Mr. Yimnang Golbuu, Chief Executive Officer, PICRC. It was attended by the Joint Coordinators of the Group of Experts of the Regular Process, Mr. Renison Ruwa (Kenya) and Mr. Alan Simcock (United Kingdom of Great Britain and Northern Ireland). Participants also included representatives from the following States: Australia, Bangladesh, Brazil, Canada, People’s Republic of China, Côte d’Ivoire, France, Japan, Palau, Philippines, Republic of Korea, Togo, Ukraine, United Kingdom and Viet Nam; they reflected a diversity of expertise including from regional scientific bodies, universities and academic research institutes (see Annex 2, List of Participants). Overall, the Workshop was attended by 35 participants, 10 of whom were females. A total of 17

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of the participants were proposed members of writing teams for the second world ocean assessment; three members of the Group of Experts who were Lead members for relevant chapters of the second world ocean assessment also participated in the Workshop. The United Nations was represented by the Secretary of the Ad Hoc Working Group of the Whole on the Regular Process and Programme Officer of the secretariat of the Regular Process.

The Workshop opened with welcoming remarks delivered on behalf of the Republic of Palau by His Excellency, F. Umiich Sengebau, Minister for Natural Resources, Environment and Tourism of the Republic of Palau. He noted the recent United Nations conservation award to Palau and informed participants that a conservation fee was incorporated in all airfare tickets to Palau. He underscored the fact that the uses of the oceans needed to be underpinned by science and research that in turn would inform policy making. In that regard, he noted that the work of the experts within the framework of the Regular Process was important as it would contribute to the generation of the latest information on the state of the marine environment which would serve to inform policy. He recognized the pro bono work of the scientists taking part in the Pool of Experts of the Regular Process and thanked them for their dedication to the Process. The Chair for the Workshop, Mr. Yimnang Golbuu began by informing participants about the practice of “Bul” – a Palauan local system of managing ocean resources. In this regard, he particularly highlighted the establishment of a marine protected area by Palau as well as its shark sanctuary and ban on trawling. He noted that some of the major challenges being faced by Palau included pollution, in particular by plastics, and climate change, and welcomed the hosting of the Workshop as a timely event. The representative of the United Nations also delivered opening remarks. The draft agenda for the workshop was subsequently adopted.

The opening segment was followed by the consideration of the items on the agenda, which included plenary sessions, a number of presentations, breakout group discussions and feedback from participants. Additionally, during the Workshop, and at the invitation of the Chair, a presentation was made by Mr. Destin Penland, the Executive Director for the “Our Ocean Conference 2020” to be held in Palau in 2020. The presentation provided an overview of the preparations for the Conference, including opportunities to support it.

The Workshop concluded with a presentation by Mr. Alan Simcock, with the approval of the Chair, of a summary of the main elements that emerged during the discussions. It was noted that guidance was given to all writing teams to capture social and economic aspects in the course of their drafting. It was highlighted that the experts would need a consistent system for cross-referencing between chapters (since line and page numbers would change) and that guidance would be provided on this by the Group of Experts. The Chair’s summary was followed by closing remarks by the Chair of the Workshop and by the representative of the United Nations.

#### **IV. Summary of discussions**

The discussions which took place under the various agenda items provided an important opportunity for members of the writing teams as well as experts from the region to discuss the outline for the second world ocean assessment, as well as the

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relevant chapters of the second world ocean assessment that were the focus of the Workshop. These discussions have been summarized below.

**A. Presentation on the outline for the second world ocean assessment and the preliminary timetable and implementation plan for the preparation of the second world ocean assessment**

Mr. Alan Simcock gave a presentation on the outline for the second world ocean assessment and the preliminary timetable and implementation plan. The presentation covered the history of the preparation of the outline, including its adoption by the tenth meeting of the Ad Hoc Working Group of the Whole. Mr. Simcock noted that the outline was based on the DPSIR (Drivers, Pressures, State, Impacts, Responses) framework.

The presentation noted that the introduction to the second world ocean assessment would restate the main principles governing the Regular Process. The focus would be on scientific and social/policy developments since the collection of the data on which the First Global Integrated Marine Assessment (first World Ocean Assessment or WOA I) was based and, where possible, trends would be brought out.

Regarding the future summary of the second world ocean assessment, it was noted that, as in WOA I, it should be designed to be presented to the General Assembly for its approval. It was noted that the summary should not aim to be a chapter-by-chapter summary, but to present an integrated view of the conclusions across the board, as well as continue to present a comprehensive view of knowledge gaps and capacity-building gaps and needs. It was noted that, as compared to the summary for the WOA I, the summary for the second world ocean assessment would need to be substantially shorter – perhaps 25 pages, rather than 60 pages.

As regards the chapter structure, it was noted that it envisages the following: a one-paragraph summary of the findings of the second world ocean assessment; a summary of the baselines set by WOA I; a description of environmental changes as well as of economic and social changes; the identified information gaps and capacity-building gaps.

Regarding the state of the marine environment, it was noted that the consideration of the following was expected: the identification of trends in the physical and chemical state of the ocean; trends in species biodiversity; trends in habitat biodiversity; trends in the interaction of human society and the ocean; coastal communities; human health and the ocean; maritime industries; and maritime cultural services including the extent to which marine cultural resources are conserved, support for cultural activities linked to the sea, and the scale of use of objects from the sea valued for cultural reasons.

As regards trends in pressures, it was noted that the following needed to be addressed: developments in pressures from climate change; developments in pressures from human activities (land-based; extraction of living marine resources; extraction of non-living resources; other human activities (shipping, tourism etc., and their cumulative impacts).

Participants were informed that the chapter structure would also consider trends in benefits from management tools, including the following: marine spatial planning; other management approaches e.g., ecosystem-based, culture-based, community-based, and area-based (including marine protected areas (MPAs, etc.); adaptation to

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climate change and resilience building and understanding of the overall benefits from these activities.

Mr. Simcock also outlined the key milestones in the preliminary timetable and implementation plan for the second world ocean assessment, such as the approval of the Lead and Co-Lead members for the chapters of the assessment (drawn from the Group of Experts) as well as the constitution and approval of the writing teams. He highlighted that the drafting of the assessment would be followed by a review process by the Group of Experts, followed by peer review, followed by two rounds of review by States in 2020. He informed participants that the expectation was that the Group of Experts would finalize the document and then submit the assessment to the Ad Hoc Working Group of the Whole in the spring of 2020, following which it would be submitted to the General Assembly in the fall of 2020.

In the ensuing discussions, in response to a query regarding the use by the writing teams of published results, Mr. Simcock noted that in some cases data published by other bodies was used in WOA I to provide tables analyzing other organizations published data e.g., that of the World Bank. He also noted that published work from other bodies, such as the Intergovernmental Panel on Climate Change (IPCC), would be considered in the preparation of the second world ocean assessment. In particular, he noted that the IPCC was preparing a special report on oceans and the cryosphere to be completed in 2019. He noted that the findings from the summary for decision-makers of this publication would be a useful resource during the preparation of the second world ocean assessment, together with the State of Fisheries and Aquaculture (SOFIA) report prepared by the Food and Agricultural Organization (FAO). Mr. Simcock noted that the Guidance for Contributors, Parts I and II (approved by the Ad Hoc Working Group of the Whole at its ninth and tenth meetings) provides further guidance on the kinds of publications to be considered in the preparation of the second world ocean assessment. He further noted that information on the Lead and Co-Lead members for the respective chapters would be available following approval by the Bureau and would be made available on the website of the Division.

## **B. Presentation on the review of the outcome of the Workshop for the North Pacific, held in Bangkok in November 2017**

Mr. Chul Park (Co-Chair for the North Pacific Workshop, held in Bangkok in November 2017) gave a presentation which reviewed the outcome of the Workshop for the North Pacific held in 2017. The presentation included a consideration of regional information sources identified in that Workshop and progress in making them available for the second world ocean assessment; consideration of further information sources that might be made available, and a discussion of other aspects of the report of the outcome of the Workshop.

Regarding the key elements discussed at the regional Workshop for the North Pacific in 2017, Mr. Park highlighted the following: the need for better integration of environmental, social and economic aspects, bearing in mind the fact that the first World Ocean Assessment had a “cubist” approach, looking at everything from three angles: ecosystem processes, human activities and habitats (including species). He noted that the Workshop considered the need for better coverage of socioeconomic issues, including better integration of environmental, social and economic aspects; a clear relation to the Sustainable Development Goals of the 2030 Agenda; a focus on specific audiences; regional information sources; national reports; intergovernmental

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organizations' (IGO's) status reports and national and regional data portals. He observed that the challenge was in obtaining and ensuring access to these sources.

Mr. Park also gave an overview of the progress after the first round of workshops (the last of which was in December 2017), mainly the preparation in January/February of 2018 by the Group of Experts of proposals for an outline for the second world ocean assessment in the light of the regional workshops and other consultations. He noted that the tenth meeting of the Ad Hoc Working Group of the Whole (28 February to 1 March 2018) determined the scope and structure of the assessment for the second cycle of the Regular Process. He further noted that the constitution of the Pool of Experts for the second cycle is organized on the basis of nominations by States and suggestions of intergovernmental organizations (open-ended process) and targeted at meeting the expertise brought out by the outline. He also noted that since the tenth meeting of the Ad Hoc Working Group of the Whole, writing teams and their convenors were being identified and organized and that the preliminary timetable for completion of the assessment by 2020 had been finalized by the Group of Experts.

### **C. Consideration of the intended structure of the various chapters (and sections of chapters) of the second world ocean assessment**

The presentation on the review of the outcome of the Workshop for the North Pacific was followed by a presentation by Mr. Renison Ruwa of the intended structure of the various chapters (and sections of chapters) of the second world ocean assessment. The presentation highlighted the following proposed structure: (a) a one-paragraph abstract of the chapter or section; (b) a very short summary of the situation recorded in WOA I; (c) a description/overview of environmental changes between 2010 and 2020; (d) a description of the economic and social consequences and/or of the other economic or social changes (including, where appropriate, changes in global distribution of benefits and disbenefits and issues relating to concepts of natural capital); (e) a description of the main (remaining) information gaps in relation to the subject matter; and (f) a description/assessment of the main capacity-building gaps in the field.

With regard to the abstract, it was noted that clear, simple language would be essential. Each chapter was expected to include a summary of relevant parts of WOA I and would address environmental changes between 2010 and 2020 (mindful that some observations in 2017 to 2020 will not be available). It was noted that, as much as possible, information should be put in a table format (some cells may have to be descriptive text, not numerical data) and should be region-specific. Regarding the short summary of the relevant situations in WOA I, it was observed that a key challenge would be the ability to provide enough information to enable new readers to understand what was in WOA I in a succinct and engaging manner.

As regards the relevant economic and social consequences and/or other economic or social changes, it was noted that each chapter should answer questions, such as what (if anything) has happened to economic and social aspects and whether there have been independent economic or social changes that have had environmental impacts.

On the main remaining information gaps, it was noted that WOA I summarized information gaps that needed to be filled, both for assessment and management. The second world ocean assessment would therefore need to look at any changes or improvements, as well as any new information sources. Finally, chapters in the second

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world ocean assessment would need to consider the main remaining capacity-building gaps - what has changed since WOA I, whether there are new solutions that need enhanced capacity to support them, and whether there are new problems where capacities do not yet exist. It was noted that the multi-stakeholder dialogue and capacity-building partnership event to be held in January 2019 could be an important information source in this regard.

During the ensuing discussions, it was noted that the Group of Experts had developed a template for chapters in general (to be published in due course) which would be a “living document” – it would be amended and adapted to address the final agreed content of the chapters and any challenges encountered during the drafting of the chapters. Regarding the template, Mr. Simcock observed that the final version would probably be more flexible than the one originally circulated by the Lead Members to the proposed members of the writing teams. It was emphasized that in their drafting of the chapters, the writing teams would need to be succinct since the envisaged page count for the entire second world ocean assessment was in the range of 300 to 400 pages.

**D. Consideration of selected chapters and sections of chapters in the light of the structure of the outline for the second world ocean assessment, including possible chapter frameworks**

The discussions under this item (item 6) of the agenda were preceded by a brief introduction of the respective chapters by the Lead members or Convenors, followed by the participants being divided into parallel break out groups to review the substance of chapters and related capacity-building needs, where possible. The breakout group sessions were followed by a plenary session during which each group’s rapporteur reported on the discussions in the group. The following is a brief summary of the introduction, presentations and discussions.<sup>4</sup>

**(i) Chapters 6 and 7: “Trends in the biodiversity of main taxa of marine biota” and “Trends in the state of biodiversity in marine habitats” (Chul Park and Hilconida Calumpong)**

These two chapters were considered together and were introduced by Mr. Simcock who observed during the ensuing discussions that basin overviews for other regions would also be covered in the assessment. He observed that the chapters would need to start from the basis that WOA I did not consider microalgae in one central chapter (the information is spread across 8 chapters dealing with ocean basins), thus, the second world ocean assessment is intended to cover the full range of habitats and species. He suggested that submarine canyons did not need to be included in the chapters. Mr. Simcock also considered that the character of the Sargasso Sea is geographical, rather than ecological, and may be out of place as part of these chapters, given its close linkage to the open ocean (though distinct from it). He further made the case that removing it from the chapter would ensure continuity from WOA I. In response to a question as to whether benthos would be considered, Mr. Park noted that the chapter would be addressed partly taxonomically and partly ecologically and

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<sup>4</sup> It is noted that the level of detail for the summaries varies depending on, inter alia, the chapter topic, chapter size (number of sub-chapters), the level of detail in the presentations and the number of experts available to provide input in the groups.

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that all benthic animals needed to be included in the sections on invertebrates subject to review at a later stage by the writing team.

Mr. Simcock underlined the need to keep the development of both chapters 6 and 7 under review given the close relation between the two chapters. He noted that if necessary, the outlines for the chapters could be amended through the Bureau of the Ad Hoc Working Group of the Whole (particularly the text in bold type would need the Bureau's approval).

From an organizational point of view, Ms. Calumpong observed that most proposed members of the writing team for the subsections of chapter 6 were not able to participate in the Workshop for the North Pacific, and that it would be important for the chapter to be considered at some of the other forthcoming workshops. She also observed that one of the challenges in constituting the writing team was that it was not always easy to determine what areas specific experts were working in, since a number of them had indicated their areas of specializations in a general manner. Ms. Calumpong suggested that once the teams were constituted, the secretariat could consider grouping ocean habitat experts together to avoid overlaps. The secretariat took note of this suggestion.

*Breakout group report and plenary discussions*

Mr. Chowdhury, a proposed member of the writing team for chapters 6 and 7 presented the report from the break-out session. As an overall comment, he observed that general patterns of biodiversity would be covered in chapter 6 but that specific habitat types would be addressed in chapter 7. The report highlighted the following suggestions from the group:

A proposal was made that the subsection of 6A 4. Microbes be replaced by "Bacteria and virus". More specifically, it was suggested that the sequence of chapter 6 would be as follows: phytoplankton and primary producers followed by marine invertebrates (both benthic and neritic regions with nektonic squids and decapods), fishes, marine mammals and seabirds.

A proposal to renumber chapter 7 was made, so that what was incorrectly numbered as subsection (c) on "Rocky substrates and reefs" would become 7(b). A proposal was made to have chapter 7, subsection (p) on "Open Ocean" discuss water column and pelagic environment. With regard to the habitat sections, participants in this breakout session considered that the continental slope and shelf should be added in the chapter outline and it was therefore proposed that chapter 7 (l) "Submarine Canyon" should be replaced with the new title "Continental Slope and Canyon" in the updated outline. It was proposed that this revision be included in the updated outline.

It was agreed that the Sustainable Development Goals should be incorporated into the chapter and that climate change issues should be emphasized. Regarding smaller areas like ridges, plateau, trenches and seamounts, it was suggested that more emphasis should be given to data gaps and emerging pressures. It was noted that the sequences to write sub-sections would be as follows: Status - Trend - Gaps. The use of cross-referencing, as well as of graphs, figures, sketches and other infographics could be added in appropriate cases to reduce the number of pages.

Regarding practical arrangements for the drafting, the importance of having experts from all regions was highlighted and it was suggested that the writing team would need flexibility to add experts who need to get approval to participate in the team. Mr. Park highlighted the need to achieve geographical and gender balance in the



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writing teams and the need to get identified experts recommended by relevant IGOs for appointment. Mr. Simcock noted that additional experts needed to be identified and appointed in accordance with the mechanism for appointment of additional experts to the Pool of Experts of the second cycle of the Regular Process. Lead Members and Convenors were encouraged to contact the secretariat in this regard.

In the ensuing discussions, Mr. Park observed that chapter 6 would probably also be discussed at the workshop for the North Atlantic, the Baltic Sea, the Mediterranean Sea and the Black Sea region to be held in Malta at the end of August 2018; this would allow for more discussion on the chapter thus, a more detailed structure would be finalized at a later stage. In the meantime, he noted that proposed members of the writing teams could already begin to research and write since the second round of workshops would be already completed by December 2018. In response to a question whether phytoplankton would be included in primary production, he observed that primary production by plankton would be included in the plankton section.

**(ii) Chapter 10: Changes in inputs to the marine environment of nutrients (Alan Simcock on behalf of Juying Wang)**

Mr. Simcock gave a brief presentation on chapter 10 on behalf of the Lead member, Ms. Juying Wang, who was unable to be at the Workshop. The presentation highlighted the fact that the problem of excess nutrients stemmed from an excess nitrogen input which leads to excessive algal growth. The algal growth ceases when the nutrients are exhausted with the result that the algal growth dies and rots. The bacteria which produce the rotting consume the available oxygen in the marine environment and the lack of oxygen leads to hypoxic areas and dead zones.

It was noted that the chapter would need to identify drivers and would also need to consider issues of quantification. For example, the scale and location of production of artificial nitrogen fertilisers and the scale and location of production of paper and pulp could be quantified, while, from current data, other drivers cannot be.

This raised the question whether it would be worth trying to bring the data in WOA I up to date. As regards the North Pacific, there was also the question of how to update information and considerations by country and sub-region. It was suggested that where WOA I found regular observations, the current data would need to be obtained and assessed. It would be necessary, where regular observations have stopped (e.g., United States National Coastal Condition Reports (NCCR) and National Estuarine Eutrophication Assessment (NEEA) do not seem to have been updated since 2010) or where there were no regular observations, that the chapter considers local studies where available.

Another consideration was the availability and accessibility of any relevant satellite studies (none were identified in WOA I) and whether any of the work of the Intergovernmental Oceanographic Commission (IOC) Intergovernmental Panel on Harmful Algal Blooms could provide an additional approach to the content of the chapter.

A participant observed that in China, ground water contamination (by animals, e.g., cows) is an important issue. Regarding data and information, he noted that the IOC has a working group whose work is relevant to this topic and that Modified Early Warning Score (MEWS) has published modelling work which provides a lot of data on this issue. It was noted that information gaps exist in the Yellow Sea (the last paper

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on the subject was published in 2004 based on 1997/98 data which calculated about 50% of nitrogen input was by riverine input and 45% by atmospheric). It was also noted that during the past two or three years, research papers had been issued indicating that the China/Republic of Korea programme to reduce levels of nitrogen was unsuccessful and that levels of nitrogen have continued to increase, and also the cattle population, therefore these data would need to be updated. Mr. Simcock observed that an update was crucial given the WOA I did not cover the results of this programme since the results of the research programme were not available at the time.

*Breakout group report and plenary discussions*

Mr. Simcock presented the report from the break out group reiterating the results of the above discussions. There were no further discussions in plenary as it was noted that there was clarity on what needs to be done for this chapter.

**(iii) Chapters 13: Changes in erosion and sedimentation and “Changes in coastal and marine infrastructure” (Ca Thanh Vu)**

Mr. Vu gave a brief introduction to the chapter, noting that chapter 13 would cover changes in coastal erosion and sedimentation, changes in river management, changes in land use resulting in changes in erosion patterns and beach nourishment.

*Breakout group report and plenary discussions*

Mr. Vu presented the discussions from the breakout group. He noted that the group agreed that the chapter should cover the period 2010 to 2020 and that, as regards changes in coastal erosion and sedimentation, it should address only the trends, as well as changes due to coastal infrastructure development, including shoreline protection structures, changes due to climate change and sea-level rise. It was noted that intra-annual coastal erosion might also be considered. Regarding changes in river management, it was noted that the chapter aims at addressing the change in river management and its impacts on coastal erosion and sedimentation, especially from 2010 to 2020. On changes in land use which result in changes in erosion patterns, it was noted that the chapter would consider the number of ways in which different land uses impact the transportation of sediment to rivers and to the coasts. Regarding beach nourishment, it was noted that a new technique had been developed recently to be applied to replenish sand-starving coasts. The chapter would address nature-based coastal protection, such as mangroves, as well as changes in beach nourishment techniques and sand engines within the period 2010-2020.

**(iv) Chapter 14: Changes in coastal and marine infrastructure (Ca Thanh Vu)**

Mr. Vu gave a brief introduction to the chapter, noting that chapter 14 would cover changes of land reclaimed from the sea from 2010 to 2020 and its socioeconomic benefits together with environmental impacts; the extent of new land defenses against the sea and the extent of abandoned sea defenses, as well as the design of these structures and their socioeconomic and environmental impacts; the extent of coastal development, including for tourism; other adaptations affecting coastal populations as a result of sea-level rise, including the socioeconomic impacts of adaptation (noting that adaptation measures could be physical and non-structural actions, including relocation and evacuation planning); changes in port installations and their management including dredging (covering changes between 2010 and 2020, with

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reference to WOA I); and changes in submarine cables and submarine pipelines between 2010 and 2020, with the trends possibly being addressed in numbers/kilometers of cables being installed or removed from the ocean.

*Breakout group report and plenary discussions*

Mr. Vu presented the discussions from the breakout group. It was noted that the relationship to relevant SDGs would also need to be highlighted in the chapter. The group agreed that the chapter needed to address the status, trends and gaps, bearing in mind the fact that there was not much information on these subjects in WOA I. Being mindful of the fact that the number of pages for the second world ocean assessment is very limited, the writing would need to be very concise. The need to identify relevant data sources was emphasized as well as the need to address the socio-economic impacts of coastal erosion and sedimentation.

In the ensuing discussions, an observation was made that the inclusion of offshore structures in chapter 14 was possibly unnecessary since the outline of the second world ocean assessment already had a separate chapter on exploration of offshore oil and gas (chapter 20). Further to this, it was noted that the separation of structures from activities in the coastal region may be problematic and that it may therefore be better to deal with structures within the context of offshore oil and gas structures since one of the issues in chapter 20 was the disposal of the structures. In response to this observation, Mr. Vu noted that this would be taken into account, notwithstanding the fact that offshore structures are not only oil and gas related and could also include (astronomical) observatories. In response to a question regarding the purpose of adding management to port installation, Mr. Vu noted that the management to be considered here was the management of the shipping infrastructure and not of shipping itself. It was suggested that the impact of defenses on habitats should be considered in chapter 14. It was noted that there was very little public information/data available on cables and pipelines. It was observed that China had a policy on land reclamation whereby permission was granted through the State as opposed to local governments, and that there would be a need to ensure that any resultant data gaps related to this are addressed in chapter 14.

**(v) Chapter 15: Changes in capture fisheries and harvesting of wild marine invertebrates (Andrew Johnson)**

Mr. Johnson provided an overview of the issues to be considered in chapter 15. The presentation covered the intended aim of the chapter, what issues it should cover, what information sources to use, especially for the North Pacific (apart from FAO's State of Fisheries and Aquaculture report and statistics), how to structure the chapter, as well as how to contribute to the chapter. It was noted that there would be a need to ensure a balance between the different chapters of the second world ocean assessment that address fisheries, namely chapter 6C: State of fish stocks (as part of state of species biodiversity); chapter 8A: State of maritime industries (as part of the state of human activity); and chapter 15: Changes in capture fisheries.

It was also noted that Part IV of WOA I dealt with the role of food from the sea and recent total catch but had no regional analysis. This raised the question whether the second world ocean assessment should introduce regional analysis. The presentation also raised the question whether there could be better analysis of maximum economic yield versus maximum sustainable yield, and whether further analysis of rebuilding

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stocks would be needed. As regards the regulation of capture fisheries, the chapter would need to consider what recent advances there had been made in quantifying and combatting illegal unreported and unregulated (IUU) fishing, and what new information was available. On space/use conflicts, it was noted that there may be room for greater specificity. Regarding gender in fisheries, it was noted that information on this issue is generally not readily available, thus a major consideration was whether there is (access to) better information.

It was observed that the chapter would need to consider the impacts of other issues such as climate change, pollution, environmental degradation, disasters etc. It would also need to consider whether there was more information that could be included on the response of fishing communities to these pressures. Finally, it was noted that WOA I only had one paragraph on subsidies, which was not very specific, thus chapter 15 of the second world ocean assessment would need to consider whether there was now more information available on this subject.

On a practical level, participants were reminded that the chapter should not delve into policy analysis. It was noted that a Convenor had been identified for the writing team, as well as some proposed members. The possible fields in which further members were needed for Chapter 15 or other chapters (e.g., 6C and 8A) included gender, subsidies and post-harvest handling.

In the ensuing discussions, in response to an observation that large-scale fishing can be very destructive especially in Asia and Africa, Mr. Johnson noted that post-harvest loss was not included in the WOA I and proposed for it to be considered in the second world ocean assessment. A suggestion was made that IUU fishing should distinguish between areas within and beyond national jurisdiction.

It was noted that the definition of, as well as the distinction between, artisanal and subsistence fishing would need to be reflected. The need to also include interactions with cetaceans and the impact of underwater noise, as well as a cross-reference to marine litter was observed, as well as the need to consider ecological issues – what fisheries are interacting with microplastics and other forms of pollution or contaminants affecting fisheries (subject to how these are addressed in other chapters across the assessment), and transnational organized crimes in the fisheries sector.

It was also noted that, in drafting the chapter, the writing team would need to use FAO's reports, though reference could be made to complimentary or other statistics for the purposes of comparison. It was noted that the Black Sea Commission had data and information from the General Fisheries Commission for the Mediterranean (GFCM) regarding the Black Sea and Mediterranean which could be useful for the Malta Workshop.

#### *Breakout group report and plenary discussions*

Mr. Johnson presented the report from the break-out session. He noted that the group discussed a proposed approach to the drafting process as follows: Introduction; Summary of World Ocean Assessment I; Documented change in state – (building on the baseline World Ocean Assessment I); Consequences of the change on human communities, economies and wellbeing; Key region-specific changes and consequences; Information gaps; Capacity-building gaps; Outlook; Information and data used in the assessment; and Key remaining knowledge and capacity gaps. It was noted that tables would be used to save on the overall envisaged word count of 3000. The importance of reflecting SDG 14 and other SDGs was emphasized. In that regard,

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the rapid assessment of the SDGs and their relation to SDG 14<sup>5</sup> produced by the Nereus Program was considered to be a useful reference.

The group discussions considered the issue of changes in capture fisheries and harvesting of wild marine invertebrates. It was agreed that the following issues should be considered in the chapter: levels of catches of fish, within and beyond national jurisdiction, as well as levels of harvesting of marine invertebrates (including shellfish), such as by-catch and other impacts on vulnerable marine ecosystems (VMEs) and benthic ecosystem, post-harvest loss (supply chain), fish-stock propagation, IUU fishing, and non-food harvesting.

The group also considered issues to add/develop further for the chapter plan. In that regard, the following were identified: the need to reflect significant management/policy interventions and/or plans since WOA I; the role of technology/technological advances; fishing effort and efficiency; themes such as human welfare, fishing under different flags (issue of flag of convenience), relationship to climate change, and gender in fisheries.

The group also discussed practical, organizational issues such as the timely confirmation of members of the writing team who want to contribute to the chapter; the need to coordinate closely with experts from the other regions in order to ensure that the chapter provides a “global” picture; and a number of timelines to facilitate the drafting process and finalize the chapter in early 2019.

In the ensuing discussions, it was noted that the chapter could explain policies and their impacts (what has happened and the consequences), but could not analyze e.g., whether the policies were good or bad. In response to the level of detail to be reflected for the regions, it was observed that the writing team would need to regroup some of FAO’s statistics (with a methodology that would need to be explained) and would also need to make reference of major papers regarding regional statistics, with the necessary caveat that they were estimates. To the extent possible, information for the “smaller ocean areas” would also be reflected, so long as it was based on SOFIA or other authoritative supplementary material.

It was observed that the United Nations Environment Programme (UNEP) could be a source for case examples on “smaller ocean areas”. Another suggestion was the consideration of large marine ecosystems (LMEs) which could provide an ecological basis for separation. The work carried out by the Census of Marine Life in this regard was noted. Regarding LMEs, a view was put forward that they are not very favoured in the North East Atlantic because there were inconsistent applications of the subdivisions and they therefore did not apply well to that region. However, it was noted that they seemed to work for the North Pacific, South Atlantic and other areas. A comment was made with regard to chapter 25 (Invasive alien species) that a subdivision along the lines of LMEs had been applied because of the biogeographical similarities. A general observation was made that the issue of regional subdivision may be relevant not just for fisheries (chapter 15) but possibly also for other chapters/issues and that it would be necessary to ensure consistency across the assessment.

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<sup>5</sup> See <https://nereusprogram.org/works/a-rapid-assessment-of-co-benefits-and-trade-offs-among-sustainable-development-goals/>.

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**(vi) Chapter 25: Invasive alien species, including transport in ballast water and on ships' hulls (Thomas Therriault)**

Mr. Therriault, Convenor for chapter 25, presented the overview for the chapter. He noted that since it is a new chapter, it would not be possible to simply provide an update from WOA I, although a review of how the issue of invasive alien species (IAS) was treated across the various chapters of that Assessment would still be useful. It was generally observed that data quality and availability would vary geographically across regions and that it would be important for the experts to use their networks to get relevant information and data. It was noted that there was a need for better monitoring – countries needed to start collecting information on IAS bearing in mind the fact that invasion vectors keep changing and that there was a need to start thinking about what the next breed of vectors and pathways are/will be.

It was noted that the chapter would benefit from some climate change modelling or scales to make some projections, and that it would also need to identify links to SDG 14, as well as the Convention on Biological Diversity (CBD) Aichi targets among others. By way of conclusion, Mr. Therriault noted that there would be need for better positioned policy and management tools to facilitate uptake of the second world ocean assessment, including, where possible, the presentation of information in a way that allows management and policy streams to understand and effectively apply the information.

In the ensuing discussions, it was noted that the information in the table on “Pressures and Impacts of Human Activities on Environmental and Socioeconomic Aspects of the Marine Environment” of WOA I had some useful information that could benefit from a review and update. Mr. Therriault observed that on the basis of such a review, the chapter would need to re-establish a meaningful baseline based on various bits of information in different chapters. A comment was made regarding the need for species migrations to be articulated in the chapter and that the Black Sea region has some good information on this and that best practices could be shared.

*Breakout group report and plenary discussions*

Mr. Therriault presented the groups discussions on the various elements of the proposed chapter template.

As regards the introduction, he noted that it was suggested that the chapter would need to clearly define marine invasive species i.e., a species introduced outside its native range, etc. as opposed to transient/migratory species as invaders, given the fact that there are many examples of native species shifting distributions in response to climate change. There would also be a need to make it clear that the chapter would consider marine and estuarine invaders and not freshwater ones. He observed that an unresolved issue was how to handle cryptogenic species, and whether to include them. A suggestion from the group to address this was that where data is better the cryptogenic species should be tracked separately, bearing in mind the need for consistency throughout the regions.

On the point of linkages with other chapters, it was noted that the contents of WOA I would need to be reviewed in order to identify the relevant references to invasive species so that the appropriate linkages could be made in the second world ocean assessment. The linkages with other chapters in the outline of the second world ocean assessment were noted as follows: chapter 4 (Drivers) due to links with invasive species as a driver of change; chapter 10 (Changes in inputs to the marine environment

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of nutrients) due to links to harmful algal blooms; chapter 14 (Artificial Habitats); chapter 16 (Aquaculture) and chapter 23 (Shipping). It was suggested that linkages could also be made to marine debris/litter/plastics, in light of the fact that there is growing literature which proves that the accumulation of these substances in the marine environment is providing a vector quite different from biological rafting on vegetation; this could tie in to the role of artificial habitats/infrastructure in providing stepping stones for marine invasive species.

Regarding the summary of the baseline from WOA I, the group did not determine a potential baseline since data quality/availability will be quite different among both taxa and regions. It was suggested that this issue be discussed at the next regional workshop to be held in Malta for the North Atlantic, the Baltic Sea, the Mediterranean Sea and the Black Sea region.

The group noted with regard to any documented changes since WOA I that there was strong support for using LMEs as the basis for spatial units in the second world ocean assessment. It was considered that this approach could be successfully used for the more data-rich region. It was suggested that the regions where better information on marine invasive species would be needed, could be identified and specifically dealt with in a third world ocean assessment. It was reported that the group discussed the idea of keeping major taxonomic groups separate i.e., algae, fish, and invertebrates. It was considered that this level of resolution in taxa and space would contribute to an assessment that would be useful to managers and policy makers. It was suggested that the chapter should also comment on major vectors and existing/proposed management/regulations. On the issue of harmful algal blooms, it was noted that following considerable discussion, it was agreed that if the harmful algal bloom was non-native then it would be considered in this chapter, but if the species was native it would be included in chapter 10 - Changes in inputs to the marine environment of nutrients. It was noted that there are many algal blooms (red tide events) with significant ecological and economic consequences that may fall in both chapters depending on the actual causative agent (which may be unknown in many situations).

It was considered that the issue of harmful algal blooms was particularly relevant in regard to the consequences of the change on human communities, economies and wellbeing. There was strong support for the need to clearly articulate the economic impacts of marine invasive species, especially for developing countries. It was noted that this may often require more data collection on what these economic impacts are/could be. The link between marine invasive species and food security was also explored. It was noted that some previous research by the North Pacific Marine Science Organization (PICES) could be useful and could be supplemented by other global examples. The issue of food security also generated discussion on aquaculture as many cultured species provide both opportunities (especially in developing economies) but also can create negative consequences (which are often not considered in developing economies). There would need to be sufficient clarity on the issue of whether the cultured species are native or not, and what the consequences are for escapees, including pathogens, parasites, and other “hitchhiker” species.

On key region-specific changes and consequences, there was support for including information on key invaders for each region that could be used to stimulate action, especially in developing economies. Finally, on other considerations, there was some discussion about including links to the issue of marine biodiversity of areas beyond national jurisdiction e.g., deep sea gastropods that were moved from one seamount to another by a research remotely operated vehicle off the west coast of North America.

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The considerable investments in deep sea mining provided another reason to consider this aspect. It was nevertheless noted that there may be challenges to this given that many invasive species are coastal species and most waters beyond national jurisdiction are deep sea waters so the habitat match was likely relatively low for these species.

Another consideration was the possibility of linking invasive species to marine protected areas, conservation areas, and ecologically and biologically sensitive areas. In this regard, it was noted that investments in marine activities typically occurred before strong regulatory or policy frameworks were put in place. Also, regulatory tools were often not developed and implemented until after impacts were noted. It was observed that dealing with marine invasive species requires a proactive approach to ensure disastrous impacts are avoided to the extent possible.

In the ensuing discussions, it was noted that since invasive alien species refers to the movement of species from their native to non-native location(s), there were also some connections to other chapters e.g., chapter 10: Changes in inputs to the marine environment of nutrients; chapter 14: Changes in coastal and marine infrastructure since some species movements are influenced by habitat changes; and chapter 15: Changes in capture fisheries and harvesting of wild marine invertebrates e.g., changes in agricultural practices that result in hitch-hiking species. Other human-mediated contributors to “hitchhiker” species to be considered include e.g., ballast water in shipping, deep sea mining. The link between IAS and threats to food security (though no data was probably readily available) was considered important as well as the need to link it with the SDG and the Intergovernmental Conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction. Other issues to consider were case studies in the Arctic and other areas, vectors, as well as scale, particularly for some regions. On the issue of scale, Mr. Therriault noted that the quality of data would influence analysis - where good time series data is available, scaling would be feasible, but where not, then more general regional divisions would have to be applied.

#### **(vii) Chapter 29: Development in marine spatial planning (Alan Simcock)**

Mr. Simcock introduced the chapter. In his presentation, he noted that chapter 29 was new in that WOA I did not have a chapter dedicated to marine spatial planning (MSP). It was noted that WOA I did not address comprehensively the various approaches to managing human impact on the sea; each human activity, and the ways in which it is managed, was looked at individually, and as a result, cross-cutting management approaches were not analysed. In an effort to ensure more integration, the outline for the second world ocean assessment included chapter 29: Developments in Marine spatial planning and chapter 30: Developments in management approaches (ecosystem-based, culturally-based and community-based).

It was further noted that the writing team would have the following main tasks: to explain the concept of MSP; to undertake a survey of the controls under the property-based system; to survey the various methods of bringing together specific permitting systems, and to decide whether to highlight general coverage or good examples.

In response to a query regarding the relevance of the IOC Marine Spatial Planning Guide (the “MSP Guide”), Mr. Simcock observed that the International Marine Spatial



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Planning Forum has had meetings and provided outputs, and that the MSP Guide may be too optimistic and not immediately transferrable to practical applications.

*Breakout group report and plenary discussions*

Mr. Simcock presented a summary of the discussions in the breakout group. He noted that the question of how to do MSP and what is actually happening would require more detailed research. He observed that information was available from China, and that the European Union (EU) had published a lot of material on this matter. An observation was made that the EU has a compliance mechanism and that there were also a number of reports from United Nations organizations that could inform the drafting of the chapter. Mr. Simcock noted in this regard that the main challenge would be finding examples of implementation/realistic application. A view was put forward that MSP could be difficult to write about objectively given that there may be different understandings among States on what constituted MSP. Mr. Simcock noted that there would be a need to find objective information. An observation was made that Hong Kong, China could be a good case study given the considerable work undertaken on water quality. It was noted that considerable information was available for East Asia as well as for the United States of America and Canada.

**E. Consideration of important issues in other chapters and discussion of issues on other chapters**

The members of the Group of Experts raised issues they wished to emphasize and discussions were held on issues on other chapters that participants raised. Mr. Simcock observed that the purpose of the discussions was to ensure that any issues raised were brought to the attention of participants at the other workshops as they related to any of the chapters to be discussed at those workshops, with the overall aim of ensuring consistency across the assessment.

In the discussions, it was observed that the experts would need to exercise caution in how they describe primary production to make sure the appropriate nuances were captured, particularly given the fact that there are no good estimates of primary production. As regards shipping, a number of questions were raised as to whether the experts would consider biogeographical measurements over the past few years, whether they would consider instruments of the International Maritime Organization (IMO), such as the International Convention for the Control and Management of Ships' Ballast Water and Sediments (Ballast Water Management Convention), and whether the next five to ten-year period would be covered in relation to artificial habitats.

In response to some of the questions, it was observed that there was more shipping in the North and that the opening of the Arctic routes around Asia could result in an increase in shipping activities in that region. It was noted, the implementation of the IMO's International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) would need to be considered. Another possible contributor to increased shipping volume was considered to be the recent enlargement of the Panama Canal as well as the changes in the fuel market e.g., the increased export by some countries of liquified natural gas. A general suggestion was made that the chapter on Developments in maritime transport (chapter 23) could note the changes over the past ten years.

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Regarding artificial coastlines, an observation was made that reliable estimates on what is happening on artificial coastlines was essential and that this could be supported by satellite data. It was noted that some data was available for the coastline of China but that not much information was available across the regions. A point was made that more consultation would be needed with other experts to get global level information and that it would be good to have convenors of the relevant chapters meet to discuss this issue.

An observation was made that more information was needed on socioeconomic aspects. In this regard, it was suggested that issues such as human trafficking should be taken into account in relation to shipping, including in the Bay of Bengal. It was noted that the shipping chapter would also need to consider the issue of lives lost at sea.

On fisheries, it was noted that the assessment should reflect the impacts of human activities e.g., whaling, artisanal and small-scale fisheries impact on habitats, and should also address geographical variations in fish stocks and habitat conditions, and climate impacts. The possibility of reflecting this in chapter 15 or in chapter 6 (c) was raised, although it was also noted that chapter 28 addresses cumulative impacts. Some participants indicated they had remote sensing data as well as some studies on modelling published in 2010 with forecasts up to 2030 (relevant to chapter 10). As regards modelling, the need to have a range of appropriate scenarios was noted.

#### **F. Discussion on integrated assessments covering environmental, social and economic aspects**

Mr. Alan Simcock gave a presentation on integrated assessments covering environmental, social and economic aspects.

The presentation sought to discuss the key elements for preparing an integrated assessment. It was noted that the envisaged dimensions of integration were environment, economic and social. A basic assessment matrix with examples of sample content with four major sets of questions was presented and participants were asked to consider whether the basic matrix was workable; what the most important environmental aspects to be studied (per region) were (including linkages between environmental status and the impacts of specific human activities, as well as who benefits from the marine environment); how the economic benefits derived from the marine environment in the specific region could be analysed; and, how the health, income and general well-being of marine workers, and the social impacts of the marine environment on society in general could be analysed (including what information is collected and/or available in the region on social aspects of the marine environment, and whether it allows health, incomes and other aspects to be analysed).

In the ensuing discussions it was noted that there was a need for sufficient data and information to answer the questions raised in the presentation. Mr. Simcock noted that the presentation was intended to stimulate thinking about the various aspects and how they are linked to each other in order to help participants think about how to present the information in an integrated assessment in order to ensure consistency.

A participant noted that the presentation touched upon major aspects/report card approach, which could be the best approach to data collection; the participant further observed that the chapters dealt with during the Workshop would involve the collection of information spatially, as such, the main drivers (which will vary across

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regions) could be presented first and then classified in a way that facilitates meaningful uptake.

**G. Consideration of learning points/needs and resources that may be relevant to the inventory of capacity-building opportunities relevant for the Regular Process being compiled and maintained by the secretariat, and to the multi-stakeholder dialogue (case studies of good practices) and capacity-building partnership event, to be held in early 2019**

With regard to the multi-stakeholder dialogue and capacity-building partnership event (the “Event”), Ms. Vita Onwuasoanya provided information on the progress in the preparations for the Event. In particular, she highlighted the fact that the Event was expected to provide an opportunity to build awareness and collaboration with respect to capacity-building in support of the Regular Process, including with respect to building capacity to participate in, and make use of, integrated assessments. Participants were informed that the Event also aimed to increase awareness of the Regular Process and more generally the science-policy interface at all levels and to highlight the importance of capacity-building in support of the Regular Process, including regarding the preparation of integrated assessments which are aimed to inform decision-making by policy-makers and other relevant stakeholders. The Event would allow for in-depth multi-stakeholder dialogues on current opportunities, gaps and needs in capacity, and would seek to foster cooperation and coordination amongst stakeholders to address these. Participants were informed that a draft concept note and draft agenda for the Event were available on the website of the Division.

In response to a question regarding how the secretariat measures the success of assessments prepared under the Regular Process, Ms. Onwuasoanya noted that a number of subjective methods were applied such as the preparation of national and regional integrated assessments that are based on the Assessment framework and/or take the WOA I into account e.g., the national assessment for the Republic of Korea, and the assessment under the Convention for the Development, Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean (Nairobi Convention); tracking the number of interventions from delegations quoting WOA I during intergovernmental meetings; tracking the references to the Assessment in presentations by stakeholders and the public/media and tracking the number of requests for presentations or other information related to the Assessment from academics.

A question was raised as to whether the Regular Process provided for capacity-building support to facilitate research in regions where there is little or no data and/or information on the state of the marine environment. It was noted that the capacity-building mandate under the Regular Process did not include this aspect, but that the Regular Process could facilitate this by providing an avenue for matching needs to opportunities through the capacity-building inventory and inventory of recent and ongoing assessments. Further, the capacity-building Event was considered to be an opportunity to further this “match-making” and synergizing process.

As a way forward, participants were encouraged to contribute to the Event, including through participation and/or the provision of information, particularly on lessons learned and best practices.

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## **ANNEX 1: Guidelines for the second round of Workshops in 2018 to Assist the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects**

### **Purpose and objectives**

1. The programme of work for the period 2017-2020 for the second cycle of the Regular Process, developed by the Ad Hoc Working Group of the Whole on the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects,<sup>6</sup> and endorsed by the General Assembly,<sup>7</sup> includes in the activities for 2018 the holding of a second round of regional workshops to, *inter alia*, inform the collection of regional-level information and data for the preparation of the second world ocean assessment, to build capacity and to facilitate outreach and awareness-raising.<sup>8</sup> These Guidelines apply to the second round of regional workshops and are intended to give guidance for the arrangements for such workshops.

2. The objectives of each of these workshops should therefore be to:

(a) Support the development of the second world ocean assessment by enabling the collection of regional-level information and data for the preparation of the second world ocean assessment and to enable relevant members of writing teams for specified chapters<sup>9</sup> to meet, and to interact with experts from the region in the fields covered by those chapters;

(b) Enable the regional experts to understand better the approaches of the Regular Process and to develop their skills in integrated assessment, covering environmental, social and economic aspects;

(c) Enable the writing teams for the chapters selected for the workshop, with the help of the Joint Coordinators and the members of the Group of Experts of the Regular Process (“the Group of Experts”) who are present, to discuss the structure of their chapter, its relationship with the other chapters of the Outline for the second world ocean assessment (“the Outline”) and responsibilities for developing the chapter text;

(d) Provide opportunities for the members of the Group of Experts present to highlight important issues within the Outline other than those of the selected chapters, in order to broaden understanding of the full range of the Regular Process;

(e) Consider what learning points / needs and resources may be relevant to the inventory of capacity-building inventory of needs and opportunities relevant for the Regular Process being compiled and maintained by the secretariat, and to the multi-stakeholder dialogue (case studies of good practices) and capacity-building partnership event, to be held in early 2019.

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<sup>6</sup> See the attachment to A/71/362.

<sup>7</sup> See General Assembly resolution 71/257, paragraph 299.

<sup>8</sup> See, *inter alia*, paragraphs 9 (c) and 13 (b) of the Programme of Work 2017-2020, attachment to A/71/362.

<sup>9</sup> Where a separate writing team is established for a section of a chapter, this section may be treated as a chapter for the purpose of these guidelines.

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(f) Consider what capacity-building steps might be taken, both at global and regional levels, in relation to the issues covered by the selected chapters.

3. The Group of Experts will inform the Bureau of the Ad Hoc Working Group of the Whole (“the Bureau”), for its consideration, of the chapters which will be the focus of each regional workshop.

**Number and locations**

4. States, relevant organizations, bodies, funds or programmes within the United Nations system and intergovernmental regional organizations are invited to offer to host workshops in 2018 for the following ocean areas:

(a) The North Pacific;

(b) The South Pacific;

(c) The Indian Ocean (including the Arabian Sea and the Bay of Bengal), the Red Sea and Gulf of Aden and the ROPME/RECOFI area;<sup>10</sup>

(d) The North Atlantic, the Baltic Sea, the Mediterranean Sea and the Black Sea; and

(e) The South Atlantic (between the African and American coasts) and the wider Caribbean.

5. Separate workshops will not be held for the Arctic Ocean or the Southern Ocean. Instead, correspondence which was initiated during the first round of regional workshops in 2017, will continue between the relevant international bodies and forums for those areas (in particular, the Antarctic Treaty System and the Arctic Council) and the Group of Experts of the Regular Process to enable those bodies and forums to contribute their views on the issues relevant to the workshops. If requested, members of the Group of Experts and Pool of Experts will make themselves available for consultation.

6. To the extent that resources permit, one or two further meetings of writing teams may be held during the first half of 2019 where the Bureau considers it desirable to do so. The themes of such meetings will be determined by the Bureau on the basis of recommendations from the Group of Experts.

**Timing**

7. Seven possible time-slots have been identified for workshops to be held between June and December 2018:

(a) 25 – 29 June, 2018;

(b) 2 – 27 July, 2018;

(c) 30 July – 10 August, 2018;

(d) 24 – 28 September, 2018;

(e) 15 – 26 October, 2018;

(f) 5 – 9 November, 2018;

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<sup>10</sup> Regional Organization for the Protection of the Marine Environment (ROPME) Members: Bahrain, Iran (Islamic Republic of), Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Regional Commission for Fisheries (RECOFI) Members: Bahrain, Iran (Islamic Republic of), Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates.

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(g) 26 – 30 November, 2018.

These Guidelines will be supplemented by details regarding the format of the workshops and the proposed composition and structure of the meetings of the writing teams.

8. Potential hosts are invited to indicate within which of these time periods they would wish to host a workshop.

#### **Activities of workshops**

9. The agenda of a workshop to support the Regular Process should reflect the objectives set out in paragraph 2 above. The activities of a workshop should take full account of the principles for the Regular Process recommended by the Ad Hoc Working Group of the Whole and endorsed by the United Nations General Assembly in 2009 and reaffirmed by the United Nations General Assembly in 2016,<sup>11</sup> and the various recommendations of the Ad Hoc Working Group of the Whole.

#### **Hosts**

10. Workshops are to be hosted by Member States, members of United Nations specialized agencies and relevant organizations, bodies, funds or programmes within the United Nations system. They are to be organized under the auspices of the United Nations,<sup>12</sup> in coordination with the secretariat of the Regular Process and with the assistance of members of the Group of Experts and Pool of Experts, as appropriate. For the organization of such workshops, as they affect these regions, hosts may request the cooperation of relevant regional intergovernmental organizations and/or that of relevant national scientific institutions.

#### **Participation**

11. Member States of the United Nations, members of United Nations specialized agencies and relevant organizations, bodies, funds or programmes within the United Nations system, shall be entitled to participate in any workshop that they consider relevant to them, up to the number of available places. Relevant regional intergovernmental organizations in the region are encouraged to participate, including regional seas organizations, regional fisheries management organizations and arrangements, relevant regional intergovernmental marine science organizations and intergovernmental organizations and arrangements undertaking work in relation to large marine ecosystems. For practical reasons, the logistics and the number of invitees will need to be managed by the host in consultation with the secretariat of the Regular Process, as well as in consultation with the Bureau, as appropriate. Member States should consider arranging for their National Focal Points for the Regular Process to assist with identification of participants for regional workshops and the organization of such workshops as required, and where possible, to participate in relevant workshops.

12. Non-governmental organizations in consultative status with the Economic and Social Council or with Convention secretariats, relevant non-governmental organizations which accredited to the United Nations Conference on Sustainable Development (“Rio + 20”) or which participated in the United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and

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<sup>11</sup> See A/64/347, annex, and paragraph 285 of General Assembly resolution 71/257.

<sup>12</sup> Such workshops will require the conclusion of a host country agreement.

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sustainably use the oceans, seas and marine resources for sustainable development (“United Nations Oceans Conference”) in accordance with General Assembly resolution 70/303: Modalities for the United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development, relevant scientific institutions and organizations representing major groups as defined in Agenda 21 may request invitations to participate in the workshops. Relevant regional marine science institutions and organizations and relevant regional arrangements undertaking work in relation to large marine ecosystems are particularly encouraged to participate. The organizations, arrangements and institutions referred to in this paragraph should be those active in ocean affairs and marine science whose participation can help advance the work and objectives of the Regular Process. Hosts may reserve a number of places in the workshop to be filled by such invitations.

13. Each workshop should include at least one member of the Group of Experts, one member of the Pool of Experts, as appropriate, and one member of the secretariat of the Regular Process, which will be coordinated with the secretariat of the Regular Process. The Joint Coordinators of the Group of Experts will be invited to participate in all the workshops. If possible, all members of the Group of Experts from States in the area covered by the workshop should participate. The Lead Members from the Group of Experts for the chapters selected for the workshop as well as relevant members of the writing teams should also be invited to participate. The participation of the members of the Group of Experts and of the Pool of Experts, as appropriate, from developing countries from the region and the Joint Coordinator from the developing country, as well as that of the relevant members of the writing teams, will be supported within the provision made in the regular budget of the United Nations for 2018/2019.

14. Hosts may, as appropriate, encourage the participation of relevant members of the Pool of Experts, including their attendance in the regional workshops and seeking their input on organization, networking, and substantive input to the preparation and review of the outcome of the workshops. Preference should be given to experts in the fields covered by chapters selected for the workshop.

#### **Chair and secretariat**

15. Hosts should designate a chair (or co-chairs) of the workshop, who will be expected to take responsibility for summarizing the outcomes of the workshop with the aid of the workshop support staff and members of the Group of Experts. Hosts may consider inviting a member of the Group of Experts and, as appropriate of the Pool of Experts, to be the chair, or a co-chair, of the workshop. Hosts may provide guidance, where needed, on what the priorities for the region are, as well as on potential participants and other modalities for the workshops.

16. Hosts should provide support staff to organize proceedings in consultation with the secretariat of the Regular Process and the members of the Group of Experts and, as appropriate, of the Pool of Experts, who are taking part, and to help the chair(s), the member(s) of the Group of Experts and the secretariat to provide a summary of the outcome.

#### **Output of workshops**

17. The output of the workshop should take the form of:

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(a) Notes by the writing teams on the issues discussed in relation to each of the chapters selected for the workshop. To deliver these, each writing team should be asked to designate one of its members to take responsibility for the production of these notes;

(b) A summary of other discussions and presentations taking place in the workshop. The member(s) of the Group of Experts, of the Pool of Experts, as appropriate, and the secretariat of the Regular Process will help to produce this summary. Provision should be made for the participants to comment on a draft of the summary and for the final version to be revised by the chair(s) and representative(s) of the Group of Experts and of the Pool of Experts, as appropriate, in the light of such comments.

18. The secretariat of the Regular Process will play an important role in ensuring that the output of each workshop is captured and presented in a way which will support the work of the second cycle of the Regular Process.

19. Those functions would include capturing the relevant information presented (directly and indirectly) during the workshops, including regional/national informational needs with respect to the Regular Process and its outputs.

20. The secretariat would also assist in the preparation of the summary of discussions. It would also be responsible for the development and adaptation of the outreach materials relevant to the Regular Process and its outputs.

21. The division of work in preparing the written output of each workshop should be agreed between the host and the secretariat of the Regular Process, in consultation with the member(s) of the Group of Experts and of the Pool of Experts, as appropriate.

**Follow-up to the workshops**

22. The final version of the summary of discussions, which could include (subject to the discretion of the relevant writing team) the notes on specific chapters, should be made publicly available on the Regular Process website.

23. The secretariat of the Regular Process should ensure that liaison continues after the workshop with bodies that have contributed to it and with National Focal Points in the region. In particular, the secretariat should seek to facilitate follow-up on capacity-building possibilities identified by the workshop both with respect to the further clarification of needs as well as the identification of best practices.



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## **ANNEX 2: Draft Agenda**

### **Workshop in Support of the Second Cycle of the Regular Process**

#### **Palau, 8 – 9 August 2018**

1. Welcome and opening remarks by representatives of the Palauan Government and of the secretariat for the Regular Process (Division for Ocean Affairs and the Law of the Sea), and the Co-Chairs of the Workshop.
2. Adoption of Agenda for the Workshop.
3. Presentation by one of the Joint Coordinators of the Group of Experts of the Regular Process of the Outline for World Ocean Assessment 2 and the Timetable and Implementation Plan, and discussion of general issues related to them.
4. Review of the outcome of the Workshop for the North Pacific held in Bangkok in November 2017:
  - (a) Introduction by one of the Co-Chairs of the Workshop;
  - (b) Consideration of regional information sources identified in that Workshop and progress in making them available for World Ocean Assessment 2;
  - (c) Consideration of further information sources that might be made available;
  - (d) Discussion of other aspects of the report of the outcome of the Workshop.
5. Presentation by one of the Joint Coordinators of the intended structure of the various chapters (and sections of chapters) of World Ocean Assessment 2, namely:
  - (a) A one-paragraph abstract of the chapter or section;
  - (b) A very short summary of the situation recorded in the First Global Integrated Marine Assessment (World Ocean Assessment I);
  - (c) A description of environmental changes between 2010 and 2020;
  - (d) A description of the economic and social consequences and/or of the other economic or social changes (including, where appropriate, changes in global distribution of benefits and disbenefits and issues relating to concepts of natural capital);
  - (e) A description of the main information gaps in relation to the subject matter;
  - (f) A description of the main capacity-building gaps in the field
6. Consideration in the light of this structure for selected chapters and sections of chapters of the Outline for World Ocean Assessment 2, including possible chapter frameworks. These discussions may take place in parallel groups and should review the substance of the following chapters and related capacity-building needs:
  - (a) Chapter 6 (Trends in the biodiversity of main taxa of marine biota) and Chapter 7 (Trends in the state of biodiversity in marine habitats) (discussion led by Chul Park and Hilconida Calumpong);
  - (b) Chapter 10 (Changes in inputs to the marine environment of nutrients) (discussion led by Juying Wang);

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(c) Chapter 13 (Changes in erosion and sedimentation) and Chapter 14 (changes in coastal and marine infrastructure) (discussion led by Ca Thanh Vu);

(d) Chapter 15 (Changes in capture fisheries and harvesting of wild marine invertebrates) (discussion led by Michelle McClure);

(e) Chapter 25 (Invasive species, including transport in ballast water and on ships' hulls)

(discussion led by Chul Park);

(f) Chapter 29: Developments in marine spatial planning (Discussion led by Alan Simcock)

7. Presentation on important issues in other chapters that members of the Group of Experts present wish to emphasise and discussion of issues on other chapters that the members of the Workshop wish to raise.

8. Presentation by a member of the Group of Experts of the Regular Process on integrated assessment covering environmental, social and economic aspects.

9. Consideration of what learning points/needs and resources may be relevant to the inventory of capacity-building opportunities relevant for the Regular Process being compiled and maintained by the secretariat, and to the multi-stakeholder dialogue (case studies of good practices) and capacity-building partnership event, to be held in early 2019.

10. Overview of the outcome of the Workshop presented by the Co-Chairs and the Joint Coordinators.

11. Closure of the Workshop.

### **ANNEX 3: Participants list**

#	TITLE	FIRST NAME	LAST NAME	COUNTRY / ORGANIZATION
1	Mr.	Matthew	Eliot	Australia / Damara WA Pty Ltd
2	Mr.	Mohammad	Chowdhury	Bangladesh / Institute of Marine Sciences and Fisheries, University of Chittagong, Bangladesh
3	Ms.	Fernanda	De Oliveira Lana	Brazil / Federal Fluminense University
4	Mr.	Luciano	Dalla Rosa	Brazil / Institute of Oceanography, Federal University of Rio Grande - FURG
5	Mr.	Jose Souto	Rosa Filho	Brazil / Universidade Federal De Pernambuco
6	Mr.	Andre	Silva Barreto	Brazil / Universidade do Vale do Itajai (UNIVALI)
7	Mr.	Russell	Hopcroft	Canada / Institute of Marine Science, University of Alaska Fairbanks
8	Mr.	Thomas	Therriault	Canada / Fisheries and Oceans Canada
9	Mr.	Jinhui	Wang	China / East China sea branch, State Oceanic Administration of China
10	Mr.	Kedong	Yin	China / Sun Yat-sen University, Guangzhou
11	Ms.	Bing	Qiao	China / China Waterborne Transport Research Institute
12	Mr.	Koffi Robert	Dapa	Côte d'Ivoire / PETROCI DFP Département Production, Chef de Service Opérations de Production
13	Mr.	Nene	Bi Tra Boniface	Côte d'Ivoire / Ministry of Petroleum, Energy, and The Development of Renewable Energies
14	Ms.	Alix	Willemez	France / Independent consultant
15	Ms.	Marine	Gouezo	France / Palau International Coral Reef Center
16	Mr.	Kazuaki	Tadokoro	Japan / Japan Fisheries Research and Education Agency, Tohoku National Fisheries Research Institute
17	Mr.	Masanori	Kobayashi	Japan / The Sasakawa Peace Foundation

18	Mr.	Renison	Ruwa	Kenya / Joint Coordinator / Kenya Marine and Fisheries Research Institute
19	Mr.	Yimnang	Golbuu	Palau / Palau International Coral Reef Center
20	Mrs.	Jennifer	Gibbons	Palau /Our Ocean Conference 2020
21	Ms.	Vanessa	Jaiteh	Palau / Bureau of Marine Resources
22	Mr.	King	Sam	Palau, Minister of Natural Resources, Environment and Tourism
23	Mr.	Destin	Penland	Palau / Our Ocean Conference 2020
24	Ms.	Charlene	Mersai	Palau / Ministry of Finance
25	Ms.	Hilconida Paalan	Calumpong	Philippines / Professor, Department of Biology/Institute of Environmental and Marine Sciences, Silliman University
26	Mr.	Chul	Park	Republic of Korea / Chungnam National University
27	Mr.	Sinjae	Yoo	Republic of Korea / Korea Institute of Ocean Science and Technology
28	Mr.	Chang Ik	Zhang	Republic of Korea / Pukyong National University
29	Mr.	Matchonnawè	Bakai	Togo / Directeur des Affaires Maritimes
30	Ms.	Iryna	Makarenko	Ukraine / Permanent Secretariat of the Commission on the Protection of the Black Sea Against Pollution (Bucharest Convention)
31	Mr.	Alan	Simcock	United Kingdom /Joint Coordinator, Group of Experts
32	Mr.	Andrew	Johnson	United Kingdom / Marine Biology Research Division, Scripps Institution of Oceanography
33	Mr.	Thanh Ca	Vu	Viet Nam / Department of International Cooperation and Science Technology
34	Mr.	Nguyen	Le Tuan	Viet Nam /Vietnam Institute of Seas and Islands, Vietnam Administration of Seas and Islands
35	Ms.	Vita	Onwuasoanya	Division for Ocean Affairs and the Law of the Sea