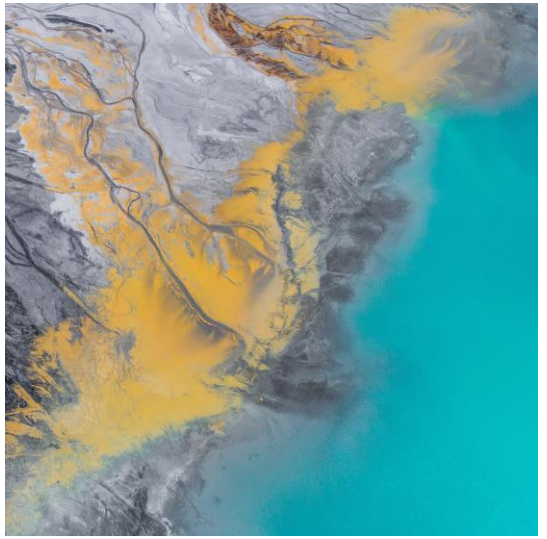
UN environment programme

GEMS Ocean

The Global Environment Monitoring System for the Ocean and Coasts (GEMS Ocean) Programme

Harnessing multi-stakeholder partnerships to transform data into action

2021 2030 United Nations Decade of Ocean Science for Sustainable Development



Framing of GEMS Ocean

UN environment programme

GEMS Ocean

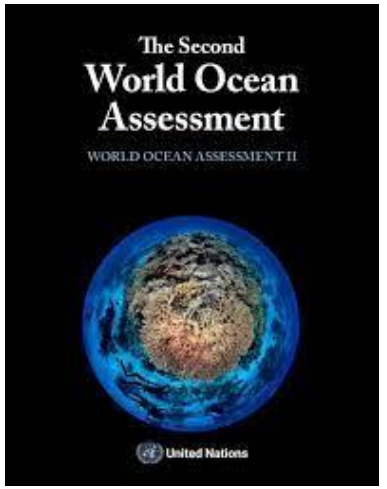
2021 2030 United Nations Decade of Ocean Science for Sustainable Development

UN environment assembly

SUSTAINABLE DEVELOPMENT GOALS

14 LIFE BELOW WATER

United Nations Framework Convention on Climate Change



UNITED NATIONS DECADE ON ECOSYSTEM RESTORATION 2021-2030

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

Convention on Biological Diversity

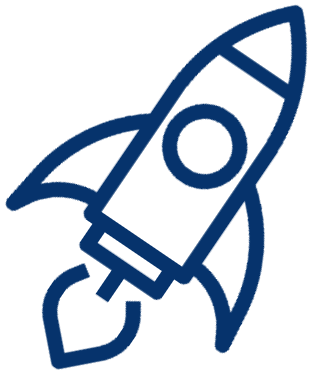
GEMS Ocean Vision and Mission

Vision

A global environment monitoring system that provides **relevant open and easily accessible ocean and coastal data, analysis, and information**, guiding actions to protect and sustainably use marine and coastal resources.

Mission

Co-design and convene a global Community of Practice across experts and society at large to provide **capacity, analysis, innovation** and synthesized information to decision and policy makers, civil society, international organizations as well as **coastal communities** worldwide in a holistic approach to keep the global ocean and coasts healthy and productive.



Strategic Goals

Problem 1: There are many observation and monitoring systems, but they are rather fragmented.

Problem 2: Many Small Island Developing States (SIDS) and Developing Countries don't have the capacity and resources to undertake effective monitoring.

Problem 3: There is much information and data already but is not easily accessible and interpretable by non-experts.

GOAL 1: Promote and convene a **transdisciplinary partnership** approach focusing on sustainable coastal and ocean use and ecosystem health.

GOAL 2: Strengthen **capacity development** on key aspects of ocean monitoring especially in **SIDS and Developing Countries**

GOAL 3: Provide **access to the use of quality assured, interoperable, open environmental data**, analysis and **sets of indicators to governments and stakeholders**.

Core-partnership (to date)

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United Nations Educational, Scientific and Cultural Organization

Intergovernmental Oceanographic Commission

G7 FUTURE OF THE SEAS & OCEANS INITIATIVE

MERCATOR OCEAN INTERNATIONAL

Regional SEAS

UN environment programme WCMC

UN environment programme GRID Geneva

G·R·I·D ARENDAL

A Centre collaborating with UNEP

GOOS The Global Ocean Observing System

futureearth research for global sustainability

WORLD RESOURCES INSTITUTE

Endorsed Programme

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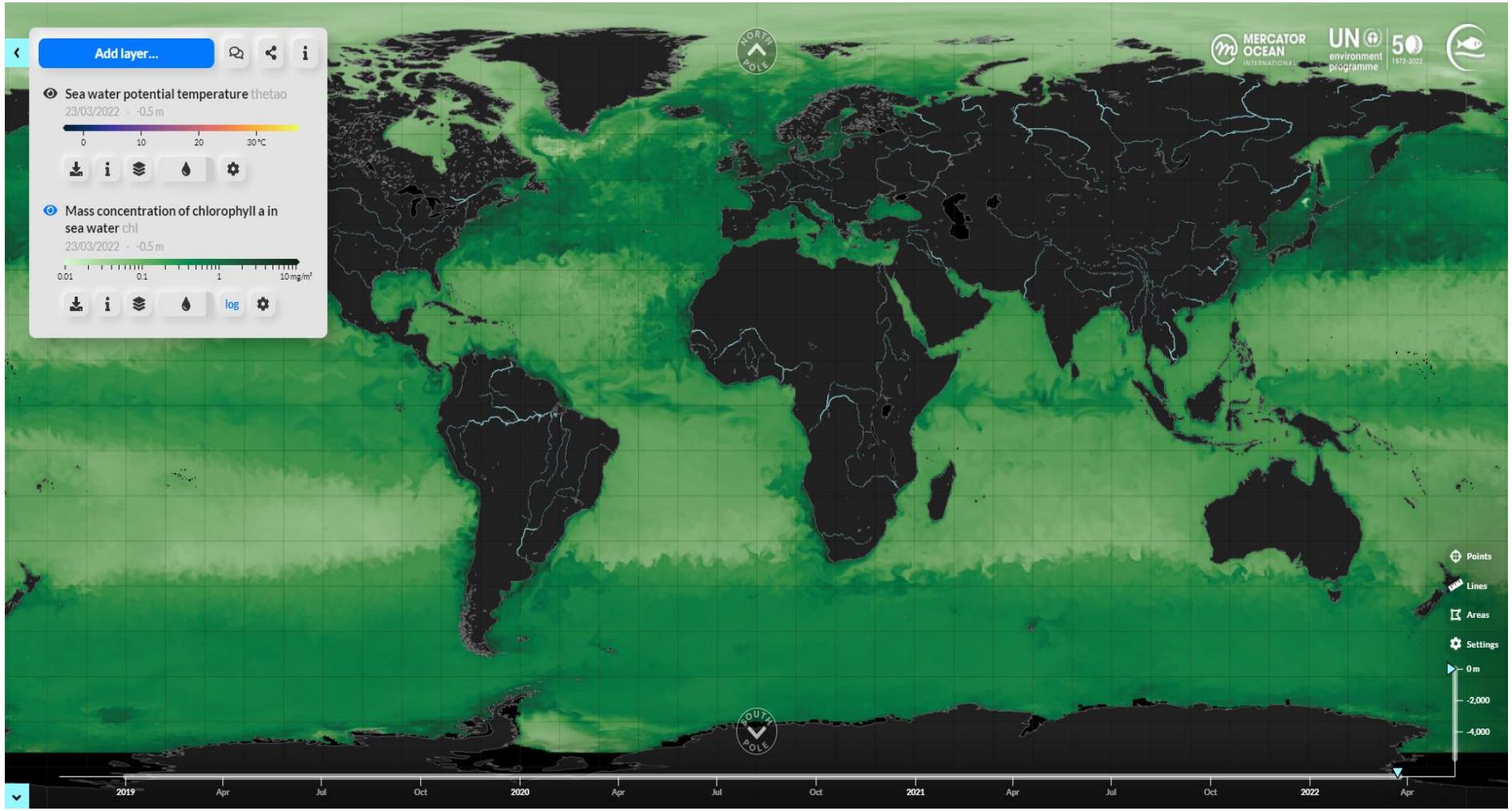
OceanPrediction UNOD-CC

Ocean Prediction | UN DECADE COLLABORATIVE CENTER

- A predicted ocean based on a shared and coordinated global effort in the framework of the UN Ocean Decade

- To galvanize and coordinate efforts towards the co-development and integration of worldwide ocean prediction activities, serving Decade objectives and in close collaboration with the Decade endorsed actions and other stakeholders

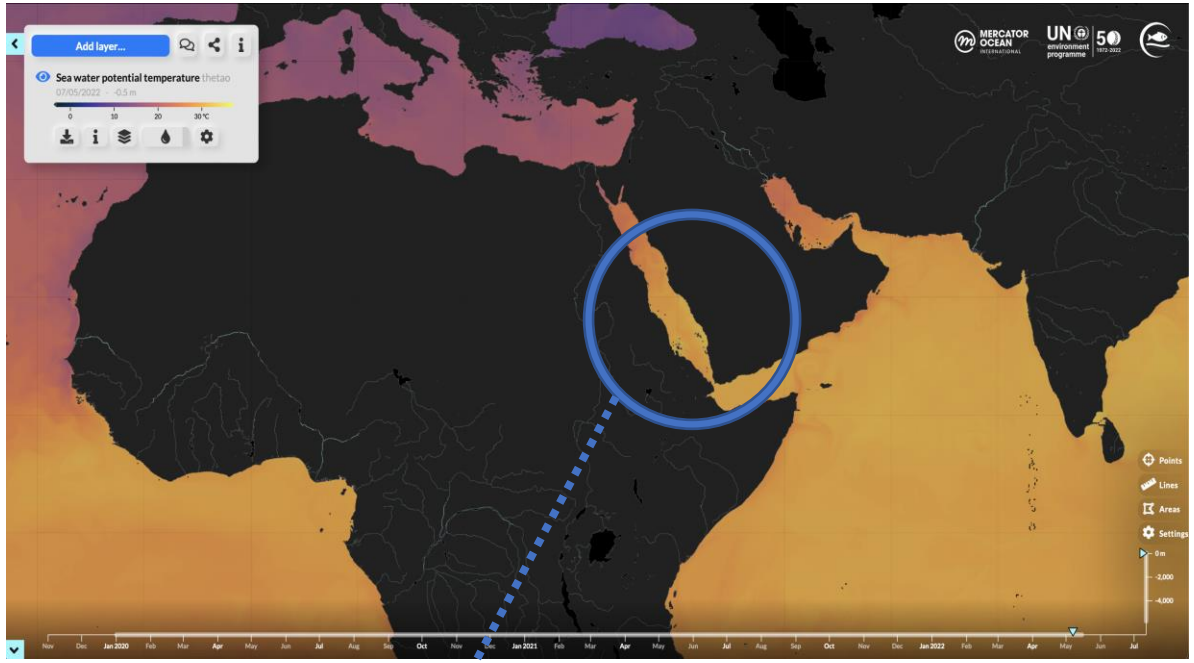
Data system and supporting services



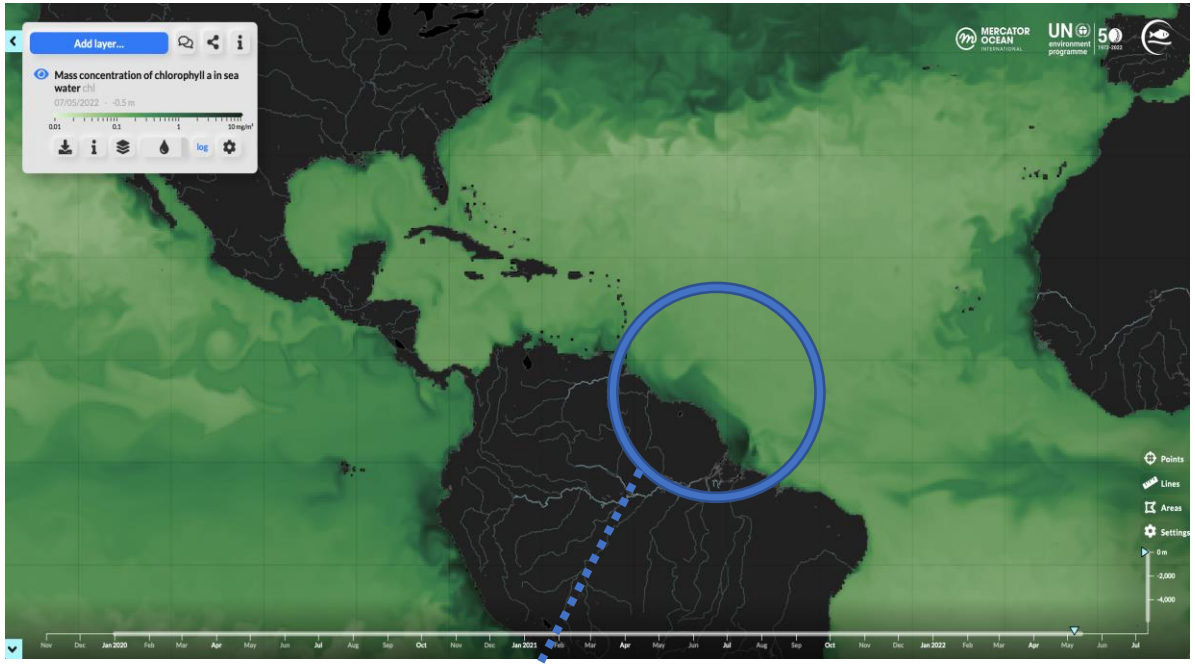
MERCATOR OCEAN INTERNATIONAL

My Ocean Tool to combine and display global 4 dimensional break down of EOVs

MyOcean Tool

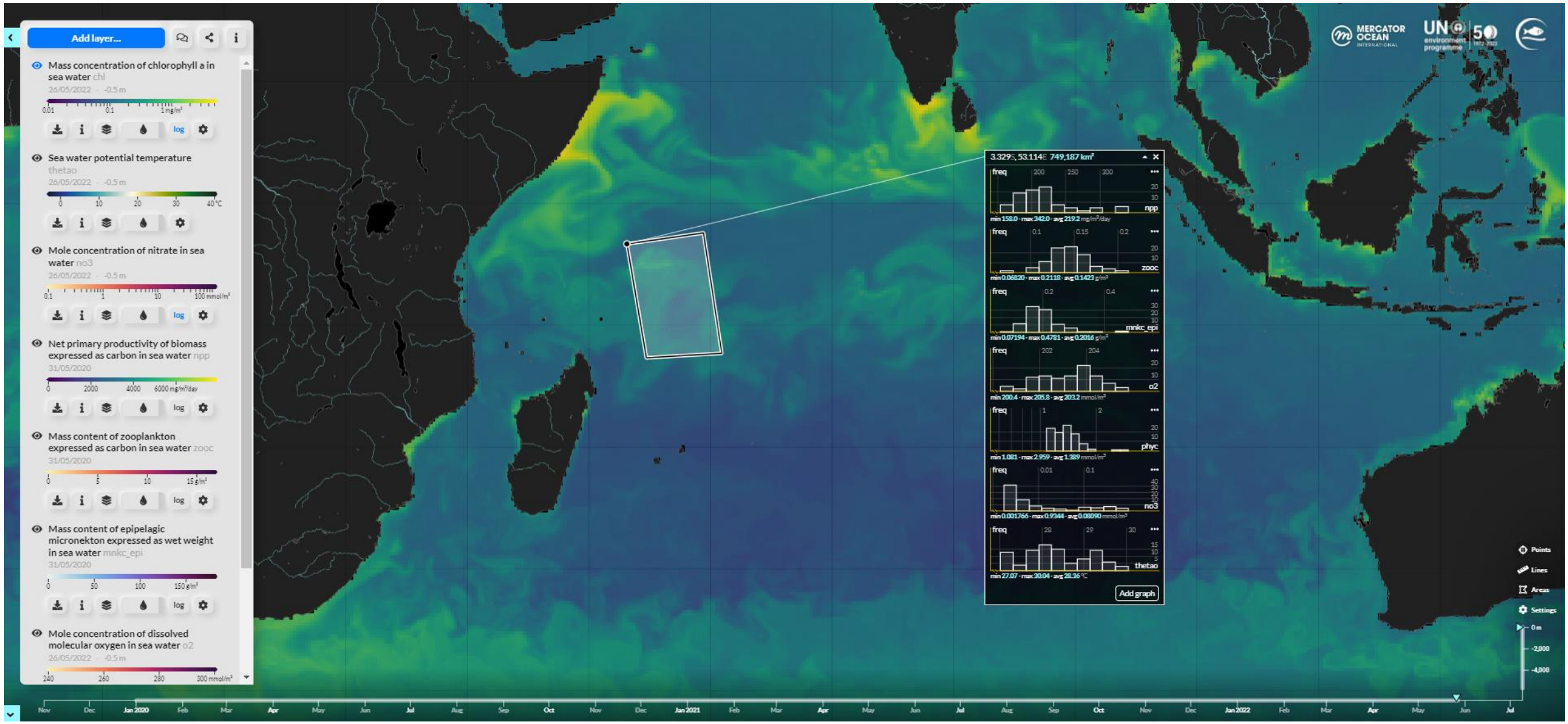


Sea water potential temperature
Temperatures above 30 °C
Possible ocean heat waves
Possible coral bleaching episodes



Chlorophyll a concentration
High concentration of Chlorophyll
Possible riverine nutrient inputs
Possible eutrophication episodes
Possible hypoxia episodes

Specific layers & values

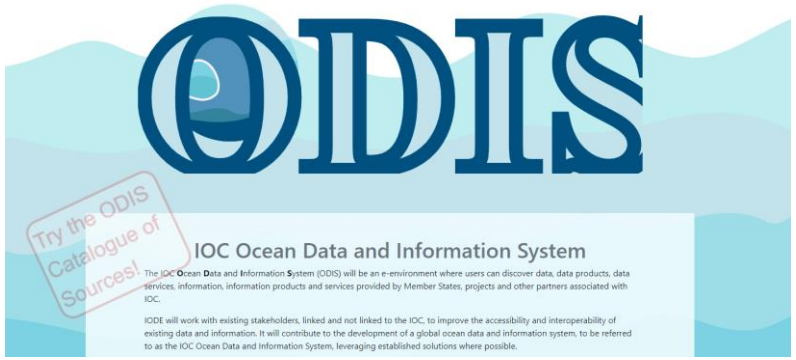


Data working flow

Thematic Working Group on Data and Services

- EVs or SDG related: ensure data sources are endorsed by the respective panels and organizations (upstream)
- Define a set of endorsed/quality-controlled data sources, make sure they are registered in IODE's ODISCat (Catalogue of Sources) so that they can be identified explicitly and trusted
- Test harvest from these data sources, refine where needed and establish agreements (e.g. MoU) to ensure data sustainability and stable flows
- Feed visualisation tools and analytics which are re-circulated to data providers as a value-added component

OBIS
OCEAN BIOGEOGRAPHIC INFORMATION SYSTEM



IODE International Oceanographic Data and Information Exchange

Defining GEMS Ocean focus

- Work with **communities** and capacity building activities
- Connection with **Regional Seas**, LMEs and Member States (priority setting, co-design, feedback, reporting support)
- Matchmaking mechanism and user centric approach (i.e., engagement process down to community level to connect demand and supply)
- Demand driven approach
- Dynamic partnership model
- Ground truthing of data

Governance Mechanism

- **Community of Practice (CoP)**

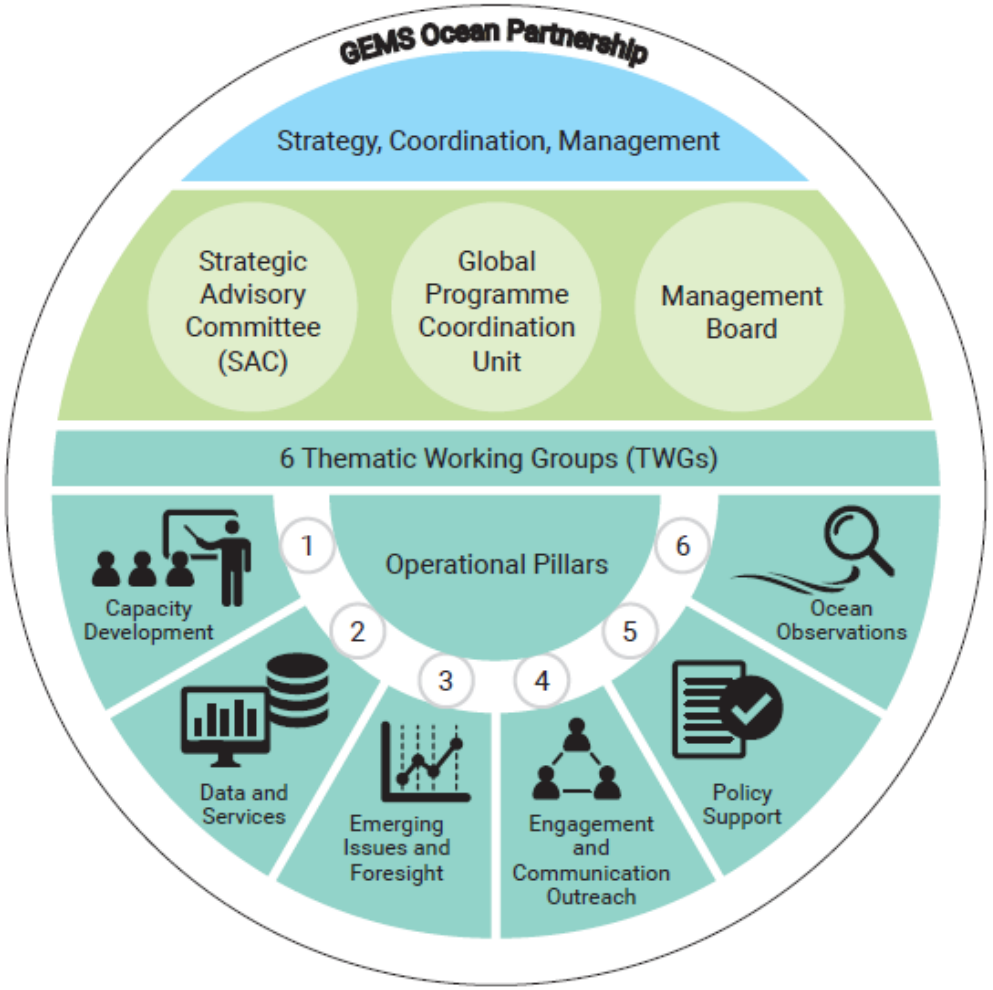
All the actors that responded on a voluntary in-kind/basis.

- **Steering Committee (SC)**

Provide strategic guidance including review and approval of work plans, advice resource mobilisation, agreement on data standards.
Membership by transparent selection process, from representatives of observing, monitoring, modelling, political, **MEAs** and private sector communities.

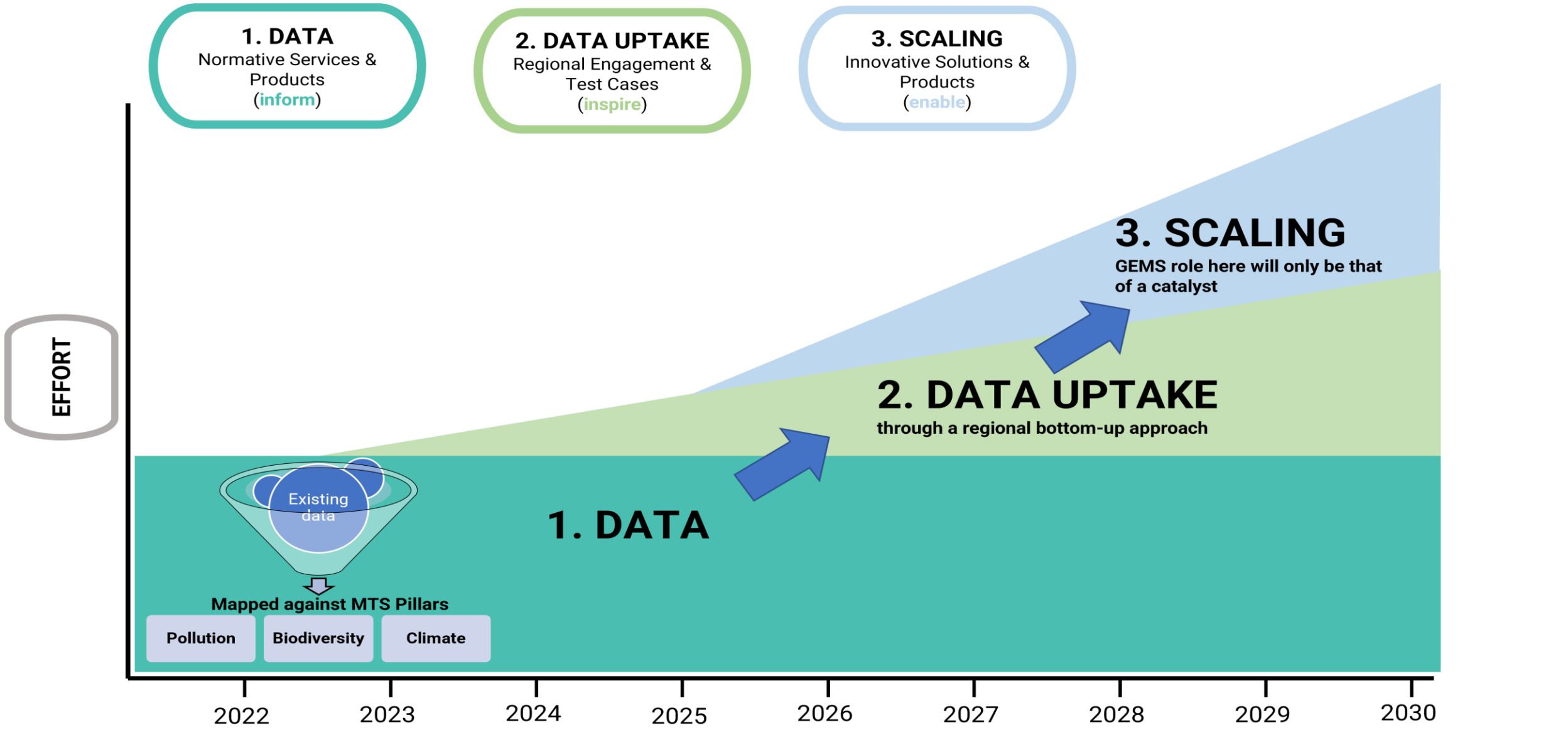
- **Thematic Working Groups (TWG)**

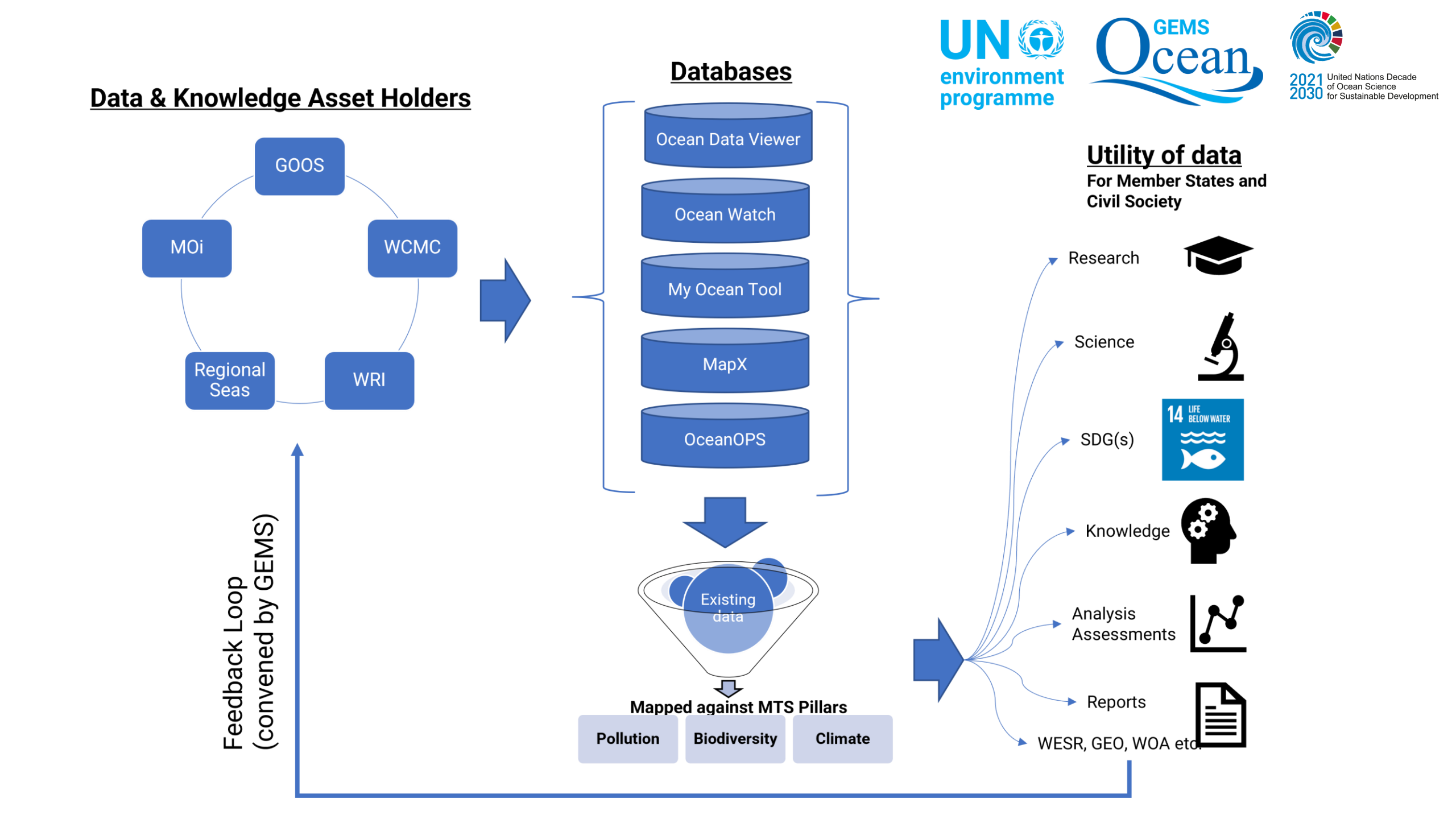
Will act as the operational mechanism of the GEMS Ocean Programme and its CoP and develop deliverables to be reflected in work-packages. Possible TWG: Capacity Development, Data and Services, Engagement and Community outreach, Policy Support, Emerging issues and foresights.



Potential structure of the GEMS Ocean Programme, including a proposed governance mechanism

Delivery system




Data & Knowledge Asset Holders
GOOS
MOi
WCMC
Regional Seas
WRI
Databases
Ocean Data Viewer
Ocean Watch
My Ocean Tool
MapX
OceanOPS
Existing data
Mapped against MTS Pillars
Pollution
Biodiversity
Climate
Feedback Loop (convened by GEMS)
Utility of data
For Member States and Civil Society
Research
Science
SDG(s)
14 LIFE BELOW WATER
Knowledge
Analysis Assessments
Reports
WESR, GEO, WOA etc.
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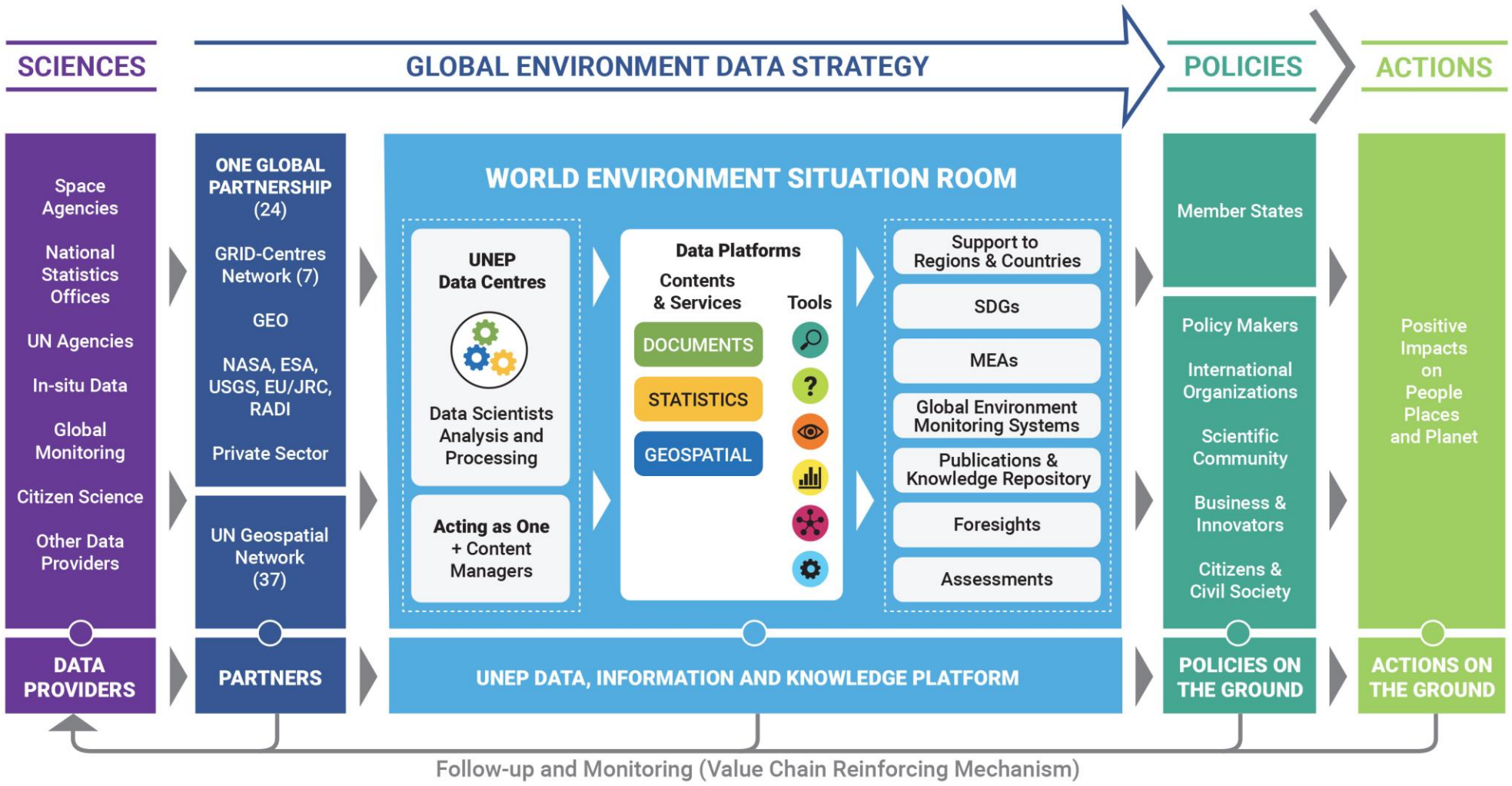
WESR

A World Environment Situation Room (WESR) implementing GEDS



GEF proposal

Source to Sea (S2S) in practice - Enabling Action to protect and restore freshwater and marine ecosystems in the Wider Caribbean Region (WCR) with a focus on Small Island Developing States (SIDS) and Developing Countries

Objectives:

- Identify, assess, and analyse interlinkages among actions taken at national/regional level for achieving SDGs 6 and 14.
- Support national/regional reporting and monitoring on the achievement of these SDGs.
- Support capacity development and local solutions to regional and global pressures.
- Community and social engagement to explore data utility and development of key actions.

Recent events

- **Digital Ocean Forum (20-22 April) Paris, France**
- **22nd Global meeting of the Regional Seas Programme (25-28 May) Mahe, Seychelles**
- **Twenty-second meeting of the United Nations open ended informal consultative process on the oceans and law of the sea (6-10 June) New York, USA**
- **UN Ocean Conference (26 June - 1 July) Lisbon, Portugal**
- **Final Conference MSP-MED project (12-14 October) Rome, Italy**

UN environment programme

GEMS Ocean

Thank you for your attention!

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Aspiring to Achieve the Sustainable Development Goal 14:
to "Conserve and sustainably use the oceans, seas and marine resources for sustainable development"

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