



Item 2.2: IOC Update

35th Meeting of Joint IHO-IOC GEBCO Guiding Committee
Canberra, Australia
15 - 16 November 2018

Julian Barbière
Head, Marine Policy and Regional Coordination Section
Intergovernmental Oceanographic Commission/UNESCO

Member States:

- 149 Member States (as of 1 August 2018)
- Most recent member of IOC:
TURKMENISTAN
- Small Islands Developing States (SIDS)
membership in IOC: 35

IOC Medium-Term Strategy 2014-2021

- Healthy ocean ecosystems
- Effective early warning systems for tsunamis and others
- Increased resiliency to climate change and variability
- Enhanced knowledge of emerging ocean science issues

51st IOC Executive Council (3 - 6 July 2018, Paris)

Decision IOC-EC-LI/4.5 Report of the IOC Working Group on User Requirements and Contributions to GEBCO Products

The Executive Council,

Recalling decision EC-XLIX/4.4 establishing a regular working group tasked with collecting, integrating and assessing the user requirements for GEBCO products and addressing potential ways to contribute to GEBCO data and products,

Having examined the report of the working group submitted in document IOC/EC-LI/2 Annex 7, Recognizing the continued need of the IOC scientific community for bathymetric products and the fact that access to high quality bathymetry is important not only for navigation, but also for other purposes including ocean science, tsunami warning and preparedness and climate modelling,

Also noting that significant amounts of bathymetric data are collected by the scientific and commercial sector for purposes other than chart improvement, but are not easily made discoverable or available for secondary purposes,

Takes note of the conclusion of the review group;



51st IOC Executive Council (3 - 6 July 2018, Paris) cont.

Decision IOC-EC-LI/4.5 Report of the IOC Working Group on User Requirements and Contributions to GEBCO Products

Requests the Executive Secretary to:

- i) convey the conclusion of this review to the IHO and the GEBCO Guiding Committee;
- ii) identify ways and means to increase the participation of respondents, particularly representing the interest of IOC programmes, as well as regional subsidiary organs, in future assessments carried out by the working group;
- iii) share the findings of the review with relevant IOC communities;

Decides to conduct the Review of User Requirements and Potential Contributions to GEBCO on a biennial basis, with the next assessment to be presented to the IOC governing body in 2020;

Encourages Member States to:

- i) cooperate to advance basin-scale campaign mapping and accelerate the delivery of GEBCO objectives and general knowledge of the ocean in particular by supporting and contributing to the Nippon Foundation – GEBCO Seabed 2030 Project,
- ii) facilitate GEBCO capacity development, including training opportunities, and
- iii) actively participate in the next assessment, to be conducted by the Working Group.



Report of the IOC Working Group on User Requirements and Contributions to GEBCO Products

1) Relevance of GEBCO products (incl possible areas of improvement)

GEBCO's gridded bathymetric data sets

Grid display software

GEBCO Digital Atlas

Undersea Feature Names

IHO-IOC GEBCO Cook Book

2) User needs for GEBCO data and products

3) Contribution to GEBCO data and products

Options for strengthened cooperation for GEBCO data and products

Approach to increase data collected through scientific activities

Capacity-development needs in relation to GEBCO

IOC Contribution to Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ)

4 - 17 September 2018

IGC-1 on BBNJ New York

first session of the Intergovernmental Conference on BBNJ

- **Discussions**

- i) Marine Genetic Resources, including access and benefit sharing
- ii) Area Based Management Tools, including marine protected areas
- iii) Environmental Impact Assessments
- iv) Capacity Building and Transfer of Marine Technology, and the Clearing-House Mechanism (CHM)
- a draft text with options, to start text-based negotiations, to be shared well in advance of IGC-2
- IOC was potential coordinator for the CHM, linking with the CBD, ISA, UNFCCC

– **Potential Areas of IOC's Contribution:**

1. marine scientific research
2. capacity development and transfer of marine technology
3. data and information management



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of UNESCO)

Fifty-first Session of the Executive Council
UNESCO, Paris, 3–6 July 2018

ROADMAP

Item 4.1 of the Revised Provisional Agenda

A Vision for the Decade

Develop scientific knowledge, build
infrastructure and foster partnerships
for a sustainable and healthy ocean

The Science We Need for the Ocean We Want



The United Nations
Decade of Ocean Science
for Sustainable Development
(2021–2030)



2021
2030 United Nations Decade
of Ocean Science
for Sustainable Development



2021
2030 United Nations Decade
of Ocean Science
for Sustainable Development



Principles: Inclusive & transformative, focused on solutions

Science breakthroughs → top-down designed

- Mapping
- Observations
- Eco-systems
- Data and Information
- Multi-Hazard Warning Systems
- Ocean in Earth System Science
- CD, Education, Ocean Literacy

Pickup by **practice** → stimulated bottom-up



Coastal zone
management



Marine Spatial
Planning/
Blue economy



Fishery
management



Disaster Risk
Reduction
(Re-)insurance



Adaptation
Mitigation



Governance:
Policies
Peace
Security

Solutions



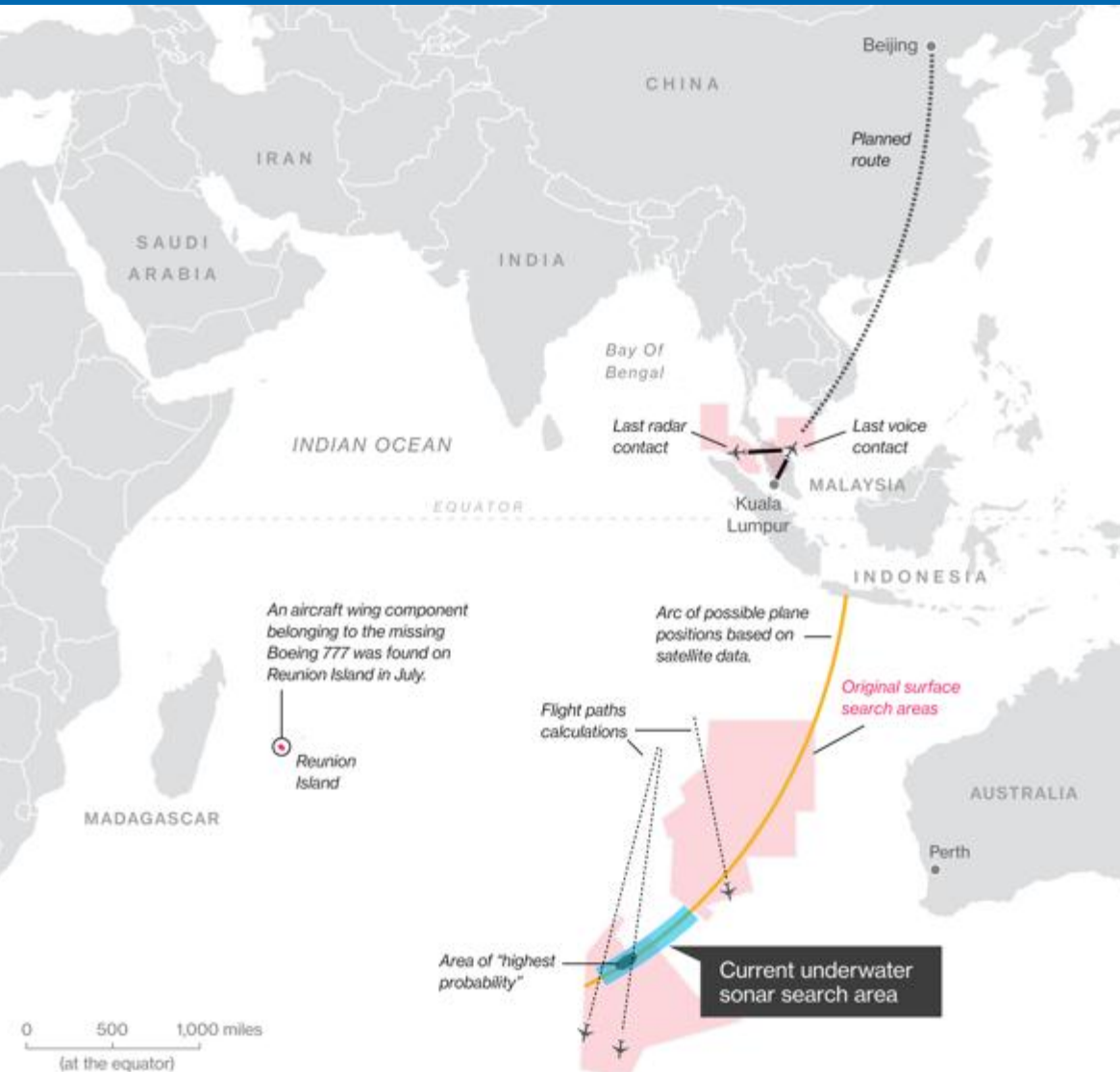
Resources

UN Decade of Ocean Science for Sustainable Development

Priority Research and Development Areas

R&D Priority Area 1:
Comprehensive map
(digital atlas) of the ocean

(Scope:
well beyond topography)

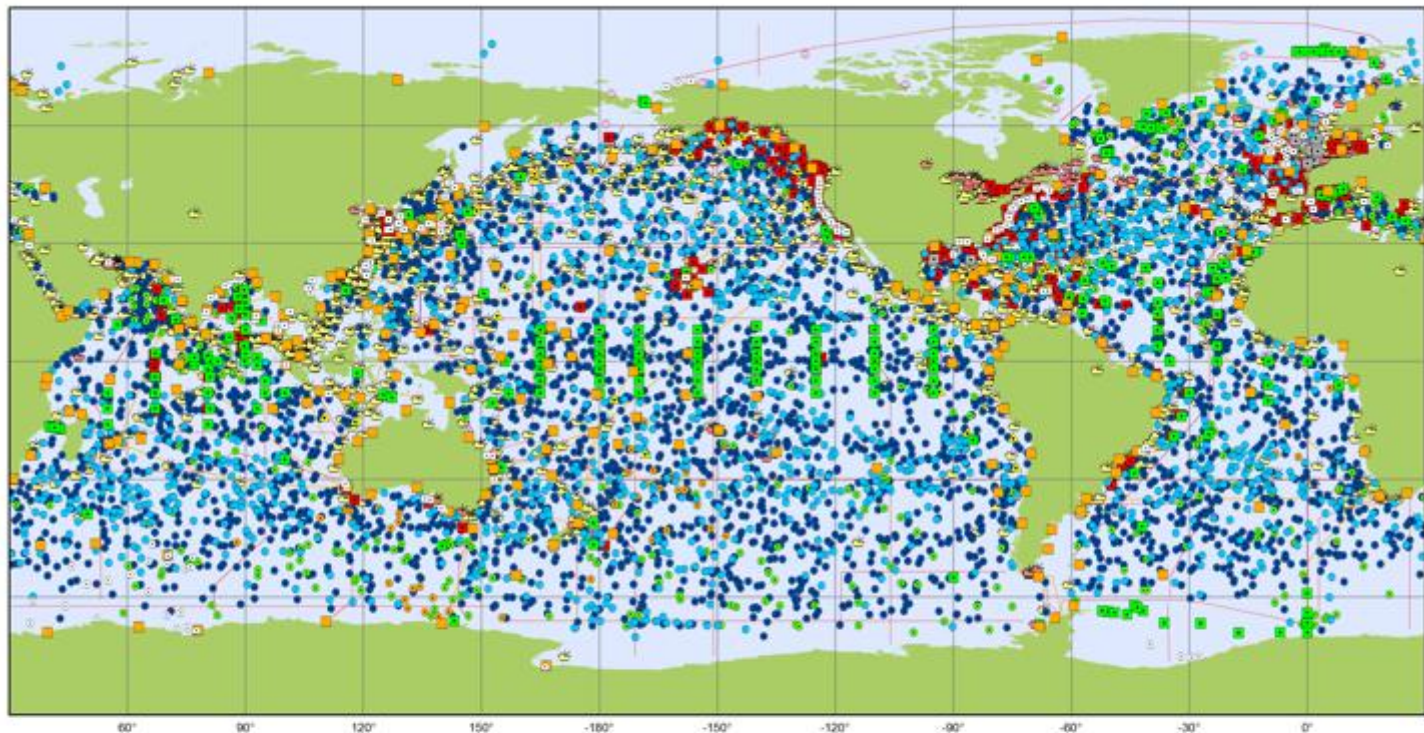


UN Decade of Ocean Science for Sustainable Development

Priority Research and Development Areas

R&D Priority Area 2:
A comprehensive ocean
observing system

(polar, bio, eco, BGC,
eDNA, deep ocean, +)



Main in situ Elements of the Global Ocean Observing System

April 2018

Profiling Floats (Argo)	Data Buoys (DBCP)	Timeseries (OceanSITES)	Ship based Measurements (SOT)	Other Networks
<ul style="list-style-type: none">Core (3815)Deep (57)BioGeoChemical (305)	<ul style="list-style-type: none">Surface Drifters (1408)Offshore Platforms (96)Ice Buoys (11)Moored Buoys (387)Tsunameters (32)	<ul style="list-style-type: none">Interdisciplinary Moorings (338)Repeated Hydrography (GO-SHIP)<ul style="list-style-type: none">Research Vessel Lines (61)Sea Level (GLOSS)<ul style="list-style-type: none">Tide Gauges (252)	<ul style="list-style-type: none">Automated Weather Stations (248)Manned Weather Stations (1767)Radiosondes (8)eXpendable BathyThermographs (37)	<ul style="list-style-type: none">HF Radars (270)Animal Borne Sensors (53)Ocean Gliders (31)

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UN Decade of Ocean Science for Sustainable Development

Priority Research and Development Areas

Large Marine Ecosystems of the World and Linked Watersheds



- | | | | | | |
|-------------------------------------|-------------------------|---------------------------|--|----------------------|------------------|
| 1 East Bering Sea | 13 Humboldt Current | 25 Iberian Coastal | 37 Sulu-Celebes Sea | 48 Yellow Sea | 60 Farnø Plateau |
| 2 Gulf of Alaska | 14 Patagonian Shelf | 26 Mediterranean Sea | 38 Indonesian Sea | 49 Kuroshio Current | 61 Antarctic |
| 3 California Current | 15 South Brazil Shelf | 27 Canary Current | 39 North Australian Shelf | 50 Sea of Japan | 62 Black Sea |
| 4 Gulf of California | 16 East Brazil Shelf | 28 Guinea Current | 40 Northeast Australian Shelf-
Great Barrier Reef | 51 Oyashio Current | 63 Hudson Bay |
| 5 Gulf of Mexico | 17 North Brazil Shelf | 29 Benguela Current | 41 East-Central Australian Shelf | 52 Okhotsk Sea | 64 Arctic Ocean |
| 6 Southeast U.S. Continental Shelf | 18 West Greenland Shelf | 30 Agulhas Current | 42 Southeast Australian Shelf | 53 West Bering Sea | |
| 7 Northeast U.S. Continental Shelf | 19 East Greenland Shelf | 31 Somali Coastal Current | 43 Southwest Australian Shelf | 54 Chukchi Sea | |
| 8 Scotian Shelf | 20 Barents Sea | 32 Arabian Sea | 44 West-Central Australian Shelf | 55 Beaufort Sea | |
| 9 Newfoundland-Labrador Shelf | 21 Norwegian Shelf | 33 Red Sea | 45 Northwest Australian Shelf | 56 East Siberian Sea | |
| 10 Insular Pacific-Hawaiian | 22 North Sea | 34 Bay of Bengal | 46 New Zealand Shelf | 57 Laptev Sea | |
| 11 Pacific Central-American Coastal | 23 Baltic Sea | 35 Gulf of Thailand | 47 East China Sea | 58 Kara Sea | |
| 12 Caribbean Sea | 24 Celtic-Biscay Shelf | 36 South China Sea | | 59 Iceland Shelf | |

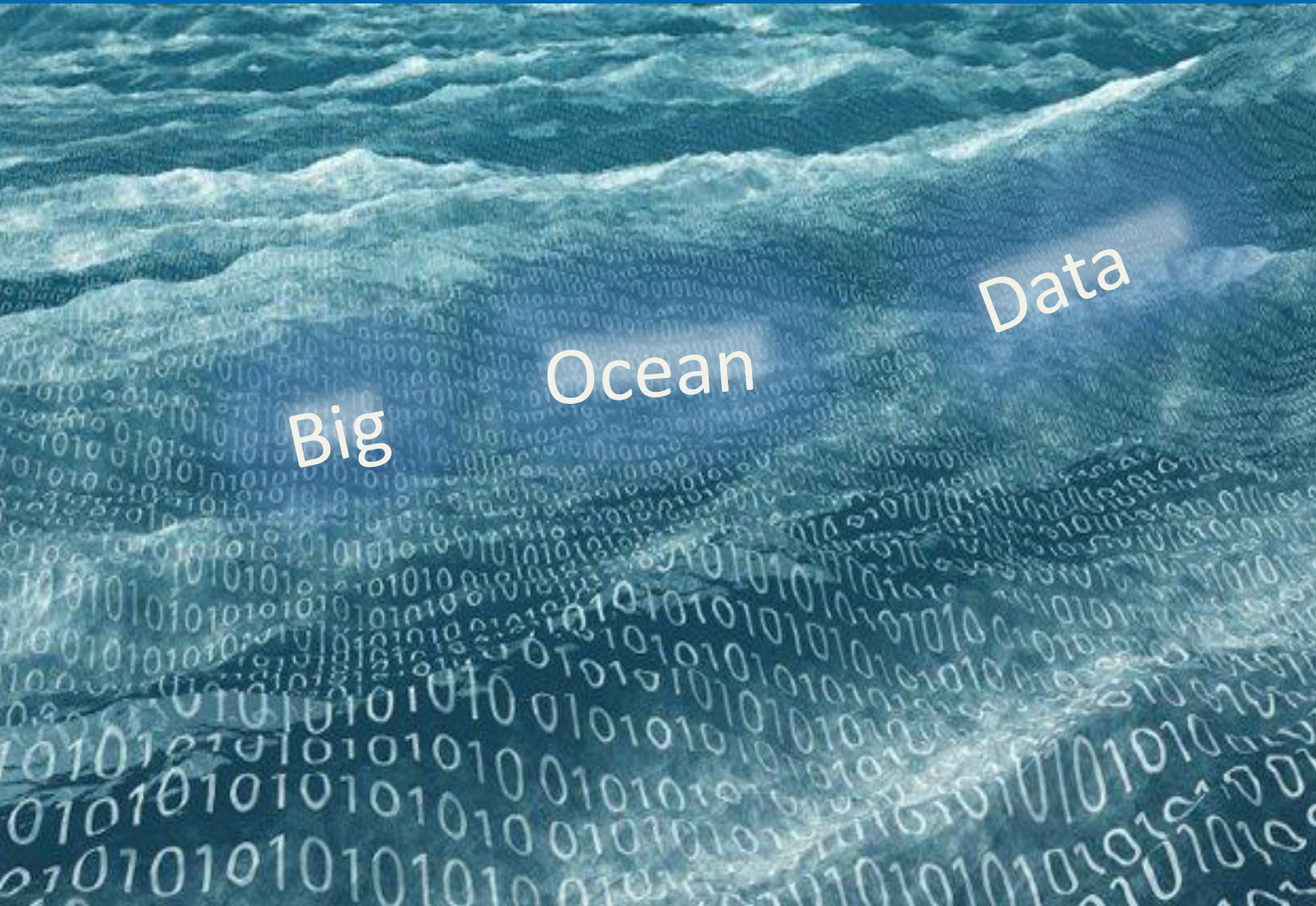
R&D Priority Area 3:

A quantitative understanding of ocean ecosystems as the basis for their integrated ocean management

(multiple stressors, deep ocean, bottom, predictive, assisted adaptation, e.g. of coral reef ecosystem)

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Priority Research and Development Areas



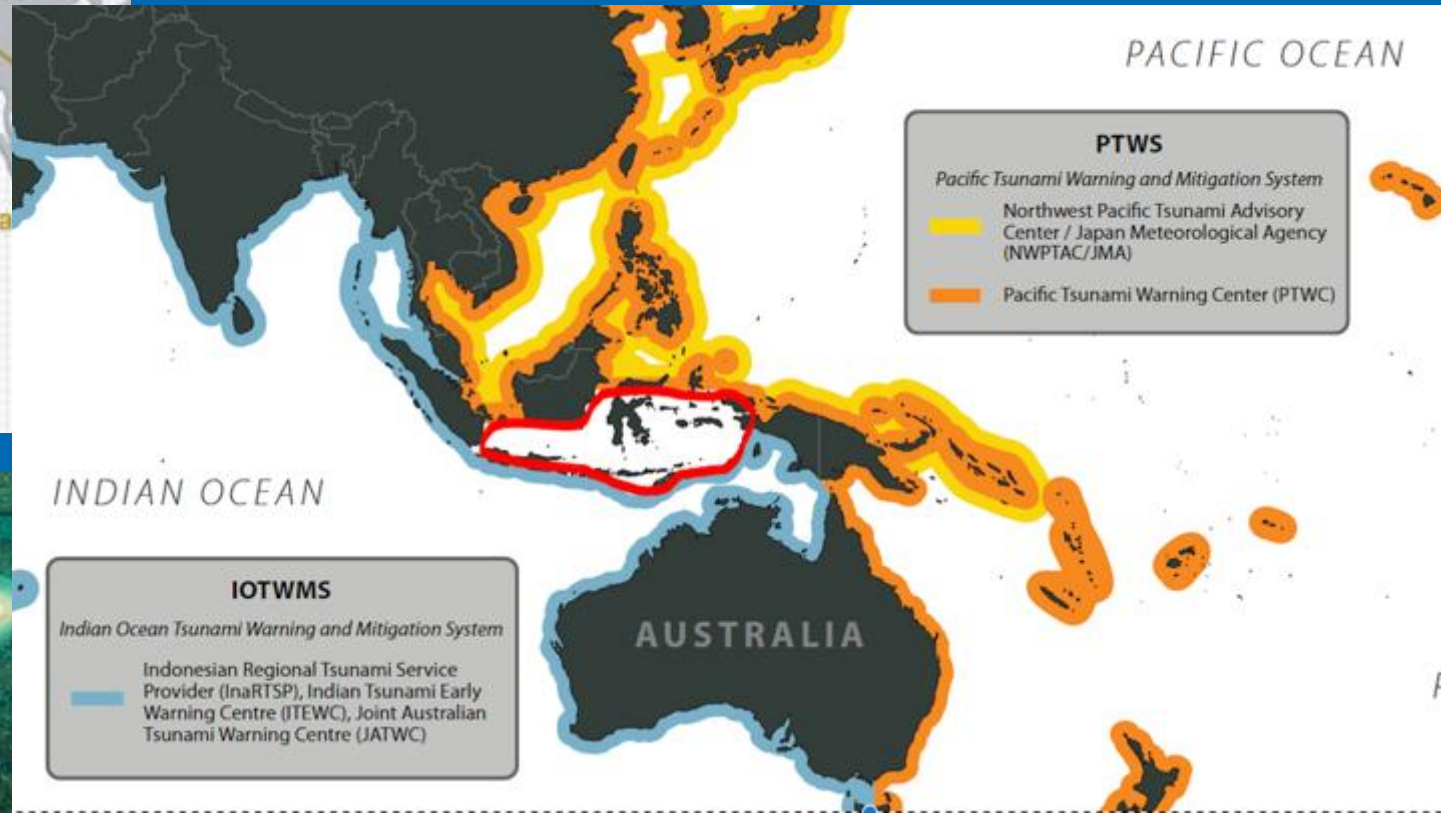
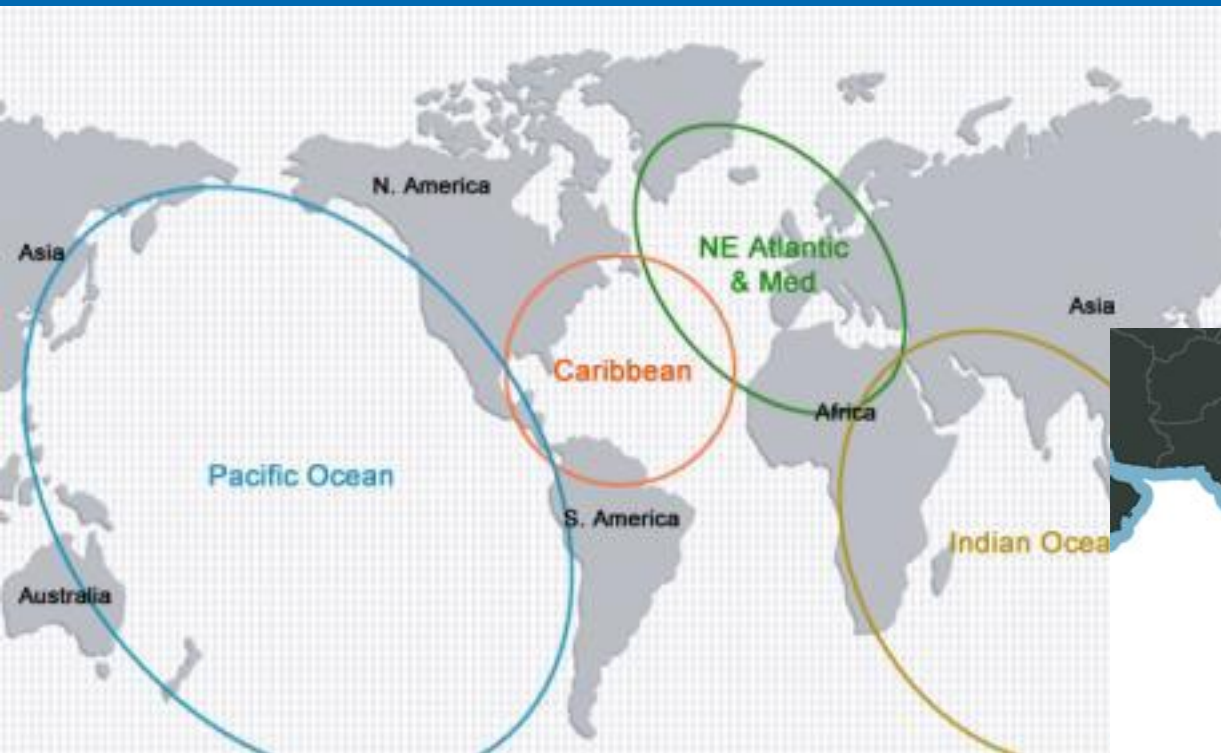
**R&D Priority Area 4:
Data & information
System**



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Priority Research and Development Areas

R&D Priority Area 5: Ocean dimension in an integrated multi-hazard warning system



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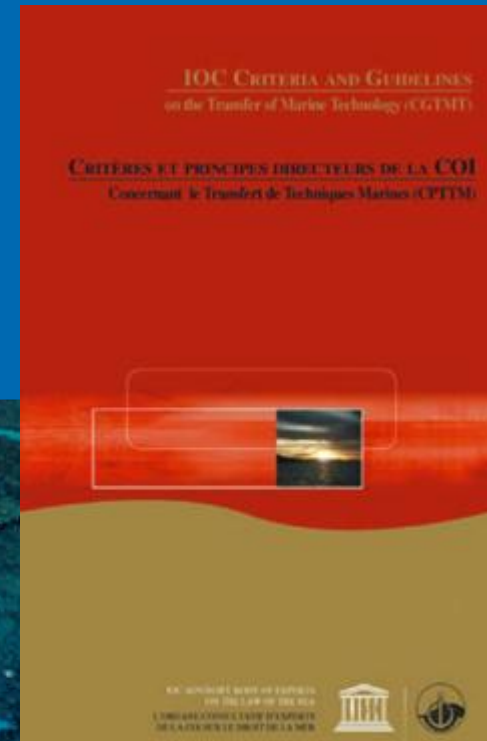
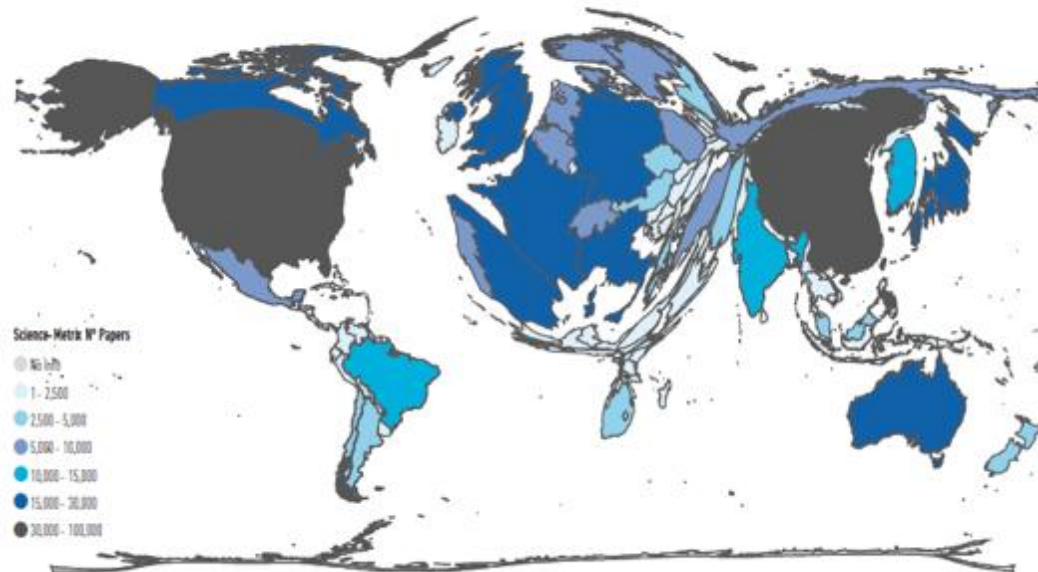
Priority Research and Development Areas



"FAR AND AWAY, THE GREATEST
THREAT TO THE OCEAN, AND
THUS TO OURSELVES, IS
IGNORANCE".

Sylvia Earle, President of [Mission Blue](#)

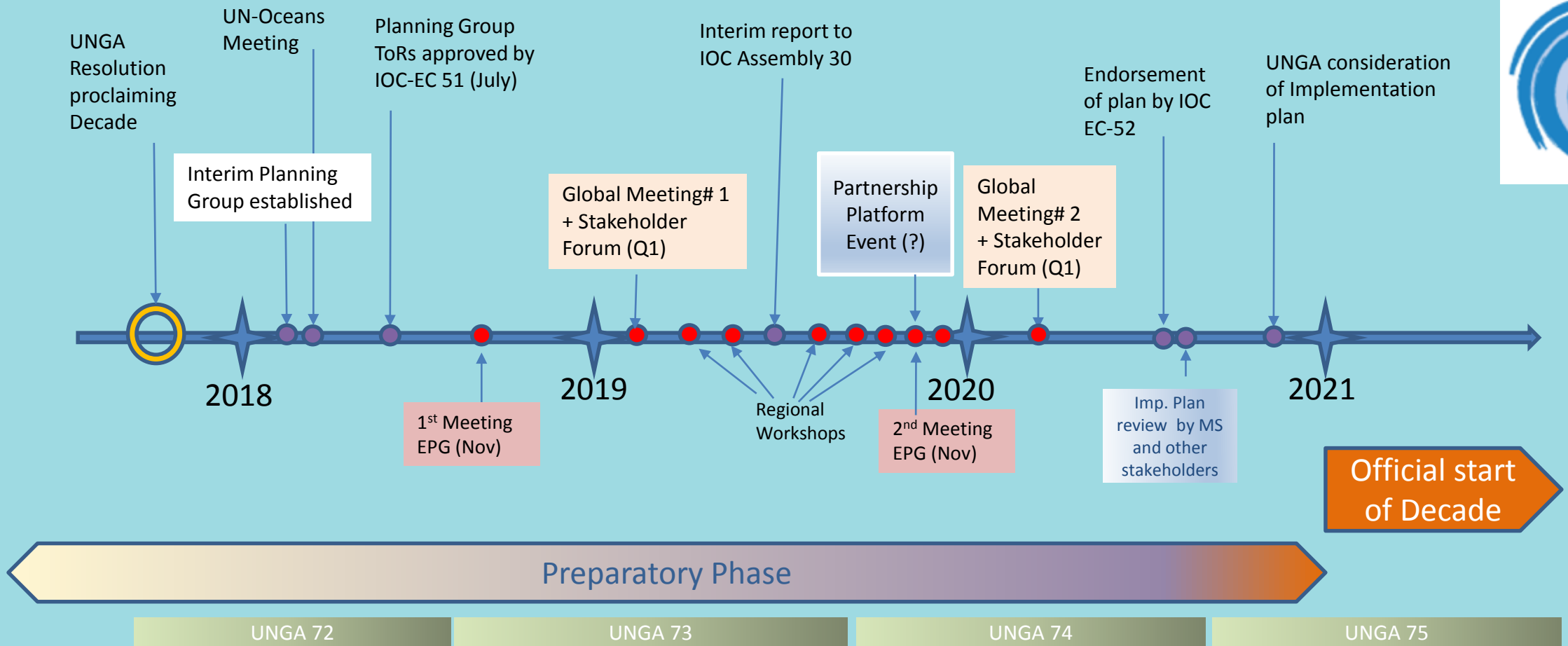
R&D Priority Area 6: Capacity Development Education and Training Ocean Literacy





HOW TO PREPARE THE DECADE: PREPARATORY PHASE (2018-2020) GOVERNANCE





Preparing for the Decade: Next Steps

Other issues

IOC Assembly, Paris, France –25 June -4 July 2019

- GEBCO Report / SB 2030 Press conference
- Financial allocation to GEBCO

GEBCO participation in IOC Regional Sub-Commissions in 2019

- IOCARIBE –XV -11-15 March 2018, Aruba
- WESTPAC-XII – 2-5 April 2018, Manilla
- IOCAFRICA – 25-27 March 2018, Nairobi

Participation of IODE as Ex-Officio Member

Thank you!

