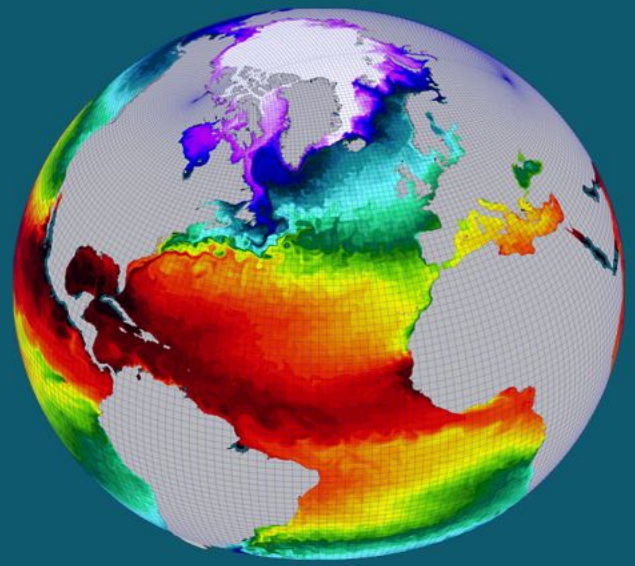
Ocean Prediction UN DECADE COLLABORATIVE CENTRE

GEO BLUE PLANET

MERCATOR OCEAN INTERNATIONAL

2024 OCEAN DECADE CONFERENCE



DELIVERING THE SCIENCE WE NEED FOR THE OCEAN WE WANT 10-12 APRIL 2024
BARCELONA, SPAIN

As part of the Ocean Decade Week (8-12 April 2024)

Connecting the world around Ocean prediction: *A vision for the Decade and Beyond*

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2021 2030 United Nations Decade of Ocean Science for Sustainable Development

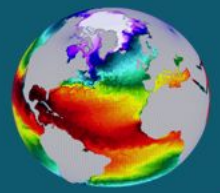
08 April 2024 3:30-7:00 PM
Port Vell room

2024 OCEAN DECADE CONFERENCE

Connecting the world around Ocean Prediction:

A vision for the Decade and Beyond

As part of the Ocean Decade Week (8-12 April 2024)



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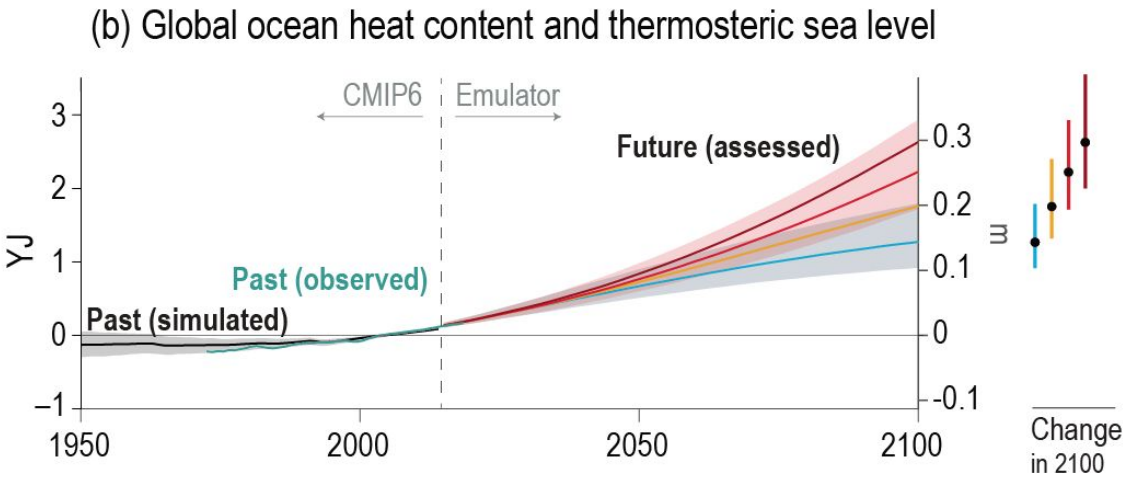
Ocean science for policy

Karina von Schuckmann
Mercator Ocean international, France

Unprecedented change and pressure in the ocean: the triple planetary crisis

CLIMATE CHANGE

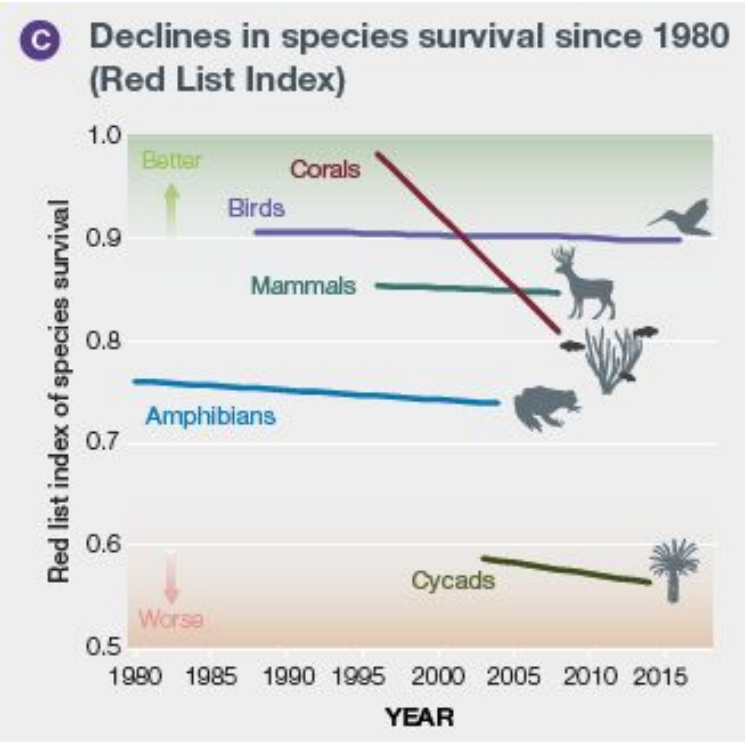


IPCC, 2021

POLLUTION

Geoblueplanet.org

BIODIVERSITY LOSS



IBES SPM, 2021

- urgent need to strengthen the transfer of science-based knowledge at the science-policy interface

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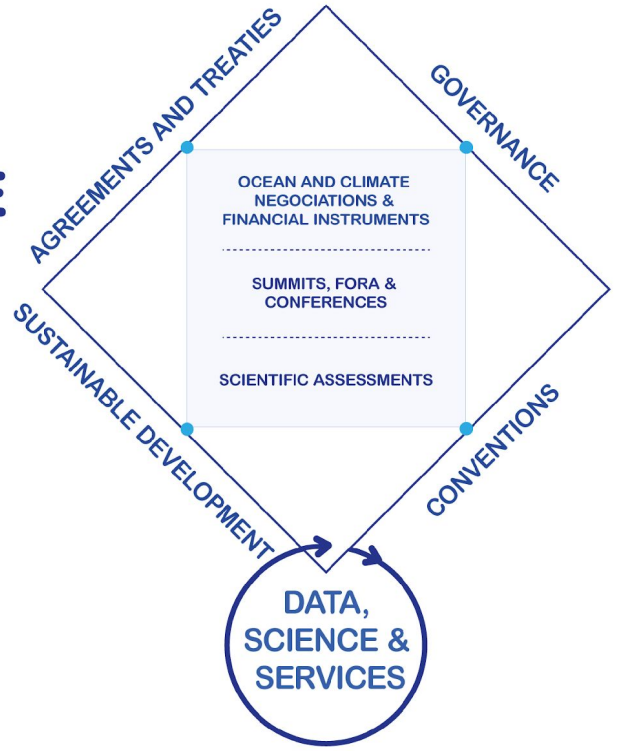
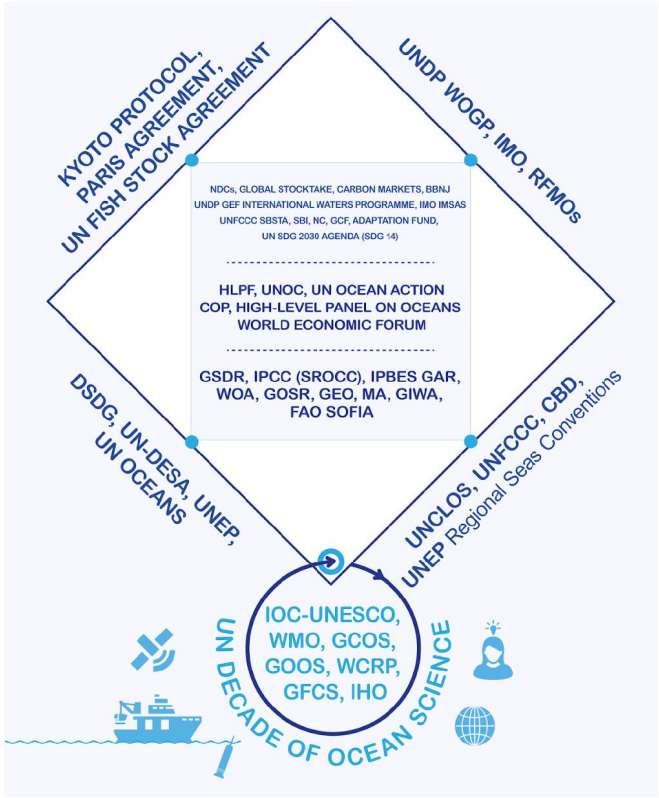
The elevation of the Ocean to a prominent role in global diplomacy reflects its importance in the Earth system.

THE OCEAN CLIMATE NEXUS





von Schuckmann et al., 2020

Unique opportunity to elevate the critical role of the ocean & to increase awareness on unprecedented change

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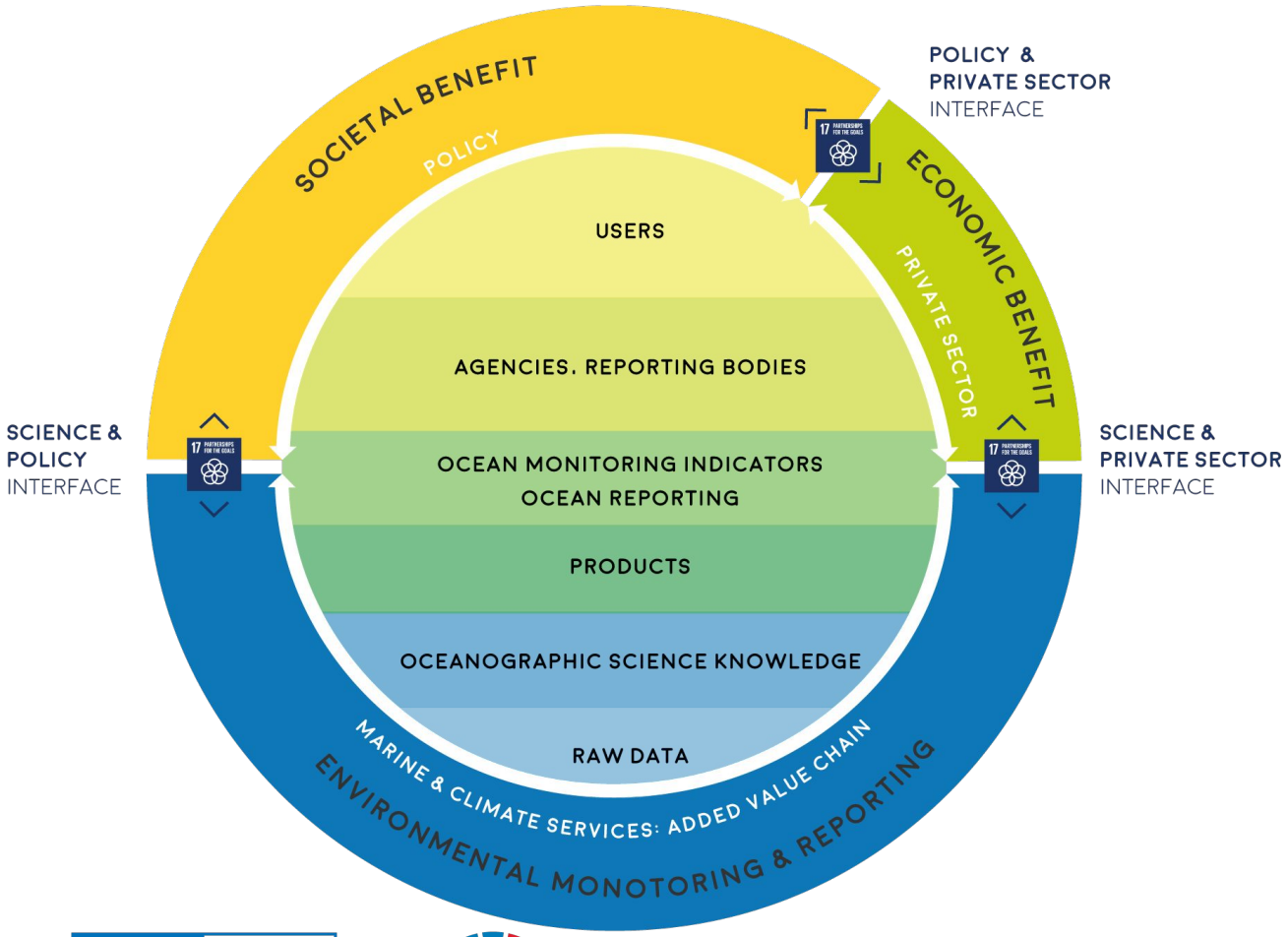

The added-value chain is the core of Ocean and climate services that connects raw products and blue knowledge to high-quality data products, and **indicators**.

von Schuckmann et al., 2020

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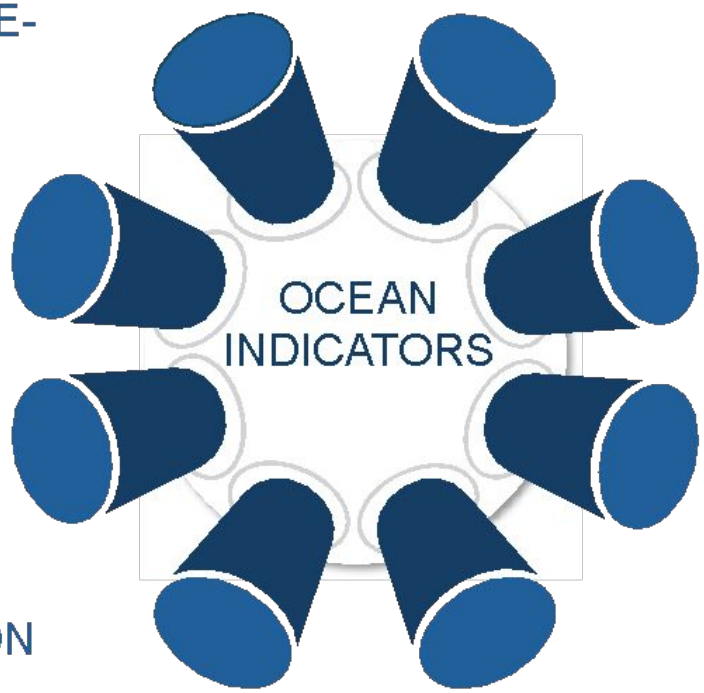
The multifaceted role of Ocean indicators

FACILITATE THE SCIENCE-POLICY NEXUS

ASSESS CAPACITIES

DRIVE INNOVATIONS

FOSTER COLLABORATION



BACKBONE ASSESSMENTS

INTERLINK SYSTEMS

STRENGTHEN COMMUNICATION

GUIDE PRIORITIES

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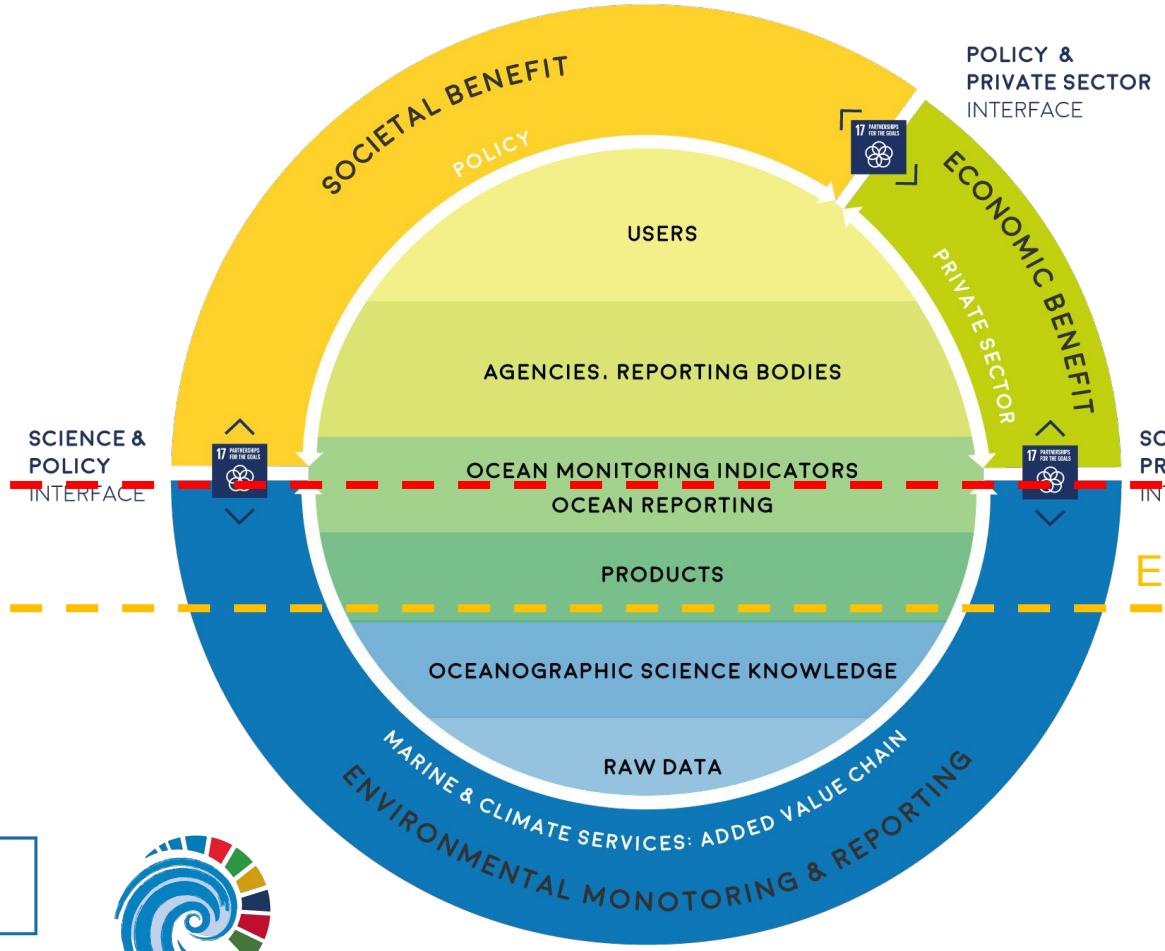
Ocean indicators: Challenge today



Today, the scientific community and ocean & climate services are faced to the current challenge of lifting our capacity up to the indicator level

Indicators

Essential Variables

von Schuckmann et al., 2020

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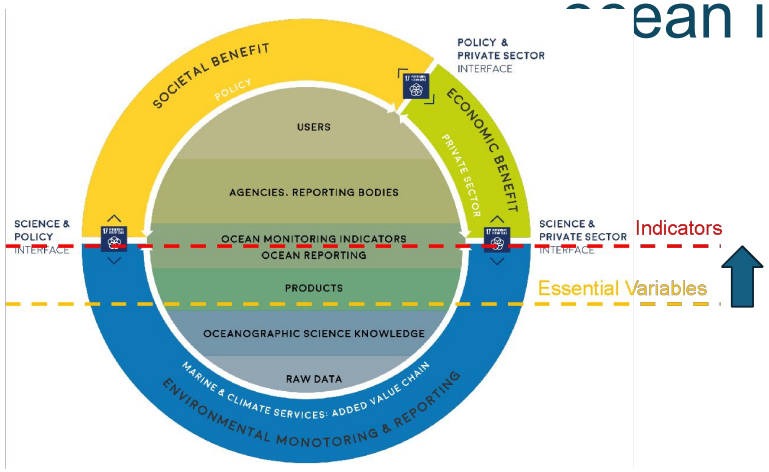
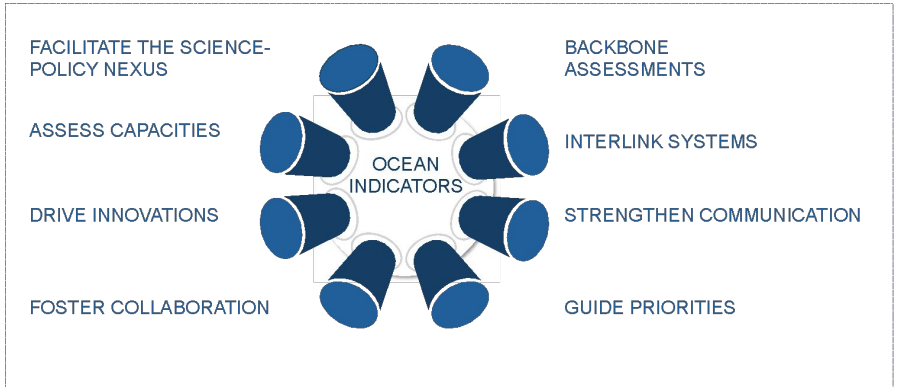
Albeit of wide-reaching use and applications, clear criteria and definition of ocean indicators are today lacking





There is currently no internationally-agreed comprehensive set of ocean indicators to characterize ocean processes, nor a common framework with agreed methodologies that would unite these individual efforts to create the common understanding and baselines required to monitor changes in the ocean environment in a transparent and authoritative way.

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An international initiative towards an ocean indicator framework, uniting physical, biogeochemical and biodiversity expertise

The cross-panel GOOS task team

GCOS · GOOS · WCRP
OOPC Ocean Observations Physics and Climate panel

OCEAN INDICATOR

The Global Ocean Observing System
Biogeochemistry Panel

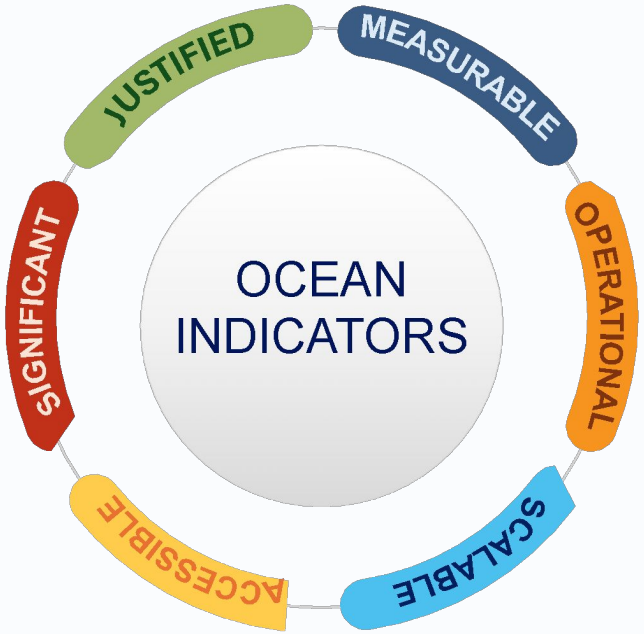
Biology & Ecosystem Panel

A definition for Ocean indicators

An ocean indicator refers to a measure based on scientifically justified theory and verifiable data that informs on change of an ocean phenomenon or in ocean health across a range of temporal and spatial scales.

The ocean indicator underpins ocean and climate assessments relevant to inform policy and decision making, to guide the ocean observing system, and to raise awareness.

Criteria for Ocean indicators



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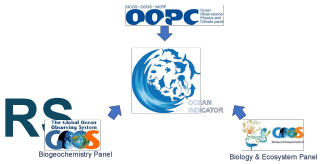
von Schuckmann et al., 2024 (in preparation), GOOS task team

A PILOT STUDY: TOWARDS A SET OF HIGH-LEVEL INDICATORS



GCOS • GOOS • WCRP
OOPC Ocean Observations Physics and Climate panel

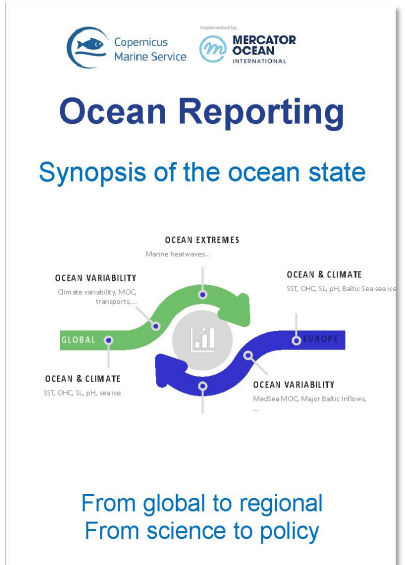
GOOS The Global Ocean Observing System
BGC Panel

Biology and Ecosystems Panel

PHYSICS & CLIMATE **BIOGEOCHEMISTRY** **BIODIVERSITY**

A PILOT STUDY: TOWARDS THE IMPLEMENTATION OF A SET OF HIGH-LEVEL INDICATORS

Ocean Prediction UN DECADE COLLABORATIVE CENTRE



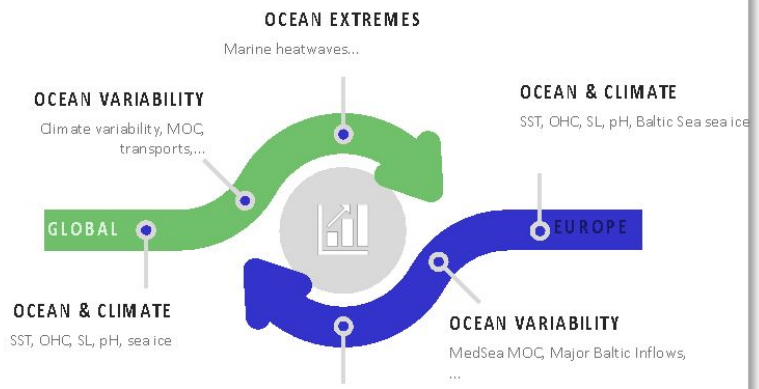
- Towards the regionalization of Ocean indicators
- Towards a coherent chain of temporal traceability of Ocean indicators

Copernicus Marine Service

Implemented by MERCATOR OCEAN INTERNATIONAL

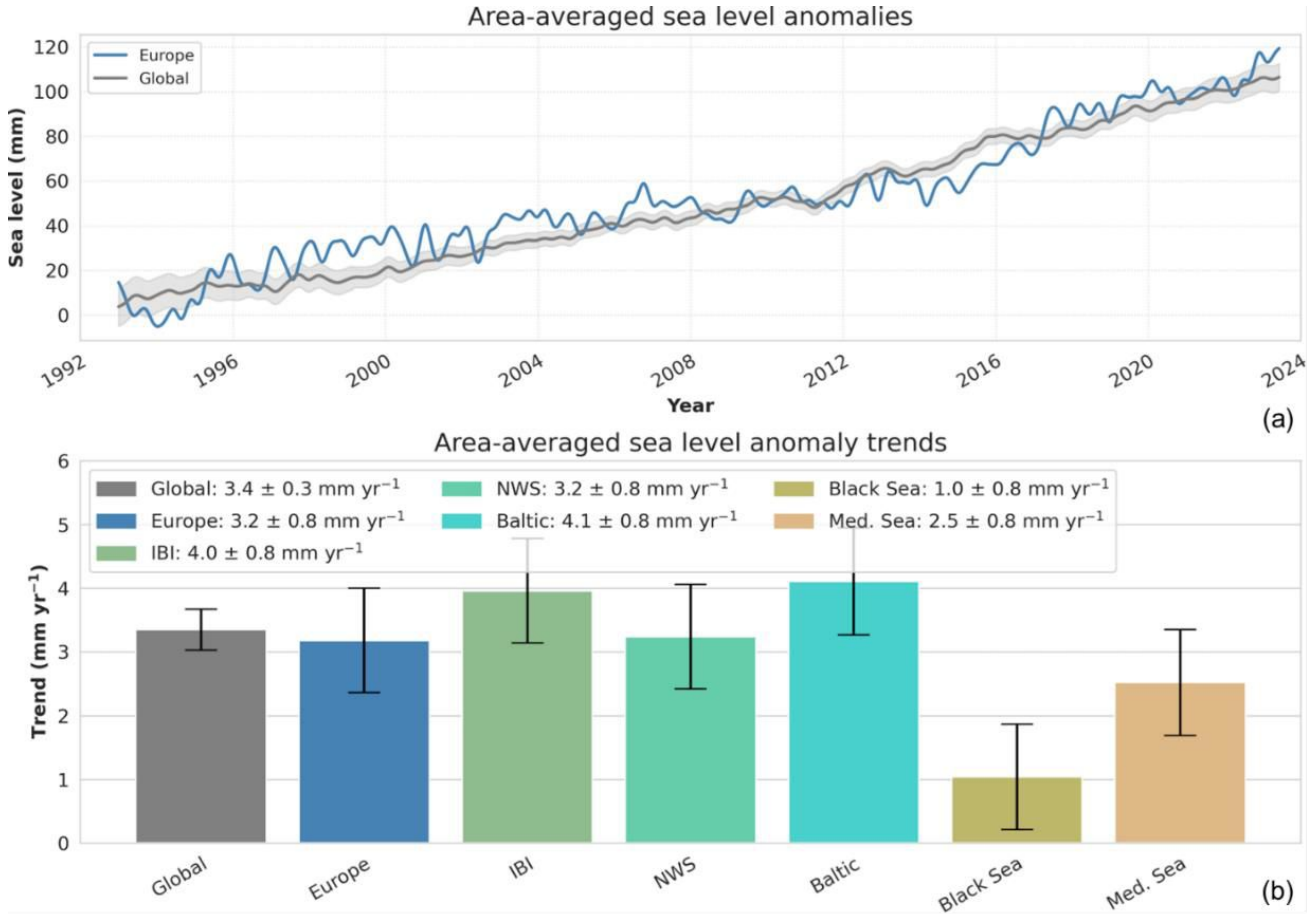
Ocean Reporting

Synopsis of the ocean state



From global to regional
From science to policy

EXAMPLE: SEA LEVEL RISE



Copernicus Ocean State Report, issue 8, under review
(to be published September 2024)

THANK YOU !

ANY QUESTIONS ?

karina.von.schuckmann@mercator-ocean.fr