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State of the Ocean Report (StOR)

Status and progress

IOC Officers Meeting 22-24 January 2024

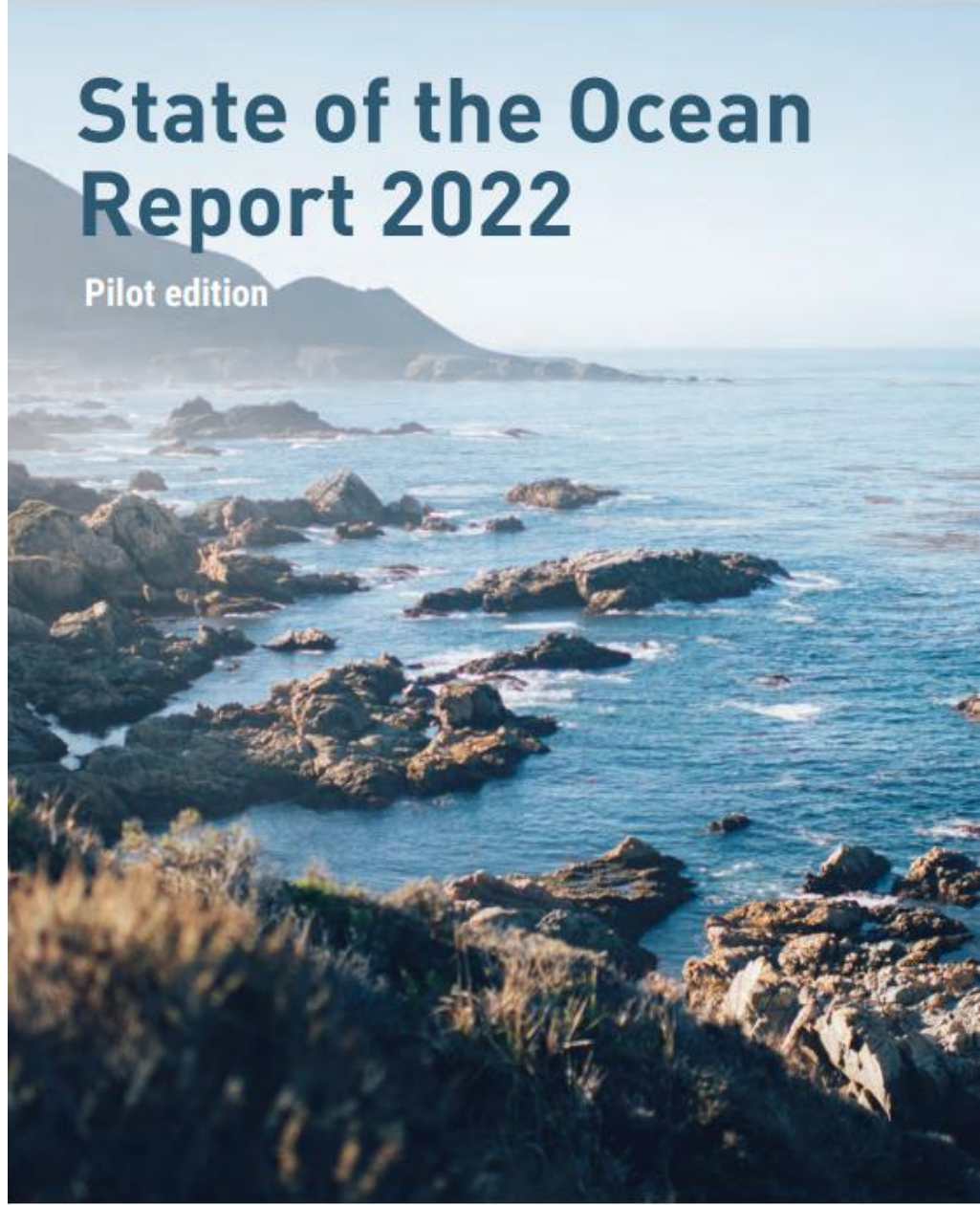
StOR Pilot edition

presented at 55th session of the IOC EC in 2022

- To demonstrate the feasibility of keeping the world up to date on the current state of the ocean
- Based on examples from IOC-led or joint initiatives
- Structured around the initial Challenges of the UN Decade of Ocean Science for Sustainable Development, 2021–2030
- 65 authors from 15 countries and 40 reviewers from 20 countries
- Launched publically at the UN Ocean Conference in Lisbon, Portugal (27 June - 1 July 2022)

State of the Ocean Report 2022

Pilot edition



StOR review process

by Member States and IOC secretariat

- IOC Secretariat invited Member States to provide their views and recommendations (July – September 2022)
- 18 IOC Member States provided comments and advice

Comments from MS

- Language should be understandable by non-scientists
- Some Member States recommended to focus on global changes, while others recommended to include regional case studies
- Should be aligned with the Ocean Decade process
- Focus on status not enabling framework
- Identification of the key indicators for different challenges is needed and they should be highlighted in the report
- Publication frequency: annually (7 countries) and biannually (8 countries)



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Revised concept note presented at 32nd session of IOC Assembly

- The basis for the revised concept note: Member State review and the guidance provided by the Advisory Board, and additional comments from all IOC sections.
- The StOR will feature the results of analyses ocean-related scientific activities towards the description of the present, and future state of the ocean, addressing physical, chemical, ecological, socio-economic and governance aspects focusing on the **7 Ocean Decade Outcomes** at the **global level**.
- The StOR will include contributions **not only by IOC projects and affiliated programmes, but also by other UN agencies and other relevant organizations**, which will be identified and invited to provide storylines based on the guidance provided by the StOR advisory board.
- The StOR, **intended to be published biannually**, is envisaged to be a complementary contribution to ocean related UN processes, by **providing a succinct summary of the latest information** available towards achieving the Outcomes of the Ocean Decade.



Decision StOR 32nd IOC Assembly - IOC Decision A-32/4.2



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The Assembly,

- Recalling the needs and views of IOC Member States with regard to the value-added, contribution, contents and structure of an IOC State of the Ocean Report (StOR) as compiled by the IOC Secretariat in response to the dedicated IOC Circular Letter 2843 issued on 28 May 2021 (IOC/INF-1393 Rev.);
- Having considered the contents and format of the Pilot edition of the IOC State of the Ocean Report as expressed by the Executive Council in its Decision IOC/EC-55/3.3,
- Taking note of the outcomes of the Pilot StOR further review consultation with IOC Member States through IOC Circular Letter 2899 and the incorporation of the outcome in the revised StOR Concept Note as detailed in document IOC/A-32/4.2.Doc(1),
- Welcomes the establishment of the StOR Advisory Board, taking into account the representation of the different electoral groups and the Terms of Reference annexed to this decision;
- Also welcomes 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;
- Endorses the development of a second StOR under the guidance of the StOR Advisory Board, and subject to the availability of extrabudgetary resources;

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Decision StOR 32nd IOC Assembly - IOC Decision A-32/4.2



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- Requests the Executive Secretary in consultation with the StOR Advisory Board to:
 - (i) **issue a Circular Letter with a revised Concept Note specifying the purpose, scope, target audience, and alignment of the StOR with other UN assessment reports; together with a detailed outline of the second edition of the StOR; to Member States for their comments;**
 - (ii) **convene a virtual meeting of Member States to present the outcomes of the feedback and agree on next steps; and**
 - (iii) draft the second edition of the StOR for presentation at the 2024 UN Ocean Decade Conference in Barcelona;
- Also requests the StOR Advisory Board, with the support of the Secretariat, to provide a report on the second edition of the StOR to the IOC Executive Council at its the 57th Session for Member States review and additional guidance;
- Invites IOC Member States to provide extrabudgetary financial resources to the realization of the IOC State of the Ocean Report.

Annex to Decision A-32/4.2

StOR Advisory Board Terms of Reference

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 storylines.
 - (iii) identifying authors and reviewers for each storyline 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.

StOR Advisory Board



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- 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
- Composed of a total of 14 experts, representing 9 Member States, which provided input to the review process considering the different electoral groups, and the IOC Secretariat.

Experts			
Country	Title	Name/First name	Institution
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'Économie Maritime / Direction des Pêches Maritimes
Spain	Mr	González-Quirós, Rafael	Instituto Español de Oceanografía
USA	Mr	Naughton, Joseph	National Oceanic and Atmospheric Administration
IOC Secretariat members			
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

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

What is new?



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Reduced redundancy in the text

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

StOR based on data from IOC programmes and affiliated projects where available and on complementary data from other international organizations where required to deliver a StOR addressing all Decade outcomes.

Frequency – regular, depending on financial and human resources

StOR a complementary contribution to the UN 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 GOSR – focus on the enabling framework for ocean science, leading to the findings and assessments presented in the StOR.



What is new?



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

Guidance for authors:

- provide a quantitative assessment related to the topic, not exceeding 3 pages (including figures and references),
- figures and graphs included in the section, once redesigned, will be an important tool to illustrate the findings to a non-expert audience,
- Section template - 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.



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)	Karina von Schuckmann	
	Status and trends of deoxygenation	Hernan Garcia, Takamitsu Ito, Zhankun Wang, James Reagan, Tim Boyer and Courtney Bouchard, GO2NE	GO ₂ 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 / for blue carbon : 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



<p>A productive ocean supporting sustainable food supply and a sustainable ocean economy</p>	<p>Status and trends of 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.</p>	<p>Tarub Bahri, Manuel Barange, Vera Agostini</p>	<p>FAO, World Economic Forum, OECD</p>
<p>A predicted ocean where society understands and can respond to changing ocean conditions.</p>	<p>Status and trends of ocean prediction capacities, products, guidelines and best practices</p>	<p>Nadia Pinardi, Vassiliki Kourafalou, Joaquín Tintoré, Emma Heslop and Mairead O'Donovan, Pierre Bahruel, Enrrique Fanjul</p>	<p>GOOS/ETOOFS and CoastPredict</p>
	<p>Status and trends of sea level rise</p>	<p>Anny Cazenave and Gary Mitchum</p>	<p>Tsunami Resilience Section</p>
	<p>Predictions of the changing potential of the ocean carbon sink including mCDR</p>	<p>Chris Vivian, Philip W Boyd and Böttcher Miranda</p>	<p>GESAMP 41 supported by IOC and IOC-R is an IOC working group</p>





<p>A safe ocean where life and livelihoods are protected from ocean-related hazards.</p>	<p>Status and trends and Impacts of response systems of ocean-related hazards</p>	<p>Bernardo Aliaga, Rick Bailey, Bruce M. Howe, Srinivasa Kumar Tummala and Yong Wei, Christa von Hillebrandt-Andrade, Harkunti Pertiwi Rahaya and Silvia Chacon</p>	<p>Tsunami Resilience Section</p>
	<p>Status, trends and impacts of harmful algae blooms</p>	<p>Gustaaf M. Hallegraeff, Adriana Zingone and Henrik Enevoldsen</p>	<p>IOC-FAO/IPHAB</p>
<p>An accessible ocean with open and equitable access to data, information and technology and innovation.</p>	<p>Status of access to a sustainable ocean observing system</p>	<p>Emma Heslop, Mathieu Belbeoch, Ward Appeltans and Serita van der Wal</p>	<p>GOOS, OceanOPS</p>
	<p>Status of open access to ocean data at the global level</p>	<p>for GOOS: Emma Heslop, Mathieu Belbeoch, Ward Appeltans, Kevin O'Brien and Pieter Provoost / for IODE: Peter Pissierssens, Lucy Scott, Ana Carolina Mazzuco and Ward Appeltans / for GEBCO: Marzia Rovere, Aileen Bohan, Caroline Bringensparr, Evert Flier, Jamie McMichael-Phillips, Helen Snaith, Pegah Souri and Pauline Weatherall</p>	<p>IODE, GOOS</p>





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	Mathieu Belbeoch	OceanObs
	Efforts to include indigenous and traditional knowledge in ocean science	Crawhall Nigel Thomas, Flamand Aude, Ikhlef Khalissa, Quesada Da Silva Michele and Fernanda Terra Stori	Guidance on ILK provided by IO



