



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION  
COMMISSION OCÉANOGRAPHIQUE INTERGOUVERNEMENTALE  
COMISIÓN OCEANOGRÁFICA INTERGUBERNAMENTAL  
МЕЖПРАВИТЕЛЬСТВЕННАЯ ОКЕАНОГРАФИЧЕСКАЯ КОМИССИЯ

اللجنة الدولية الحكومية لعلوم المحيطات

政府间海洋学委员会

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**IOC Circular Letter No 2963**

(Also available in French, Russian and Spanish)

IOC/ VR/HE/KI/ss  
27 September 2023

To : Official National Coordinating Bodies for Liaison with the IOC

C.c. : Permanent Delegates/Observers Missions to UNESCO and  
National Commissions for UNESCO of IOC Member States  
Chair and Vice-Chairpersons of IOC  
Officers of Major Subsidiary Bodies of IOC (Scientific, Technical and Regional)

**Subject: Presentation of the updated *State of the Ocean Report* concept note**

At its 32<sup>nd</sup> session in June 2023, the IOC Assembly considered an updated concept note of the *State of the Ocean Report* (StOR). The Assembly welcomed the continued evolution of the StOR Concept Note as a living document, based on the review provided by Member States and the advice by the StOR Advisory board, including the themes and storylines outlined. It further endorsed the preparation of a second edition of StOR under the guidance of the StOR Advisory Board (see [IOC Decision A-32/4.2](#)).

Further to the IOC decision, the Secretariat invited additional experts to participate in the StOR Advisory Board (cf Appendix I) to further discuss and advise on the concept note in terms of sections, scope, audience and topics. The result of this exercise is an updated concept note here attached as Appendix II.

In accordance with Decision A-32/4.2, two online consultation sessions with IOC Member States are being organized by the Secretariat on:

31 October 2023 09:00 a.m. CET – [register here](#), English only

31 October 2023 05:00 p.m. CET – [register here](#), English only

Once you have registered for one of the two consultation meetings, you will receive a confirmation email containing information about your online participation in the meeting.

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For further information leading up to the online events please contact Ms Kirsten Isensee ([k.isensee@unesco.org](mailto:k.isensee@unesco.org)) and Ms Yun Jie Lee ([yi.lee@unesco.org](mailto:yi.lee@unesco.org)).

Yours sincerely,

*[signed]*

Vladimir Ryabinin  
Executive Secretary

Enclosures (2): Appendix 1/ Composition of the *State of the Ocean Report* Advisory Board  
Appendix 2/ Concept note of the *State of the Ocean Report* (September 2023)

## Appendix I/ Composition of the State of the Ocean Report Advisory Board

### Secretarial support :

Henrik Enevoldsen, i.a. Head of Ocean Science Section

Kirsten Isensee, Programme Specialist Ocean Science Section

Yun Jie Lee, Programme Specialist Ocean Science Section

<b>Experts</b>			
<b>Country</b>	<b>Title</b>	<b>Name/First name</b>	<b>Institution</b>
Australia	Ms	Wicks, Louise	Bureau of Meteorology
Brazil	Mr	de Pinho, Roberto	Ministry of Science, Technology and Innovation
Chile	Mr	Fierro, Juan José	Servicio Hidrográfico y Oceanográfico de la Armada
Germany	Mr	Wunsch, Matthias	Bundesamt für Seeschifffahrt und Hydrographie
Japan	Mr	Michida, Yutaka	University of Tokyo
Kuwait	Ms	Al-Yamani, Faiza	Kuwait Institute for Scientific Research
Senegal	Ms	Dioh, Mariama	Ministère des Pêches et de l'Economie Maritime / Direction des Pêches Maritimes
Spain	Mr	González-Quirós, Rafael	Instituto Español de Oceanografía
USA	Mr	Naughton, Joseph	National Oceanic and Atmospheric Administration
<b>IOC Secretariat members</b>			
IOC-UNESCO WMO	Mr	Belbeoch, Mathieu	International Center of Excellence for Coordination and Monitoring of Meteo-Oceanographic Observing Systems
IOC-UNESCO	Mr (Ms)	Barbière, Julian (Clausen, Alison)	Marine Policy and Regional Coordination Section, Decade Coordination Unit
IOC-UNESCO	Ms	Heslop, Emma	Ocean Observations and Services Section
IOC-UNESCO	Mr	Pissierssens, Peter	International Oceanographic Data and Information Exchange
IOC-UNESCO	Mr	Aliaga, Bernardo (Chang Seng, Denis)	Tsunami Resilience Section

## Appendix II/ Concept note of the State of the Ocean Report (September 2023)

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### Background

1. In recent years, a renewed focus on the world's ocean and appreciation of its crucial role for life on Earth, the global climate, food security, human health and wellbeing, as well as its contribution to the global economy, have led to an increased demand by decision-makers for relevant, strategic, current, and easily accessible information on the state of the ocean.
2. At its 53<sup>rd</sup> session in February 2021, the IOC Executive Council (EC) considered the proposal to prepare a periodic 'IOC State of the Ocean Report (StOR)' as a response to the previously mentioned increased demand for the key information on the state of the ocean (see [IOC/INF-1393](#)). Following the 53<sup>rd</sup> session of the Executive Council, the IOC Secretariat invited Member States to express their views on the spatial and temporal scope of the report, focus areas, and style of presentation (cf. IOC Circular Letter, [2843](#)). In parallel the IOC Secretariat convened an informal expert consultation on the StOR to further discuss its main features. The results of the Member States and expert consultation are synthesized in the [IOC/INF-1393 Rev.](#) The IOC Assembly at its 31<sup>st</sup> session in June 2021 endorsed the production of a Pilot StOR, which was presented to the IOC Executive Council at the 55<sup>th</sup> session in 2022.
3. The 'State of the Ocean Report 2022 – Pilot edition' was presented to the Executive Council in June 2022. This first edition was structured around the ten initial Challenges of the UN Decade of Ocean Science for Sustainable Development, 2021–2030, and also identified an urgent need for a quantitative description of the state of the ocean and the capacity to report changes. The pilot edition consists of 21 sections and was authored by 65 authors and peer reviewed by 40 experts (see IOC Technical Series, [173](#)). The pilot edition was presented to the wider public on the occasion of the UN Ocean Conference in Lisbon (27 June–1 July 2022) shortly after the Executive Council had welcomed the concept and sought further guidance from Member States.

### StOR review process by IOC Member States and IOC Secretariat

4. Following the 55<sup>th</sup> session of the Executive Council, the IOC Secretariat invited Member States to provide further views on the pilot edition of the StOR and recommendations on how to improve future editions, focusing on its scope and publication frequency (IOC Circular Letter, [2899](#)). Eighteen (18) IOC Member States answered this call between July and September 2022 and provided advice (see [IOC-32/4.2.Doc\(1\)](#)).
5. A StOR Advisory Board was established in the first quarter of 2023 to support the preparation of the revised StOR concept note and to actively guide the preparation of the next StOR edition to be launched at the Ocean Decade Conference, 10–12 April 2024 in Barcelona, Spain. The StOR Advisory Board is composed of experts from IOC Member States and the IOC Secretariat. The IOC Secretariat invited national experts, taking into account the representation of the different electoral groups.
6. During the 32<sup>nd</sup> session of the IOC Assembly Member States agreed on the following Terms of Reference for the StOR Advisory Board ([IOC Decision A-32/4.2](#)):
  1. *Guide the ongoing development of the Concept Note of the State of the Ocean Report to ensure the further refinement of the purpose, frequency, scope, target audience, and alignment of the StOR with other UN assessment reports.*
  2. *Provide advice to the Secretariat in support of the production of the StOR, including:*
    - (i) *defining themes relevant for the different Ocean Decade Outcomes,*
    - (ii) *identifying the respective topics for the section,*
    - (iii) *identifying authors and reviewers for each section which reflect diversity in expertise, gender, geographic representation, career status and Indigenous Peoples and other coastal communities.*

3. *Provide regular reports on the concept and production of the StOR to IOC governing bodies.*

7. The revised concept note is the result of consultation with the Member States and guidance from the Advisory Board.

### **Revised StOR objective and scope**

8. The StOR has the ambition to:

- (i) Inform decision-makers about gaps in the implementation of the Ocean Decade outcomes and, in the longer term, about gaps on the path to ocean well-being. The StOR will be used to inform policy and administrative priorities and identify research focus areas that need to be strengthened or developed.
- (ii) Inform policymakers about the state of the ocean to stimulate actions towards ‘the ocean we need for the future we want’, contributing to the 2030 Agenda and in particular SDG 14, which reads ‘Conserve and sustainably use the oceans, seas and marine resources’, as well as other global processes such as the UNFCCC, the Convention on Biological Diversity, and the Sendai Framework. The StOR will be used to assist in the implementation of stronger science-based ocean governance frameworks at national and global levels.

9. The StOR will present the results of ocean-related scientific activities and analyses to describe the current and future state of the ocean, addressing physical, chemical, ecological, socio-economic and governance aspects, focusing on the seven Outcomes of the Ocean Decade.

10. The Ocean Decade Outcomes represent the main features of the ‘ocean we want’ at the end of the Decade and are therefore well suited to serve as a framework for monitoring the state of the ocean during the Decade. Structuring the report around the Outcomes rather than the Challenges should improve the assimilation of the results presented. It will also strongly complement the other elements of the Ocean Decade monitoring and evaluation framework that focus on action-oriented activities and other key elements of the enabling environment of the Ocean Decade. Even after the end of the Decade the outcomes will represent general and globally agreed priorities on the path to ocean well-being. This will ensure that the StOR also has a long-term perspective beyond the Decade.

11. The target audience of the StOR are therefore primarily policy- and decision-makers, while being a potential source for information about the status of the ocean for the media and the general public.

12. The majority of the StOR sections will be provided by IOC expert working groups and projects, IOC affiliated activities, Ocean Decade programmes, and based on collaborations with other international and UN organizations.

13. There are already a number of related publications which focus on the ocean or contain dedicated sections exploring ocean themes, raising awareness on the importance of the ocean for the general public, policymakers and other marine stakeholders, such as the UN World Ocean Assessment (WOA), WMO *State of the Global Climate Report*, IPBES, Sofia Report, IPCC reports, AMS *State of the Climate Report*, among others. More information about the StOR and how it compliments many of these efforts was presented in [IOC/INF-1393](#).

14. The StOR is intended to make a complementary contribution to the United Nations ocean-related processes, providing a succinct summary of the latest information available with a view to achieving the Outcomes of the Ocean Decade. The StOR also complements the information presented in the UNESCO-IOC *Global Ocean Science Report*, which focuses on the enabling framework for ocean science, leading to the findings and assessments presented in the StOR.

## **Structure and timeline of production**

15. It is expected that the next edition of the StOR, to be published in 2024, will feature multiple sections representing topics covering global assessments relevant to each Ocean Decade Outcome.

16. Future editions of the StOR shall be comprehensive but concise, with 2-5 sections per Ocean Decade Outcome. A section is a brief narrative description of a parameter(s) related to the specific Ocean Decade Outcome.

17. The decision on topics and list of contributors to each section is guided by the StOR Advisory Board and the review by Member States. A preliminary list of relevant themes and lead authors for each Outcome, is provided in Annex 1. Lead authors are invited to fill gaps in the authorship in diversity in expertise, gender, geographic representation, career status and Indigenous Peoples and other coastal communities, where appropriate.

18. A 2- to 3-page executive summary will be preceding the main body of the text, organized around the seven Ocean Decade Outcomes, illustrating key findings highlighted by sections.

19. The authors of each section are asked to provide a quantitative assessment related to the topic, not exceeding 3 pages (including figures and references). The figures and graphs included in the section, once redesigned, will be an important tool to illustrate the findings to a non-expert audience. Authors are advised to follow the section template (see Annex 2) which guides on content and format. Each section will be organized as follows: a brief introduction to the issue presented and why it is relevant for illustrating the respective outcome, a description of the current state of knowledge with quantitative and qualitative analyses and conclusions, as well as next steps that would be required for the topic of the contribution to achieve the respective Ocean Decade Outcome.

20. A timeline/ Gantt chart for the production of the 2024 edition guides the preparations (Annex 3).

## **Financial and administrative implications**

21. The StOR is part of the activities under Function D, 'Support assessment and information to improve the science-policy interface'. The allocated regular budget is insufficient to produce the StOR (RP Workplan n°802: Follow-up to SDGs, WOA & State of the Ocean Reporting).

22. The publication of a regular StOR will require human and extrabudgetary financial support by IOC Member States to finance coordination at the IOC Secretariat, editorial work, translation, layout, design, printing and communication.

## Annex 1: Proposed topics of sections and authors for the StOR 2024 edition

The table below is based on the revised concept note presented at the 32nd session of the IOC Assembly. The titles and authors are the results of previous consultations with the Advisory Board, the pilot edition presented in 2022 and the review by Member States.

Ocean Decade Outcome	Proposed section heading	Authors	Relation to IOC
A clean ocean where sources of pollution are identified and reduced or removed.	Status and trends of nutrients and eutrophication, including strategies on how to reduce them	Alexander F. Bouwman and John A. Harrison, supported by Back to Blue	IOC and UNEP led initiative
	Status and trends of plastic pollution, including strategies on how to reduce them	Peter Kershaw and Bethanie Carney, supported by Back to Blue	GESAMP 40 supported by IOC
A healthy and resilient ocean where marine ecosystems are understood, protected, restored and managed.	Status and trends of ocean acidification	Katherina L. Schoo, Jan Newton, Steve Widdicombe and Kirsten Isensee	GOA-ON (IOC co-organizer) and OARS (Decade programme, co-lead), SDG 14.3.1 custodian agency
	Status and trends of warming (not addressed yet)	Mercator	
	Status and trends of deoxygenation	Andreas Oschlies and Hernan Garcia, GO2NE	GO <sub>2</sub> NE is an IOC working group
	Status and trends of marine life, e.g. biodiversity, different functional groups.	for plankton: Peter Thompson, Jacob Carstensen and Hans Paerl / for increasing knowledge and threats: Mark J. Costello, J. Tom Webb, Pieter Provoost and Ward Appeltans	TrendsPo IOC WG and OBIS related to Marine Life 2030
	Status and trends of marine protection, restoration, marine management	for MSP: Michele Quesada da Silva, Joanna Smith and Ingela Isaksson; Chenae Neilson and Elisabetta Bonotto on behalf of Coordinator Team of the International Partnership for Blue Carbon	MSP IOC led programme and IPBC IOC is part of the coordinator team IOC co-organizes the Blue Carbon Initiative
A productive ocean supporting	Status and trends of a sustainable ocean economy	FAO, World Economic Forum, OECD	

Ocean Decade Outcome	Proposed section heading	Authors	Relation to IOC
sustainable food supply and a sustainable ocean economy	and blue food supply, such as fisheries, aquaculture, maritime transport, coastal, marine and maritime tourism, other traditional uses, coastal renewable energy, seabed mining, and bioprospecting.		
A predicted ocean where society understands and can respond to changing ocean conditions.	Status and trends of ocean prediction capacities, products, guidelines and best practices	Nadia Pinardi, Vassiliki Kourafalou, Joaquín Tintoré, Emma Heslop and Mairead O'Donovan, Pierre Bahruel, Enrique Fanjul	GOOS/ETOOFS and CoastPredict
	Status and trends of sea level rise	Anny Cazenave and Gary Mitchum, Xuebin Zhang (CSIRO)	Tsunami Resilience Section
	Predictions of the changing potential of the ocean carbon sink including mCDR	Experts from IOC-R and GESAMP	GESAMP 41 supported by IOC and IOC-R is an IOC working group
A safe ocean where life and livelihoods are protected from ocean-related hazards.	Status and trends and Impacts of response systems of ocean-related hazards	Bernardo Aliaga, Rick Bailey, Bruce M. Howe, Srinivasa Kumar Tummala and Yong Wei, Christa von Hillebrandt-Andrade, Harkunti Pertiwi Rahaya, Silvia Chacon	Tsunami Resilience Section
	Status, trends and impacts of harmful algae blooms	Gustaaf M. Hallegraeff, Adriana Zingone and Henrik Enevoldsen	IOC-FAO/IPHAB
An accessible ocean with open and equitable access to data, information and technology and innovation.	Status of access to a sustainable ocean observing system	Emma Heslop, Mathieu Belbeoch, Ward Appeltans and Serita van der Wal	GOOS, OceanOPS
	Status of open access to ocean data at the global level	for GOOS: Emma Heslop, Mathieu Belbeoch, Ward Appeltans, Kevin O'Brien and Pieter Provoost / for IODE: Peter Pissierssens, Lucy Scott,	IODE, GOOS



Ocean Decade Outcome	Proposed section heading	Authors	Relation to IOC
		Claudia Delgado and Ward Appeltans / for GEBCO: Marzia Rovere, Aileen Bohan, Caroline Bringensparr, Evert Flier, Jamie McMichael-Phillips, Helen Snaith, Pegah Souri and Pauline Weatherall	
An inspiring and engaging ocean where society understands and values the ocean in relation to human wellbeing and sustainable development.	Status and trends in building global ocean literacy	Emma McKinley and Ronaldo Christofolletti	IOC-led Ocean Literacy programme
	Status and trends of civil society/private sector involved in ocean science and observation	OceanObs	OceanObs
	Efforts to include indigenous and traditional knowledge in ocean science	UNESCO LINKS programme	Guidance on ILK provided by IO

## Annex 2: The StOR Contribution Template

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### Outcome X

**[Title]** maximum 80 characters

Authors: [name, first name<sup>1</sup>, name, first name<sup>2</sup>, ....]

<sup>1</sup> [Affiliation, Country, email corresponding author]

<sup>2</sup> [Affiliation, country]

[Introductory text including relevance of the topic to the Decade outcome in question ]

150 words maximum

[Description of findings, trends, status]

500 maximum

[Conclusion, next steps]

150 words maximum

Figure [X]. [caption text]. Source: [text].

### References

examples, authors are encouraged to focus on the main publications and apply the style below:

Friedlingstein, P., O'Sullivan, M., Jones, M. W., Andrew, R. M., et al. 2020. Global Carbon Budget 2020. *Earth System Science Data*, Vol. 12, pp. 3269–3340. <https://doi.org/10.5194/essd-12-3269-2020>

IPCC. 2019. *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*. (H.-O. Pörtner, D. C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama and N. M. Weyer (eds.)). In press. <https://www.ipcc.ch/srocc/>

### Additional resources

maximum 3, follow the example

IOC SDG 14.3.1 portal <http://oa.iode.org>

Global Ocean Acidification Observing Network <http://goa-on.org>

Ocean Acidification Research for Sustainability Ocean Decade Programme <http://goa-on.org/oars/overview.php>

### Additional guidance:

- Number of figures maximum 2
- Footnotes should be avoided

### Annex 3: Timeline for the preparation of the StOR to be published in 2024



