

Report of the Second 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

Valletta, Malta, 27-28 August 2018

I. Summary of discussions

The present document provides a summary of the discussions and information emanating from the second regional Workshop of the second round of workshops 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. The Workshop was held in Valletta, Malta, from 27 to 28 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 Atlantic held in Lisbon in September 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)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

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.

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 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 Malta. It was held at the University of Malta in Valletta campus, housed in the old University Building in Valetta, Malta. The Workshop was conducted in accordance with the draft agenda (Annex 2).

The Workshop was chaired by Mr. Alan Simcock, Joint Coordinator of the Group of Experts of the Regular Process and by Ms. Carmen Mifsud, Senior Environment Protection Officer, Environment and Resources Authority of Malta. Participants also included representatives from the following countries: Argentina, Benin, Brazil, Canada, China, Denmark, Estonia, France, Greece, Ireland, Ivory Coast, Japan, Malta, Norway, Poland, Portugal, Republic of Korea, Spain, Sweden, Togo, Turkey, Ukraine, United States, and the United Kingdom, and from the Regional Sea Conventions of the Black Sea, the Baltic Marine Environment Protection Commission (HELCOM) and the Convention for the Protection of the Marine Environment of the North-East Atlantic

(OSPAR); they reflected a diversity of expertise including from regional scientific bodies, universities and academic research institutes (see Annex 3 List of Participants).

Overall, the Workshop was attended by 46 participants, 23 of whom were females. A total of 20 participants were proposed members of writing teams for the second world ocean assessment; five 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 Deputy-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 Government of Malta by His Excellency, Mr. Carmelo Abela, Minister for Foreign Affairs and Trade Promotion. Minister Abela stressed on the important and historic role of the Mediterranean Sea for maritime civilizations, and emphasized its role as a leading global tourism destination, supporting vulnerable marine ecosystems and around ten per cent of the world's known marine species as a biodiversity hotspot. The designation of an Ocean Ambassador for Malta was mentioned as one of the ways to demonstrate the importance Malta gives to matters relating to the sea. The Minister noted that the last "Our Oceans Conference" was held in Malta in October 2017, and that Malta made a commitment to protect more than 30 per cent of its areas within national jurisdiction by designating such areas as marine protected areas (MPAs), covering a marine area equivalent to over twelve times the territorial area of the Maltese archipelago. The key role played by the Regular Process in providing a clear picture of the state of the marine environment in a world that is ever more dependent on the oceans for economic development, was stressed. 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. A cultural tour to the Malta Maritime Museum in Vittoriosa was held at the end of the afternoon session of the first day of the Workshop. The second day started with presentations on important issues in other chapters of the second world ocean assessment, followed by meetings in the five breakout groups dealing with the relevant chapters identified for discussion at the Workshop. In the afternoon, a rapporteur from each breakout group reported to the plenary on the discussions in their group, following which the Workshop considered the remaining items on the agenda.

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 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 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.

B. Presentation on the review of the outcome of the Workshop for the North Atlantic held in Lisbon in September 2017

Ms. Maria Bebianno of Portugal (Chair for the North Atlantic, the Baltic Sea, the Mediterranean Sea and the Black Sea regional workshop held in Lisbon in September 2017) gave a brief presentation of the outcome of the Workshop for the North Atlantic held in Lisbon in September 2017.

Regarding the key elements discussed at the 2017 regional Workshop, Ms. Bebianno noted that the discussions focused on existing or future assessments in the region, so as to identify how the assessment under the Regular Process can 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.

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

Ms. Sanae Chiba made a presentation on the intended structure of the various chapters (and sections of chapters) of the second world ocean assessment. She explained that the second world ocean assessment must be concise, (about 300 pages), that the length of each chapter will be approximately nine pages or 3000 words with a suggested maximum of four tables and four figures, and that a supplementary maximum of four pages could be added for sub-chapters and new material that was not included in WOA I, in an effort to avoid redundancy and duplication among contents of multiple chapters. While stressing on the need of cross references, she noted that the DPSIR framework would be applied to identify the relationships among the content of the chapters as follows: Driver: chapter 4; Pressure: chapters 9-25 (climate change and human activities); State: chapters 5, 6, 7 (of physical, chemical, biological properties); Impact: chapters 5, 6, 7; Response: chapters 29, 30 (management plan as a way to mitigate the impact). She noted that the outline of the chapters will include 6 elements, namely: Keynote points (Abstract), Summary of relevant parts of WOA I, Trends of issues over the period 2010-2020, Economic and social consequences, knowledge and information gaps, and capacity-building gaps.

This presentation was followed by discussions on possible suggestions on the structure for the second world ocean assessment. While it was noted that the discussion on the human dimension was very limited in WOA I, the importance of ensuring that the impacts on the various aspects of human society were reflected in certain chapters was stressed. In this regard, the difficulty in retrieving information/data at temporal scale to

reveal current trends from developing countries was noted. It was also proposed that tourism should be looked at as a special/extractive activity or industry. On the question as to whether the regional dimension will be reflected in all the chapters, it was noted that, while WOA I had several chapters that dealt with regional aspects without leading to important conclusions, the idea for the second world ocean assessment would be to put together an overall picture of the issue under consideration, and at the same time, within each chapter, provide as much information as possible regarding the regional situation/dimension. The importance of the findings of the Second Holistic Assessment of Ecosystem Health in the Baltic Sea (HOLAS II), for the development of the second world ocean assessment, particularly regarding the section dealing with pollution, was also noted. In this regard, it was recalled that, while the main goal of WOA I was to provide a baseline study of the state of the world's oceans, the second world ocean assessment will extend to evaluating trends and identifying gaps.

As regards what elements of capacity-building should be taken into consideration in the second world ocean assessment, it was agreed that both issues on building the capacity to prepare assessments as well as on how to sustainably use the marine environment should be covered. The need to further develop capacity-building to assess socioeconomic issues in an integrated way was also stressed. On the question as to whether each item in the assessment would be dealt with at the global level, it was noted that each writing team would need to make a decision as to how to present the information on a given topic, mostly depending on the information available. Some experts raised concerns regarding the difficulty in developing a valuable and complete chapter in the agreed approximate ten-page limit for each chapter. Moreover, the fact that not all the regional fisheries management organizations nor regional seas programmes have appropriate and effective means of communication with their constituencies and third parties, was also noted. The importance of improving the ways to edit the various chapters, as well as to develop an appropriate way for cross-referencing across the various chapters, was also stressed.

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 breakout 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.⁴

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

Mr. Chul Park gave a presentation on the development of chapter 6 which deals with trends in the biodiversity of main taxa of marine biota. He noted that this chapter will include plankton, zooplankton and meroplankton, marine invertebrates, fish, marine mammals, marine reptiles, seabirds, marine plants and macroalgae. The importance of simplifying the language in this chapter so as to make sure the content is clear for policy-

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.

makers, as well as for the general public, was stressed. It was noted that the Guidance for contributors, part I and part II describe how these, as well as other related issues, should be addressed.

Breakout group report and plenary discussions

Ms. Nessa O'Connor presented the report from the breakout session on chapter 6. She noted that there were 8 different parts to this chapter, and that a main aim for this chapter would be to identify the key data. It was noted that the writing team for this chapter would need to be looking for more microbiologists as writing team members. An exchange of views was held as to whether crustaceans should be covered under the chapter dealing with fisheries, whether there should be a focus on fish biodiversity, whether invertebrate by-catch should be included, as well as the indirect effects of predator species. Gaps in available data were identified for the areas of West Africa and the South China Sea. There was no discussion on reptiles and seabirds, and on marine plants and microalgae, as the lead experts on these topics were not present. It was noted that MPAs-related information would be a good place to start looking for the needed data.

Ms. Lis Jorgensen gave a presentation on the work carried out by the breakout group session on chapter 6B on marine invertebrates. She noted that this group was missing input from experts to cover the African region. The group felt a need to define what is an invertebrate, and why invertebrates are important to the whole ecosystem and to the human community. It was suggested that the group focus its attention on two aspects: (i) biologically driven factors, and (ii) human community and economic wellbeing. It was proposed that two tables would be included to: (a) show the state of the key regions; and (b) try to indicate the trends since the release of WOA I. The writing team would aim to try to establish case studies around the world for this and for future assessments. The writing team would also aim to identify who is responsible for collecting the data so that they can refer to them for future updates. The writing team also identified a way of linking this chapter 6 with chapters 7 and 15, since subjects permeate between them. The importance of ensuring the participation of experts from the Russian Federation in the preparation of the second world ocean assessment was briefly discussed. It was noted that efforts were ongoing to appoint members of the Group of Experts through the Eastern European Group of States.

(2) Chapter 8: Trends in the state of human society in relation to the ocean: (a) coastal communities; (b) human health as affected by the ocean; (c) maritime industries; (d) maritime cultural services (Alan Simcock)

Mr. Alan Simcock gave a presentation on chapter 8: Trends in the state of human society in relation to the ocean. It was noted that this chapter would deal with coastal communities; human health as affected by the ocean; maritime industries; and maritime cultural services. It was noted that, to date, there have been no global studies produced on the wealth/income issue in coastal communities. It was also noted that port employment is changing rapidly due to the so-called "containerization". With regards to the dependence on other maritime resources, coastal tourism was recognized to be an important element for the gross domestic product (GDP) of some countries. The possibility of having this issue addressed either in this chapter or in the chapter on tourism and recreation (chapter 24), was also discussed.

With regards to the aspect of resilience and vulnerability of coastal communities, it was noted that sea level rise, storms and tsunamis would be a key element in this chapter. As regards hazardous substances and plastics, the question as to how they affect human health, with specific reference to the issue of microplastics and how they are working up

the food chain, was raised. On shipping-related aspects, it was noted that several reports produced by the United Nations Conference on Trade and Development (UNCTAD) could be used as a basis, and that data on coast-wide shipping and ferries is generally lacking. Moreover, the importance of measuring gender involvement in shipping, the involvement of women being originally listed at 2%, was also noted. The question as to whether tourism and recreation should be treated as a land-based industry was raised.

In the ensuing discussions on the introduction, it was noted that coastal communities are more likely to suffer from illness which is not caused by marine-based factors. The density and rapid growth of coastal communities and the consequence of this effect was also noted. In this regard, the difficulty of having a large population, and the way the population is divided between rural and coastal communities, was raised. The importance of reflecting the heterogeneity of coastal communities over time, was also stressed.

Breakout group report and plenary discussions

Mr. Alan Simcock gave a presentation on the discussions in the breakout group on chapter 8. The content of the four subchapters in chapter 8 were described as follows:

(i) Coastal communities: how to define coastal communities and how to show their distribution. The importance of more research geared towards finding out where the major concentrations of populations are, was stressed. While it was noted that 80% of the earth's population is in the Northern hemisphere and 20% is in the Southern hemisphere, the importance of taking into consideration the variability of seasonal imbalance, especially during the tourist season, was stressed.

(ii) Human health, welfare and income as affected by the ocean: The difficulty in tracking information on a global scale was noted. The possibility of looking at a selection of coastal communities in different parts of the world and how being a coastal community affects income vis-à-vis the national average, was highlighted.

It was noted that the marine environment contributed significantly to human health through the provision and quality of the air that we breathe, the food we eat, the water we drink and in offering health-enhancing economic and recreational opportunities. At the same time, the marine environment was under pressure from human activities such as transport, industrial processes, agricultural and waste management practices. Evaluation and management of the resultant impacts, on both marine ecosystems themselves, and on human health, had largely been undertaken as separate activities, under the auspices of different disciplines with no obvious interaction. Hence, many of our perceptions of the relationships between the marine environment and human health were limited and still relatively unexplored, leaving critical knowledge gaps for those seeking to develop effective policies for the sustainable use of marine resources and environmental and human health protection.

It was pointed out that it was necessary to develop a better understanding of the functioning of the biosphere and our connections with it if society was to have a practical capability to forecast how changes in the marine and other environments impact on linkages between natural systems, social systems and human health. The complex and causal interconnections between marine environment and human health required a systems approach addressing all levels of organization from genes to ecosystems. Such an integrated systems approach had to be interdisciplinary drawing on the skills and expertise of many scientific disciplines as well as the social and economic sciences. Living systems were strongly interdependent, often in ways that continue to surprise us, and environmental impacts - by both natural events and man-made interventions - are a fact of life. Among these impacts were harmful environmental pollutants and potentially pathogenic organisms to which people are exposed through a variety of complex

transport and exposure pathways, e.g. through air (including marine aerosols), sediment, water and from chemical and microbiological residues in food.

Developing the capacity to predict and minimize impacts of potential risks (and their harmful consequences for biological resources, ecosystems and human health) was described as a daunting task for legislators and regulators. Evaluating environmental risk required dealing with complex issues, such as the effects of the physico-chemical interactions on the speciation and uptake of pollutant chemicals; inherent inter-individual and inter-species differences in vulnerability to toxicity; the emergent toxicity of complex chemical mixtures; toxicity of harmful algal blooms (HABs); and knowledge of reservoirs of microbial pathogens as well as factors governing infectious viability. It was, therefore, not surprising that these were areas of growing public and government interest, which were reflected in various national and international priorities; for example, in the NSF/NIH Oceans and Human Health Programme (United States of America), the European Union (European Marine Board - Linking Oceans and Human Health: A Strategic Research Priority for Europe, 2014), the World Health Organization (Millennium Ecosystem Assessment, 2005), and the International Year of Planet Earth 2006 (Earth and Health theme).

While such predictive capability had to remain a major long-term scientific goal, the scope of a global oceans and human health activity needed to have an initial focus on exploratory research (e.g., “proof-of-concept”) and on building the interdisciplinary community required for the longer-term task. Particular emphasis needed to be placed on the integration of public health within an ecosystem-based approach to management. Unfortunately, there remained a relative dearth of substantial epidemiological and public health data that would permit a comprehensive understanding of possible causal links between human and ecosystem health (see Millennium Ecosystem Assessment, 2005; and the World Health Organization, 1999 and 2010). However, by effectively identifying and interconnecting the interdisciplinary elements, the emergence of new ways of solving problems in what are, at present, areas of research that have traditionally had little connection with one another were being discerned.

It was observed that to address the considerable knowledge gaps that exist, research on interactions between the marine environment and human health had to be directed at elucidating key environmental processes, and providing a predictive capability for both biotic and abiotic environmental influences on human health and well-being. This could only be achieved through the mobilization of interdisciplinary competencies globally and ensuring that the necessary scientific and technical capabilities were available. A consolidated global oceans and human health research capability should be developed and supported to ensure the scale of investment and collaboration necessary to address the major challenges of understanding and dealing with the immense complexity of the relationship between the marine environment and human health.

It was noted that the establishment and implementation of such a global capability would ultimately allow:

- Improvement of the understanding of the potential public health benefits from marine and coastal ecosystems;
- reducing the burden of the human disease linked with marine environmental causes;
- the anticipation of new threats to public health before they become serious (e.g., health risks from the ingestion of sea food contaminated with nano - and microplastics, and chemical obesogens).

The complex and causal interconnections between marine environment and human health required a systems approach addressing all levels of organization from genes to ecosystems. Such an integrated systems approach had to draw on the skills and expertise

of many scientific disciplines as well as the social and economic sciences.

(iii) Resilience and dependency: It was noted that the IPCC special report on oceans and the cryosphere would be used as a basis since it would look into several challenges that are critical to resilience and adaptability. The need to consider the effects on certain large cities, of adverse effects such as hurricanes was noted. The importance of including data on the boundary between pressure and state, and a description of the state of the industry and pressures on the environment was highlighted. Mr. Simcock also noted the need to establish the state of marine industry. He recalled that chapter 3 on “the scientific understanding of the ocean”, would cover the direct connection between marine scientific research and the further development of ships and the use of marine genetic resources. The importance of hydrography in marine shipping and transport and the fact that it could be regarded as an independent industry, was noted. The importance of considering how some elements will have an impact on coastal communities and/or industries, e.g., saltwater intrusion into inland areas was raised, as well as the need to distinguish between the sustainable ocean-based economy which traditionally included shipping and fisheries, and blue growth (eg. renewable energy and use of marine genetic resources (MGRs)).

(iv) Maritime cultural services: The importance of taking into consideration the effects of new elements which had previously not been identified, such as cultural products for display (pearls/corals) and consumption (turtle soup), and cultural services (the need to explore whether there are new ones that the assessment should draw attention to) was noted. A question was raised whether the cultural section should explore the possibility of looking into the way countries are educating their next generations on the importance of the oceans.

(3) Chapter 11: “Changes in liquid and atmospheric inputs to the marine environment from land (including through groundwater), ships and offshore installations: (a) Persistent organic pollutants (including run-off from the use of agricultural pesticides); (b) Metals; (c) Radioactive substances (including naturally occurring radioactive material (NORM)); (d) Personal care products, pharmaceuticals and nutraceuticals; (e) Atmospheric pollutants (NO_x (but not in its role as a nutrient) and SO_x); (f) Hydrocarbons from terrestrial sources, ships and offshore installations (including arrangements for response to spills and discharges); (g) Other substances used on, and discharged from, offshore installations; (h) Distribution of, and trends in, contaminant concentrations (Maria Bebianno);

Ms. Maria Bebianno gave a brief overview of chapter 11 on Changes in liquid and atmospheric inputs to the marine environment from land (including through groundwater), ships and offshore installations. It was noted that this chapter will provide an update on the baselines provided by chapter 20 of the WOA I, and will also bring together updates on baselines relating to offshore installations (detailed in chapter 21) and shipping (detailed in chapter 17) into one chapter, with the aim to provide a more comprehensive overview of changes in liquid and atmospheric inputs.

Breakout group report and plenary discussions

Ms. Bebianno gave a presentation on the discussions on chapter 11. After several exchanges in the breakout group, it was noted that the explanation of hazardous substances in the chapter needed to remain. The group proposed to include the word “distribution” in the title as was the case in chapter 12: Solid Waste, and also identified the relationship with other chapters, namely chapters 9 (Pressures from changes in climate and atmosphere), 20 (Changes in hydrocarbon exploration and extraction), 23

(Developments in marine transportation), and 24 (Developments in tourism and recreation activities). The difficulty in identifying socioeconomic experts for these chapters from both the Group of Experts and from the Pool of Experts was raised.

The importance of approaching United Nations agencies, such as the United Nations Environment Programme, particularly the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, other Regional Seas Conventions, such as the Black Sea, HELCOM and OSPAR, as well as the European Union as regards its Marine Strategy Framework Directive, in order to obtain a global view about the different contaminants in the region, was noted. It was pointed out that during the discussions, it had been possible to identify a number of experts from the Pool of Experts on contaminants from shipping.

The group considered that information regarding the input of hazardous substances from ground water inputs might be a challenge. The group also considered that it would be preferable to have the relationship to the Sustainable Development Goals (SDGs) for all the hazardous substances all in one group, instead of having it in separate chapters. It was noted that OSPAR had produced a table on trends for certain contaminants which could be included in the chapter. The importance of recommending improvements in the quality of data, especially on the impact of contaminants in food safety, and on future trends was highlighted. The importance of reaching out to the scientific community, given the need for more information on each group of contaminants, was stressed. It was suggested that the group also look into chapter 20 on land-based inputs and consider including nitroaromatics as a pollutant. The group also expressed some perplexity with the wording “liquid” in the title of the chapter, noting that it was misleading.

(4) Chapter 15: “Changes in capture fisheries and harvesting of wild marine invertebrates” (Alan Simcock on behalf of Michelle McClure)

Mr. Alan Simcock gave a brief presentation on chapter 15 on behalf of the Lead member, Ms. Michelle McClure, who was unable to attend the Workshop. Mr. Simcock presented the outcome of the breakout group that discussed this chapter at the regional Workshop held in Koror, Palau in August 2018. Mr. Simcock noted that there was no regional analysis in WOA I, and highlighted the importance of key documents, such as the Food and Agriculture Organization’s State of World Fisheries and Aquaculture (SOFIA), as well as the information provided by regional organizations. He also noted that since the release of WOA I, more information was now available on gender in fisheries. Mr. Simcock noted that climate change and other impacts are currently having an impact in the way fishers work.

Breakout group report and plenary discussions

Ms. Lena Bergstrom gave a presentation on the discussions of the breakout session on chapter 15. She noted that the discussions in this group were oriented towards analytical questions to determine what this chapter should be focusing on. The proposed aims were as follows: i) the state of fisheries globally, how it is developing and how it related to available resources; ii) recent changes in policy direction; and iii) report on new evidence on the reciprocal influences of humans and the sea, the latter aspect of which was not covered in Palau. The close relation between this chapter and chapter 6(c) on state of fish stocks, and chapter 8 on the state of maritime industries was noted. The importance of gathering the needed data sources from FAO, in particular any relevant data regarding illegal unreported and unregulated (IUU) fishing, was emphasized, as well as the need to take economic and social consequences into consideration.

Knowledge gaps of relevance for developing the global perspective/monitoring and data collection, and the monitoring/review of implementation of methods were identified. A participant suggested the inclusion of a link to chapters 6(b) and 6(d) on Marine invertebrates and Marine mammals, respectively. The Co-Chair suggested links with tourism and the recreational sector on bill fishing since there was a lack of information on capture of bill fish in recreational fishing, especially in some parts of the world. A question was raised as to whether chapter 15 would address fishery impacts only on the environment, or also on coastal communities.

(5) Chapter 26: “Developments in exploration and use of marine genetic resources” (Sanae Chiba).

Ms. Sanae Chiba gave a brief presentation on chapter 26 on developments in exploration and use of marine genetic resources.

Breakout group report and plenary discussions

Ms. Ellen Kenchington gave a presentation on the discussions held in the breakout group on chapter 26. It was noted that a draft outline of this chapter had been agreed, and that the group, while briefly discussing the issues covered in WOA I, identified a number of areas which were not covered and others where there were policy changes, such as the convening of 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 and the entry into force of the Nagoya Protocol – and their potential implications for marine genetic resources.

The gap between policy development and research in this field was noted, in particular, the fact that policy was unable to keep up with the fast pace of research in this field. This was observed to be most visible in the new developments that were identified in the fields of nutrition and cosmetics, and marine genetic resources in aquaculture. It was also observed that public databases of biodiversity and genetic resources are growing. In this regard, while it was noted that recent research and regional research projects needed to be taken into account, it was also noted that the cost of gene sequencing had been reduced and that it is now possible to demonstrate trends and implications for future research. With regard to economic policy, the importance of taking into account the distinction between monetary and non-monetary benefit-sharing was stressed.

New developments, such as the link between MGRs and known biodiversity in the sea, habitat loss, and the establishment of gene banks similar to seed banks to mitigate climate change were identified as the main remaining knowledge gaps or future trends. The low number of countries ready to commercialise marine genetic resources was identified as a capacity-building gap. It was noted that this chapter had direct links with chapters 6 and 7 on Trends in the biodiversity of main taxa of marine biota, and on Trends in the state of biodiversity in marine habitats, respectively, and communication with the writing teams of these chapters was particularly important. The importance of making a link with SDG 14 and its targets was also suggested.

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.

Mr. Alan Deidun gave a presentation on Marine invasive alien species (IAS) in the Mediterranean. He noted that at present there were over 800 marine IAS in the Mediterranean, which entered the Mediterranean through various activities such as shipping, aquarium trade, aquaculture, canal construction, yachting and pleasure cruises. It was noted that citizen science and early warning systems were among the useful tools to keep track of such species. Geographical coverage, taxonomy, case histories, stakeholder collaboration and matching reports and quality validation were listed as identified knowledge gaps. The gathering of data on the effect of IAS on blockages of power stations water intake pipelines was considered to be an important element for further investigation. The effect of such species on commercial and small-scale fisheries was also discussed.

On the question as to whether climate change was expected to result in more cases of IAS, it was noted that modelling was the solution to see how species will expand in the future. It was also observed that some case studies demonstrate that the presence of IAS had a severe impact on the biodiversity of certain areas, as demonstrated through case studies conducted in Israel and in Scotland, United Kingdom of Great Britain and Northern Ireland. The possibility of using IAS for processed fish products was highlighted. In this regard, it was noted that jelly fish were being used to produce collagen which is in high demand.

Ms. Carmen Mifsud, in her personal capacity, provided an overview (approved by UNEP/MAP-Barcelona Convention) of the regional management structures with respect to the marine and coastal environment in the Mediterranean, namely the UNEP/MAP Barcelona Convention process and the Mediterranean Status Report (QSR 2017). She noted that the Mediterranean hosts almost 10 per cent of the world's marine biodiversity, despite representing just one per cent of the world's seas. She gave an overview of the number of protocols under the umbrella of this Convention and when they came into force. She also mentioned trends in pollution hot spots identified through periodical assessments and the monitoring, compliance and eutrophication monitoring taking place in the region. She also mentioned briefly the studies and assessments carried out, including those on biodiversity and MPAs and elaborated on the EcAp process, noting its similarities with the European Union's Marine Strategy Framework Directive (MSFD). She gave an overview of the road map of the EcAp process as well as an outline of its initial assessment carried out. Goals and commonalities with the Regular Process were also identified. The initial assessment conclusions at the Mediterranean scale were also presented. A brief overview of the *Mediterranean Quality Status Report (QSR2017)* was then also presented.

Ms. Mifsud, in her personal capacity, also delivered a presentation (approved by ACCOBAMS) on the Agreement on the Conservation of Cetaceans in the Black Sea Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) and its Survey Initiative, the First Large-Scale Mediterranean Cetacean Survey for enhancing cetaceans conservation in the Mediterranean and Black Seas. She informed that this regional instrument, established under the aegis of the Convention on the Conservation of Migratory Species and Wild Animals (CMS) and which entered into force in 2001, promotes cooperation between the riparian countries. Its purpose was to reduce threats to cetaceans, in particular by improving our knowledge of these animals.

She noted that whales, dolphins and porpoises (collectively known as cetaceans) were an essential component of the natural heritage of Mediterranean and Black Sea countries and played a key role in maintaining the equilibrium of marine ecosystems.

Out of the 21 species recorded in this area, it was noted that eleven species are considered to be regularly present in the Mediterranean and most of them were classified as “Endangered” according to the International Union for Conservation of Nature (IUCN) Red List of Threatened Species. She also noted that the threats faced by the Mediterranean’s cetaceans included the risk of collisions with maritime traffic, by-catch in fishing gear, habitat degradation, acoustic disturbance and chemical pollution.

It was noted that the ACCOBAMS secretariat developed, coordinated and implemented the multi-million euro “ACCOBAMS Survey Initiative” (ASI), which also included a multispecies approach (sea turtles, seabirds, sharks etc..) together with the parties and other bodies, to improve the conservation status of cetaceans and their habitats in the Mediterranean through appropriate management. The Project Steering Committee, apart from ACCOBAMS, also includes the Regional Activity Centre for Specially Protected Areas (UNEP/MAP/SPA-RAC), the IUCN Centre for Mediterranean Cooperation, and the Marine Protected Area Agency of France.

It is envisaged that this project will contribute to the attainment of some of the targets in SDG 14, the Aichi Biodiversity Targets and Strategic plan, the EcAp process, the European Union habitats and MSFD directives and other regional and international commitments. It was noted that a major element of this initiative is the first ever synoptic survey of the entire Mediterranean which took place between June and July 2018, and which combined aerial and ship-based methods and passive acoustic monitoring. During this survey, five research vessels and eight aircraft were deployed with almost one hundred scientists from the whole region. Training workshops were also held to provide instructions to the aerial and boat-based observers. Capacity-building was noted to be a key component of the ASI.

It was noted that the ASI is supported by the MAVA Foundation pour la Nature, the Prince Albert II of Monaco Foundation, the International Fund for Animal Welfare, the Ministry of Ecological Transition of Spain, the French Agency for Biodiversity, the Ministry for the Protection of the Environment, the Territory and the Sea of Italy and the Government of the Principality of Monaco, as well as by all riparian countries through the mobilization of their national scientists.

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 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

Mr. Marco Boccia provided information on capacity-building under the Regular Process, noting that it is one of the core objectives of the Regular Process. He noted that participants attending the first round of regional workshops held in 2017 identified capacity-building as an important element for the Process. It was noted that a fully-searchable capacity-building inventory has been compiled and continues to be updated on the website of the Division. It was also noted that a two-day multi-stakeholder dialogue (with case studies of good practices) and capacity-building partnership event (“the Event”) would be held in New York in early 2019 to build awareness on the Regular Process and the science-policy interface at all levels, while allowing for in-depth multi-stakeholder dialogues on current opportunities, gaps and needs in capacity, as well as building capacity to participate in, and make use of, assessments.

The importance of increasing the number of National Focal Points was emphasized, it being noted that they were important for, among other things, assisting with the nomination of experts to the Pool of Experts, as well as awareness-raising and outreach concerning the Regular Process. Moreover, the importance of filling the geographic and capacity gaps with respect to the composition of the Pool of Experts was also highlighted. In this regard, it was noted that out of more than 570 members of the Pool of Experts there are less from developing countries, and less than half are women. It was also noted that some gaps in expertise are in part due to a lack of available courses of study/academic courses in certain topics, particularly those related to the socioeconomic aspects of ocean issues.

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

Mr. Alan Simcock noted that the Workshop had a very thorough look at the main issues of the chapters under consideration, examined issues affecting the Mediterranean and the Black Sea, and included a presentation on IAS that could provide input to information on regional processes (the Mediterranean is particularly unusual in this respect). He noted the multi-stakeholder dialogue and capacity-building partnership event next January and the inventory of capacity-building.

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.

(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.

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.

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;
- (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

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.

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 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

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.

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

Workshop in Support of the Second Cycle of the Regular Process

Valletta, Malta, 27 – 28 August 2018

1. Welcome and opening remarks by representatives of the Maltese Government and of the United Nations Secretariat Division of Ocean Affairs and 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 Atlantic held in Lisbon in September 2017:
 - (a) Introduction by one of the Co-Chairs of that 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 (discussion led by Chul Park);
 - (b) Chapter 8: Trends in the state of human society in relation to the ocean: (a) Coastal communities; (b) Human health as affected by the ocean; (c) Maritime industries; (d) Maritime cultural services (discussion led by Alan Simcock and Anastasia Strati);

(c) Chapter 11: Changes in liquid and atmospheric inputs to the marine environment from land (including through groundwater), ships and offshore installations: (a) Persistent organic pollutants (including run-off from the use of agricultural pesticides); (b) Metals; (c) Radioactive substances (including naturally occurring radioactive material (NORM)); (d) Personal care products, pharmaceuticals and nutraceuticals; (e) Atmospheric pollutants (NO_x (but not in its role as a nutrient) and SO_x); (f) Hydrocarbons from terrestrial sources, ships and offshore installations (including arrangements for response to spills and discharges); (g) Other substances used on, and discharged from, offshore installations; (h) Distribution of, and trends in, contaminant concentrations (discussion led by Maria Bebianno and Alan Simcock);

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

(e) Chapter 26: Developments in exploration and use of marine genetic resources (discussion led by Sanae Chiba).

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 on 23-24 January 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: List of Participants

| # | TITLE | FIRST NAME | LAST NAME | COUNTRY / ORGANIZATION |
|----------|--------------|-------------------|------------------|---|
| 1 | Mr. | Alan | Simcock | (Co-Chair) United Kingdom / Joint Coordinator of the Group of Experts of the Regular Process |
| 2 | Ms. | Carmen | Mifsud | (Co-Chair) Malta / Member of Pool of Experts |
| 3 | Mr. | Filipe | Alves | Portugal / Marine and Environmental Sciences Centre (Video Conf) |
| 4 | Mr. | Christos | Arvanitidis | Greece / Hellenic Centre for Marine Research, Institute of Marine Biology |
| 5 | Ms. | Maria | Bebiano | Portugal / University of Algarve |
| 6 | Ms. | Lena | Bergstrom | Baltic Marine Environment Protection Commission (HELCOM) |
| 7 | Ms. | Burcu | Bilgin Topcu | Turkey / Ministry of Agriculture and Forestry, General Directorate of Fisheries and Aquaculture |
| 8 | Mr. | Nene | Bi Tra Boniface | Ivory Coast / Ministry of Petroleum, Energy, and the Development of Renewable Energies |
| 9 | Mr. | Nikolaj | Bock | Denmark / European Environment Agency |
| 10 | Ms. | Simone | Borg | Malta / University of Malta |
| 11 | Mr. | Charles | Calleja | Malta / Ministry for Foreign Affairs and Trade Promotion |
| 12 | Ms. | Sanae | Chiba | Japan / JAMSTEC |
| 13 | Ms. | Marina | Cunha | Portugal / Universidade de Aveiro (Video Conf) |
| 14 | Ms. | Fernanda | De Oliveira Lana | Brazil / Federal Fluminense University |
| 15 | Mr. | Alan | Deidun | Malta / International Ocean Institute (IOI) |
| 16 | Ms. | Hebe Monica | Dionisi | Argentina / Center for the Study of Marine Systems (CESIMAR-CONICET) |
| 17 | Ms. | Joanne | Foden | UK / Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) |
| 18 | Mr. | Carlos | Garcia Soto | Spain / Spanish Institute of oceanography (IEO) |
| 19 | Ms. | Francesca | Gatt | Malta / Ministry for Foreign Affairs and Trade Promotion |
| 20 | Ms. | Ida-Maja | Hasselov | Sweden / Chalmers University of Technology |
| 21 | Mr. | Martin | Hasselov | Sweden / University of Gothenburg |
| 22 | Mr. | Luciano | Hermanns | Brazil / Brazilian Oceanography Association (AOCEANO) |
| 23 | Mr. | Manuel | Hidalgo | Spain / Spanish Institute of Oceanography, Balearic Oceanographic Center |
| 24 | Ms. | Lis Lindal | Jørgensen | Norway / Institute of Marine Research |

| | | | | |
|----|-----|------------------|-------------|---|
| 25 | Ms. | Ellen | Kenchigton | Canada / Department of Fisheries and Oceans, Bedford Institute of Oceanography |
| 26 | Mr. | David | Lusseau | France / University of Aberdeen |
| 27 | Ms. | Iryna | Makarenko | Ukraine / Permanent Secretariat of the Black Sea Commission |
| 28 | Ms. | Michelle | Micallef | Malta / Ministry for Foreign Affairs and Trade Promotion |
| 29 | Mr. | Mike | Moore | United Kingdom / European Centre for Environment & Human Health, University of Exeter |
| 30 | Mr. | Thomas Anthony | Muscat | Malta / Ministry for Foreign Affairs and Trade Promotion |
| 31 | Ms. | Elizabeth | Nyman | United States of America/University of Oklahoma |
| 32 | Mr. | Jae Ryoung | Oh | Republic of Korea / Korea Institute of Ocean Science & Technology (KIOST) |
| 33 | Mr. | Henn | Ojaveer | Estonia / University of Tartu, Estonian Marine Institute |
| 34 | Ms. | Nessa | O'Connor | Ireland / University of Dublin, Trinity College |
| 35 | Mr. | Chul | Park | Republic of Korea / Chungnam National University |
| 36 | Ms. | Bing | Qiao | China / China Waterborne Transport Research Institute |
| 37 | Ms. | Regina | Salvador | Portugal / Universidade de Aveiro (Video Conf) |
| 38 | Mr. | Hoinsoude | Segniagbeto | Togo / University of Lomé |
| 39 | Mr. | Zacharie | Sohou | Benin / Institut de Recherches Halieutiques et Oceanologiques du Benin (IRHOB) |
| 40 | Mr. | Lars | Sonesten | Sweden / Swedish University of Agricultural Sciences, Dept. of Aquatic Sciences |
| 41 | Ms. | Monika | Stankiewicz | Baltic Marine Environment Protection Commission (HELCOM) |
| 42 | Ms. | Antonella | Vassallo | Malta / International Ocean Institute (IOI) |
| 43 | Ms. | Helena | Vieira | Portugal / University of Lisbon (Video Conf) |
| 44 | Mr. | Ruo-Qian (Roger) | Wang | China / University of Dundee |
| 45 | Mr. | Boris | Wawrik | United States of America / University of Oklahoma (Video Conf) |
| 46 | Mr. | Marco | Boccia | (Secretariat) Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations (DOALOS) |