



Ocean Observing Co-Design

by The Global Ocean Observing System



2021
2030 United Nations Decade
of Ocean Science
for Sustainable Development

Realizing the Benefits of Ocean Knowledge through Ocean Observing Co-Design

Supporting the Decade of Ocean Science for Sustainable Development by transforming our ocean observing system assessment and design process.

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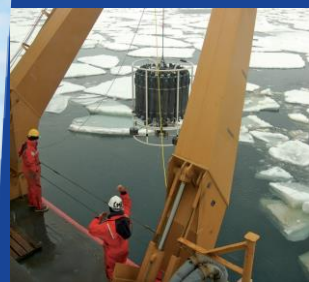
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The Global Ocean Observing System

Climate, Forecasts, Biodiversity,
Fisheries, Aquaculture, Pollution,
Transport,
Mineral exploitation,
Ocean Health, ...



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THE CHALLENGE

Better ocean knowledge is needed.

We need clear priorities for **how we invest in ocean observing and better integration of observations and models** to produce **useful ocean knowledge**.

We need more **integrated ocean observing system design with repeatable processes that satisfy global, regional and local stakeholder needs**, while developing integrated observing and modelling capabilities.



Transforming our ocean observing system assessment and design process

Supporting the Decade of Ocean Science
for Sustainable Development



2021 United Nations Decade
of Ocean Science
2030 for Sustainable Development

This programme is endorsed by the UN Decade of Ocean Science

THE SOLUTION

Transforming our ocean observing system assessment and design process by:

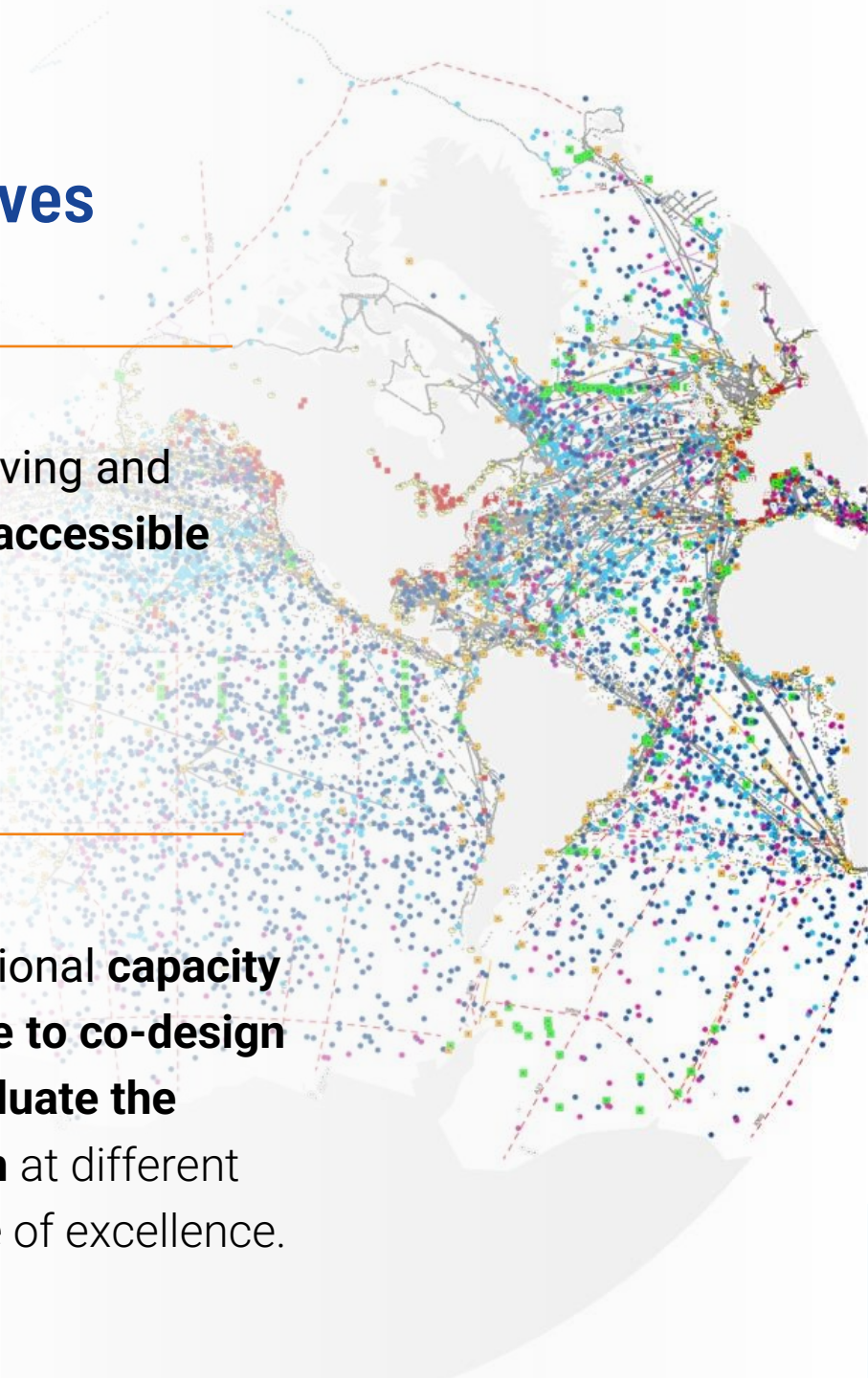
1. Developing a more user-focused co-design process to create a fit for purpose, integrated and responsive observing system;
1. Involving existing efforts and new technologies, and modelling, forecast and service communities;
1. Building the process, infrastructure and tools, to inform investment and benefit society.

Read more on the GOOS [website](#)

Go online to download the programme [brochure](#)

— Ocean Observing Co-Design Programme objectives

1. —
 - Provide national government funders the **information needed to target investment globally, regionally and locally.**
2. —
 - Make ocean observing and information more **accessible and impactful.**
3. —
 - **Develop system diagnostics, tools and reporting capability** to better assess fitness-for-purpose across evolving requirements and use-inspired needs.
4. —
 - Establish international **capacity and infrastructure to co-design and regularly evaluate the observing system** at different scales by a centre of excellence.



— EXEMPLARS

- **First set** of **exemplars** around use areas
- **Active** and **interactive** development of the co-design process
- To **give voice and visibility** to community needs
- First set will include:
 - **Tropical Cyclones**
 - **Marine Heatwaves**
 - **Boundary Currents**
 - **Carbon**
 - **Storm Surge**
 - **Marine Life 2030**



Ocean Observing Co-Design Workshop

June 7-9, and Day 4 (TBD) **CONCLUDED LAST WEEK**

- Use **lessons learned** and previous experiences to shape and define exemplars
- Advance planning for **initial priority exemplars**
- Prepare **Exemplar project plans**

Ocean Observing Co-Design Workshop, June 7-9, 2022 (Virtual)



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Ocean Observing Co-Design Workshop - Exemplar meetings

Thank you Ocean Predict community for participating in the workshop and Exemplar meetings. Outstanding engagement by modeling community.

Exemplar meetings generated a lot of engagement across obs-modeling communities and even some downstream stakeholders

Across the exemplars we saw emerging a potential set of “best practices” to help them work through a co-design process.

These initial Best Practices might include:



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Develop strong benefit statement (supported through economic impact analysis where possible)

Boundary Currents are a critical underlying drivers that border ocean basins and can be either **highly energetic** contributing to the **global climate system**, or **productive** and **rich in fisheries**, critical to **food security globally**

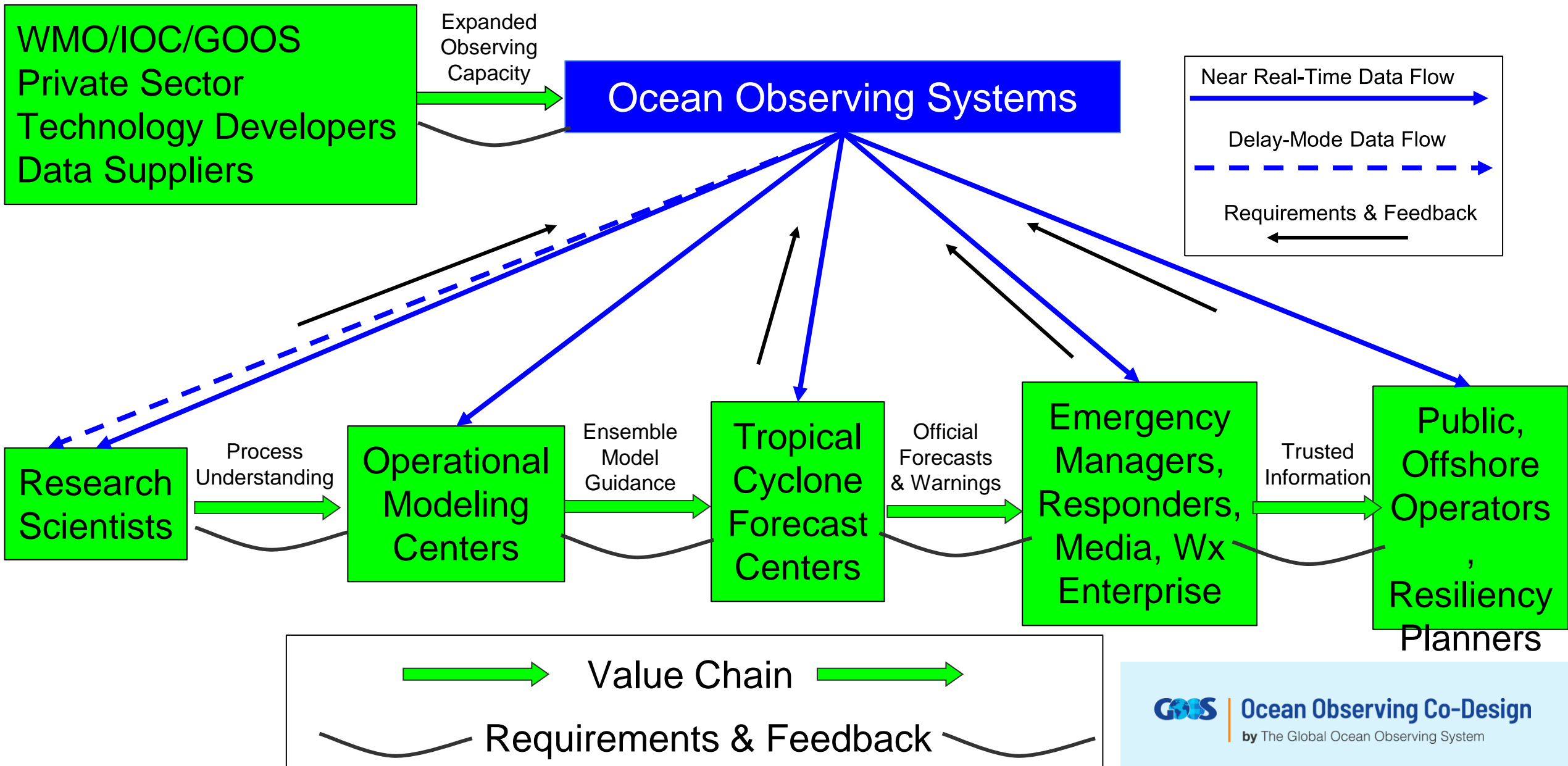
Engage stakeholders and characterize interactions

- **Methods** to ensure **full representative** of stakeholders
- Document requirements
- Design in **feedback loops** and **trusted and sustained flows of information** for iterations on platform design, data exchange, needs
- Seek funding opportunities to allow for **compensation**

Boundary Current Exemplar

Thoughts from multiple exemplars

Develop value chain; identify stakeholders



— Workshop outcomes and next steps

- **Outlines of proposals** for projects to progress different Exemplars towards final Supporters Forum DAY 4 (end Sept 2022)
- **Paper** to present initial summary of co-design best practices: 'Co-designing Science for the Ocean We Want - ICES Journal of Marine Science - abstract submitted
- **Preparation of a 2-page flyer for the** UN Ocean Conference in Lisbon to highlight the Exemplars



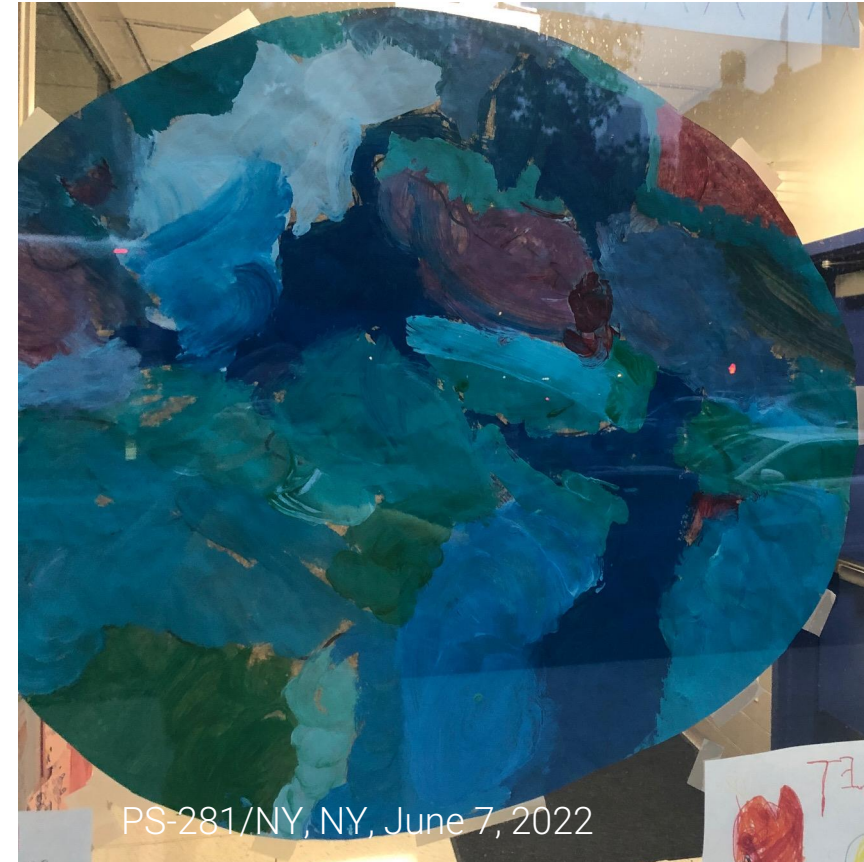


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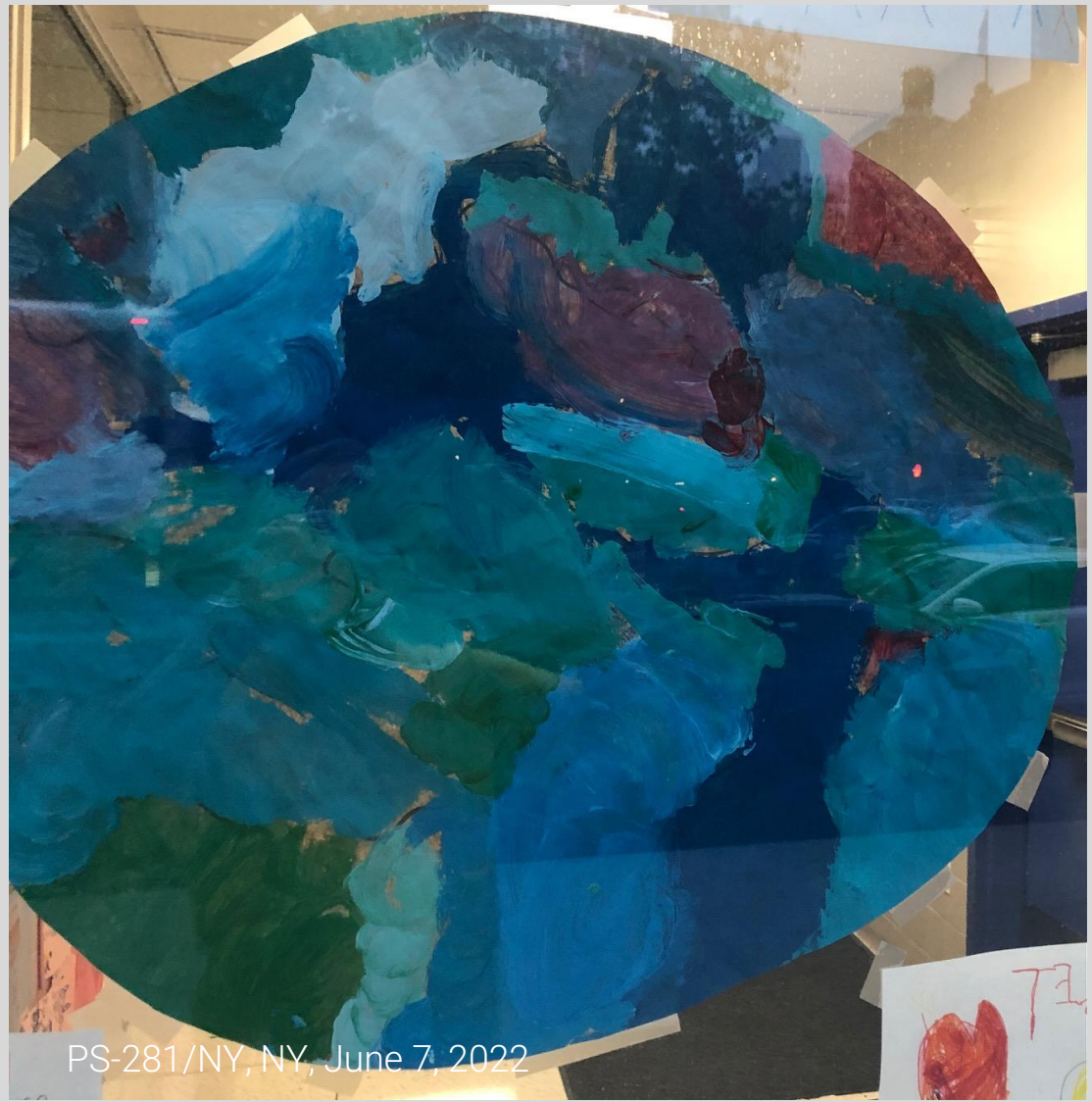
Next Steps with Ocean Predict

- Continued engagement with current exemplars in preparing ocean observing co-design “proposals”
- Help conceptualizing and/or coordinating proposed design studies (e.g. OSSEs, OSEs) for exemplars
- Ideas/priorities for additional exemplars, particularly those that move us towards an integrated ocean observing system.





PS-281/NY, NY, June 7, 2022



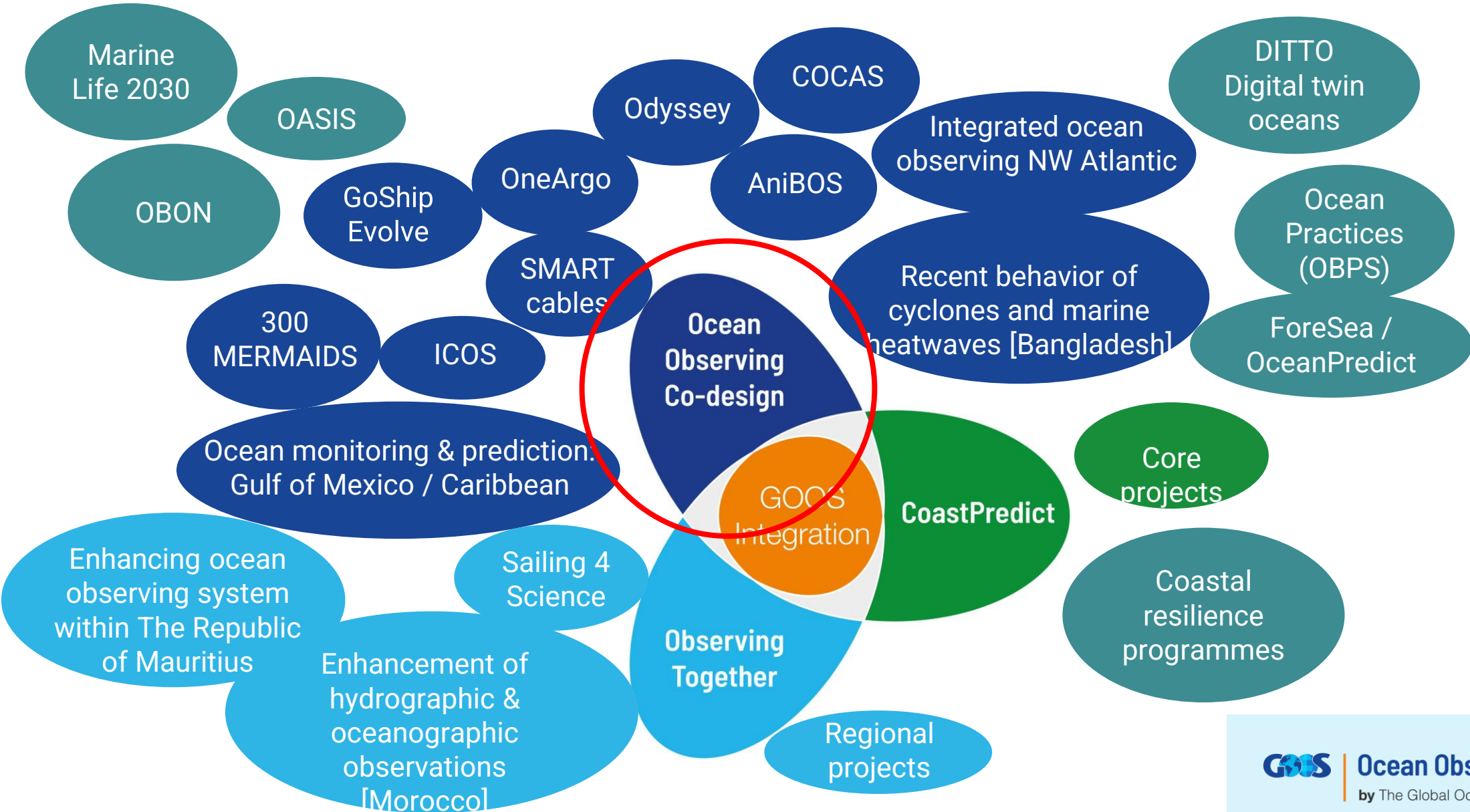
PS-281/NY, NY, June 7, 2022



GOOS is sponsored by the **Intergovernmental Oceanographic Commission of UNESCO**, the **World Meteorological Organization**, the **UN Environment Programme**, and the **International Science Council**.

---- **Thank you!**

Working together: elevated level of collaboration for the Decade



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