

Report of the Third 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

Odessa, Ukraine, 17 to 18 October 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 Atlantic, the Baltic Sea, the Mediterranean Sea and the Black Sea region. The Workshop was held in Odessa, Ukraine from 17 to 18 October 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 North Atlantic, the Baltic Sea, the Mediterranean Sea and the Black Sea region held in Lisbon in October 2017 and in Valetta, in August 2018; (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) Presentation on important issues in other chapters that members of the Group of Experts present wish to emphasize and discussion of issues on other chapters that the members of the Workshop wish to raise and (f) 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)¹ and endorsed by the General Assembly,² 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.³ 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 provide guidance on the arrangements of the workshops. The Guidelines provide for, inter alia, the

¹ See the attachment to A/71/362.

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

³ See paragraph 8(h) of the programme of work 2017-2020, attachment to A/71/362.

purpose, objectives, participants and outputs of the workshops, as well as for the various operational and administrative considerations on their implementation. The Guidelines are provided in Annex 1 to 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 Government of Ukraine. It was held at the Odessa National I.I.Mechnikov University, Odessa. The Workshop was conducted in accordance with the draft agenda.

The Workshop was chaired by Mr. Sergiy Medinets, member of the Pool of Experts of the Regular Process (Ukraine). It was attended by the Joint Coordinator of the Group of Experts of the Regular Process, Mr. Alan Simcock (United Kingdom of Great Britain and Northern Ireland). Participants also included representatives from the following States: Australia, Brazil, People’s Republic of China, Greece, Philippines, Poland (via Skype), Portugal (via Skype), Republic of Korea, Sierra Leone, Sweden, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, and United States of America. They reflected a broad 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 34 participants, 14 of whom were female. A total of 17 of the participants were proposed members of writing teams for the second world ocean assessment; four members of the Group of Experts who are Lead or Co-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 by the Programme Management Officer of the secretariat of the Regular Process.

In the opening remarks, the representative of the Government of Ukraine, Mr. Dmytro Cheberkus, General Director of the Directorate of Science, Ministry of Education and Science of Ukraine, noted that the oceans provide an enormous contribution to the world's wealth and to people's well-being. He highlighted the fact that, though they are a critical source of food and energy, as well as a vital medium for the global transportation of goods, they are also under severe threat from anthropogenic activities.

Mr. Cheberkus noted that initiatives, such as the Regular Process, will provide a framework for pooling resources and bringing together key actors and relevant policies and instruments, in order to address the impacts of human activities on the ocean. He expressed Ukraine's support for the Regular Process, including in building collaboration with other States in order to effectively manage, protect and conserve marine resources.

The Rector of Odessa National I.I.Mechnikov University, Mr. Ihor Koval, expressed his gratitude to the Ministry of Education and Science of Ukraine as well as to the secretariat of the Regular Process, for the opportunity to host a Workshop in support of the second cycle of the Regular Process. He noted that the Regular Process was a challenging undertaking as it provided the framework for organizing such a diverse range of marine scientific and ocean experts to produce a document to inform the decisions of policy makers who have to deal with a wide range of complex issues.

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 in plenary sessions, breakout groups as well as discussions and feedback from participants.

The Workshop concluded with a presentation by the Chair, together with the Joint Coordinator, Mr. Alan Simcock), of a summary of the main elements that emerged during the discussions. The Chair noted that the Workshop had taken a very thorough look at the main issues of the chapters under consideration and had also discussed relevant issues affecting the Black Sea. Mr. Simcock noted that, guidance had been 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 to be succinct in their presentation of information, including utilising 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. Mr. Simcock also noted that the discussions at the regional Workshops held in Palau and Malta in August 2018 had enriched the discussions in the Ukraine Workshop.

Closing remarks were made by the Chair of the Workshop and by the representative of the United Nations.

IV. Summary of plenary and breakout group discussions

The discussions which took place on 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 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 at 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 climate change and resilience building and understanding of the overall benefits from these activities.

Mr. Simcock also briefly outlined the key milestones in the preliminary timetable and implementation plan for the second world ocean assessment, highlighting, in particular, the nomination of experts to the Pool of Experts in order to complete the constitution of the writing teams. He highlighted that the drafting of the assessment was expected to be completed by the fall of 2019. This would be followed by a review process by the Group of Experts, followed by peer review, and then by two rounds of review by States in 2020. He informed participants that the expectation was that the Group of Experts would finalize 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.

B. Presentation on the review of the outcomes of the Workshops for the North Atlantic, the Baltic Sea, the Mediterranean Sea and the Black Sea region, held in Lisbon in September 2017, and in Valetta in August 2018

Ms. Maria Bebiano in her capacity as Co-Chair for the regional Workshop for the North Atlantic, the Baltic Sea, the Mediterranean Sea and the Black Sea region, held in Lisbon in October 2017, gave a brief presentation on the discussions at that Workshop. Regarding the key elements discussed at the 2017 regional Workshop, Ms. Bebiano noted that the discussions focused on existing or future assessments in the region, so as to identify how the assessments under the Regular Process could best build on these; the possible structure of the assessment of the second cycle; regional priorities for consideration in the preparation of the second assessment; how to make the assessment of the second cycle most helpful to policy-makers in the region, including with respect to the implementation of the United Nations 2030 Agenda for Sustainable Development (2030 Agenda); on possible steps which may be undertaken within the region to support contributions to the second assessment; on the capacity-building needs and opportunities relevant to the science-policy interface and how the activities undertaken during the second cycle of the Regular Process may contribute; on how capacities to achieve integrated assessments of the marine environment can be improved; and on what steps could be taken, either within the region or at a global level, to improve the information available for the assessment of the second cycle, and to improve the information available for future assessments.

Mr. Simcock, in his capacity as Co-Chair for the regional Workshop for the same region, held in Valetta, in August 2018, also gave a presentation summarizing the discussions at that Workshop. He noted, inter alia, that participants thoroughly discussed the main issues of the chapters under consideration and examined particular issues affecting the Mediterranean and the Black Sea in that context.

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 Atlantic was followed by a presentation by Mr. Alan Simcock 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 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.

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 amended and adapted to address the final agreed content of the chapters and any challenges encountered during the drafting of the chapters. 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 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 breakout groups to review the substance of chapters and related capacity-building needs, where possible. The breakout group sessions were followed by plenary discussions during which each group's rapporteur reported on the discussions in the group. The discussions in plenary also included a number of presentations from participants as follows: Changes in marine fisheries in Ukrainian zone in the Black Sea and environmental transformation (Serhii Snigirov); Coastal Erosion and Sedimentation in the Black Sea (Kadurin S.V., Cherkez E.A., Medinets V.I); and Black Sea Hotspots Methodology (Kateryna Utkina). The following is a brief summary of the introduction, presentations and discussions.⁴

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

These two chapters were considered together. Ms. Hilconida Calumpong introduced chapter 6 on behalf of the Lead member for the chapter, Mr. Chul Park, who was unable to attend the Workshop. In her presentation on Chapter 6, Ms. Calumpong noted the importance of establishing the point of reference to measure developments since WOA I. Ms. Calumpong also observed that information on the benefits of biodiversity would need to be provided by scientists working in socioeconomic disciplines, and that, where appropriate, an evaluation of linkages to the achievement of relevant Sustainable Development Goals (SDGs) under the 2030 Agenda would be made. She also highlighted the importance of gap analysis. Ms. Calumpong further noted that sub-chapters 6(g) on Marine plants and 6(h) on Macroalgae were additions to the outline.

Ms. Calumpong noted that the treatment of the various taxa of seagrasses, mangroves and macroalgae would be considered in chapter 6, while the state of the habitats where these predominate would be considered in the appropriate sections of Chapter 7. She further observed that there would be some overlaps with other chapters and that the respective writing teams would need to coordinate their work.

With regard to the Sargasso Sea, Ms. Calumpong noted that it is a unique ecosystem, best studied and described as a unit. Thus, as in WOA I, the Sargasso Sea and the floating species of *Sargassum* macroalgae would be treated together in a single section.

She noted that following the discussions at the regional Workshop for the North Pacific held in Koror, Palau, in August 2018, the topic of continental slopes had been added to sub-chapter 7(1) on submarine canyons.

In response to a question during the ensuing discussions, Ms. Calumpong clarified that microfiber benthos would not be dealt with in chapter 7.

Regarding the composition of the habitat diversity writing team, Ms. Calumpong noted there was a need to identify other expertises for the team, apart from the botanists.

⁴ 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.

Breakout group report and plenary discussions

(a) Chapter 6: Trends in the biodiversity of main taxa of marine biota (Chul Park)

On behalf of Mr. Chul Park (Lead member), Ms. Hilconida Calumpong presented the report from the breakout session. It was noted that Convenors had been identified for chapter 6H, chapter 7H and chapter 17. It was also noted that draft outlines were being developed for the following chapters: chapter 6G on marine plants; chapter 6H on macroalgae; chapter 7H on kelp forests and algal beds; and chapter 7I on seagrass meadows. No member of the writing team for chapter 7S on the Sargasso Sea was available for this Workshop.

With regard to chapter 6H (Macroalgae), the difficulties inherent in defining the number of species of green, red, and brown algae were noted. In this regard, it was observed that while certain pressures, such as temperature increase, eutrophication and heavy metal contamination, have likely led to a decrease in macroalgal biodiversity, the improvement of molecular analysis have assisted in the identification of a greater number of species of macroalgae through the identification of cryptic species. As a result, the measure of macroalgal biodiversity, in terms of the number and composition of species, has changed at the regional level depending on the efforts of taxonomists. It was noted that chapter 6H will deal only with marine algae and exclude freshwater algae from consideration. While considering gaps in information, it was noted that no report had yet been published on threatened species of macroalgae.

(b) Chapter 7: Trends in the state of biodiversity in marine habitats (Hilconida Calumpong)

Ms. Hilconida Calumpong, Lead member, gave a brief introduction to chapter 7. As part of the discussion of the chapter, Mr. Jason Hall-Spencer gave a brief presentation on Chapter 7H on kelp forests and algal beds. In this context, the linkages with Chapter 25 on invasive species were highlighted. Mr. Hall-Spencer further noted the linkages between macroalgae, fish and other organisms, and the impacts of coral reef deaths on seaweeds.

Breakout group report and plenary discussions

Mr. Konstantinos Topouzelis presented the report from the breakout group on chapter 7I on seagrass meadows. With regard to scope, Mr. Topouzelis noted that the sub-chapter will cover changes in the extent, condition and distribution of seagrass meadows. It was further noted that the introduction would need to set out the links between this sub-chapter and relevant sub-chapters of chapter 6, in particular sub-chapters 6B on marine invertebrates, 6C on fish, 6G on marine plants, and 6H on macroalgae. Moreover, cross-references would need to be made to sub-chapters 7H on kelp forests, 7J on mangroves and chapter 17 on changes in seaweed harvesting and use. With regard to developments since WOA I, it was noted that the sub-chapter 7I would discuss documented changes of seagrass meadows, and the changes in governance status.

Ms. Judith Weis presented the report from the breakout group on sub-chapter 7K on saltmarshes. With regard to the outline of the sub-chapter, it was noted that the sub-chapter would summarize the main functions of salt marshes, including their role as

a habitat for certain species of fish and birds and as coastal protection, including through stabilizing shorelines and reducing erosion. The sub-chapter would highlight how these functions are relevant to human communities, economies and well-being. Ms. Weis observed that the overall state of saltmarshes is declining due to sea-level rise, while highlighting the regional differences in this regard. In this context, it was noted that due to sea-level rise, intertidal saltmarshes must increase elevation, move inland or be submerged. It was also noted that experiments aiming to increase the elevation of salt marshes were ongoing, but that knowledge gaps remained regarding execution and long-term effectiveness.

(2) Chapter 11: Changes in liquid and atmospheric inputs to the marine environment from land (including through groundwater), ships and offshore installations (Maria Bebianno)

Ms. Maria Bebianno gave a brief presentation about the discussions on chapter 11 highlighting the need to identify the sources of pollution, particularly along rivers. The need for a common definition of a hotspot was also stressed. As part of the breakout group discussions, Mr. Yuriy Denga gave a presentation on the State of the Black Sea Environment. He emphasized that the balance of nutrients in the Black Sea needs to be corrected. He noted that in all monitoring programmes (river and marine) it was recommended to perform observations of total nitrogen and phosphorus. Further, given that available data revealed that atmospheric deposition of nutrients was the main source of nutrient pollution (especially for open sea areas), atmospheric monitoring for the Black Sea should be an area of focus. He expressed the opinion that other pollutants entering the Black Sea from atmospheric deposition and precipitation should be similarly monitored.

Ms. Kateryna Utkina, gave a presentation on Black Sea Hot Spots Methodology. She noted that the methodology allows for the identification and ranking (using uniform criteria) of hot spots located in the Black Sea catchment area. The criteria used were environmental, socioeconomic, and integrative indices. It was also noted that the hot spot methodology included an expertise score, but also mathematical methods for estimating the effect of hot spots on the marine environment of the Black Sea. Ms. Utkina further noted that to support the use of this methodology, a database on hot spots, which contains meta data and data on discharges (concentrations and/or loads), as well as information on and maps of ecological status of areas, which are under the pressure of hot spots, had been developed.

Breakout group report and plenary discussions

Ms. Maria Bebianno presented the report from the breakout group. She noted that the outline for the sub-chapter had been agreed, and the spreadsheet on available expertise in the writing team updated. As with the regional Workshop held in Malta in August 2018, it was proposed to delete the word “liquid” from the title and change it to read “Changes in inputs to the marine environment including atmospheric, from land (including surface and groundwater), ships and offshore installations”. The suggestion made during the regional Workshop held in Malta to include nitrogen oxide (NO_x) and sulphur oxide (SO) compounds as part of chapter 11 was also discussed, and it was agreed that these should actually be treated as part of chapter 10. It was suggested that tributyltin (TBT) and perfluorinated compounds (PFCs), such as perfluorooctane sulfonate (PFOS) and perfluorooctanoate (PFOA), should be

included as a general class of compounds. A proposal was made to include the biological implications of increased inputs to the marine environment from land, for example the effects of cocktails of different contaminants. A number of gaps were also identified. For example, with regard to socioeconomic aspects, the need for additional experts was noted, in particular to discuss the economic impacts in different regions. It was also noted that there were gaps with regard to capacity-building. Regarding data, it was noted that there were gaps in relation to data mining and consolidation, and that it would be important to establish baselines and to identify safety thresholds for some of the compounds. The need to develop quality control to provide comparisons and confidence intervals and a confidence matrix based on the quality and quantity of the data was also highlighted. The need to identify gaps in regional data and the need for the addition of new developments was also stressed, as well as the overlaps with chapter 8.

In the ensuing discussions, a question was raised as to why the second world ocean assessment foresaw including tributyltin (TBT), taking into account that it has been phased out as an antifoulant. Mr. Alan Simcock, in response, noted that as during the preparation of WOA I, TBT is still in use in many regions of the world, and on smaller vessels. In this context, another participant noted the long-term effects of TBT, including its continued presence in sediment and the resulting effects on biota. It was noted that WOA I did not include the full names of compounds, or note the concentrations discussed. A proposal was made to add a column to the relevant table to cover these aspects. In this context, Mr. Simcock noted that such data might only be available for certain regions.

(3) Chapter 15: Changes in capture fisheries and harvesting of wild marine invertebrates (Michelle McClure)

Mr. Alan Simcock, on behalf of Ms. Michelle McClure (Lead member), provided an overview of the issues to be considered in chapter 15. The presentation covered the purpose, scope and structure of the chapter, the available sources of information, as well as how to contribute to the Chapter. The need to ensure a balance between the chapters of the second world ocean assessment that address fisheries, namely chapter 6C, chapter 8A, and chapter 15, was noted.

It was also noted that Part IV of WOA I considered the role of seafood in food security and food safety, and discussed recent total catch, but included little 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 stocks would be needed. As regards the regulation of capture fisheries, the chapter would need to consider what recent advances 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 aspects related to 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 pressures, such as climate change, pollution, environmental degradation and disasters. The

chapter would 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 contained one paragraph on subsidies, and that in drafting chapter 15 of the second world ocean assessment there would be a need to consider whether more information was now available on this subject.

Mr. Serhii Snigirov gave a presentation on “Changes in marine fisheries in Ukrainian zones in the Black Sea and environmental impacts”. He informed the meeting that the Ukrainian maritime areas under Ukrainian jurisdiction remain the main habitat of sturgeon fish, migrating for breeding to the Dnieper and Danube rivers, and that there was a ban on sturgeon fishing in Ukraine. He noted that Ukrainian experts participate in international projects under the auspices of European Union Programme “STURGEON 2020”, aimed at developing recommendations and measures to improve sturgeon’s reproduction and the survival of young fish.

Breakout group report and plenary discussions

Ms. Burcu Bilgin Topcu presented the discussions from the breakout group. It was noted that the group had consolidated discussions from the Palau and Malta regional Workshops held in August 2018. It was noted that with regard to information on the state of fisheries and developments at the global level, the primary source would be the *State of Fisheries and Aquaculture* (SOFIA) report, produced annually by the Food and Agriculture Organization of the United Nations (FAO). This would be supplemented by other reports and relevant data on IUU fishing globally, as needed. It was noted that in addition to chapter 6 on Trends in the biodiversity of main taxa of marine biota and chapter 8 on Trends in the state of human society in relation to the ocean, the drafting of chapter 15 would need to consider overlaps with chapter 24 on developments in tourism and recreation activities, including the impacts of fisheries on tourism activities, the impacts of tourism activities on fisheries, and the broader socioeconomic considerations at play. It was further noted that the state of fish stocks would be considered in Part 4 (Current state of the marine environment and its trends) of the second world ocean assessment, while the pressures on the fish stocks would be considered in Part 5 (Trends in pressures on the marine environment). In this context, the need for cross-referencing was highlighted.

In the ensuing discussions, it was noted that chapter 15 should consider developments related to sharks and other elasmobranchs. It was observed that the issue of sharks and other elasmobranchs may need to be addressed in multiple chapters, and that the annotated outline could accommodate this need since there was no possibility of adding chapters to the agreed outline.

With regard to scope, Mr. Simcock noted the importance of avoiding repeating information contained in WOA I. He observed that this would only be necessary for chapters for which insufficient baseline data was available at the time that WOA I was being prepared. To ensure consistency, the writing teams were encouraged to consult the relevant chapters of WOA I.

(4) Chapter 17: Changes in seaweed harvesting and use (Hilconida Calumpong)

Ms. Hilconida Calumpong gave a brief introduction to the chapter, noting the structure and envisaged content of the template for the chapters for the second world

ocean assessment. The importance of gender balance as part of the consideration of the composition of the writing team was noted. In response to an observation regarding the need to coordinate the presentation of graphics across all the chapters of the second world ocean assessment, Mr. Alan Simcock noted that a member of the Group of Experts would play a key role in facilitating this.

Breakout group report and plenary discussions

There were no discussions on this chapter in a breakout group given that there were no members of the writing team present at the Workshop.

(5) Chapter 22: Developments in renewable energy sources (Anastasia Strati)

Ms. Anastasia Strati gave a brief introduction to the chapter, highlighting the main issues covered and the challenges lying ahead. She noted that considerable progress had already been made, as a draft outline has been developed by the Convenor for the chapter, Mr. Takvor Soukissian, based on comments received from the current proposed members of the writing team. In this respect, Ms. Strati underlined the need for additional expertise in ocean geothermal energy, offshore solar energy and marine biomass energy.

Breakout group report and plenary discussions

Ms. Strati presented the group's discussions on chapter 22, which also included issues of terminology and consistency with the template provided for all chapters of the second world ocean assessment. Ms. Strati noted the need for baseline information on offshore solar and ocean geothermal energy, as these issues were not covered in WOA I. The advances made in knowledge and capacity in this regard were noted, and sources of information to consider with regard to developments in marine renewable energy at the global and regional levels were discussed. Ms. Strati also noted the linkages between chapter 22 and the following chapters: chapter 9 on pressures from changes in climate and atmosphere, Chapter 14 on changes in coastal and marine infrastructures, chapter 21 on trends in inputs of anthropogenic noise to the marine environment, chapter 23 on developments in marine transportation, chapter 27 on marine hydrates and chapter 29 on marine spatial planning.

As regards structure, it was noted, after a short introduction to Marine Renewable Energy (MRE) sources and a brief summary of the baseline provided in WOA I, that chapter 22 would discuss progress between 2010 and 2020, key region-specific developments and anticipated future trends. Environmental benefits from MRE, its role in climate change mitigation, and the potential adverse impacts of MREs would also be discussed. This would be followed by a consideration of the socioeconomic benefits and impacts from MRE deployment. For example, visual impacts and impacts on other uses, such as tourism, fisheries and navigation would need to be considered, and the potential use of integrated coastal zone management as a tool to manage competing uses of ocean space was discussed. It was further noted that the role of MRE in achieving the SDGs, in particular Goal 7 which aims to ensure access to affordable, reliable, sustainable and modern energy for all, would need to be considered. The chapter would also present the remaining knowledge and capacity gaps, including funding mechanisms, and would highlight the special needs and challenges of developing States.

In the ensuing discussion, Mr. Simcock suggested removing the consideration of marine spatial planning and integrated coastal zone management, as these issues would be covered in chapters 29 and 30.

(6) Chapter 23: Developments in maritime transportation (Alan Simcock)

Mr. Alan Simcock introduced the chapter. In his presentation, he noted the many social aspects related to the developments in maritime transportation, including the working conditions of seafarers, passenger safety, and the impact of piracy. He further noted that a number of industries were associated with the maritime transportation sector, from shipbuilding to shipbreaking. With regard to linkages with other chapters, Mr. Simcock noted that environmental aspects of maritime transportation would primarily be covered in other chapters, e.g., sewage in chapter 10, air pollution and anti-fouling agents in chapter 11, and garbage in chapter 12. It was noted that while wrecks were a contributor to pollution, they were also linked to chapter 8 with regard to their role as maritime cultural services.

In the ensuing discussions, the linkages to chapter 14 on coastal and marine infrastructure and chapter 22 on marine renewable energy sources were noted. In response to a comment regarding the inclusion of military aspects in chapter 23, particularly contributions to noise, Mr. Simcock noted that the extent to which the second world ocean assessments could cover military aspects had to bear in mind political considerations, and that the focus would need to remain on impacts on the state of the marine environment, including socioeconomic aspects. In this regard, he further noted that the chapter on underwater noise (chapter 21) would discuss all sources of noise. With regard to shipping disasters, it was noted that the number and scale of such disasters would be covered in chapter 23 on developments in tourism and recreation activities, while their impact on the marine environment would be more appropriately considered in chapter 11 on changes in liquid and atmospheric inputs to the marine environment from land (including through groundwater), ships and offshore installations. With regard to invasive species, it was noted that the shipping industry is but one of a number of vectors, and the importance of considering all vectors as a whole was stressed. With regard to contaminants, it was noted that the chapter would need to consider emerging contaminants as well as those which were not new but had not been considered previously.

Breakout group report and plenary discussions

Mr. Alan Simcock presented a summary of the discussions in the breakout group. It was noted that the chapter would build on chapter 17 of WOA I. The annual reports of the United Nations Conference on Trade and Development (UNCTAD) could provide data regarding developments in international freight since WOA I. It was also noted that at the national level, more data was required from a number of key shipping nations. The need to supplement or update the information provided on socioeconomic aspects in WOA I was noted. Passenger ferries, cruise ships, the working conditions of seafarers, migration by sea and related migrant deaths as well as piracy were highlighted in this context, as well as the consideration of how ship routing is changing. Regarding cruise ships, the cruise ship industry was noted as an important source of information, and specific regional and national gaps were noted.

Regarding links to other chapters, the need to coordinate the drafting of chapter 23 with that of other chapters, in particular chapter 11 on Changes in liquid and

atmospheric inputs to the marine environment from land (including through groundwater), ships and offshore installations, was stressed. It was further noted that the interface between cargo ships and fishing vessels, as well as the interface between cargo ships and marine infrastructure were not discussed in WOA I and would need to be added. A participant also provided relevant sources of information for the Baltic Sea region including relevant assessments (HELCOM) and noted in particular the link between shipping and input of nutrients into the marine environment. It was noted that considerable information on shipping and emissions was available for East Asia as well as for the United States and Canada.

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

A number of participants gave presentations to raise issues relevant to the preparation of the second world ocean assessment and to the second cycle of the Regular Process, and discussions were held on these issues.

Mr. Sergiy Kadurin gave a presentation on coastal erosion and sedimentation in the Black Sea, with reference to chapter 13 of the second world ocean assessment, noting the specific features relevant to the Black Sea, as well as some perceived gaps relevant to chapter 13.

Mr. Oleksandr Kalinichenko gave a presentation on the use of unmanned underwater vehicles for marine scientific research, noting the longstanding interest and participation of the Ukraine in such research, and the importance of gliders to monitoring of the marine environment.

Mr. Hugh Kirkman shared experiences related to the establishment and operation of marine protected areas (MPAs) in Australia, including the lessons learned. In this context, he observed that while the MPA for the Great Barrier Reef had been successful, the general success rate for MPAs in Australia was low. Some of the challenges highlighted were the lack of integrated coastal zone management and carrying capacity policy, the fact that activities were carried out on a case-by-case basis, and discrepancies between policies on environmental impact assessments.

Mr. Oleksandr Neprokin, representing the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, gave a presentation that demonstrated how relevant information could be accessed from the Ocean Biogeographic Information System (OBIS) database, which contains records of up to 60 million marine species.

F. 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 Participants were informed that the Event 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.

Participants were encouraged to contribute to the Event, including through participation as panellists and/or the provision of information, particularly on lessons learned and best practices.

Ms. Onwasoanya highlighted the importance of the designation of National Focal Points who were instrumental in nominating experts to the Pool of experts, and in helping to raise awareness, and share information about the Regular Process.

Mr. Dmytro Cheberkus, General Director of the Directorate of Science, Ukraine, shared the main concerns and challenges for the Ukraine related to its marine scientific research capacity, and presented the key elements of Ukraine's science and technical programme for the restoration of marine research and scientific and technical infrastructure. Mr. Cheberkus noted that the programme consisted of three main blocks of tasks: organizational events, such as audits of existing capacity and the creation of a national coordinating centre for marine scientific research; measures to create a modern research infrastructure, including the acquisition of a specialized research vessel; and measures for the implementation of scientific research. He further noted the key gaps that had been identified, including a lack of necessary equipment and infrastructure, the need to improve the training of students and young scientists, including through summer schools, scholarships and fellowships, and the need to raise awareness among policy-makers.

Mr. Cheberkus also set out the current regional priorities in the context of the preparation of the second world ocean assessment. He highlighted the importance of regional coordination in assessing the state of the marine environment of the Black Sea. He noted Ukraine's support during the Lisbon Workshop in 2017, for the inclusion in the second world ocean assessment of the consideration of an additional topic which could deal with underwater noise, (including from a variety of vessels), as well as its transboundary effects,

With regard to the multi-stakeholder dialogue and capacity-building partnership event to be organized in early 2019, Mr. Cheberkus noted that a review of best practices of other States in preparing integrated assessments would be helpful and proposed that the secretariat could prepare short reviews for each region of modern best practices and lessons learnt regarding implementation.

Ms. Iryna Makarenko, Commission on the Protection of the Black Sea Against Pollution (Black Sea Commission), gave a presentation on the State of Environment report for the Black Sea region to be considered by the 34th Regular Meeting of the Black Sea Commission in October 2018. It was noted that the report would consider socioeconomic aspects and challenges for the first time, and that it applied the approach used for WOA I, and partly applied the standards set out in the Marine Strategy Framework Directive of the European Union. It was further noted that more

than 100 experts had contributed to the preparation of the State of Environment report, and that the experts were active in the activities of the Black Sea Commission. Ms. Makarenko also stressed that her organization stands ready to contribute all necessary data and efforts to assist in the drafting of the second world ocean assessment, and to present the lessons learnt from the drafting of the State of Environment report at the multi-stakeholder dialogue and capacity-building partnership event.

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,⁵ and endorsed by the General Assembly,⁶ 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.⁷ 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 chapters⁸ 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.

⁵ See the attachment to A/71/362.

⁶ See General Assembly resolution 71/257, paragraph 299.

⁷ See, *inter alia*, paragraphs 9 (c) and 13 (b) of the Programme of Work 2017-2020, attachment to A/71/362.

⁸ 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.

(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;⁹

(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;

⁹ 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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- (f) 5 – 9 November, 2018;
- (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 2016,¹⁰ 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,¹¹ 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

¹⁰ See A/64/347, annex, and paragraph 285 of General Assembly resolution 71/257.

¹¹ Such workshops will require the conclusion of a host country agreement.

Development (“Rio + 20”) or which participated in 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 (“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:

(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.

ANNEX 2: Draft agenda

REGULAR PROCESS FOR THE GLOBAL REPORTING AND ASSESSMENT OF THE MARINE ENVIRONMENT, INCLUDING SOCIOECONOMIC ASPECTS

Workshop in Support of the Second Cycle of the Regular Process

Odessa, Ukraine, 17 – 18 October 2018

1. Welcome and opening remarks by representatives of the Government of Ukraine, the secretariat for the Regular Process (Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations), and the Chair 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 the second world ocean assessment and the Timetable and Implementation Plan, and discussion of general issues related to them.
4. Review of the outcome of the Workshops for the North Atlantic, the Baltic Sea, the Mediterranean Sea and the Black Sea region held in Lisbon, in September 2017 and in Malta in August 2018:
 - (a) Introduction by one of the Co-Chairs of those Workshops;
 - (b) Consideration of regional information sources identified in those Workshops and progress in making them available for the second world ocean assessment;
 - (c) Consideration of further information sources that might be made available;
 - (d) Discussion of other aspects of the report of the outcome of those Workshops.
5. Presentation by one of the Joint Coordinators of the intended structure of the various chapters (and sections of chapters) of the second world ocean assessment, namely:
 - (a) A one-paragraph abstract of the chapter or section;
 - (b) A short summary of the findings 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, of selected chapters and sections of chapters of the Outline for the second world ocean assessment, 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:

I. *Breakout groups on:*

(a) Chapter 6 (Trends in the biodiversity of main taxa of marine biota) (discussion led by Chul Park and Hilconida Calumpong) mainly 6 (g). Marine plants, 6(h). Macroalgae, and Chapter 7 (Trends in the state of biodiversity in marine habitats) (discussion led by Chul Park and Hilconida Calumpong), mainly 7(h). Kelp forests and algal beds, 7(i). Seagrass meadows and, 7(s). Sargasso Sea);

(b) Chapter 11 (Changes in liquid and atmospheric inputs to the marine environment from land (including through groundwater), ships and offshore installations) (discussion led by Maria Bebiano);

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

(d) Chapter 17. (Changes in seaweed harvesting and use) (discussion led by Hilconida Calumpong);

(e) Chapter 22 (Developments in renewable energy sources) (discussion led by Anastasia Strati);

(f) Chapter 23: (Developments in marine transportation) (discussion led by Alan Simcock).

II. Presentations to the plenary by a representative of each of the breakout groups.

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

8. 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.

9. Overview of the outcome of the Workshop presented by the Chair and the Joint Coordinators.

10. Closure of the Workshop.

ANNEX 3: List of Participants

Workshop in Ukraine, 17-18 October 2018

#	Nationality	Title	First Name	Last name	Email	Affiliation
1	AUSTRALIA	Mr.	Hugh	Kirkman	hughkirkman@ozemail.com.au	Private Consultant
2	BRAZIL	Ms.	Fernanda	De Oliveira Lana	fe_lana@hotmail.com	Federal Fluminense University
3	BRAZIL	Mr.	Luciano	Hermanns	luciano.hermanns@gmail.com	AOCEANO – Associação Brasileira dos Oceanógrafos
4	BRAZIL	Ms.	Nair	Yokiya	nyokoya@hotmail.com	Instituto de Botanica de Sao Paulo, Associate Researcher of Phycological Research Nucleus
5	CHINA	Ms.	Bing	Qiao	qiaobing9635@qq.com , qiaobing@wti.ac.cn	China Waterborne Transport Research Institute
6	GREECE	Mr.	Takvor	Soukisian	tsouki@hcmr.gr	Hellenic Centre for Marine Research
7	GREECE	Ms.	Anastasia	Strati	astrati@mfa.gr	Member of the Group of Experts, Permanent Mission of Greece to the United Nations
8	GREECE	Mr.	Konstantinos	Topouzelis	topouzelis@marine.aegean.gr	Assistant Professor in Marine Remote Sensing, Department of Marine Sciences, University of the Aegean
9	PHILIPPINES	Ms.	Hilconida Paalan	Calumpang	hpcalUMpong@yahoo.com	Member of the Group of Experts, Professor, Department of Biology/Institute of Environmental and Marine Sciences, Silliman University, Dumaguete City, Philippines
10	POLAND (via Skype)	Ms.	Monika	Stankiewicz	monika.stankiewicz@helcom.fi	Baltic Marine Environment Protection Commission – HELCOM, Executive Secretary
11	PORTUGAL (via Skype)	Ms.	Maria	Bebiano	mbebian@ualg.pt	Member of the Group of Experts, University of Algarve

12	PORTUGAL (via Skype)	Mr.	Miguel	Caetano	mcaetano@ipma.pt	IPMA - Instituto Portugues do Mar e da Atmosfera; Division of Oceanography and Marine Environment
13	PORTUGAL (via Skype)	Ms.	Isabel	Sousa Pinto Machado	ispinto@fc.up.pt ; ispinto@ciimar.up.pt	Universidade do Porto
14	REPUBLIC OF KOREA	Mr.	Jae Ryoung	Oh	jaekordi@gmail.com ; jroh@kiost.ac.kr	Korea Institute of Ocean Science & Technology (KIOST)
15	SIERRA LEONE	Mr.	Keh Osman	Kamara	kehkamara@yahoo.com	Member of the Group of Experts
16	SWEDEN	Mr.	Lars Erik Elmar	Sonesten	Lars.Sonesten@slu.se	Swedish University of Agricultural Sciences, Dept. of Aquatic Sciences and Assessment
17	TURKEY	Ms.	Burcu	Bilgin Topcu	burcu.bilgin@tarim.gov.tr ; bilginburcu@gmail.com	Turkish Ministry of Agriculture and Forestry, General Directorate of Fisheries and Aquaculture
18	UNITED KINGDOM OF THE GREAT BRITAIN AND NORTHERN IRELAND	Mr.	Jason Michael	Hall-Spencer	Jhall-spencer@plymouth.ac.uk	University of Plymouth (United Kingdom) and University of Tsukuba (Japan)
19	UNITED KINGDOM OF THE GREAT BRITAIN AND NORTHERN IRELAND	Mr.	Colin	Moffat	colin.moffat@gov.scot	Marine Scotland, Scottish Government
20	UNITED KINGDOM OF THE GREAT BRITAIN AND NORTHERN IRELAND	Mr.	Alan	Simcock	ajcsimcock@aol.com	Joint Coordinator of the Group of Experts
21	UKRAINE	Mr.	Dmytro	Cheberkus	cheberkus@mon.gov.ua	Director General, directorate of Science, Ministry Education and Science of Ukraine
22	UKRAINE	Mr.	Yuryi	Denga	lawmd@te.net.ua	Ukrainian Scientific Center of Ecology of the Sea (UkrSCES)

23	UKRAINE	Ms.	Daryna	Horbachova	dasha.horbachova@mfa.gov.ua	Representative from the Ukrainian State Mission to the United Nations
24	UKRAINE	Mr.	Sergiy	Kadurin	kadurins@gmail.com	Odessa National I. I. Mechnikov University
25	UKRAINE	Mr.	Igor	Koval	rector@onu.edu.ua	Rector of the Odessa State University
26	UKRAINE	Ms.	Iryna	Makarenko	iryna.makarenko79@gmail.com	Permanent Secretariat of the Commission on the Protection of the Black Sea Against Pollution (Bucharest Convention)
27	UKRAINE	Mr.	Sergiy	Medinets	s.medinets@gmail.com	Odessa National I. I. Mechnikov University
28	UKRAINE	Mr.	Volodymyr	Medinets	v.medinets@onu.edu.ua	Odessa National I. I. Mechnikov University
29	UKRAINE	Mr.	Oleksandr	Neprokin	o.neprokin@gmail.com	Head of Information Support for the Scientific Researches Department OBIS Black Sea node Manager Ukrainian Scientific Centre of Ecology of the Sea (UkrSCES)
30	UKRAINE	Mr.	Serhii	Snigirov	snigirev@te.net.ua	Odessa National I. I. Mechnikov University
31	UKRAINE	Ms.	Kateryna	Utkina	kateutkina@gmail.com	V. N. Karazin Kharkiv National University
32	UNITED STATES	Ms.	Penny (Epapandi)	Vlahos	Penny.vlahos@uconn.edu	Department of Marine Sciences, University of Connecticut
33	UNITED STATES	Ms.	Judith Shulman	Weis	jweis@newark.rutgers.edu	Rutgers University
34	DIVISION FOR OCEAN AFFAIRS AND THE LAW OF THE SEA	Ms.	Vita	Onwuasoanya	onwuasoanya@un.org	Programme Management Officer