

## Annex II

### Guidance for contributors

30 November 2012

#### I. Introduction

1. The present annex sets out working arrangements and guidance for those contributing to the first global integrated marine assessment under the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects — the World Ocean Assessment I.
2. World Ocean Assessment I will be the product of cooperation among a large number of experts in many different fields in various roles. The major challenge is to produce the first global integrated marine assessment, bringing together environmental, economic and social aspects. Under the general supervision of the Group of Experts of the Regular Process, teams of experts will prepare draft chapters (and, where necessary, supporting working papers).
3. The guidance is intended for:
  - (a) Members of the Group of Experts of the Regular Process, established pursuant to General Assembly resolution 65/37 A;
  - (b) Members of the pool of experts appointed to assist the Group of Experts of the Regular Process, pursuant to General Assembly resolution 66/231;
  - (c) Peer reviewers who are invited under arrangements approved by the Bureau of the Ad Hoc Working Group of the Whole, to review the draft World Ocean Assessment I.
4. Members of these groups are referred to collectively as “contributors”.

#### II. Status of contributors

5. When contributing to the preparation of World Ocean Assessment I, contributors are expected to act in their personal capacity as independent experts, not as representatives of any Government or any other authority or organization. They should neither seek nor accept instructions from outside the Regular Process regarding their work on the preparation of the Assessment, although they are free to consult widely with other experts and with Government officials, in order to ensure that their contributions are credible, legitimate and relevant. Contributors are also expected to disclose to the secretariat of the Regular Process any conflicts of interest, or the possibility of any perception of a conflict of interest, both before they accept their appointment and after appointment, when any potential conflict may arise and to confirm on the World Ocean Assessment I website their commitment to do so.
6. The input of contributors will be fundamental to the success of World Ocean Assessment I and will be fully acknowledged in the text. Accordingly, the names of the members of the writing team for each chapter will be shown prominently at the head of each chapter. Those involved in writing working papers will be acknowledged in the same way. Each chapter and working paper will be capable of

being cited separately. Appropriate acknowledgements will likewise be made for the work of commentators and peer reviewers.

### **III. Structure of the Regular Process**

7. The Regular Process is an intergovernmental process, accountable to the General Assembly and guided by international law, including the United Nations Convention on the Law of the Sea and other applicable international instruments. It is overseen and guided by an Ad Hoc Working Group of the Whole of the General Assembly, comprised of representatives of all States Members of the United Nations. The framework of the Regular Process consists of (a) the overall objective, (b) a description of its scope, (c) a set of principles to guide its establishment and operation, and (d) best practices identified by the Group of Experts. These can be found on the website of the Regular Process. Capacity-building is essential for the implementation, and is an integral part, of the Regular Process at all stages of its implementation (see General Assembly resolution 64/71, para. 177, in which the Assembly endorses the recommendations contained in document A/64/347, annex; see also Assembly resolution 65/37 A, paras. 200-203). Without detracting from the other principles which the Assembly has endorsed, the allocation of tasks to members of the pool of experts must reflect the principle of adherence to equitable geographical representation in all activities of the Regular Process and have due regard to a desirable balance between the genders.

8. A Group of Experts has been established with the general task of carrying out assessments under the Regular Process. It consists of up to 25 experts — 5 appointed by each of the five regional groups of the General Assembly (Africa, Asia and the Pacific, Eastern Europe, Latin America and the Caribbean, and Western Europe and Other). A pool of experts is appointed by States, through the regional groups in the Assembly, to provide support for the work of the Group of Experts. The Division of Ocean Affairs and the Law of the Sea of the Office of Legal Affairs of the Secretariat has been designated as the secretariat of the Regular Process. The United Nations Environment Programme (UNEP), the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Food and Agriculture Organization of the United Nations (FAO), the International Maritime Organization (IMO) and other competent specialized agencies of the United Nations, as appropriate, have been asked to provide scientific and technical support (see General Assembly resolution 65/37 A, para. 200 and 209-211, and Assembly resolution 66/231, para. 202).

### **IV. Tasks to be undertaken and who will carry them out**

#### **A. General outline of work to produce World Ocean Assessment I**

9. The framework for the tasks to deliver World Ocean Assessment I is established by the terms of reference and methods of work for the Group of Experts adopted by the Ad Hoc Working Group of the Whole on 27 April 2012 and subsequently endorsed by the General Assembly. Within this framework, the present guidance provides more detail on how the tasks will be achieved.

10. As the implementation plan and timetable for World Ocean Assessment I shows,<sup>a</sup> there are five main tasks foreseen for contributors to its production:

(a) Producing working papers to serve as a basis for the chapters identified in the outline for World Ocean Assessment I (A/67/87, annex II) (depending on the chapter, in some cases, existing assessments may well provide sufficient material to cover the issues to be addressed in the chapter, thus saving the work of preparing a specific working paper; in other cases, several working papers will be needed, covering either different aspects, or different regions, or both);

(b) Writing draft chapters of World Ocean Assessment I;

(c) Producing a draft of World Ocean Assessment I;

(d) Carrying out a review by independent peer reviewers of the draft of World Ocean Assessment I and receiving comments from States on it;<sup>b</sup>

(e) Finalizing the text of World Ocean Assessment I.

The flow chart in the appendix to the present annex shows in more detail how these tasks are divided among the various parts of the Regular Process.

11. When the Group of Experts has finalized the text of World Ocean Assessment I, it will be submitted, with the approval of the Bureau of the Ad Hoc Working Group of the Whole, for consideration to the Ad Hoc Working Group of the Whole and for final approval by the General Assembly. A note showing the comments received from States and the way in which they have been addressed will also be submitted to the Bureau.

## **B. Tasks of the Group of Experts**

12. The Group of Experts will be responsible collectively for:

(a) Selecting, subject to the approval of the Ad Hoc Working Group of the Whole or its Bureau:

(i) The writing teams for the working papers that are needed to provide support for the various chapters of World Ocean Assessment I;

(ii) The writing teams for the various chapters of World Ocean Assessment I;

(iii) Panels of commentators to comment on initial draft working papers and initial draft chapters.

The Group of Experts will ensure that the members of the writing teams and the panels of commentators have adequate qualifications and represent an equitable geographic and gender distribution;

(b) Agreeing on the structures proposed by the lead members for chapters, including the working papers to be produced and the existing assessments identified as capable of being used instead of working papers;

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<sup>a</sup> Available on the website of the Division of Ocean Affairs ([http://www.un.org/Depts/los/global\\_reporting/A6787AnnexIV.pdf](http://www.un.org/Depts/los/global_reporting/A6787AnnexIV.pdf)) and on the website of World Ocean Assessment I.

<sup>b</sup> In future assessments, with fewer time constraints, there may be an advantage in separating this task into two tasks, and carrying out the independent peer review and the review by States sequentially.

(c) Reviewing the working papers and draft chapters produced by the writing teams, together with any existing assessments identified as relevant. In the light of their consideration of the working papers and the existing assessments identified as relevant, the Group of Experts may issue guidance on the writing of the draft chapters in order to ensure, for example, that important interrelationships are covered in one chapter rather than another and that different draft chapters are coherent one with another;

(d) Agreeing on the text of the draft of World Ocean Assessment I;

(e) Proposing arrangements for peer review to the Bureau;

(f) In the light of comments from States and the peer reviewers, finalizing the text of World Ocean Assessment I.

### **C. Tasks for lead members**

13. In order to ensure that there is a person clearly identifiable as responsible for ensuring that the preparation of each chapter follows the present guidance and otherwise achieves the necessary high standards, the Group of Experts will designate one of its members as the lead member for each chapter in the outline for World Ocean Assessment I (except those summarizing parts of the Assessment, where parallel arrangements are set forth in para. 17 below). Other members may also be designated as co-lead members where the complexity of the chapter so justifies. Members may also be designated to take the lead on groups of chapters, in order to ensure that they are properly coordinated. The designation of lead members will be subject to the approval of the Ad Hoc Working Group of the Whole, or of its Bureau. The lead member will have overall responsibility, with any co-lead members, under the supervision of the Group of Experts as a whole, for the progress of the chapter. Where the lead member is not an expert in the field covered by the chapter, a separate convenor of the writing team will be designated. This may also be done where the Group of Experts considers that a member of the pool of experts is particularly well qualified to act as convenor of the writing team. The lead member, in particular, will:

(a) Present to the Group of Experts, for approval, a proposed writing team for each chapter (including any working paper in support of the chapter), together with a panel of commentators, drawn from the pool of experts, for those chapters where this seems appropriate. The membership of the proposed team will be worked out by the proposed convenor of the writing team and the lead member. Where appropriate, more than one panel of commentators may be established for a single chapter to review different aspects. The designations of the writing teams and panels of commentators will be subject to the further approval of the Ad Hoc Working Group of the Whole, or of its Bureau;

(b) Present to the Group of Experts a structure for the chapter developed by the convenor of the writing team in collaboration with the lead member, taking into account any conclusions of the Group of Experts on the overall structure of World Ocean Assessment I, together with the subjects for the working papers to be prepared as a basis for writing the chapter;

(c) Review all material (working papers and draft chapter) produced by the writing team for the chapter, the comments from any panel of commentators and the

way in which those comments are proposed to be reflected by the writing team, in order to ensure that the data and information used are the best available and that interpretations and conclusions are sound and well supported. (Where the lead member is also the convenor of the writing team, this task will be carried out as part of the work of writing);

(d) Present versions of the working papers and the draft chapter developed by the writing team to the Group of Experts for agreement for them to go forward to the next stage;

(e) Present to the Group of Experts, for approval, with the help of the convenor of the writing team (if a separate convenor of the writing team is appointed), for approval by the Bureau, a list of experts to serve as peer reviewers of the draft World Ocean Assessment I with regard to the chapter for which they are lead member;

(f) Ensure that the writing team has considered carefully comments from States and peer reviewers on the relevant chapter of the draft World Ocean Assessment I and has made appropriate adjustments to the text, and that explanations are recorded of how each comment has been reflected in the final version;

(g) Arrange that the working papers and draft chapter, in the latest approved versions, are loaded at the various stages onto the public part of the World Ocean Assessment I website.

14. The purpose of the collaboration of the lead member and the convenor of the writing team, where these are separate individuals, is to ensure the integration, consistency and quality of the various chapters of World Ocean Assessment I and to make sure that the present guidance is followed. It is not to “second-guess” the writing team.

15. In order to help deliver the collective responsibilities of the Group of Experts in cases when the lead member is also designated as convenor of the writing team for a chapter, the Group of Experts will designate another of its members to review the material for that chapter produced and to act jointly with the lead member in the tasks at subparagraphs 13 (e), (f) and (g) above.

#### **D. Tasks for writing teams and their convenors**

16. A separate convenor of the writing team will be designated for each chapter where no member of the Group of Experts has relevant expertise, or where a member of the pool of experts appears to be particularly well qualified for this work. Initially, proposed convenors of the writing team will be identified by the Group of Experts, applying the principles for the Regular Process approved by the General Assembly. When suitable members for the team have been identified, the Group of Experts will submit the names for approval by the Ad Hoc Working Group of the Whole, or by its Bureau.

17. The convenor of the writing team for a chapter will have general responsibility for drafting the chapter and overseeing preparation of the supporting working papers. In particular, the convenor of the writing team will:

(a) Develop the structure of the chapter, including the identification of the necessary supporting working papers, in collaboration with the lead member (if separate) for the approval of the Group of Experts;

(b) Identify other candidate members of the writing team and commentators for the chapter in collaboration with the lead member (if separate);

(c) Agree on the division of work in preparing and revising the working papers and the draft chapter with other members of the writing teams for the chapter and subsidiary working papers, and ensure that the team as a whole delivers them in accordance with the timetable;

(d) Identify existing assessments relevant to the chapter which can be used as a basis for World Ocean Assessment I;

(e) Ensure that working papers and the draft chapter reflect the guidance in the present document and other conclusions of the Group of Experts, that they are based on the best available data and information, and that the conclusions in them are sound and well supported;

(f) Where a panel of commentators is designated, ensure that comments from the commentators are considered by the writing team, that appropriate adjustments are made to the drafts in the light of those comments and that explanations are recorded of the response made to each comment in the manner described in paragraph 61 below;

(g) Develop, in collaboration with the lead member, versions of the working papers and the draft chapter for submission to the Group of Experts for agreement for them to go forward to the next stage;

(h) Help the lead member to propose peer reviewers and to consider the comments of States and peer reviewers on the relevant chapter of the draft World Ocean Assessment I, enlisting the help of other members of the writing team, where appropriate.

18. Where the agreed structure for a chapter indicates that there should be several working papers, one or more members of the Group of Experts and the pool of experts may be designated to prepare each working paper. Where more than one person is so designated, one of them will be designated to coordinate the preparation of the working paper, in liaison with the lead member and convenor of the writing team, as necessary. All such designations will be subject to the approval of the Bureau in the same way as the designations of writing teams for chapters.

19. All members of the writing team for each chapter and all those persons designated to prepare working papers are expected to take an interest in the overall balance of the working papers and draft chapter, and to ensure that, as far as they are able, the working papers and chapter are based on the best available data and information, and that conclusions in them are sound and well supported. If any member of a writing team for a chapter does not agree with the version of that chapter finally approved by the Group of Experts as part of the finalized World Ocean Assessment I, he or she is entitled to have a footnote inserted recording briefly his or her disagreement and the reasons for it.

20. For the chapters summarizing the various parts of World Ocean Assessment I, the coordinators of the Group of Experts will arrange, in collaboration with the lead members and convenor of the writing teams for those chapters, for the production of the initial drafts, on the basis of the draft chapters as reviewed by the Group of Experts, by one or more of the lead members or convenor of the writing teams of the relevant chapters and/or the coordinators. Where appropriate, the coordinators will also take such initiatives as seem to be needed in order to enable other tasks to be completed effectively and in accordance with the timetable.

## **E. Reviewing tasks**

21. Where a panel of commentators is designated for any chapter, working papers and the draft chapter will be reviewed by that panel and appropriate adjustments will be made by the writing team in the light of the panel's comments before being posted on the World Ocean Assessment I website.

22. Commentators are expected to help the writing team by:

- (a) Where appropriate, contributing additional information and/or data;
- (b) Reviewing the draft working papers and draft chapters from the point of view of overall balance;
- (c) Considering both whether the best available data and information have been used, and whether the conclusions are sound and well supported.

Commentators are expected to record their comments in the manner described in paragraph 61 below and to submit them in good time in accordance with the timetable. Writing teams are expected to indicate in a document for publication on the World Ocean Assessment I website how they have responded to each comment from the commentators.

23. Peer reviewers, acting in a totally independent capacity as experts, are likewise expected to review the relevant chapter of the draft World Ocean Assessment I from the point of view of overall balance and to consider both whether the best available data and information have been used, and whether the conclusions are sound and well supported. They also are expected to record their comments in the manner described in paragraph 61 below and to submit them in good time in accordance with the timetable. The Group of Experts will prepare documents showing the responses to the comments of States and, separately, peer reviewers. The former will be submitted to the Bureau and both will be published on the World Ocean Assessment I website.

## **V. Context of the Regular Process**

24. Contributors will have expertise that applies to a particular aspect of the Regular Process, but they should, nevertheless, familiarize themselves with the broad context of the Regular Process. As a minimum, they should be aware of the contents of:

(a) The report of the assessment of assessments;<sup>c</sup>

(b) Other background material prepared by the Group of Experts to accompany invitations to serve as convenor of the writing teams, members of writing teams, commentators or peer reviewers.

25. In addition, the review by the InterAcademy Council<sup>d</sup> of the processes and procedures of the Intergovernmental Panel on Climate Change contains useful background to issues that arise in preparing assessments on a global scale.

## VI. Identifying existing assessments

26. The assessment of assessments report showed the scale of the existing activity in assessing the state of the marine environment. The assessments considered in that exercise are identified in the global and regional assessments of the marine environment database (GRAMED) maintained by the World Conservation Monitoring Centre of UNEP.<sup>e</sup> It is expected that contributors will take the relevant parts of all these assessments into account in preparing material for World Ocean Assessment I. Where one of the assessments has been overtaken by a more recent assessment, contributors are expected to arrange, where resources permit, for the GRAMED entry to be updated accordingly.

27. There will also be other assessments that have not yet been entered into GRAMED, but that will be relevant to issues identified in the outline for World Ocean Assessment I. Contributors are invited to identify such assessments for inclusion in GRAMED. Such notification is particularly important where the assessment is sufficiently comprehensive to be usable directly as a basis for a draft chapter, thus avoiding the writing of a special working paper on the issue. This applies also where the assessment is carried out at the regional level, since such an assessment may serve in place of a working paper in relation to that region.

28. The aim is to ensure, as far as feasible, that a single portal (GRAMED) will enable those interested to identify the information on which World Ocean Assessment I is based and help them to access it.

## VII. Information

29. The aim is to make all information on which World Ocean Assessment I is based accessible so that its conclusions can be checked. Contributors should therefore, in general, base their working papers and draft chapters on publicly available information. Nevertheless, where significant information is not yet publicly available, contributors are free to use it, but should take such steps as are

<sup>c</sup> UNEP and the Intergovernmental Oceanographic Commission of UNESCO, *An assessment of assessments: findings of the Group of Experts pursuant to United Nations General Assembly resolution 60/30: start-up phase of the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects*, Malta. Available at: <http://www.unga-regular-process.org>.

<sup>d</sup> InterAcademy Council, *Climate change assessments: review of the processes and procedures of the IPCC (the Shapiro report)*. Available online at: <http://reviewipcc.interacademycouncil.net/report/Climate%20Change%20Assessments,%20Review%20of%20the%20Processes%20&%20Procedures%20of%20the%20IPCC.pdf>.

<sup>e</sup> Available at: <http://www.unep-wcmc.org/gramed>.

possible to enable the information to be accessed. If practicable, such steps should include making it available to those who peer-review a chapter and saving a copy (or the means of accessing it on the Internet) in the restricted part of the World Ocean Assessment I website, to be made available on request when World Ocean Assessment I is presented. Where this is not practicable, the problem should be drawn to the attention of the Group of Experts so that they can consider how the matter should be addressed.

30. Where a draft chapter draws on a working paper, it will be sufficient to refer to the working paper without giving further references.

31. The objectives are to ensure that all information used receives critical evaluation, that its use is open and transparent and that all references used in the reports are, as far as possible, easily accessible. Citation of peer-reviewed information is therefore to be preferred where it is available (noting that, in addition to primary journal articles, many documents in the secondary scientific and technical literature have undergone peer review prior to their publication or release). Although not perfect, the peer-review process ensures that the study being considered has had the benefit of independent scrutiny and quality control before it is used in the assessment. In some instances, the use of non-peer-reviewed sources is acceptable. However, all contributors are responsible for critically assessing such sources and reviewing their quality and validity before incorporating them into a working paper or draft chapter. Where a publication is referred to, but is neither peer-reviewed nor an official statistical publication, it should be identified as such, so that the Group of Experts can consider whether its use would adversely affect the quality of World Ocean Assessment I.

32. Where information is lacking in any ocean area in relation to any issue, the gap must be identified and its impact on the conclusions must be clearly expressed. The degree of urgency for addressing this gap in future assessments should be stated. Extrapolation based on broad or complex modelling is discouraged and must be justified by good reasons where it is considered necessary.

## **VIII. World and regions**

33. The prime audiences for World Ocean Assessment I are the policymakers at the national, regional and global levels. The focus of both working papers and draft chapters must therefore be to provide an assessment that will be useful to such policymakers. The aim is not to second-guess regional assessments, but to put regional problems and challenges into context, showing which are common to many or most regions and which are of particular importance to a few regions or just one region. World Ocean Assessment I is to be prepared on the basis of existing regional and subregional assessments. It will therefore be important for the convenor of the writing teams to strike the right balance between aggregating material to the global level and providing detail about the regional and national levels. The final assessment must give a balanced view of the world's oceans as a whole, not focus on regions with a lot of information.

34. Working papers may concentrate on one area of the world or cover all the different parts of the world's oceans and seas. Working papers may therefore need to contain much information. The draft chapters, however, must be clear and concise. Working papers will need to be prepared to assist the drafters of the chapters to

achieve these aims. Maps, tables and charts will often allow a lot of information about different regions or aspects to be presented concisely. When appropriate, the text should highlight the most significant points, rather than discussing every region or aspect in turn.

## **IX. Risk**

35. “Risk” can be formally defined as the product of the likelihood of an event and the seriousness of the event if it were to occur. World Ocean Assessment I will have to include an evaluation of risks and will have to be written in the context of those risks. In all assessments, when a risk is being described, both the likelihood and the potential severity of each consequence should be made as clear as possible. Where “potential severity” is actually a range of possible outcomes, “worst case” scenarios should be clearly differentiated from other potential outcomes of similar or possibly greater likelihood.

36. There are several ways that risk can enter into decision-making. One is the risk that some pressure, either a natural event or a human activity, will have some undesirable consequence if it is not managed or mitigated effectively. Another is the risk that such management or mitigation could have its own undesirable impacts on some other ecosystem feature or benefit. Assessments should always consider both of these aspects of risk.

37. The details of how this will be done should be case-specific, as there are many tools for quantifying and communicating risk. The selection of the appropriate method of reporting risk depends on the quantity and quality of data and information that is available.

38. Given that the aim of World Ocean Assessment I is to integrate information on diverse pressures and ecosystem properties globally and supra-regionally, it is expected to have to accommodate a wide range in data quality and quantity, and in knowledge of relationships and impacts. Hence, there will be no single best approach to risk quantification and communication.

## **X. Integration**

### **A. What is meant by “integrated assessment”?**

39. Throughout the development of the framework for the Regular Process, it has always been stressed that the assessments under the Regular Process would be “integrated”. No formal definition of “integrated assessment” was, however, developed.

40. To clarify this fundamental aspect, the assessment of assessments reviewed and evaluated how “integrated assessment” had been interpreted in various cases. A summary of the conclusions of this evaluation is contained in chapter 2 of the assessment of assessments.<sup>f</sup> The term “integrated assessment” has been used in three quite different contexts:

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<sup>f</sup> UNEP and the Intergovernmental Oceanographic Commission of UNESCO, *An assessment of assessments*, pp. 40-48 (see footnote c above).

(a) **Across ecosystem components and processes** (“physics to fish” assessments). Here, ocean processes and ecological relationships are used to assess not only the status and trends of individual ecosystem components, but also how changes in some components or processes have led to changes in others. These assessments can take into account many factors, but often do not include human activities that may be drivers of change, and rarely social and economic consequences of the ecological changes, except in concluding narrative discussions;

(b) **Across sectors** (“cumulative effects” or “integrated management” assessments). Here, the assessments try to quantify how impacts of multiple human uses and activities (sometimes combined with natural ecological drivers) have led to changes in status and trends of ecosystem components and processes (“ecosystem features”). These assessments may look at a single ecosystem feature as it is affected by (or is needed to support) several sectors of human activities, or at multiple ecosystem features. They may or may not be indicator-based, and if they assess the cumulative or aggregate impacts of multiple industry sectors on several ecosystem properties, they may or may not assess how the ecosystem features themselves interact. DPSIR frameworks<sup>g</sup> are often, but not always, used for such assessments;

(c) **Across environmental, economic and social aspects** (“sustainable development” assessments). Here, the assessments try to quantify how the status or trends in ecological properties are linked to social and economic benefits derived from the ecosystem, and/or how pursuit of various social or economic objectives (explicit or implicit) are affecting important ecosystem components. This type of assessment is making increasing use of quantification (or at least indices) of ecosystem goods and services, as well as market and non-market valuation methods of the social and economic benefits.

41. The assessment of assessments was clear that the Regular Process should aim for “fully integrated assessments” — a phrase that includes all three contexts of integration. The General Assembly, in paragraph 177 of its resolution 64/71, endorsed the recommendation of the Ad Hoc Working Group of the Whole that integration should be a central feature of the Regular Process (see A/64/347, annex). Discussion in the Working Group stressed that the value added by the Regular Process would not lie in comprehensive reporting on the status and trends of individual ecosystem features or human uses of the oceans, but in how well the status and trends reported in other assessments were integrated in World Ocean Assessment I from the point of view of sustainable use and development. The central role for social, economic and environmental integration was also reaffirmed at the United Nations Conference on Sustainable Development (Rio+20) in 2012 (see General Assembly resolution 66/288, annex, para. 158).

## **B. How will we achieve this integration?**

42. A fully integrated assessment is a massive undertaking. It is not possible to achieve it in a largely quantitative, analytical way in World Ocean Assessment I. Neither is it possible to build all the chapters and subsections as separate pieces and bring them all together in the final part of the entire document. The focus of World

<sup>g</sup> Frameworks based upon an analysis of drivers, pressures, states, impacts and responses.

Ocean Assessment I will be on establishing a baseline. Integration will have to be built incrementally. Part IV (Assessment of the cross-cutting issues: food security and food safety) may be able to achieve this sooner because of the greater amount of information (much of it quantitative) available on the environmental, social and economic aspects of fisheries and aquaculture. Separate specific strategies will, however, be needed for both part V (Assessment of other human activities and the marine environment) and part VI (Assessment of marine biological diversity and habitats).

### C. Strategy for integration in part V (Assessment of other human activities and the marine environment)

43. The approved outline for World Ocean Assessment I (see A/67/87, annex II) provides for each chapter of part V a set of points that are to be addressed. These points are not, however, intended to give a structure for the chapter, since they vary from chapter to chapter. Each chapter also includes a standard point, “Significant environmental, economic and/or social aspects”, without guidance on how it should be addressed, but making it clear that policy analysis is not intended.

44. The following guidance on a common structure for chapters in part V should therefore be followed. Each chapter should generally consist of the following seven subsections:

(a) **Nature and magnitude of the human activity.** This subsection should aim to explain how the activity interacts with the marine environment and human society, and should thus capture many of the points given for the chapter in the outline. It should also consider what are the drivers of the activity (that is, the factors that determine its nature and magnitude). This subsection should also contain the best available information on the state and trends in the magnitude of the activity/activities. “Magnitude” is intended to cover not only the physical scale of the activity (by whatever measure is appropriate), but also how large a sea area is affected by the activity, the type and features of the marine environment affected and the timescale (ongoing, seasonal, sporadic) over which the activity takes place. For some chapters, the generic activity which is the theme of the chapter is composed of a variety of different species of the activity (for example, “shipping” covers intercontinental cargo shipping, shorter-run cargo shipping, passenger cruising and passenger and cargo ferries). The nature and magnitude of each of these specific activities should be described separately. Where there are different stages in the activity with different effects (for example, exploration and exploitation in offshore hydrocarbon industries), they too should be treated separately as far as possible. Whenever available, management reference points<sup>h</sup> should be included in reporting state and trends. Comparisons between regions should be provided where they are necessary for interpreting overall trends, or where they show major differences in nature or magnitude between regions;

(b) **Socioeconomic aspects of the human activities.** This subsection should describe the nature, scale and trends of turnover, economic benefits and disbenefits

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<sup>h</sup> That is, points, levels or directions established as a basis for evaluating management outcomes. They can refer to a situation to be aimed at, a situation to be avoided, or what has been achieved in the past.

and other socioeconomic results of the activity. Where possible, economic benefits should be quantified. Also where possible, the numbers of people, or the proportion of the population, engaged in the activity should be provided. Where the description of the activity under subsection (a) is subdivided, a similar subdivision should be used in this subsection. Comparisons between regions should be provided where they are necessary for interpreting overall trends, or where they show major differences in nature or scale between regions;

(c) **Pathways from the human activity to its environmental impacts.** This subsection should describe the nature of the pressures generated by the activity and the ecosystem components or processes likely to be impacted by such pressures should be identified (often referred to as “pathways of effects” analysis). The pathways are likely to be generic, describing the same pattern of pathways in all parts of the world. However, there may be regional contrasts in which pathways are likely to be significant. (Some ecosystem components or processes readily affected by an activity may not be present in some regions, or other regional circumstances may magnify or diminish effects.) This subsection should also characterize the types of indicators likely to be informative about ecosystem impacts of the activity. It should not, however, specify which indicators should be used in any regional reporting. Where the description of the activity under subsection (a) is subdivided, this subsection should also reflect that subdivision if the pathways are different;

(d) **Major ecosystem impacts.** This subsection should aim to quantify, or otherwise describe, the scale of, and trends in, the major ecosystem impacts through the pathways identified in subsection (c). The scale of the impacts should be described both in terms of the extent of the impact relative to the extent of the vulnerable ecosystem feature(s) affected, and to the degree of disturbance from the impact of those ecosystem features. Where appropriate, regional comparisons should be made and hot spots identified. Where management reference points have been set, the description should relate to these points. If the description of pathways in subsection (c) is subdivided and there is no cross-linkage between the effects, then it may be clearer in some cases to link the descriptions in this subsection directly to the subdivisions of subsection (c) in order to help avoid repetition;

(e) **Integration of environmental and socioeconomic trends.** This subsection should describe the extent to which there are parallels between the trends in environmental impacts, trends in levels of the activity and the socioeconomic aspects of the activity. Where the description in subsection (a) is subdivided, the division should be reflected in this subsection. Special attention should be given to cases where the assessments being used as the basis for the chapter described causal linkages between the activity and environmental trends. Regional comparison will often be necessary for the meaningful integration of trends;

(f) **Environmental, economic and social influences.** This subsection should discuss what factors (e.g. environmental, socioeconomic, management approaches) may underlie any differences in the trends and their linkages noted in subsection (e);

(g) **Capacity-building gaps.** This subsection should identify gaps in the capacities of developing countries both to engage in the activity (where this is noted in the outline) and to assess the environmental, social and economic aspects of the activity. In relation to the first issue, attention should be paid to the extent to which the activity in the waters under the jurisdiction of the States is carried on by local

undertakings in comparison with the situation elsewhere, to the reasons for any differences and to the extent to which any such reasons relate to training and education. In relation to assessment capacity, attention should be paid to the scale of current monitoring and assessment both in absolute and relative terms, the relationship between the land and the sea areas under the jurisdiction of the States and their populations, and to the availability of institutions suitable for carrying out the monitoring and assessment.

#### **D. Strategy for integration in part VI (Assessment of marine biological diversity and habitats)**

45. Part V (Assessment of other human activities and the marine environment) will contribute to integration by illustrating how achieving social and economic benefits from use of the oceans (or, where the information exists, how use of ocean ecosystem goods and services) may affect the parts of marine ecosystems specifically chosen as potentially vulnerable to the activity assessed in each chapter. This is valuable for looking at targeted impacts, but it is incomplete because it does not consider status and trends of marine ecosystems overall. The sector-by-sector approach of part V can both overestimate and underestimate the impacts of human uses on the seas. The approach may overestimate impacts by focusing on biased sets of ecosystem features and, where available, indicators, specifically chosen because they are expected to be vulnerable to the uses being assessed in part V. The approach may underestimate impacts by missing or undervaluing the aggregate and cumulative impacts on ecosystems affected by multiple uses at once. The balance of these two factors is unknown at the global and regional levels. The overview of marine biological diversity and its assessment (chaps. 34-36) in part VI (A) will set the framework for more holistic and representative views of the status and trends of ecosystems, species and habitats singled out for attention in part VI (B) (chaps. 37-42), and thus provide the basis for the synthesis and integration in chapter 43 (Significant environmental, economic and/or social aspects in relation to the conservation of marine species and habitats).

46. Given the time constraints for completing World Ocean Assessment I, it may be necessary to start work on part VI (B) before work is complete on part VI (A). It will therefore be necessary for the lead members and the convenors of the writing teams identified for the chapters in these two sections to work together in establishing the structures of those chapters under paragraphs 12 (b) and 13 (a) above. In doing so, they should take into account the following factors:

(a) The titles of chapters 37 to 42 are indicative only. In developing the structures of these chapters, there is flexibility to adjust the division of chapters in order to organize the information more effectively. In particular, where a taxonomic group ranges across more than one of the types of sea floor habitat listed in chapter 36, it will be desirable to bring together all aspects relating to that taxonomic group;

(b) The structure of chapter 36 should be so organized that it identifies the elements that will need to be developed for chapters 37 to 42. This implies that the structures for chapters 37 to 42 will need to be developed in parallel with those for chapter 36 and its subsections;

(c) The structure of chapters 36 to 42 will need to identify the major features of biological diversity which are sufficiently well documented so they can be used

to provide support for comment on status and trends and, where possible, to link to the ecological sustainability of major human uses of the ocean.

47. The initial structures that are thus jointly developed may be amended as the working papers and draft chapters of part VI (A) and part VI (B) are developed, in order to ensure that the writing teams cover all crucial issues.

## **XI. Characterizing and communicating uncertainty**

48. Some of the conclusions of World Ocean Assessment I may be controversial. As such, they will be subject to intense scrutiny by stakeholders. However, all parts of the report must be as accurate as possible since an error in any part can undermine the credibility of the entire report. To this end, contributors must exercise caution and discipline in describing the uncertainty associated with any statements made in their chapters.

49. Uncertainty is characterized and communicated by describing how much is known about a topic (i.e. the quality and nature of the evidence available) and the probability that a particular event will occur. Each conclusion of World Ocean Assessment I will need to be accompanied by a judgement of its uncertainty. There are several different ways to express uncertainty:

(a) Likelihood (e.g. “extremely likely” might indicate a greater than 95 per cent probability that a particular event will occur);

(b) Confidence (e.g. “high confidence” might indicate an 8 out of 10 chance of being correct);

(c) Level of understanding (described in terms of the amount of evidence available and the degree of agreement within the evidence).

50. The level-of-understanding scale is a convenient way of communicating the nature, number and quality of studies on a particular topic, as well as the level of agreement among studies. This scale can be supplemented by quantitative likelihood or confidence measures, if such are deemed to be needed and appropriate.

51. Contributors should avoid reporting conclusions with high levels of confidence for which there is little evidence and should always seek clarity when making definitive statements. All conclusions should withstand scrutiny and be supported sufficiently by the available information cited in the assessment. To this end, contributors should use standard terms to qualify the level of confidence and risk. The Group of Experts will agree on a glossary of such standard terms.

52. Contributors are encouraged to make statements about the likelihood of an outcome or event as explicit as possible, but must ensure that the methods they use for estimating or otherwise evaluating probabilities or likelihood (expert judgement, analysis of data, modelling) are appropriate to the quantity, quality and nature of the information available.

## **XII. Handling the full range of views**

53. An assessment is intended to arrive at a judgement of a topic. Although all reasonable points of view should be considered, they need not be given equal weight

or even described fully in a working paper or draft chapter. What alternative viewpoints warrant mention is a matter of professional judgement. Therefore, convenors of the writing teams have considerable influence over which viewpoints will be discussed in the process.

54. Involving contributors with diverse viewpoints is the first step towards ensuring that a full range of views is considered. Equally important is combating “confirmation bias”, that is, the tendency of authors to place too much weight on their own views relative to other views. Convenors of the writing teams should explicitly document that a range of scientific viewpoints has been considered and lead members should satisfy themselves that due consideration was given to properly documented alternative views.

55. There can be multiple interpretations of the available body of information, each with support from some portion of the scientifically sound information but inconsistent with other portions. Policymakers are often best served by being informed of the nature of the discrepancies in the scientific and technical information, the range of interpretations that cannot be rejected and the implications, including risks, of each interpretation. This ensures that the important policy decisions about which risks to accept, mitigate and avoid are made by policymakers, not science advisers.

### **XIII. Ethics in authoring and evaluating material for the Regular Process**

56. It is expected that contributors will follow established protocols for ethics in scientific reporting. In particular, contributors are responsible for:

- (a) Correctly citing the published work of others;
- (b) Accurately representing the conclusions of cited work;
- (c) Disclosing any conflict of interest.

57. World Ocean Assessment I will be based primarily upon existing assessments, which are themselves a synthesis of existing information relative to a particular geographic area. It is important that information cited in World Ocean Assessment I can be traced back to its original source (see section VII above on information). The credit for the production of synthesis products (e.g. maps and graphs) should be accurately attributed to the original authors.

58. By its very nature, the Regular Process requires contributors to review and synthesize numerous large bodies of work, and to distil out the salient points of numerous regional studies into consolidated statements. Throughout this process, it is important that the synthesis produced does not lose or misrepresent the essential conclusions, meaning and intent of the original works. Contributors are responsible for ensuring that such misrepresentation does not occur.

59. The nature of the Regular Process demands that contributors pay special attention to issues of independence and bias to maintain the integrity of, and public confidence in, the results.

## **XIV. Style and modalities**

60. World Ocean Assessment I is not written to appear in a scientific journal. It is intended to be read by policymakers and the general public, and must be written in a manner that will enable broad understanding. This requirement implies that technical terms not in common use in general writing should be explained on their first appearance and that abbreviations and acronyms should likewise first appear with the full form.

61. Those invited to contribute text to working papers and draft chapters may do so in any of the official languages of the United Nations. Contributions not in English will be translated into that language, since it will be the working language of the Group of Experts. Submission of a courtesy translation with the contribution will be welcomed.

62. The United Nations Secretariat works in MSWord 2003 for documents. Documents should therefore be submitted as .doc files as far as possible.

63. Since much material will be read on-screen, references should be given in brief in the text, rather than in footnotes. A complete list of works referred to should be included at the end of the text. In-text references should be placed within brackets and consist of the author's name (or the first author's name, followed by "et al."), the year of publication and the page or paragraph reference. If there is more than one publication by that author in the same year, the different publications should be differentiated by A, B, C and so on after the year number. The list of references should be in the alphabetical order of the in-text references and give full details of the material to which reference is made. Arrangements will be made for collecting lists of references in a suitable format.

64. It will assist the production of World Ocean Assessment I if the following writing approaches are followed (which are aligned with those of the United Nations Secretariat):

(a) Paragraphs should be numbered in Arabic numerals in a single sequence from the start of a text to the end;

(b) Paragraphs should not contain more than two levels of indentations. The higher level of indentation should be identified by small roman letters in brackets ((a), (b), (c) and so on). The lower level should be identified by small roman numerals in brackets ((i), (ii), (iii), (iv) and so on);

(c) Headings of sections and subsections should be aligned with the left margin;

(d) Subparagraphs should commence with a capital (majuscule) letter.

65. For more detailed guidance, the United Nations online Editorial Manual can be consulted at <http://69.94.137.26/editorialcontrol/>.

66. Commentators and peer reviewers should record their comments in a method to be developed by the Group of Experts that will enable the comments to be aligned automatically alongside the text to which the comment relates and allow the response of the writing team or the Group of Experts to be shown alongside. The composite document, showing text, comments and responses, will be published on the World Ocean Assessment I website.