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Организация
Объединенных Наций по
вопросам образования
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• Intergovernmental
Oceanographic
Commission

• Commission
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intergouvernementale

• Comisión
Oceanográfica
Intergubernamental

• Межправительственная
океанографическая
комиссия

Implementing and Monitoring the Sustainable Development Goals in the Caribbean: The Role of the Ocean

Workshop January 17 - 19th 2018
St Vincent and the Grenadines

Observational Requirements

Ecosystem Health

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United Nations
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Intergovernmental
Oceanographic
Commission

UN mechanism for ocean science, ocean observations and services, data and information exchange and capacity building

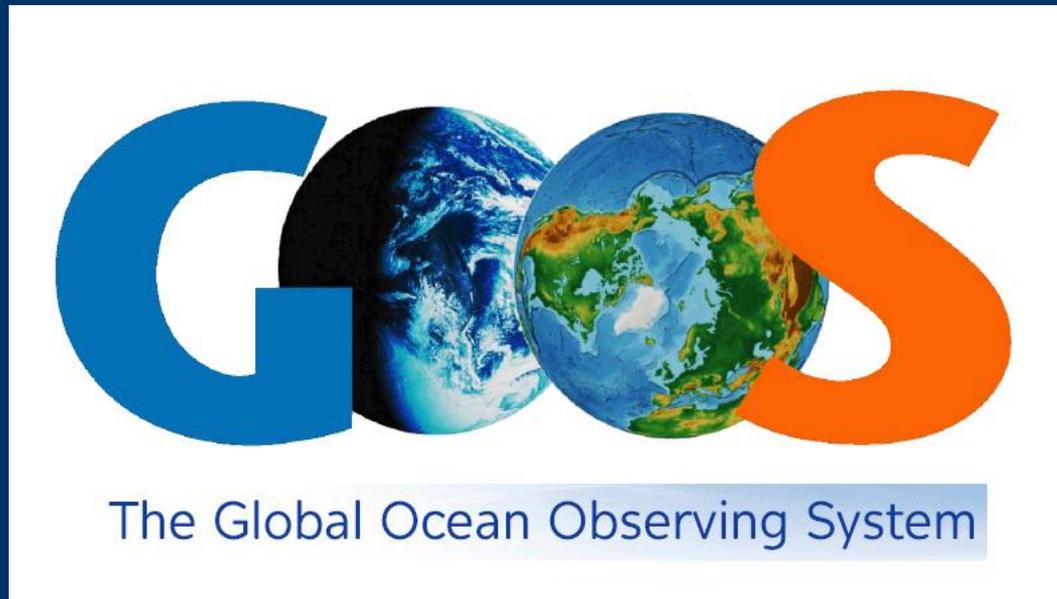
Established in 1960
149 Member States

IOC VISION

Strong *scientific understanding* and *systematic observations* of the changing world ocean climate and ecosystems shall *underpin sustainable development and global governance* for a healthy ocean, and global, regional and national management of risks and opportunities from the ocean.



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The GOOS is a sustained global collaborative system for observations, modeling, and analysis of marine and ocean variables to support research and operational ocean services.

GOOS coordinates observations across three critical cross-cutting themes: CLIMATE, REAL-TIME SERVICES, and OCEAN HEALTH. These themes are addressed by three discipline-based Expert Panels: Physics, Biogeochemistry, and Biology and Ecosystems.



The GOOS BioEco Panel aims to develop and coordinate international efforts to implement a sustained and targeted global ocean observation system of biological and ecosystem EOVs, driven by societal needs.

This information is crucial to inform priority scientific and societal questions that will facilitate critical policy development and management decision-making on ocean and coastal resource sustainability and health.

In addition to being scientifically credible in terms of providing an indicator of change, these EOVs should be based on

- (1) Relevance in helping to solve science questions and addressing societal needs,
- (2) Contribution to improving management of marine resources, and
- (3) Feasibility and practicality for global measurement in terms of cost, available technology, and human capabilities.

To identify biological and ecosystem EOVs, the Panel followed a DPSIR process (Drivers-Pressures-State-Impact-Response).

Societal drivers and pressures requiring sustained global ocean observations were identified by analyzing the goals and societal issues addressed by more than 20 major international bodies and/or conventions, either binding or non-binding.



DRIVERS	%	PRESSURES	%
Knowledge : Science / Data Access	74	Loss of Resources: Habitats / Biodiversity	91
Sustainable Use: Biodiversity and Resources	74	Climate Change	48
Conservation: Biodiversity and Ecosystems	65	Pollution / Eutrophication	48
Development: Sustainable Economic Growth	61	Coastal Development	39
Capacity Building	57	Invasive Species	35
Improve Management: Integrated Ecosystem Approach	61	Solid Wastes	30
Threat Prevention And Impact Mitigation	35	Ocean Acidification	22
Food Security	26	Extreme Weather Events	22
Environmental Quality: Health	26	Noise	22
		Mining	9

Table 1. Summary of societal drivers and pressures identified and percentage of international bodies addressing each of them.

The current state of ocean observation of biological and ecosystem variables was assessed through an on-line survey completed by more than 50 major global and large-scale regional observing networks or programmes.

To identify EOVs, the Panel is also building on scientific expertise and existing frameworks such as the Australian Integrated Marine Observing System (IMOS), the US Integrated Ocean Observing System (IOOS), the Panel for Integrated Coastal Observations (PICO) plan, and the Southern Ocean Observing System (SOOS), among others. This process has led to nine proposed EOVs within two categories or phenomenon of interest

STATUS OF FUNCTIONAL GROUPS	HEALTH OF LIVING ECOSYSTEMS
Phytoplankton Biomass and Productivity	Seagrass Cover
Incidence of Harmful algal blooms	Macroalgal Cover
Zooplankton Diversity	Live Coral Cover
Fish Distribution and Abundance	Mangrove Cover
Apex Predator Distribution and Abundance	

Table 2. Proposed EOVs for Biology and Ecosystem health of marine ecosystems.

The variables identified with the highest level of readiness for implementation at a global scale were those related to zooplankton and coral reefs. These proposed EOVs will now undergo a process of consultation and validation with the scientific observing community who will build specification sheets within GOOS standards, including the concepts of readiness.

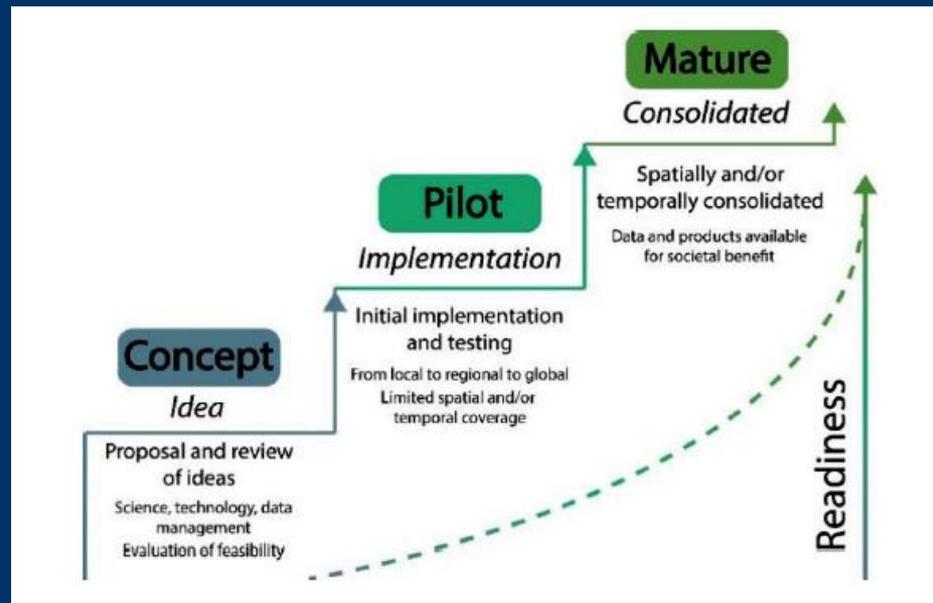


Figure 1. The concept of Readiness Levels.

The Ocean Health Index, a collaborative project of the group Conservation International, the National Geographic Society, the New England Aquarium, the National Center for Ecological Analysis and the Synthesis and the Sea Around Us project, measures, country by country, the ability of marine ecosystems to thrive and to support human livelihoods — goals that are often in tension. The index aggregates complex data into a single numerical score for every country.



“The Ocean Health Index is the first broad, quantitative assessment of the critical relationships between the ocean and people, framed in terms of the many benefits we derive from the ocean. Instead of simply assuming any human presence is negative, it asks what our impacts mean for the things we care about”. *Gail Gallessich 2012*

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감사합니다!

¡Muchas gracias!

Merci beaucoup!

Thank you!

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Спасибо

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