Prepared by IOC Secretariat – 19 January 2023

Revised concept note for the second edition of the

‘State of the Ocean Report’

1. **Background**

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 and society at large for relevant, strategic, current, and easily accessible information on the state of the ocean.

At its 53rd 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](https://oceanexpert.org/document/27624)). Following the 53rd IOC EC, 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 ([CL-2843](https://oceanexpert.org/document/28087)). In parallel the IOC Secretariat convened an informal expert consultation on the StOR to further discuss the main features of a possible StOR. The results of the Member States and expert consultation are synthesized in the [IOC/INF-1393 Rev](https://oceanexpert.org/document/28482). This document was presented at the 31st session of the IOC Assembly in June 2021 and Member States endorsed the production of a Pilot StOR, to be presented at the 55th session of the IOC EC in 2022.

Following this the ‘State of the Ocean Report 2022 – Pilot edition’ was presented to the 55th session of the IOC EC in June 2022. This first edition was structured around the ten initial Challenges of the [UN Decade of Ocean Science for Sustainable Development](https://oceandecade.org/), 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 report consists of 21 storylines[[1]](#footnote-1) and was authored by 65 authors and peer reviewed by 40 experts. The Executive Council welcomed the report and adopted Decision IOC/EC-55/3.3, which lays out the consecutive process.

*The Executive Council,*

*Taking into account 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 as compiled by the IOC Secretariat in response to the dedicated IOC Circular Letter issued on 28 May 2021 (IOC/INF-1393 Rev.),*

*Also taking into account the recommendations of the informal expert consultation on the possible scoping of an IOC State of the Ocean Report (IOC/INF-1393 Rev.),*

*Noting the suggested contents and format of the pilot edition of the IOC State of the Ocean Report in IOC/EC-55/33.Doc(1),*

*Welcomes the regular publication of the IOC State of the Ocean Report building on the model provided by the pilot edition of the Report and taking into account the comments made during the 55th session of the Executive Council;*

*Requests the IOC Executive Secretary to issue a circular letter summarizing the discussions held at the 55th session of the Executive Council and seeking guidance of Member States on the scope, process, frequency and plans going forward with a view to improve the pilot IOC State of the Ocean Report to be presented to the Assembly at its 32nd session;*

*Also requests the IOC Executive Secretary to coordinate the production of the Report;*

*Invites IOC Member States to provide extrabudgetary financial resources to the realization of the Report as per the typology of expenses presented in the pilot edition of the IOC State of the Ocean Report;*

*Also invites all scientific partners of the IOC to contribute to, and rely on the Report, to present their findings on the status and trends of our common ocean from the perspectives of ocean health and needed management interventions;*

*Calls upon the IOC Executive Secretary to promote the findings on the IOC State of the Ocean Report through appropriate communication channels.*

The IOC Secretariat further used the opportunity of the UN Ocean Conference in Lisbon, Portugal (27 June - 1 July 2022) to present the pilot [StOR to the wider public](https://ioc.unesco.org/news/unesco-launches-new-state-ocean-report-monitor-progress-meeting-global-goals).

1. **Review process by IOC Member States and IOC Secretariat**

Following the 55th session of the IOC EC, the IOC Secretariat invited Member States to provide their views on the first version of the StOR and their recommendations on the the second version of the pilot StOR, focusing on its scope and publication frequency, to improve the quality of the report (CL-2899). The review from the Member States ran from July to September 2022, and a total of 18 Member States provided their comments and advice. Member States were asked to provide input to three categories, the scope of the report, the frequency and additional comments (summary in Annex I) The secretariat took the Member State advice as the basis for the updated concept note (this document), with the aim to accommodate the comments and suggestions.

1. **StOR objective and scope**

Based on the comments received from Member States, the IOC secretariat will continue to coordinate the production of future editions of the StOR, which 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](https://oceandecade.org/vision-mission/). which directly contribute to the vision of the Ocean Decade and encompass the 10 Ocean Decade Challenges. The Ocean Decade Outcomes represent the key characteristics of the ‘ocean we want’ at the end of the Decade and thus lend themselves well to being the framework for tracking the state of the ocean over the life of the Decade. Structuring the report around the Outcomes rather than the Challenges is expected to increase the uptake of the presented findings. It will strongly complement the other elements of the monitoring and evaluation framework of the Decade that focus on to meet the action-oriented Ocean Decade Challenges and on the key elements of the Ocean Decade enabling environment. The revised StOR will include contributions not only by IOC projects and affiliated programmes, but also by other UN agencies and organizations. Following the advice by Member States, the objective will be to compile a concise overview of the current state of the ocean, helping scientists, policymakers and decisionmakers to mobilize global society to act towards ‘the ocean we need for the future we want’ contributing to the 2030 Agenda and in particular [SDG 14](https://www.un.org/sustainabledevelopment/oceans/), which reads ‘Conserve and sustainably use the oceans, seas and marine resources’, as well as other global processes such as the UNFCCC, CBD, Sendai Framework. There are already a number of 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, policy makers and other marine stakeholders. Among the publications highlighting the importance of the ocean is the World Ocean Assessment (WOA), the first edition was published in 2016 and the second in 2021. The second assessment is a comprehensive report which was authored by over 300 scientists, nominated by United Nations Member States, and comprises more than 1000 pages. The StOR, intended to be published biannually, builds on this momentum and 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.

The StOR has the ambition to inform policy action, support decisions on research focus areas that need to be strengthened or developed and assist in the implementation of stronger science-based governance frameworks at national and global levels by strengthening the ocean science-policy interface.

It is expected that the second edition of the StOR will be published in 2024. With the framework now being the Outcomes and not the Challenges, the report will feature multiple storylines (2-5 per Outcome) representing topics covering global assessments relevant for each Outcome.

A StOR advisory board, to be established in the first quarter of 2023, will guide the preparation of the upcoming StOR, particularly in defining themes relevant for the different Outcomes and identifying the respective topics for the storylines and corresponding authors. The StOR advisory board will be composed of approximately 10 experts from IOC Member States, taking into account the Member States which contributed to the review process and the electoral groups, as well as the IOC Secretariat.

The second edition of the StOR, will be a comprehensive but concise report with 2-5 storylines per Ocean Decade Outcome. Storylines being brief narrative description of parameter(s), issues describing the trend and activities including figure(s) illustrating the trend and activities.

The topics and list of contributors of the storylines will be decided by the StOR advisory board. A preliminary list of relevant themes under each Outcome, assisting in the identification of relevant topics for the different storylines, is listed in Annex II. These themes are based on the Member State review and the previous StOR publication. In order to keep the report succinct each storyline will be maximum 2 pages (incl. figure(s) and references).

A 2-3 page executive summary will be, like the main body of the report, organized around the 7 Ocean Decade Outcomes, preceding the main body of text will illustrate key findings highlighted by each storyline.

Authors of each storyline are asked to provide figures and graphs easy to understand for a non-expert audience. Contributors are advised to follow the storyline template (Annex III) providing guidance on content and format. Each storyline will be organized as follows: a brief introduction to the issue presented, description of the current state of knowledge and conclusions as well as next steps, which would be required for the topic of the storyline to achieve the respective Outcome.

1. **Timeline for the preparation of the second edition of the StOR**

|  |  |
| --- | --- |
| Timeline | Actions |
| July – September 2022 | * Member States consultation on the StOR |
| October – December 2022 | * Analysis of the consultation result |
| January 2023 | * Presentation of revised concept note for the second edition of the StOR to IOC officers |
| January - February 2023 | * Formation of StOR Advisory Board |
| March - April 2023 | * Consultations of the StOR Advisory Board, definitions of storyline topics * Drafting initial structure and topics of the report in consultation with the StOR Advisory Board * Inviting inputs from UN agencies and experts |
| April – May 2023 | * Finalization of the progress report focusing on the improvements from the first edition |
| June 2023 | * Presentation of a progress report at the 32nd session of the IOC Assembly |
| September 2023 | * Deadline to receive contributions by UN agencies and expert working groups towards the second edition of the StOR |
| October – November 2023 | * Expert review |
| November - December 2023 | * Incorporation of comments by authors * Drafting of Executive Summary |
| January 2024 | * Layout and translation |
| April / May 2024 (Dates TBC) | * Publication of StOR (Launch at the Second International Ocean Decade Conference, Barcelona, Spain) |

ANNEX I

**Summary of StOR Member State review**

|  |  |
| --- | --- |
| **Category** | **Comment** |
| *Scope of the report* |  |
| Please advise how to improve the template in terms of format, length, inclusion of figures etc. | * Document needs to be shortened, potentially reduce to a subset of challenges * Focus on quantitative information, where possible * Recommended use of high resolution infographics, potentially videos * Depending on length include short summary in the beginning or end * Improve online access not only pdf and hard copy * Identification of the audience should be clear. * Language should be understandable by non-scientists * Template to be improved, by instructing to have the key take-home message(s) as few short sentences or bullet points for each storyline, also provide instruction for minimum/maximum * Structure could be as follows: (1) Current stage of knowledge; (2) Knowledge gaps; (3) Recommendations on how these gaps could be closed. * Some Member States recommended to focus on global changes, while others recommended to include regional case studies * Provide guidance on number of references |
| Advise on the relevance of the existing storylines | * Future editions of the StOR could consider placing a greater emphasis on how science is informing solutions that can be implemented by people. In particular, the role of First Nations peoples, local communities and local industries that are reliant on a healthy ocean are important to highlight in future reporting. * Same number of storylines for each challenge * Identification of the key indicators for different challenges is needed and they should be highlighted in the report * The focus on status not enabling framework |
| Propose how to improve the currently used indicators and benchmarks | * No need to define new indicators and goals, rather specify the state of the ocean at the moment, in terms of well-defined variables or parameters. * Each information concerning the state of the ocean is relevant, however the report should highlight the issues most relevant for a large audience * The pilot edition of the StOR is structured along the Decade Challenges. This should be maintained, whereby the direct reference to the Decade is taken up/continued. |
| Advise on how to identify new potential indicators. | * The StOR should not aim to identify new indicators, but rather new parameters that allow us to give the most complete vision of the state of the ocean. * Should be aligned with the Ocean Decade process * The report could include social indicators to show how people perceive and/or understand phenomena that occur on a day-to-day basis. * Reports of state of the sea/ocean for marginal and coastal seas could be consulted and considered to identify relevant parameters. * Potentially add to each challenge, number of programmes, projects contributing to it. * The StOR could include information on ship-originated pollution, oil spill modeling, marine traffic information. |
| *Frequency of the report* |  |
| How often should the StOR be published? | * 7 countries annually, 8 biannually * It will require 2-3 years to measure progress within the storylines |
| Additional comments |  |
| Please advise on relevant UN Organizations and the information they could provide and to which Decade challenges. | * Align and discuss with WOA * Challenge 1: Information on pollution observations and pollution reducing activities: UNEP, Basel Convention Secretariat, GESAMP * Challenge 2: Information on ecosystem observations and ecosystem restoration activities: UN Decade of Ecosystem Restoration – UNEP, FAO, CBD, CMS, Ramsar, WMO, UNDP, UN-Habitat * Challenge 3: Information on ocean food resources and activities: UNCTAD, ESCAP, FAO, ILO, UNDP, UNIDO * Challenge 4: Information on ocean industries and economies: UNDESA, ISA, UNCTAD, ESCAP, FAO, ILO, IMO, UNIDO, IACSD, UNDP, WTO * Challenge 5: Information on climate observations and climate activities: UNFCCC, WMO, IMO, UNIDO, UNCTAD, UNDP * Challenge 6: Information on ocean hazards and activities: UNFCCC, WMO, IMO, FAO * Challenge 7: Information on comprehensive ocean observations including socio-ecological and socio-economic observations: UNFCCC, WMO, IMO, FAO, UNEP , GESAMP, DOALOS, CBD, CMS, SOCA, WTO * Challenge 8: Information needed for a digital twin of the ocean: UNFCCC, WMO, IMO, FAO, UNEP GESAMP, DOALOS, CBD, CMS, Ramsar, SOCA, UNIDO, UNCTAD, UNDP * Challenge 9: Information on capacity building activities, knowledge: UNFCCC, WMO, IMO, FAO, UNEP, GESAMP, DOALOS, CBD, CMS, SOCA, UNIDO, UNCTAD, UNDP, UNDESA * Challenge 10: Information on socio-ecological and socio-economic observations and activities, literacy activities: UNDESA, ISA, UNCTAD, ESCAP, FAO, ILO, IMO, UNIDO, UNFCCC, WMO, FAO, CBD, CMS, UNEP , DOALOS, CITES, GESAMP, SOCA, WTO, UNESCO education, UN-WOMEN |
| Please suggest additional resources to be consulted to support the IOC Secretariat in the preparation of the StOR. | * Member States suggested to consult products of various UN organizations, NGOs and international organizations such as, International Coral Reef Initiative (ICRI) and its Global Coral Reef Monitoring Network (GCRMN), Ocean High Level Panel, SCAR, WMO statement of the state of the climate. |
| Please let us know if you have any further advice to improve the next edition of the StOR. | * Incorporation of latest available knowledge * Establish a transparent editorial process |

ANNEX II

**7 Ocean Decade Outcomes and relevant themes for storylines**

The table below lists the 7 Ocean Decade Outcomes and themes potentially illustrating the status and trends towards achieving the Outcomes. Themes are supposed to assist in the identification of storyline topics. The list of themes should be considered preliminary and will develop further based on the input by the StOR Advisory board and consultations throughout the preparation of upcoming StOR editions.

|  |  |
| --- | --- |
| A clean ocean where sources of pollution are identified and reduced or removed. | Status and trends of nutrients and eutrophication, plastic pollution  Strategies to reduce ocean pollution |
| A healthy and resilient ocean where marine ecosystems are understood, protected, restored and managed. | Status and trends of ocean stressors and their impacts, e.g. ocean acidification, warming, deoxygenation, sea level rise  Status and trends of marine life, e.g. biodiversity, different functional groups.  Status and trends of marine protection, restoration, marine management |
| A productive ocean supporting sustainable food supply and a sustainable ocean economy. | Status and trends of ocean economy, such as fisheries, aquaculture, maritime transport, coastal, marine and maritime tourism, other traditional uses, coastal renewable energy, marine ecosystem services (i.e. blue carbon), seabed mining, and bioprospecting. |
| A predicted ocean where society understands and can respond to changing ocean conditions. | Status and trends of ocean predictions  ocean carbon and oxygen  Status, trends and impacts of ocean based mitigation efforts, in particular marine carbon dioxide removal technologies |
| A safe ocean where life and livelihoods are protected from ocean-related hazards. | Status, trends and impacts of ocean related hazards  Status, trends and impacts of harmful algae blooms |
| An accessible ocean with open and equitable access to data, information and technology and innovation. | Status and trends of the ocean observing system  Status and trends of ocean data management  Status and trends of access to technological and human resources relevant for ocean activities  Status and trends of capacity building in the field of ocean science and marine management |
| An inspiring and engaging ocean where society understands and values the ocean in relation to human wellbeing and sustainable development. | Status and trends of ocean literacy activities’ implementation |

ANNEX III

**The StOR Template**

**Outcome X**

***[Title]*** maximum 80 characters

Authors: [name, first name1, name, first name2, ….]

1 [Affiliation, Country, email corresponding author]

2 [Affiliation, country]

[Intro text]

150 words maximum

[Description of findings, trends, status]

300 words 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 protal <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

1. Storyline definition: brief narrative description of parameter(s), issues describing the trend and activities including figure(s) illustrating the trend and activities. [↑](#footnote-ref-1)