Ocean Science Day 2019

Jan Mees

Co-chair GOSR-2020
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Ocean science – how, where and by whom?

Assesses for the first time the status and trends in ocean science capacity around the world.

A global record of how, where, and by whom ocean science is conducted.

Information used for reporting towards SDG target 14.a – 2030 Agenda for Sustainable Development

IOC-UNESCO, Global Ocean Science Report, 2017
http://unesco.org/gosr
Data resources

IOC and UNESCO Resources
IOC Questionnaire
IODE
JCOMMOPS
UNESCO Science Report
UNESCO Institute for Statistics
Science Metrix – contracted to provide information on the bibliometrics (science output)

Previously published reports/articles
Ocean Science in Canada
Belgian Marine Research - an overview
FP6 and FP7 reports
JPI
Ocean Economy – OECD
Royal Society...

UN/International/Intergovernmental councils/organizations
FAO
Worldbank
OECD
PICES
ICES

Online database
Research Vessel compilations
GO-Ship...

Official lists of participants of globally distributed international environmental and ocean science conferences – proxy for human resources and ocean science laboratories
Key Findings

1. Global ocean science is ‘big science’.
2. Ocean science is multidisciplinary.
3. There is more equal gender balance in ocean science than in science overall.
4. Ocean science expenditure is highly variable worldwide.
5. Ocean science benefits from alternative funding.
6. Ocean science productivity is increasing.
7. International collaboration increases citation rates.
8. Ocean data centres serve multiple user communities with a wide array of products.
9. Science-policy interactions can occur through many avenues.
10. National inventories on ocean science capacity exist only in few countries.
From the first to the second edition of the GOSR

1. New flagship report of IOC-UNESCO
2. First time data on human resources at the global level on ocean science
3. New visibility for IOC-UNESCO.
4. Editorial Board was engaged and advised throughout the process.
5. Indicator 14.a.1 included and moved up to Tier II.
6. New opportunities to present IOC’s work at multiple venues.
7. Several countries confirmed that they are now establishing national reporting mechanisms on ocean science capacities.
Editorial Board Meeting,
24-26 April 2018, Paris, France, IOC HQ

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New Items to include in the GOSR-II and to adjust from the GOSR-I

1. **GOSR-II questionnaire now online** – facilitating submission and analysis (support IODE)

2. **GOSR data portal** – ALL information open access (support IODE)

3. **Each chapter** will start with a box with approximately five key messages, which include emerging issues and highlight specific items of relevance to the UN Decade of Ocean Science for Sustainable Development.

4. Examples and **regional assessments** to be highlighted in boxes in each chapter.

5. **Highlight why countries conduct** and why they should enforce/support ocean science.

6. **New focus areas**: ocean science capacity development, innovative ways to measure ocean science output, e.g. patents.

7. **Each chapter needs to be self-standing**, including references, citation etc.
Navigating the Future V:

• Integrate the 4D structure & function of marine ecosystems into management practices;
• Establish an early-response system to gain better understanding of the short- and long-term impacts of events;
• Develop a business model for the long-term sustainability of ocean observations co-designed with stakeholders. Including biological observations, geological events, adaptive sampling and access to data in real-time;
• Create an ensemble of validated quantitative physical, biogeochemical, biological, bio-economic and socioecological models to quantify uncertainties and give early-warning indicators for multiple stressors or approaching tipping points;
• Develop the OIOT: new technologies; real time observation transfer to satellites/other communication networks;
• Develop a virtual reality ocean platform where all information is uploaded and visible to the public in real time;
• Promote dialogue across disciplines. Train holistic scientists and sustainability scientists;
• Enhance marine citizen science to understand the ocean as a common good whose health is crucial for humanity; and
• Set up a sustainability science forum, including industry and civil society partners.

European marine research towards the Ocean Decade

http://www.marineboard.eu/publications/navigating-future-v
Thank you for your attention!


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