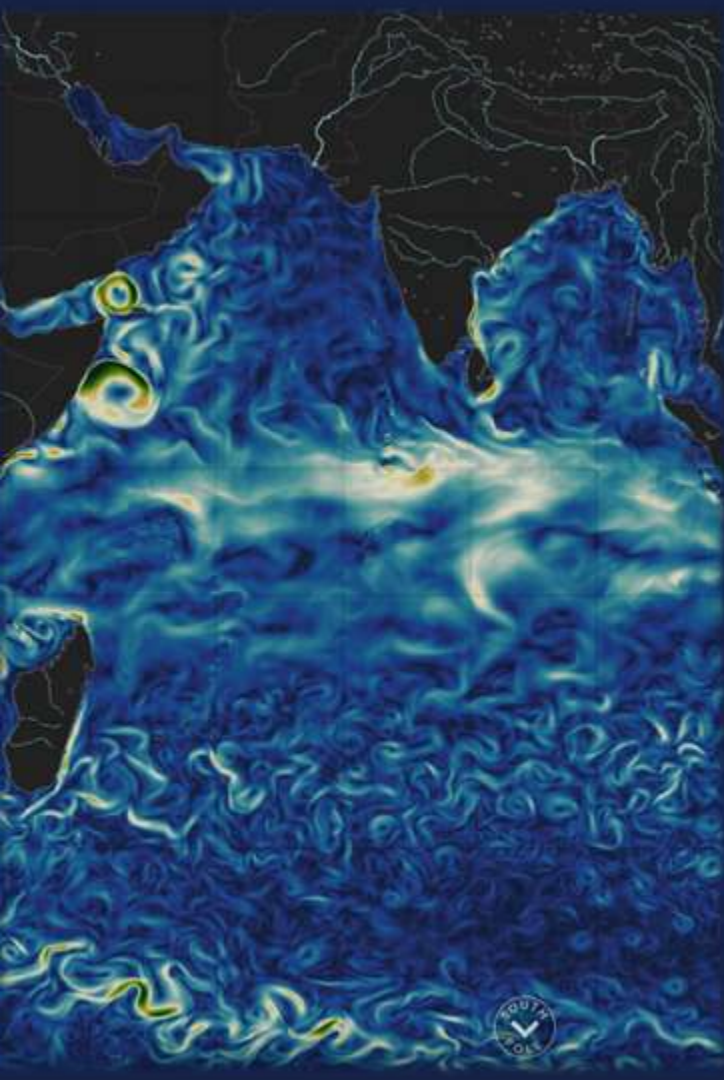




GWFF

GEOSPATIAL WORLD FORUM

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MERCATOR
OCEAN
INTERNATIONAL

Building a Digital Ocean for Data-Driven Decisions

Tina Silovic, Mercator Ocean International



13-16 MAY 2024 | ROTTERDAM
THEME - GEOSPATIAL TRANSITION:
POWERING THE WORLD ECONOMY

THE OCEAN IS CENTRAL TO THE FUNCTIONING OF THE PLANET

THE OCEAN IS CENTRAL FOR HUMAN WELLBEING



The Blue Economy: Unlocking Ocean Potential Sustainably



A sustainable Blue Economy, also known as “marine industrial revolution”, allows society to obtain value from the oceans and coastal regions, whilst respecting the long-term capacity of the oceans to regenerate and endure such activities through the implementation of sustainable practices.

(EuroSea Policy Brief ‘Nourishing Blue Economy and Sharing Ocean Knowledge’)



Sustainable Blue: Data-Driven Decisions for a Healthy Ocean and Thriving Economy



Photo source :Unsplash

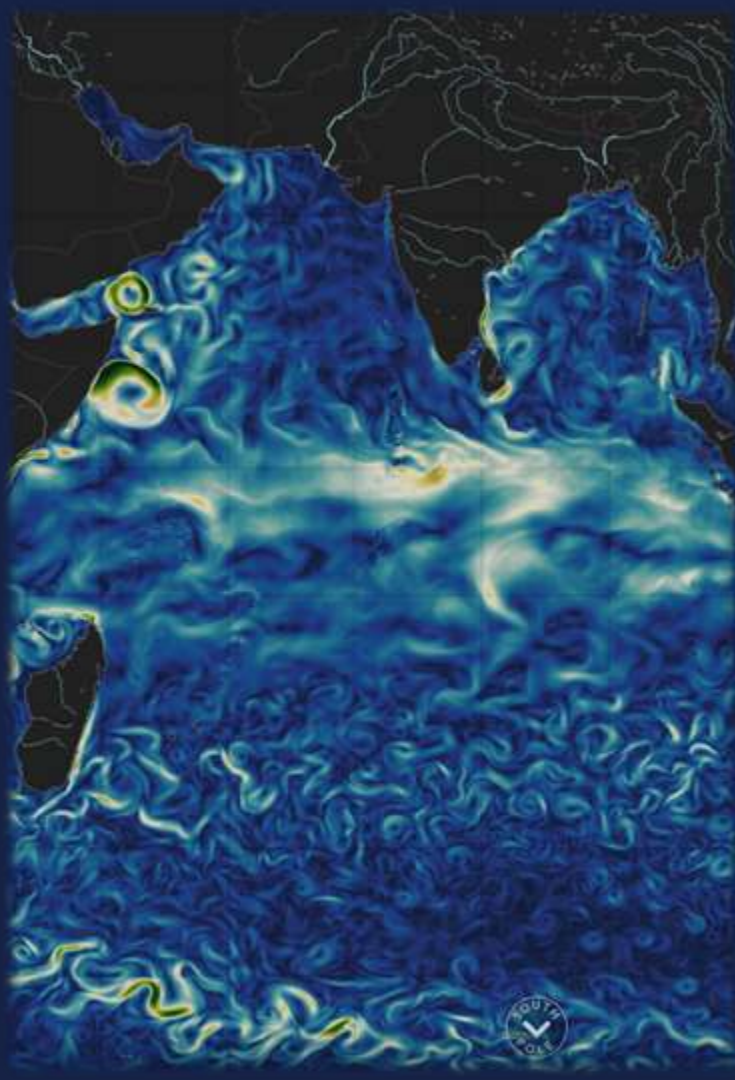
- High-resolution data collection and analysis
- Real-time monitoring to track and respond to changes in the ocean environment.
- Interdisciplinary collaboration to address complex ocean challenges



Mercator Ocean International

We aim to provide the:

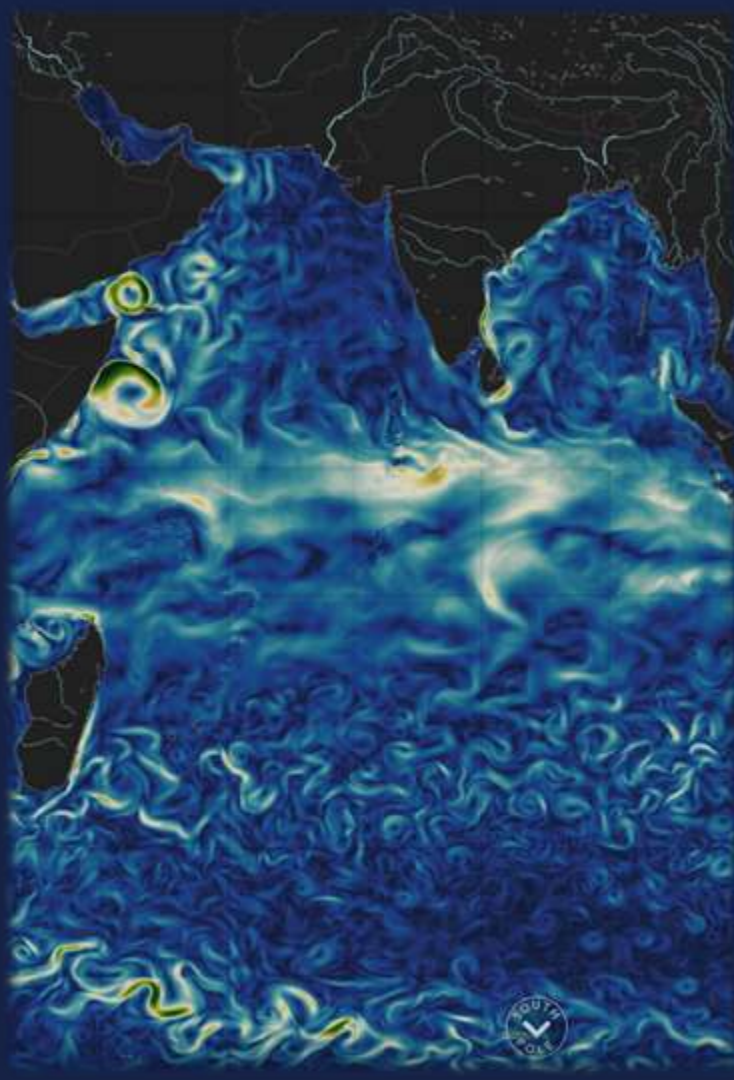
- DATA
- DATA PLATFORM & INFRASTRUCTURE
- COLLABORATIVE ENVIRONMENT necessary to empower communities worldwide to make informed decisions for a sustainable and safe future.

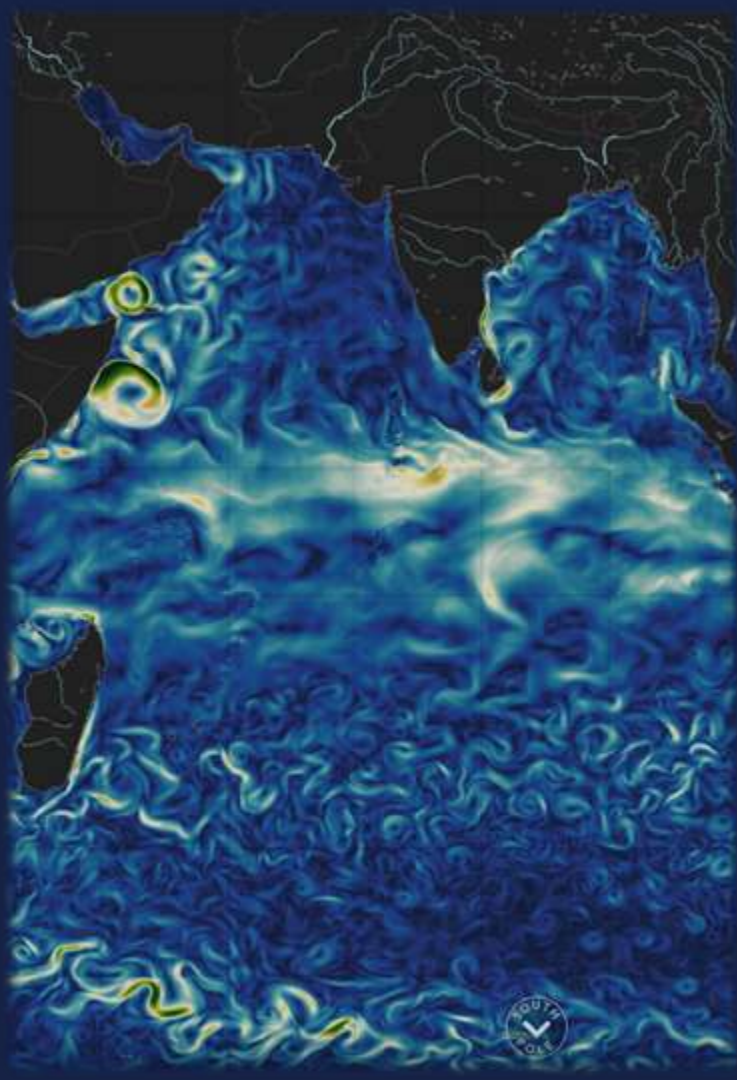


Mercator Ocean International

We are mandated at the European and International levels to implement:

- 1 Copernicus Marine Service**
- 2 Digital Twin of the Ocean Infrastructure**
and to :
- 3 Build/Connect Ocean Community**





1 Copernicus Marine Service



FULL, FREE AND OPEN
ACCESS TO DATA



-  ATMOSPHERE MONITORING
-  MARINE ENVIRONMENT MONITORING
-  LAND MONITORING
-  CLIMATE CHANGE
-  EMERGENCY MANAGEMENT
-  SECURITY


Europe's eyes on Earth



Copernicus Marine Service

Providing free and open marine data and services to enable marine policy implementation, support blue growth and scientific innovation.

Access Data

DATA	Forecast	News	Exploration
OCEAN PRODUCTS A robust ocean data catalogue, to download or visualise data including hindcasts, nowcasts and forecasts.	OCEAN STATE REPORT Extensive annual analysis on the state of the ocean over nearly 20 years and severe/notable annual events.	OCEAN CLIMATE TRENDS Monitoring the health of the ocean. Ocean State of the Environment Ocean Climate Portal	OCEAN VISUALISATION Dive into our 4D digital oceans through our 3D visualisation tools for beginners, intermediate and advanced users.

Online catalogue
marine.copernicus.eu

More than 300 scientifically qualified products & Ocean monitoring indicators

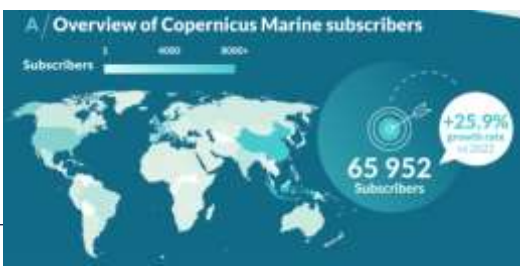
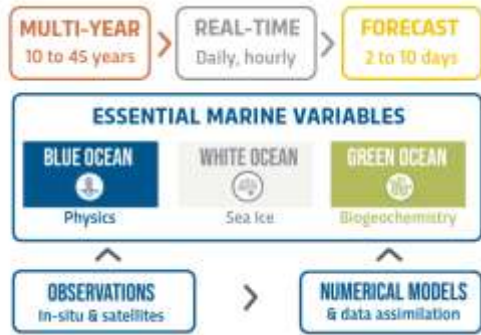
User driven

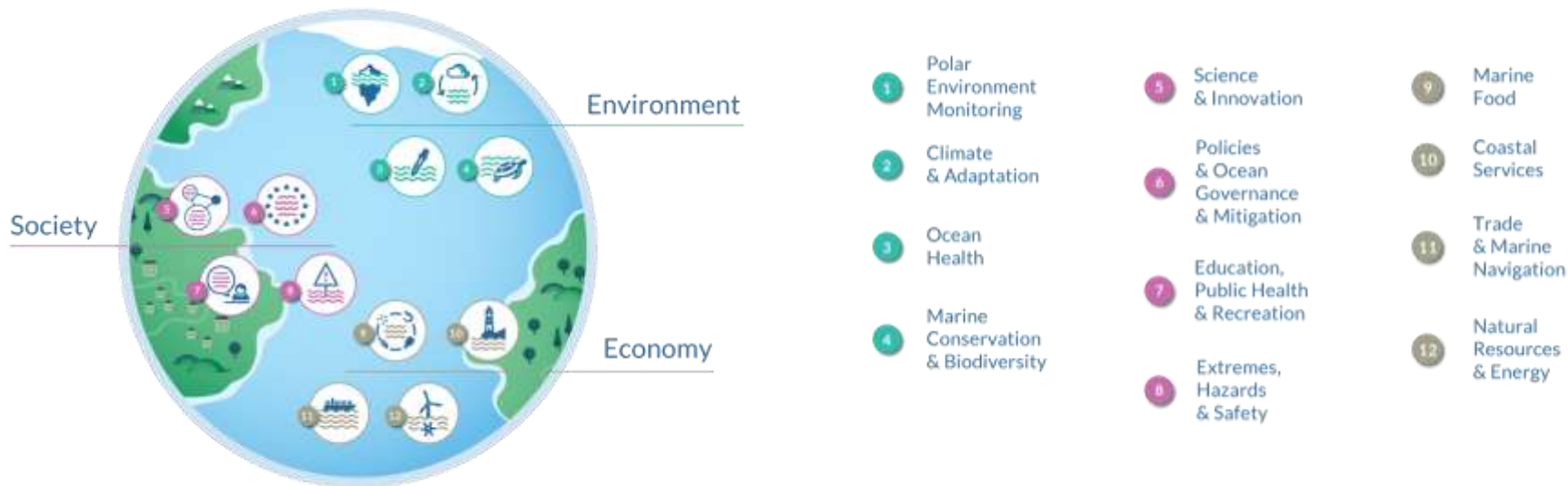
Common format (Netcdf -Shapefile)

Open and Free

COPERNICUS MARINE REGIONAL OCEAN PRODUCT DIVISIONS

- 1 Global Ocean
- 2 Arctic Ocean
- 3 Baltic Sea
- 4 European North West Shelf Seas
- 5 Iberian Biscay Inland Seas
- 6 Mediterranean Sea
- 7 Black Sea





Developing actions (instruments)

Training and
WORKSHOPS

Practices and
USE CASES

Sectorial
PARTNERSHIPS

Marketing
CAMPAIGNS

**USER
FEEDBACKS**





BLUE OCEAN

Currents, temperature,
waves, sea level, ...



WHITE OCEAN

Ice coverage, velocity,
concentration, Icebergs ...



GREEN OCEAN

CO₂, nutrients, oxygen,
primary production, ...

Copernicus Marine Service in COPERNICUS 2 :

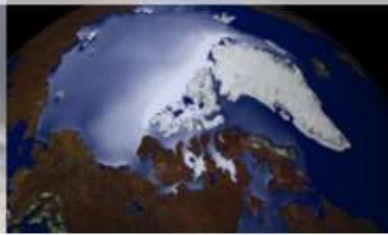
Continuity of the Blue/White/Green Offer

+ a series of major evolutions developed depending on priorities & budget

Coastal



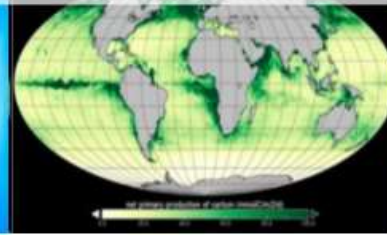
Arctic



Marine Biology

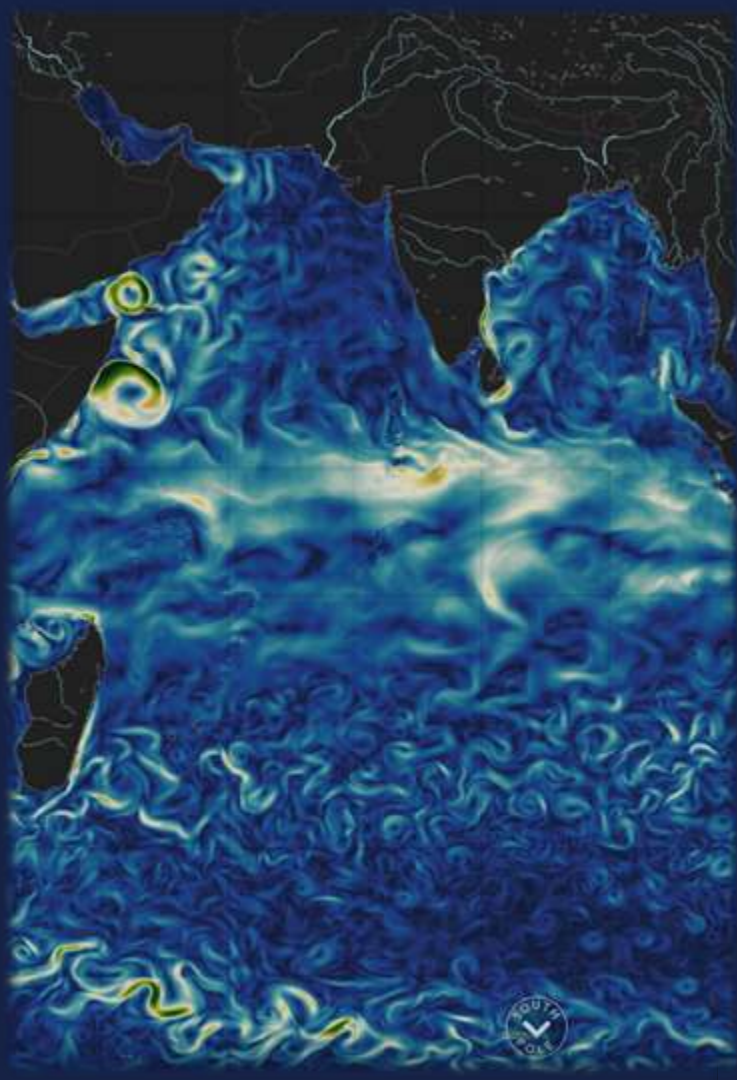


Ocean Climate



Digital services

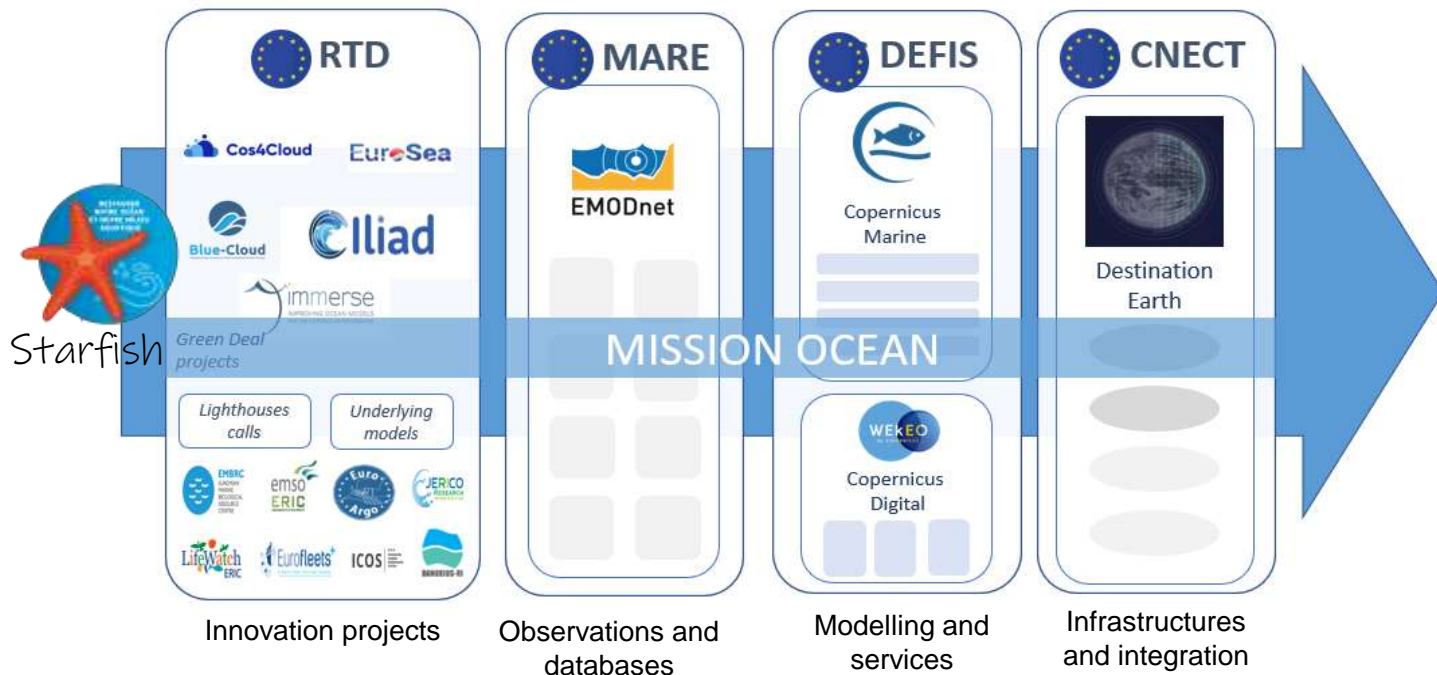




② Digital Twin of The Ocean



Its aim is to support the deployment of multiple DTO applications, including new generation ocean models, and serve as a foundation for the European DTO initiative. It will be fully compatible with Destination Earth.





ARCHITECTURAL BASIS FOR THE INTECONNECTION OF ASSETS



Processing engine → will allow to launch models, AI Machine Learning, ...

Marine Protected Area for biodiversity

Ship routes for zero carbon

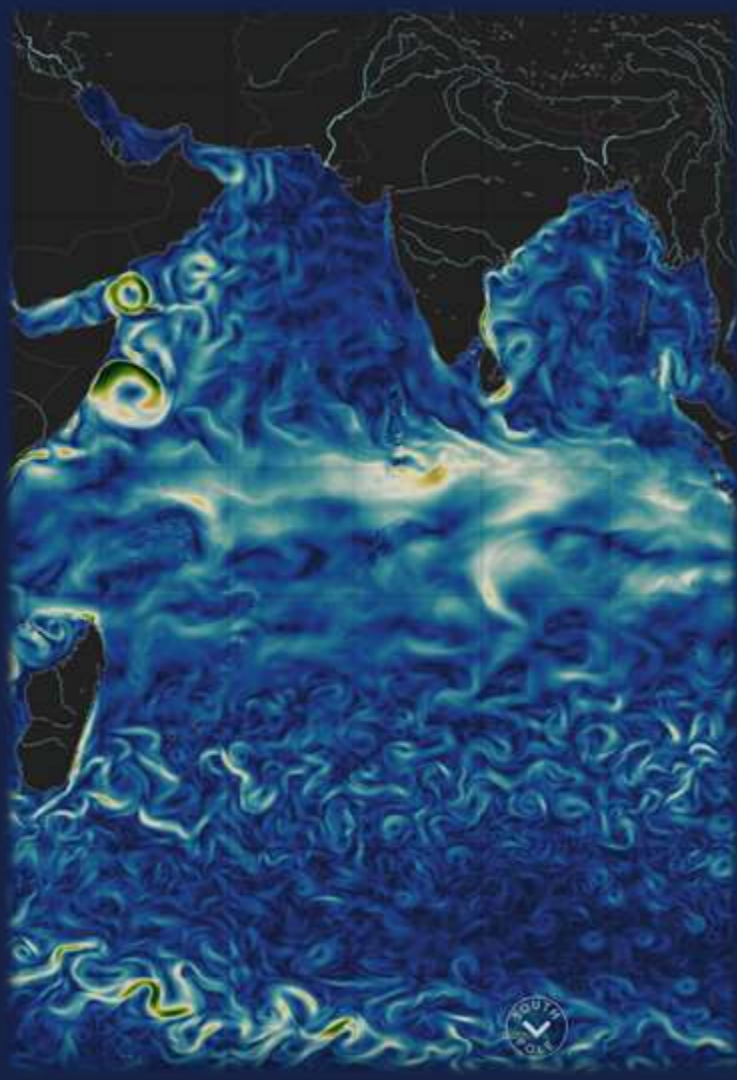
Pollution sources for zero pollution

Nature-Based Solutions for biodiversity and coastal hazards

Aquaculture for zero carbon

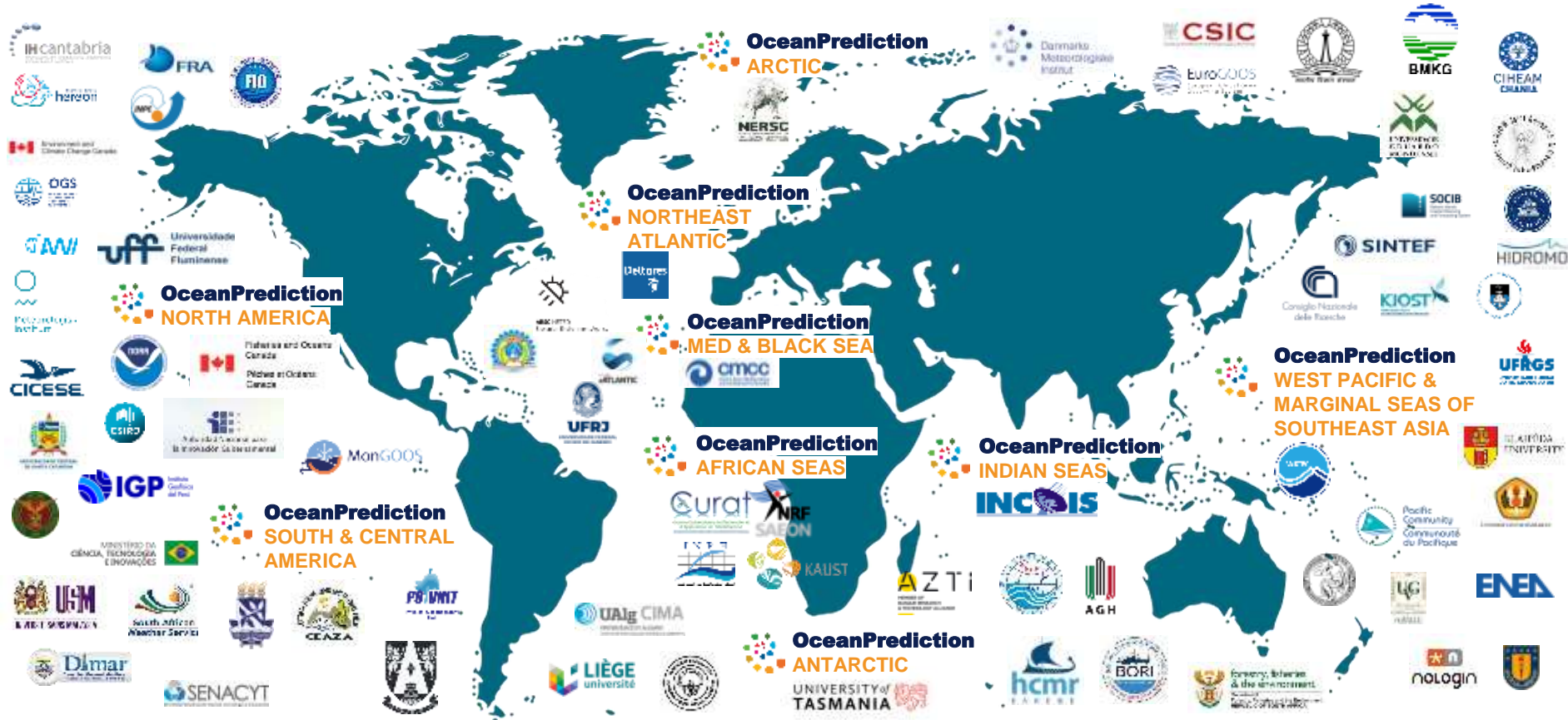
Marine plastic for zero pollution





③ Building/Connecting Ocean Community





Scientific collaborations



Scientific diplomacy and cooperation



Co-design with Copernicus Member States (Marine Forum, NCP)



Working with Users (CUAG Members)





Infrastructure

Technological challenge



Invest in a public core software infrastructure to offer a global public service providing **state-of-the-art ocean information**



Information

Scientific challenge



Co-design of local, regional and global **digital ocean services, best practices, and thematic applications**



Impact

Cooperation challenge



Co-design with key players, set inter-disciplinary cooperation, be led by demand



*'Learn to cooperate.
Learn to have
international institutions
that really work and
take what steps you
can to world
government.'*

~Bernard Russel



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OCEAN**
INTERNATIONAL

**Thank you for your
attention**

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