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| Summary  This document presents developments related to the preparation of the Second edition of the Global Ocean Science Report (GOSR 2020) since the 51st session of the IOC Executive Council in 2018, with specific reference to the newly developed GOSR data portal and progress in the implementation of GOSR to be published in 2020. |

### Background Information

Since 2014, the IOC has added to its mandate the publication of the Global Ocean Science Report (GOSR) based on decisions [EC-XLVII/6.2](http://ioc-unesco.org/index.php?option=com_oe&task=viewDocumentRecord&docID=14087) and [IOC-XXVIII/5.](http://ioc-unesco.org/index.php?option=com_oe&task=viewDocumentRecord&docID=16578)1 adopted respectively by the IOC Executive Council at its 47th session (Paris, 1–4 July 2014) and the IOC Assembly at its 28th session (Paris, 18–25 June 2015).

The [first edition of the GOSR](https://en.unesco.org/gosr), launched on 8 June 2017, assessed for the first time the status and trends in ocean science capacity around the world. It offers a global record of how, where, and by whom ocean science is conducted. The GOSR identifies and quantifies the key elements of ocean science at the national, regional and global scales, including workforce, infrastructure and publications. It represents the first collective attempt to systematically highlight opportunities as well as capacity gaps to advance international collaboration in ocean science and technology.

The GOSR is a resource for policymakers, academics and other stakeholders seeking to harness the potential of ocean science to address global challenges by informing strategic decisions related to funding for ocean science, pointing to opportunities for scientific collaborations and fostering partnerships aimed at developing further capacity in ocean science.

The GOSR 2020 should be part of a transformative process to provide the needed capacity in ocean science in the context of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030), the 2030 Agenda at large, and Sustainable Development Goal (SDG) 14, in particular. It is intended to provide the baseline against which to assess progress in the development of capacity in the area of ocean science in the course of the UN Decade. The Second edition of the Global Ocean Science Report will be published in concomitance with the second United Nations Ocean Conference in 2020 in Lisbon, co-convened by Portugal and Kenya.

### Developments since the 51st session of the IOC Executive Council

In its Decision [IOC/EC-LI/4.3](http://www.ioc-unesco.org/index.php?option=com_oe&task=viewDocumentRecord&docID=22090), the IOC Executive Council encouraged each Member State to contribute actively to the Second edition of the GOSR report by providing relevant data and information through the GOSR data portal and, in particular, by contributing actively to the GOSR 2020 questionnaire.

The IOC Executive Council further reaffirmed through its decision IOC/EC-LI/4.3 the importance of the Global Ocean Science Report (GOSR) as the main mechanism to measure progress towards the achievement of Sustainable Development Goal (SDG) 14, Target 14.a (SDG Indicator 14.a.1), and recognized that investments in ocean science are key to developing sustainable ocean economies.

Based on the GOSR questionnaire and IODE survey that were used for the First edition of the GOSR, the IOC Secretariat prepared an improved draft questionnaire. The IOC Secretariat, in close cooperation with the [Editorial Board](http://www.unesco.org/new/en/natural-sciences/ioc-oceans/single-view-oceans/news/experts_kick_off_production_of_the_second_global_ocean_scien/), developed a new online questionnaire for the Second edition of the *Global Ocean Science Report (*GOSR 2020*)*, to which Member States were invited to report on the current status report of ocean science ([CL-2729](http://www.ioc-unesco.org/index.php?option=com_oe&task=viewDocumentRecord&docID=22577); [CL-2744](http://www.ioc-unesco.org/index.php?option=com_oe&task=viewDocumentRecord&docID=23135)). New topics addressed in the [questionnaire](https://gosr.ioc-unesco.org/en/survey) included ocean science capacity building and national infrastructures/activities related to the 2030 Agenda for Sustainable Development, with particular focus on SDG 14. The draft questionnaire also benefited from feedback by two IOC Member States from two IOC regions, and the UNESCO Institute for Statistics.

The GOSR data portal will provide the function of a data repository. It will further allow the submission and retrieval of data and metadata, related literature, feature multiple possibilities of visualization of data to meet the needs of multiple stakeholders, as well as give access to quality controlled survey data and information obtained via bibliometric analysis.

The second meeting of the Editorial Board of GOSR 2020 was held in Zanzibar, Tanzania, from 8 to 10 May 2019, generously hosted and supported by the Western Indian Ocean Marine Science Association (WIOMSA) as well as by the Flanders Marine Institute (VLIZ).

The main results of this meeting are summarized below:

* Confirmation of the outline of GOSR 2020: 1. Introduction; 2. Definitions, data collection and analyses; 3. Ocean science funding; 4. Research capacity and infrastructure; 5. Data and information; 6. Research productivity and science impact; 7. Implications and application of ocean science for sustainable development; 8. Conclusions and recommendations.
* Proposal to modify the title of the report from “Global Ocean Science Report – second edition” to “Global Ocean Science Report 2020”.
* Identification of additional authors (cf. [Annex I](#Annex_i); see [Annex II](#Annex_ii) for the preliminary of list peer- reviewers).
* An agreed set of questions to be addressed per chapter, and of visuals to be used to illustrate the ensuing analyses.
* A strategy on how to improve the number of submissions, including guidance on how to utilize relevant data from the GOSR-I.
* Feedback to the initial review of the bibliometric analysis for GOSR 2020 and provision of guidance for the finalization of the analysis.
* Identification of additional resources related to gender disaggregated data and non-English peer reviewed literature listed in the Aquatic Sciences and Fisheries Abstracts (ASFA).
* Review and approval of the communication strategy for GOSR 2020, including in relation to the need to develop region-friendly infographics and communication materials.
* Review and adaptation of timeline for the production of the GOSR 2020 and confirmation of the finalization and launch of GOSR 2020 on the occasion of the Second UN Ocean Conference (Lisbon, Portugal, 2 to 6 June 2020).

Financial support provided by the Republic of Korea for the development of the GOSR 2020 data portal and the bibliometric analysis, as well as support in kind, and the financial support by the United Kingdom for bibliometric research has enabled the progress of the GOSR 2020 this far. Continued and additional financial support is requested to complete the work required for the publication of the GOSR 2020.

### Table 1: GOSR 2020 Timetable 2018–2020

| **Dates** | **Actions** |
| --- | --- |
| **1Q 2018** | Decision concerning endorsement of the GOSR & Fundraising  Invitation of EB & Online survey development |
| **2Q 2018** | Collection of information with regard to the approved outline  EB meeting (confirmation of questionnaire) |
| **3Q 2018** | Circular Letter and Launching online survey |
| **4Q 2018** | MS submission of questionnaire and analysis |
| **1Q 2019** | Identification of co-authors and writing of individual chapters.  Circular Letter and Launching online survey.  Submission of questionnaire and analysis. |

| **Dates** | **Actions** |
| --- | --- |
| **2Q 2019** | Draft of the first text elements.  Identification of further expertise if needed. Discussions by e-mail and teleconference with the EB and experts from Member States. Review of the first text elements  Second EB meeting (8–10 May hosted by WIOMSA). |
| **3Q 2019** | Designing GOSR data portal and development.  Discussions by e-mail and teleconference with the Editorial Board and experts from Member States.  Review of the first text elements. |
| **4Q 2019** | Start of the GOSR data portal beta service.  GOSR survey 2nd round.  Writing and improving of text elements. |
| **1Q 2020** | Finalization of discussions by e-mail and teleconference.  Review of conclusions and recommendations.  Completion of the structure. |
| **2Q 2020** | Finalization of the report and executive summary.  Preparation of the presentation.  Launch of the GOSR2020, 2–6 June 2020 at the UN Oceans Conference. |

ANNEX I

**LIST OF AUTHORS OF GOSR 2020**

| **Chapter** | **Name** | **Institutional affiliation** |
| --- | --- | --- |
| **1. Introduction** | **Jan Mees** | **EB Lead and supporter** |
| **Jacqueline Uku** | **EB Lead and supporter** |
| Salvatore Aricò | IOC-UNESCO Secretariat |
| **2. Definitions, data collection and analyses** | **Roberto de Pinho** | **EB Lead and supporter** |
| **Claire Jolly** | **EB Lead and supporter** |
| Kirsten Isensee /  Itahisa Déniz González | **IOC-UNESCO Secretariat** |
| **3. Ocean science funding** | **Claire Jolly** | **EB Lead and supporter** |
| **Youn-ho Lee** | **EB Lead and supporter** |
| **Christian Wexels Riser** | EB |
| **Leonard Nurse** | EB |
| Kirsten Isensee /  Itahisa Déniz González /  Dongho Youm | IOC-UNESCO Secretariat |
| Elva Escobar Briones | Institute of Marine Science and Limnology, National Autonomous University of Mexico |
| Roberto de Pinho | UIS |
| **4. Research capacity and infrastructure** | **Paula Sierra Correa** | **EB Lead and supporter** |
| **Kwame Koranteng** | **EB Lead and supporter** |
| **Christian Wexels Riser** | EB |
| Kirsten Isensee /  Itahisa Déniz González | IOC-UNESCO Secretariat |
| Seonghwan Pae | KIMST (Korea Institute of Marine Science & Technology) |
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| Eugene Morozov | P. P. Shirshov Institute of Oceanology of Russian Academy of Sciences |
| Margareth Kyewelyanga | Institute of Marine Sciences, University of Dar es Salaam |
| Ann-Katrien Lescrauwaet | VLIZ |
| Francesca Santoro | IOC-UNESCO |
| **5. Data and information** | **Yoshihisa Shirayama** | **EB Lead and supporter** |
| **Paula Sierra Correa** | **EB Lead and supporter** |
| Peter Pissierssens | IOC-UNESCO Secretariat |
| Sergey Below | IODE co-chair |
| Kirsten Isensee | IOC-UNESCO Secretariat |
| Karina von Schuckmann | Mercator Ocean international |
| John Bemiasa | Marine Sciences and Fishery Institute |
| Cynthia Chandler | Woods Hole Oceanographic Institution (WHOI) |
| Yutaka Michida | University of Tokyo |
| **6. Research productivity and science impact** | **Ana Lara-Lopez** | **EB Lead and supporter** |
| **Jan Mees** | **EB Lead and supporter** |
| **Luis Valdés** | **EB Lead and supporter** |
| Margareth Kyewelyanga | Institute of Marine Sciences, University of Dar es Salaam |
| Henrik Enevoldsen | IOC-UNESCO Secretariat |
| Boris Kelly-Gerreyn | Bureau of Meteorology Observations and Infrastructure Division |
| Gladys Okemwa | Kenya Marine and Fisheries Research Institute |
| **7. Implications and applications of ocean science for sustainable development** | **Jacqueline Uku** | **EB Lead and supporter** |
| **Susan Roberts** | **EB Lead and supporter** |
| Salvatore Aricò | IOC-UNESCO Secretariat |
| Julian Barbière | IOC-UNESCO Secretariat |
| Francesca Santoro | IOC-UNESCO |
| Elva Escobar Briones | Institute of Marine Science and Limnology, National Autonomous University of Mexico |
| Richard Coleman | University of Tasmania |
| Karina von Schuckmann | Mercator Ocean International |
| Issufo Halo | Department of Conservation and Marine Sciences, University of Cape Town |
| **8. Conclusions and recommendations** | **Jan Mees** | **EB Lead and supporter** |
| **Jacqueline Uku** | **EB Lead and supporter** |
| Salvatore Aricò | IOC-UNESCO Secretariat |

ANNEX II

**LIST OF THE PRELIMINARY PEER-REVIEWERS**

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| **Name** | **Institutional affiliation** | **Note** |
| **Rohan Pathirage** | UNESCO Institute for Statistics | Internal Reviewer |
| **Roberto de Pinho** | UNESCO Institute for Statistics | Internal Reviewer |
| **Jan Mees** | Flanders Marine Institute | EB Co-Chairs |
| **Jacqueline Uku** | Western Indian Ocean Marine Science Association | EB Co-Chairs |
| **Claire Jolly** | Ocean Economy Group (OECD) | EB |
| **Youn-ho Lee** | Korea Institute of Ocean Science and Technology | EB |
| **Christian Wexels Riser** | The Research Council of Norway | EB |
| **Leonard Nurse** | Centre for Resource Management and Environmental Studies | EB |
| **Paula Cristina Sierra Correa** | Instituto de Investigaciones Marinas y Costeras José Benito Vives de Andreis | EB |
| **Kwame Koranteng** | Expert, Ghana | EB |
| **Yoshihisa Shirayama** | JAMSTEC (Japan Agency for Marine-Earth Science and Technology) | EB |
| **Ana Lara-Lopez** | The Integrated Marine Observing System University of Tasmania | EB |
| **Luis Valdés** | Centro Oceanográfico de Gijón, Instituto Español de Oceanografía | EB |
| **Susan Roberts** | The National Academies of Sciences, Engineering, and Medicine | EB |
| **Benjamin Pfeil** | University of Bergen ICOS Ocean Thematic Centre | External Reviewer |
| **Ed Urban** | Scientific Committee on Oceanic Research | External Reviewer |