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INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
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INFORMATION DOCUMENT

UPDATE ON THE IMPLEMENTATION OF THE REGULAR PROCESS FOR GLOBAL REPORTING AND ASSESSMENT OF THE STATE OF THE MARINE ENVIRONMENT, INCLUDING SOCIO-ECONOMIC ASPECTS – WORLD OCEAN ASSESSMENT, 2013

Summary: This document provides a summary of the main developments that have taken place in the implementation of the Regular Process since June 2012. These include information on the Regional Workshops, the establishment of the Regular Process Pool of Experts, IOC's input to the work of the Group of Experts (GoE), as well as possible activities to meet the capacity development needs of the Regular Process.

Introduction

The task of the first cycle of the Regular Process (2010 to 2014) will be to produce the first [World Ocean Assessment](#). To this end, the UN General Assembly has created an Ad Hoc Working Group of the Whole to oversee and guide the Regular Process, and a Group of Experts to carry out the assessments within the framework of the Regular Process. In addition, a much larger pool of experts has been created to assist the Group of Experts in conducting the assessments and to provide effective peer-review to ensure the high quality of the outputs. Since the Working Group meets once a year, a Bureau consisting of fifteen Member States¹, representing the regional groups of the United Nations, was established for the intersessional periods of the Ad Hoc Working Group of the Whole.

Following the adoption in 2012 of the Terms of Reference and Methods of Work for the Group of Experts as well as the Outline of the First Global Integrated Marine Assessment (World Ocean Assessment, WOA-I), a number of activities have taken place and are briefly described in this document.

Regional Workshops

From September 2011 to February 2013, a number of regular process regional workshops have been organized under the auspices of the United Nations. The objectives of these workshops were to:

- (i) review and evaluate all assessments considered by the participants to be relevant to the sea area under consideration and, on the basis of those evaluations, compile an inventory of assessments likely to be useful for the Regular Process;
- (ii) start building a network between experts and organizations taking part in each workshop, and the Group of Experts and the secretariat of the Regular Process; and
- (iii) Identify the capacity-building needs of States taking part in the workshop which are needed to allow them to contribute more fully to, and benefit more fully from, the Regular Process.

IOC played an active role in supporting scientifically and technically the organization of these workshops. IOC participated in all regional workshops and was a member of the organizing committee for some of them. The list of organized workshops is as follows:

- Brisbane, Australia (25–27 February 2013) –IOC represented by IOC Perth Office representative
- Maputo, Mozambique (5–7 December 2012) – IOC represented by IOCAFRICA representative
- Miami, United States (13–15 November 2012) – IOC represented by IOCARIBE Secretary and Headquarters, member of workshop organizing committee
- Brussels, Belgium (27–29 June 2012) – IOC represented by IODE and Headquarters representatives, member of workshop organizing committee
- Sanya, China (21–23 February 2012) - IOC represented by WESTPAC Secretary representative and member of workshop organizing committee
- Santiago, Chile (13–15 September 2011), represented by IOCARIBE Secretary.

¹ African States: Ghana, Kenya, Tanzania ; Asia-Pacific States : China, Republic of Korea, Sri Lanka; Eastern European States: Bulgaria, Estonia, Ukraine; GRULAC: Argentina, Chile, Ecuador; Western European and other States: Greece, Spain, USA (at the date of 26/03/2013)

Pool of Experts

A large Pool of Experts of the Regular Process is essential to support the work of the Group of Experts in conducting the assessments and to provide effective peer-review to ensure the high quality of the outputs. It has been estimated that between 1500 and 2000 experts will be needed for the Pool of Experts. The Criteria for the appointment of experts to the Pool of Experts is available as Annex I, in A/66/189 at <http://ods.un.org/>. Experts with appropriate qualifications are urged to become engaged in this ongoing process. To do so, qualified individuals should contact their Governments to obtain the necessary nomination.

IOC has widely disseminated this call through [IOC Circular Letter, 2424](#) and as well as through other electronic means. At the date of this document, the Pool is still open for nominations. As of 17 May 2013, 402 experts have been nominated.

Inputs to the work of the UN Group of Experts

Since April 2012, two meetings of the UN Group of Experts in charge of carrying out the assessments within the framework of the Regular Process were organized in November 2012 and April–May 2013.

In November 2012, the Group met to agree on proposed Lead Member allocations, and to discuss the draft chapter structures. IOC participated in this meeting as an observer to the Group of Experts.

In response to the letter from the Group of Experts Coordinators (Nov. 2012), requesting assistance to technical agencies, IOC has identified a number of resources and technical inputs that could be made available to the experts and lead contributors. These are presented in Annex II of this document. This document was made available to the Group of Experts.

These scientific inputs are derived from a number of on-going IOC programmes, and include for example the products derived from OBIS (Ocean Biogeographic Information System).

Another example of technical resources that IOC can provide is through the GEF Transboundary Water Assessment Programme (TWAP), which started March 2013 and will produce a number of ecological and socio-economic indicators for all 64 LMEs of the world and Open Ocean areas.

Alan Simcock, coordinator of the Group of Experts, attended the TWAP Open Ocean and Large Marine Ecosystems Inception meeting (20–22 March 2013) held at IOC headquarters. A number of options were explored for linking the two assessment processes which are both due to be published at the end of 2014. Thanks to the support received by the Government of France, through the TWAP project, IOC will develop a number of baseline indicators that will be made available to the Group of Experts and relevant contributors. IOC will ensure that the assessment products (including graphical materials) developed in the context of TWAP will be made available to the Regular Process Group of Experts and contributors for possible inclusion in the World Ocean Assessment.

On 29 April–2 May 2013, another meeting of the Group of Experts was organized in New York, following the fourth meeting of the Ad Hoc Working Group of the Whole, with the objective to examine further chapter structures and begin considering the formation of writing teams based on expertise residing in the pool of experts.

According to the timetable of the Regular Process (Annex I of this document), two additional meetings of the Group of Experts are scheduled in November 2013 and May 2014. IOC intends to participate in these meetings.

The need for increased coordination between the Regular Process and the work of the UN technical agencies such as IOC was recognised at the fourth meeting of the Ad Hoc Working

Group of the Whole (22–26 April 2013), that decided *inter alia* that the Group of Experts in consultation with the Bureau and the secretariat of the Regular Process, should consider ways to improve coordination with other agencies and bodies conducting assessments that involve the oceans, including through the sharing of information and data on assessments.

Capacity Building needs for Regular Process

The Regular Process through various meetings of this Ad Hoc Working Group has expressed the need to start building capacity of Member States for the conduct of integrated marine assessments as a key priority.

Recommendations identified during the Regular Process Regional Workshops are extremely useful in identifying regional priorities where targeted capacity-development interventions should be implemented. These needs should be considered by IOC regional bodies such as WESTPAC and IOCARIBE in order to address these needs through the development of regional capacity-development interventions. At the same time, as IOC is in the process of redefining its global strategy for capacity development (IOC-XXVII/2 Annex 10), these should also be addressed in this framework.

During the Fourth Meeting of the Ad Hoc Working Group of the Whole (22–26 April 2013), the issue of capacity building was discussed in details by UN Member States. On that occasion, building on their respective mandates, IOC and UNEP stated that a practical approach for addressing capacity needs as identified through the regional workshops, would require the development of a tailored approach, such as the development and implementation of a specific Regular Process Training Module which would:

- (i) provide common information content/common approaches towards assessment methodologies;
- (ii) define approaches for scaling up assessments (national, regional, global);
- (iii) promote the use of standardized procedure to integrate the ecological and socio-economic dimensions of assessments, with the aim of securing coherence, consistency and comparability across regions.

In the coming months, IOC, UNEP, DOALOS as Secretariat of the Regular Process, as well as the Bureau of the Ad Hoc Working Group will continue to discuss these options.

Useful links:

Outline of the World Ocean Assessment

http://www.un.org/depts/los/global_reporting/Outline_of_the_First_Global_Integrated_Marine_Assessment.pdf

Pool of experts

http://www.un.org/Depts/los/global_reporting/Pool%20of%20experts%20Chart.pdf

Recommendations of the Fourth Meeting of the Ad Hoc Working Group of the Whole (22 - 26 April 2013)

http://www.un.org/Depts/los/global_reporting/Recommendations_25042013.pdf

Website of the World Ocean Assessment

<http://www.worldoceanassessment.org/>

Annex I: Revised Timetable of the Regular Process

Date	Action or Event
COMPLETED	
August/September 2009	The Ad Hoc Working Group of the Whole considers the Assessment of Assessments, agrees on the overall framework for the Regular Process and the timing for the first cycle, agrees on the need for more time, and recommends the appointment of an interim Group of Experts.
March 2010	The General Assembly endorses the overall framework and timing of the first cycle, asks for States' views on the fundamental building blocks and arranges for a further meeting of the Ad Hoc Working Group of the Whole and the appointment of an interim Group of Experts.
June 2010	The interim Group of Experts provides suggestions on the fundamental building blocks.
September 2010	The Ad Hoc Working Group of the Whole agrees on modalities for implementing the Regular Process, including capacity-building.
December 2010	The General Assembly approves the modalities for implementing the Regular Process, establishes the Group of Experts and asks them to provide options to achieve the deadline of 2014.
February 2011	The Ad Hoc Working Group of the Whole recognizes the need for regional workshops and the appointment of a pool of experts to support the Group of Experts and agrees on the need for communication systems.
May 2011	The General Assembly approves the recommendations of the Ad Hoc Working Group of the Whole and requests it to meet again in June 2011.
June 2011	The Group of Experts provides a preliminary inventory of types of experts for workshops.
June 2011	The Ad Hoc Working Group of the Whole agrees on the Criteria for the Appointment of Experts, the Guidelines for Workshops, and the establishment of the Bureau.
September 2011	A regional Workshop for the South-East Pacific is held in Santiago, Chile.
December 2011	The General Assembly approves the Criteria for the Appointment of Experts, the Guidelines for Workshops and arrangements for the Bureau.
January 2012	The secretariat of the Regular Process issues call for nomination of members of the pool of experts.
February 2012	A regional Workshop for Eastern and South-Eastern Asian Seas is held in Sanya, China.
April 2012	The third meeting of the Ad Hoc Working Group of the Whole agrees on the Terms of Reference and Methods of Work for the Group of Experts and the Outline of the First Global Integrated Marine Assessment.

Date	Action or Event
April 2012	In the intervals of the meeting of the Ad Hoc Working Group of the Whole, the Group of Experts meets to discuss methods of achieving an integrated assessment and organization of drafting.
June 2012	A regional Workshop for the North Atlantic and Baltic, Black and Mediterranean Sea is held in Brussels, Belgium.
February 2012 – September 2012	Appointments by States of experts to the Pool of Experts based on the Criteria for the appointment of experts.
September 2012	Additional UNEP workshop for East Asian Seas and North-West Pacific
October 2012	Comments by Bureau on Guidance to Contributors
26 – 30 November 2012	<p>Meeting of the Group of Experts (5 days) to:</p> <ul style="list-style-type: none"> (a) agree proposed Lead Member allocations (b) agree handling of Part VI (Biodiversity) (c) discuss the structure of Part VI (Marine Biological Diversity and Habitats) (c) discuss some draft chapter structures; (d) agree how to involve the Pool of Experts and the website start-up. <p>During the meeting there is also a discussion with some AHWGW Bureau members on the draft Guidance</p>
December 2012	AHWGW Bureau approves the Guidance for Contributors by a written procedure.
December 2012	General Assembly approves Outline and Terms of Reference and Working Methods.
January – March 2013	Group of Experts begins analysis of the nominations of members of the Pool of Experts as a basis for proposals for writing teams for chapters and develop chapter structures
22 – 26 April 2013	<p>The fourth meeting of the Ad Hoc Working Group of the Whole is convened. The main issues are:</p> <ul style="list-style-type: none"> Format of World Ocean Assessment I; Mobilisation of resources; Capacity-building.
<u>FORSEEN</u>	
29 April – 2 May 2013	Meeting of the Group of Experts (4 days) to review progress, examine further chapter structures and begin considering the formation of writing teams.
June 2013	Group of Experts complete the first set of proposals for writing teams and request any further necessary appointments to the Pool of Experts.
June 2013	Meeting of the Bureau to consider the proposals of the Group of Experts for writing teams
Summer 2013	Further regional Workshops are held
Later in 2013 (as necessary)	Group of Experts complete further sets of proposals for writing teams and submit them to the Bureau.
Later in 2013 (as necessary)	Bureau considers further sets of proposals for writing teams.
April – August 2013 (and at other points, if necessary)	States make further appointments to the Pool of Experts.

Date	Action or Event
July – August 2013	Writing teams agree draft chapter structures, and the Group of Experts agree them
September 2013 – January 2014	Writing teams prepare initial drafts of chapters and any necessary supporting working papers.
November 2013 – January 2014	Any necessary meetings of writing teams
3 - 7 November 2013	Meeting of the Group of Experts (5 days): (a) To review progress (including the state of the chapter structures and any available drafts of working papers and draft chapters); (b) To recommend arrangements for peer review (subject to approval of the Bureau).
November/December 2013	Meeting of the Bureau to consider the outcome of the meeting of the Group of Experts and to agree on consequential actions.
End January 2014	Completion of Draft Chapters by Writing Teams.
February 2014	Commentators comment on Draft Chapters.
March 2014	Writing teams revise Draft Chapters in the light of comments.
March – April 2014	Group of Experts prepares draft First Global Integrated Marine Assessment.
April/May 2014	Possible fifth meeting of the Ad Hoc Working Group of the Whole.
May 2014	Meeting of the Group of Experts (5-10 days) to complete the draft First Global Integrated Marine Assessment.
May 2014	Coordinators of the Group of Experts provide briefing on progress on the occasion of the meeting of the Commission on Sustainable Development (review phase) in its consideration of the Oceans and Seas thematic cluster.
June – August 2014	Review of the draft First Global Integrated Marine Assessment by States and Peer Reviewers.
September 2014	Meeting of the Group of Experts (5-10 days) to finalize the First Global Integrated Marine Assessment.
October – November 2014	Review of the final draft of World Ocean Assessment I by the Bureau and asks for any necessary clarifications. Group of Experts makes clarifications.
End November 2014	Submission of the final text of World Ocean Assessment I – the First Global Integrated Marine Assessment – by the Group of Experts to the secretariat of the Regular Process.
December 2014	Bureau approves submission to the Ad Hoc Working Group of the Whole and develops recommendations for action
By end December 2014, at the latest	Submission of World Ocean Assessment I to the Ad Hoc Working Group of the Whole. It is made available on the WOA website.
December 2014 – February 2015	Copy-editing, translation of the Summary into the other UN languages, and printing.
February 2015	Publication of World Ocean Assessment I.
February 2015 (or some later date)	Consideration of the First Global Integrated Marine Assessment by the Ad Hoc Working Group of the Whole and related recommendations to the General Assembly.

Date	Action or Event
May 2015	The Coordinators of the Group of Experts provide briefing on the First Global Integrated Marine Assessment on the occasion of the meeting of the Commission on Sustainable Development (policy phase) in its consideration of the Oceans and Seas thematic cluster.
Late autumn 2015	The General Assembly considers the First Global Integrated Marine Assessment during its 70th session.

Annex II: Information and Data Available Through IOC/UNESCO for the Development of the First World Ocean Assessment (Woa-I)

In response to the letter from the GoE coordinators (Nov. 2012), requesting assistance to IOC, UNEP, FAO and IMO, the IOC Secretariat has prepared the following table that identifies a number of resources, information, ecological and socio-economic indicators, data products that can be made available to the Lead Drafters and Members of the WOA, through IOC programmes, projects or co-sponsored initiatives. A contact point is identified for each of these.

<u>CHAPTER</u>	<u>IOC PROGRAMMES /PROJECTS/Co- SPONSORED INITIATIVES</u>	<u>TYPE OF INFORMATION/DATA PRODUCTS</u>	<u>SCALE GLOBAL/ REGIONAL/ NATIONAL</u>	<u>CONTACT POINT FOR ADDITIONAL INFO (NAME, EMAIL, WEB SITE)</u>
Chapter 1. Planet, oceans and life	OBIS	Biogeographic Information / Biodiversity Indices	Global	Ward Appeltans, w.appeltans@unesco.org http://iobis.org
Chapter 2. Mandate, information sources and method of work				
PART III – ASSESSMENT OF MAJOR ECOSYSTEM SERVICES FROM THE MARINE ENVIRONMENT (OTHER THAN PROVISIONING SERVICES)				
Chapter 3. Scientific understanding of ecosystem services				
Chapter 4. The oceans' role in the hydrological cycle	WCRP	The CLIVAR and GEWEX projects of WCRP coordinate research in this area and could contribute publications and scientific expertise.	Global	Valery Detemmerman, vdetemmerman@wmo.int , www.wcrp-climate.org
	TWAP	indicator time series and maps: ocean heat content evolution and projections, sea level rise projections, cyclone heat potential projections and human vulnerability, sea ice extent and accompanying narrative assessment text LMEs: Mean sea surface temperature and assessment text	Global; LMEs	Albert Fischer, a.fischer@unesco.org , ioc-goos.org (TWAP partner: WCRP, as above); Julian Barbière (TWAP partner: Ken Sherman, NOAA/URI. Kenneth.sherman@noaa.gov)
Chapter 5. Sea/Air interaction	GOOS SOLAS WCRP CLIVAR	GOOS takes observations and WCRP/CLIVAR coordinates research on air-sea interaction and could contribute publications and scientific expertise.	Global	GOOS: Albert Fischer, a.fischer@unesco.org , www.ioc-goos.org

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				<p>SOLAS: Dr. Emilie Brévière [ebreviere@geomar.de] and [skontradowitz@geomar.de] GEOMAR Helmholtz-Centre for Ocean Research Kiel</p> <p>WCRP: Dr Ghassem Asrar (WMO) email: gasrar@wmo.int</p> <p>CLIVAR: Roger Barry International Project Office Southampton, United Kingdom E-mail: icpo@noc.soton.ac.uk</p>
Chapter 6. Primary production, cycling of nutrients, surface layer and plankton	TWAP	<p>indicator time series and maps: ocean colour, chlorophyll, primary productivity, and biogeographic domain shifts; mesozooplankton abundance, copepod community size, timing and phenology. and accompanying narrative assessment text</p> <p>LMEs: Mean primary productivity and chlorophyll a</p>	Global; LMEs	<p>Albert Fischer, a.fischer@unesco.org, ioc-goos.org (TWAP partners: Trevor Platt, tplatt@dal.ca and Shubha Sathyendranath, shubha@dal.ca, www.pml.ac.uk; Sonia Batten, soba@sahfos.ac.uk, www.sahfos.ac.uk)</p> <p>Julian Barbieri (TWAP partners: Ken Sherman, NOAA/URI. kenneth.sherman@noaa.gov)</p>
	N-CIPR, GEOHAB	Nutrient loading data and models	All	<p>N-CIRP : Lex Bouwman, Lex.Bouwman@pbl.nl GEOHAB : Raphe Kudela, kudela@ucsc.edu</p>
Chapter 7. Ocean-sourced carbonate production	IOCCP	The IOC-SCOR International Ocean Carbon Coordination Programme works with observations and synthesis of ocean carbon and could contribute publications and scientific expertise.	Global	Maciej Telszewski, m.telszewski@ioccp.org , www.ioccp.org

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Chapter 8. Aesthetic, cultural, religious and spiritual ecosystem services derived from the marine environment				
Chapter 9. Conclusions on major ecosystems services other than provisioning services				
PART IV – ASSESSMENT OF CROSS-CUTTING ISSUE: FOOD SECURITY AND FOOD SAFETY				
Chapter 10. Oceans and seas as sources of food				
Chapter 11. Capture fisheries	TWAP	indicator time series and maps: demersal fishing effort, catch from bottom-impacting gear, tuna catch in the high seas, marine trophic index, fishing-in-balance index, projections of fish catch potential to 2050 under global warming. For LMEs: Reported landings, Value of reported landings, Marine Trophic Index & Fishing in Balance Index, Ecological Footprint of Fisheries, Stock-status plots, Catch from bottom-impacting gear, Fishing Effort and accompanying narrative assessment text		Albert Fischer, a.fischer@unesco.org, ioc-goos.org; Julian Barbière (TWAP partner: UBC Fisheries Center, Daniel Pauly, d.pauly@fisheries.ubc.ca , Villy Christensen, v.christensen@fisheries.ubc.ca , www.seaaroundus.org)
	Indiseas	Status and trends: see examples at: http://www.indiseas.org/		SHIN Yunne [yunne-jai.shin@ird.fr] SHANNON Lynne [Lynne.Shannon@uct.ac.za]
Chapter 12 Aquaculture				
Chapter 13 Fish stock propagation		see "projections of fish catch potential to 2050 under global warming" above		

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Chapter 14 Seaweeds and other sea-based food				
Chapter 15 Social and economic aspects of sea-based food and fisheries	TWAP	LMEs: % GDP fisheries	LMEs	Julian Barbière (TWAP: Liana McManus)
Chapter 16 Conclusions on food security				
PART V – ASSESSMENT OF OTHER HUMAN ACTIVITIES AND THE MARINE ENVIRONMENT				
Chapter 17. Shipping	TWAP	indicator time series and maps: ship traffic		Albert Fischer, a.fischer@unesco.org , ioc-goos.org
	ICES-IOC Working Group on Ballast and Other Ship Vectors	Introduction and transfer by ballast of ships	All	Tracy McCollin: Tracy.McCollin@scotland.gsi.gov.uk
Chapter 18. Ports				
Chapter 19. Submarine cables and pipelines				
Chapter 20. Coastal, riverine and atmospheric inputs from land	TWAP	Nutrients (P, N, Si) export from watersheds (Global NEWS model) for year 2000 with projections to 2030; and coastal eutrophication potential	LMEs	Julian Barbière (TWAP partner: IGBP, Sybil Seitzinger, Sybil.Seitzinger@IGBP.kva.se)
	N-CIRP	Nutrient loading and models	All	N-CIRP : Lex Bouwman, Lex.Bouwman@pbl.nl
Chapter 21. Offshore hydrocarbon industries				
Chapter 22. Other marine-based energy industries				
Chapter 23. Offshore mining				

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industries				
Chapter 24. Solid waste disposal	GESAMP	WG on microplastics		Peter Kershaw (Cefas) <peter.kershaw@cefas.co.uk>
Chapter 25. Marine debris	TWAP	indicator time series and maps: plastic debris density (collected in plankton nets), plastic pellet distribution and contaminant (POPs) concentrations and accompanying narrative assessment text Also for LMEs	Global and LMEs (gridded data to allow aggregation at any scale)	Albert Fischer, a.fischer@unesco.org, ioc-goos.org; Julian Barbière (TWAP partner: GESAMP: Tim Bowmer, tim.bowmer@tno.triskelion.nl , Peter Kershaw, peter.kershaw@cefas.co.uk , www.gesamp.org)
Chapter 26. Land/sea physical interaction	TWAP	Population within 10 m coastal elevation, Deaths from climate-related natural disasters	LMEs	Julian Barbière (TWAP partner: Liana McManus)
Chapter 27. Tourism and recreation	TWAP	% GDP international tourism	LMEs	Julian Barbière (TWAP partner: Liana McManus)
Chapter 28. Desalinisation				
Chapter 29. Use of marine genetic resources				
Chapter 30: Marine scientific research	OBIS	Biogeographic Information / Biodiversity Indices	Global	Ward Appeltans, w.appeltans@unesco.org http://iobis.org
Chapter 31. Conclusions on other human activities				
Chapter 32. Capacity-building in relation to human activities affecting the marine environment				

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PART VI – ASSESSMENT OF MARINE BIOLOGICAL DIVERSITY AND HABITATS				
Chapter 33. Introduction				
Chapter 34. Scale of marine biological diversity	OBIS	Biogeographic Information / Biodiversity Indices	Global	Ward Appeltans, w.appeltans@unesco.org http://iobis.org
Chapter 35. Extent of assessment of marine biological diversity	TWAP, OBIS	indicator time series and maps: corrected marine biodiversity distributions based on OBIS holdings and accompanying narrative assessment text		Ward Appeltans, w.appeltans@unesco.org , www.iobis.org
Chapter 36. Overall status of major groups of species and habitats	OBIS	Biogeographic Information / Biodiversity Indices	Global	Ward Appeltans, w.appeltans@unesco.org http://iobis.org
The structure of chapters in this section will be established in the light of work on Chapters 34 -35, but the following were identified for some of the possible subjects to be covered:				
Coral (and other biogenic) reefs	TWAP	indicator global threats to coral reefs from warming, acidification, sea level rise; LMEs: Reefs at risk index and accompanying narrative assessment text	Global and LMEs	Albert Fischer, a.fischer@unesco.org , ioc-goos.org Julian Barbrière (TWAP partner: UNEP-WCMC, Damon Stanwell- Smith Damon.Stanwell-Smith@unep-wcmc.org)
	GCRMN	Global reef monitoring Management & sustainable conservation of coral reefs for people	Global/ Regional	Clive Wilkinson clive.wilkinson@rrrc.org.au
Hydrothermal vents & cold seeps				
Kelp forests				

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Mangroves, salt marsh and other macro Vegetation areas	TWAP	LMEs: mangrove extent and accompanying narrative assessment text	LMEs	Julian Barbière (TWAP partner: UNEP-WCMC, Damon Stanwell-Smith Damon.Stanwell-Smith@unep-wcmc.org)
Migratory marine species.	OBIS-SEAMAP	Marine Mammal, Seaturtle, Sea Bird data	Global	Patrick Halpin, phalpin@duke.edu http://seamap.env.duke.edu
Plankton	TWAP	indicator time series and maps: ocean colour, chlorophyll, primary productivity, and biogeographic domain shifts; mesozooplankton abundance, copepod community size, timing and phenology. and accompanying narrative assessment text	Global	Albert Fischer, a.fischer@unesco.org , ioc-goos.org (TWAP partners: Trevor Platt, tplatt@dal.ca and Shubha Sathyendranath, shubha@dal.ca , www.pml.ac.uk ; Sonia Batten, soba@sahfos.ac.uk , www.sahfos.ac.uk)
	HABP	Harmful Algae Blooms	All	Katherine Richardson, http://macroecology.ku.dk/oceanography/ , kari@science.ku.dk
	OBIS	Biogeographic Information / Biodiversity Indices	Global	Ward Appeltans, w.appeltans@unesco.org http://iobis.org
Seagrass and eel-grass beds				
Seamounts, deep-sea banks and plateaus				
Chapter 43. Significant environmental, economic and/or social aspects in relation to the conservation of marine species and habitats	TWAP	Change in MPA coverage	LMEs	Julian Barbière (TWAP partner: UNEP-WCMC, Damon Stanwell-Smith Damon.Stanwell-Smith@unep-wcmc.org)
Chapter 44. Capacity building needs in relation to the status of species and habitats				

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Chapter 45. Summary on marine biological diversity	OBIS	Biogeographic Information / Biodiversity Indices	Global	Ward Appeltans, w.appeltans@unesco.org http://iobis.org
PART VII – OVERALL ASSESSMENT				
Chapter 46. Overall assessment of human impact on the oceans	TWAP	indicator: cumulative human impact on ocean ecosystems (updated), Ocean Health Index Also for LMEs	Global and LMEs	Albert Fischer, a.fischer@unesco.org , ioc-goos.org ; Julian Barbière (TWAP partner: CMAP, Ben Halpern, halpern@nceas.ucsb.edu)
Chapter 47. Overall value of the oceans to humans	TWAP	Value of fish catch, % GDP fisheries and tourism, OHI is also relevant here – the 10 public goals reflect the ecosystem services provided to humans	Open Ocean, LMEs	See above

Intergovernmental Oceanographic Commission (IOC)
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