



CoastPredict

with The Global Ocean Observing System

Revolutionising Global Coastal Ocean observing and predicting coastpredict.org

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2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development

This programme is endorsed by the UN Decade of Ocean Science





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Objective

- co-design and implement an integrated coastal ocean observing and predicting system adhering to best practices and standards, designed to improve coastal resilience and coastal risk management

For nations: responsive & fit-for-purpose systems into coast to address many challenges: carbon sequestration, shipping/ports, hypoxia, marine heatwaves, storm surge, climate impacts, 30x30 targets



CoastPredict development strategy: a butterfly approach

**METHODOLOGY
STEP:
FOCUS AREAS,
SCIENCE &
TECHNOLOGY**



**GENERALIZATION
STEP:
COASTPREDICT
SOLUTIONS**

**GLOBALCOAST
EXPERIMENT**



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The barriers

1. International Networking for Global Coastal Ocean innovation and solutions/coastal resilience does not exist
2. Fragmentation of Knowledge
3. Open and Free Data is still limited to the Global North
4. Coastal managers and the public generally not involved in research development strategies
5. Trust in solutions still low
6. Study cases take a long time, with limited international collaboration



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GlobalCoast Experiment

Turn vision of an integrated observing and predicting system for the global coastal ocean into a tangible reality for coastal communities and researchers worldwide

Create globally replicable solutions, standards, and applications that enhance coastal resilience

Accelerate the data collection and advance modelling and analysis tools to be aligned with

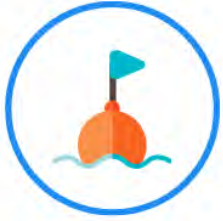
Best Practices and Open and Free Data sharing



CoastPredict

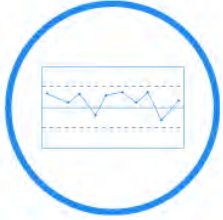
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Implementation at Pilot Sites



01. New technologies

for the coastal observing system will be implemented, innovated and tested at each Pilot Site to validate/calibrate regional and coastal models



02. Regional-coastal limited area models & AI-based models

will be implemented to assess the range of predictability and understand uncertainties, and provide an impact ensemble framework



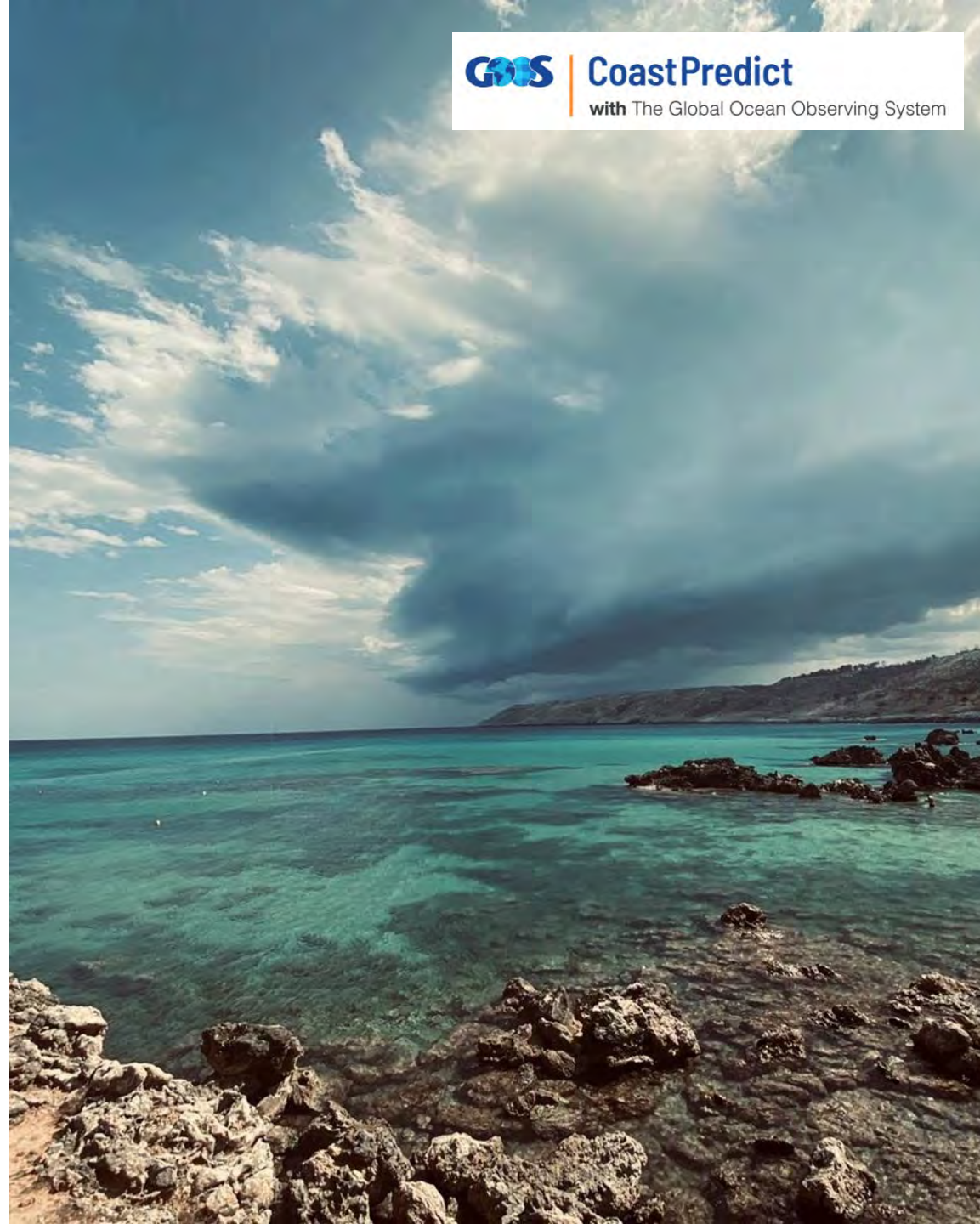
03. 100 years projections

will be produced by implementing regional to coastal climate limited area and AI-based models to downscale climate scenarios



04. High resolution reanalysis to instruct AI networks

will be produced at the coastal scale





29

Regions of the Global
Coastal Ocean



119

Pilot Sites



227

institutions
in 64 countries

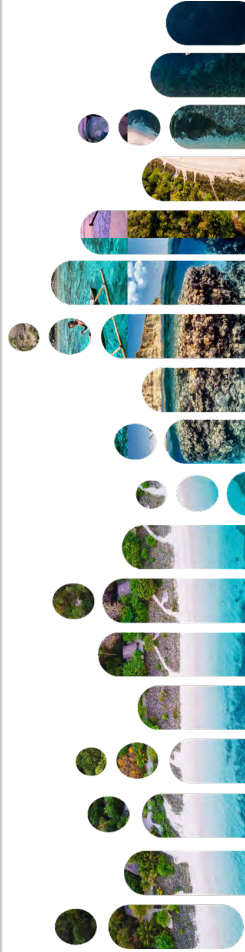
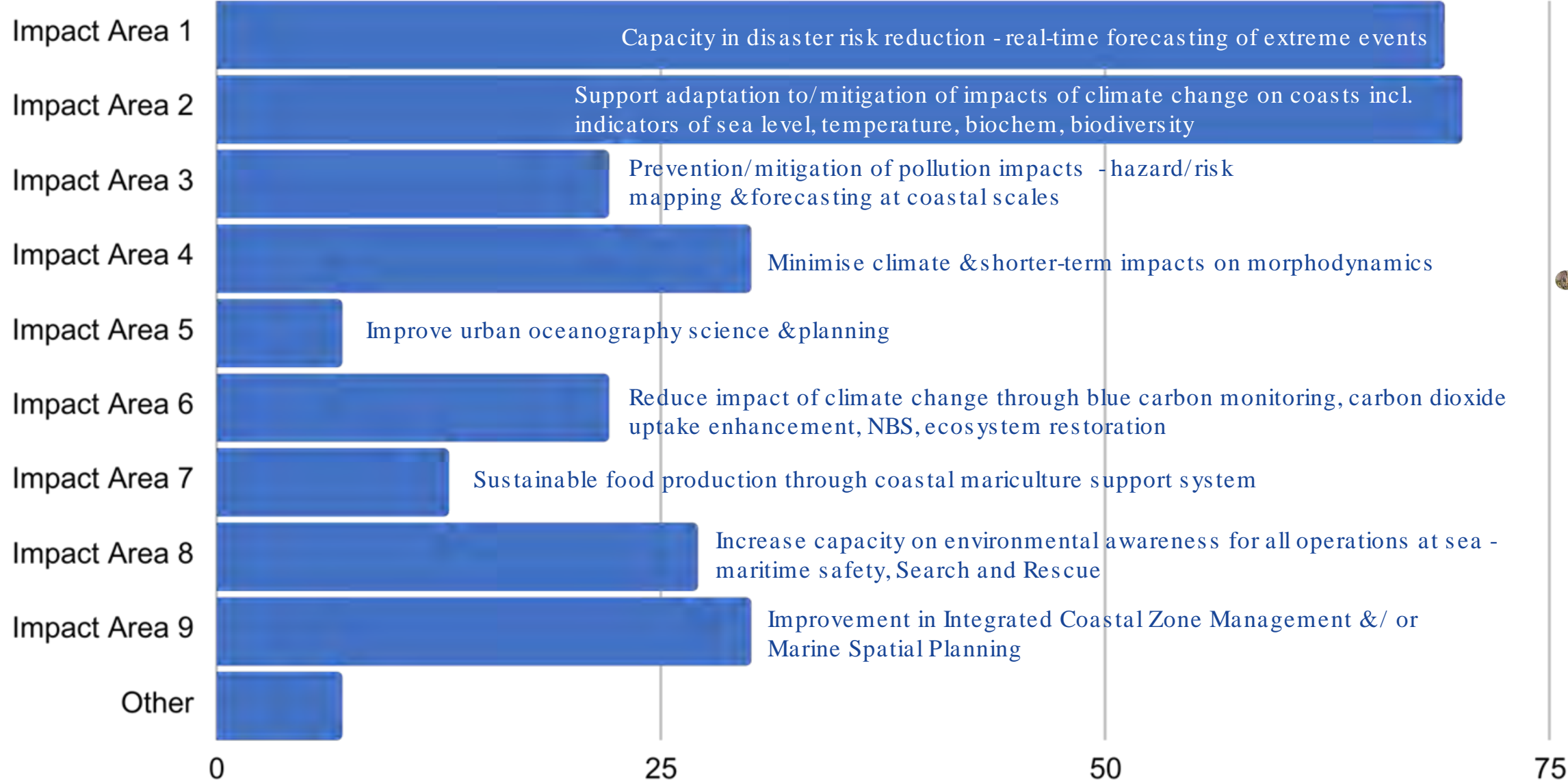
Pilot Site locations*



*subject to change - some locations to be verified

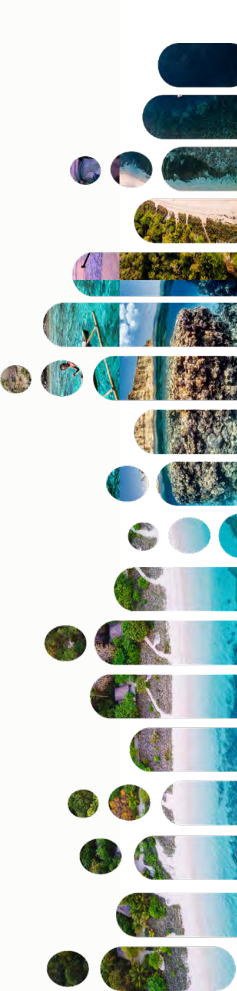
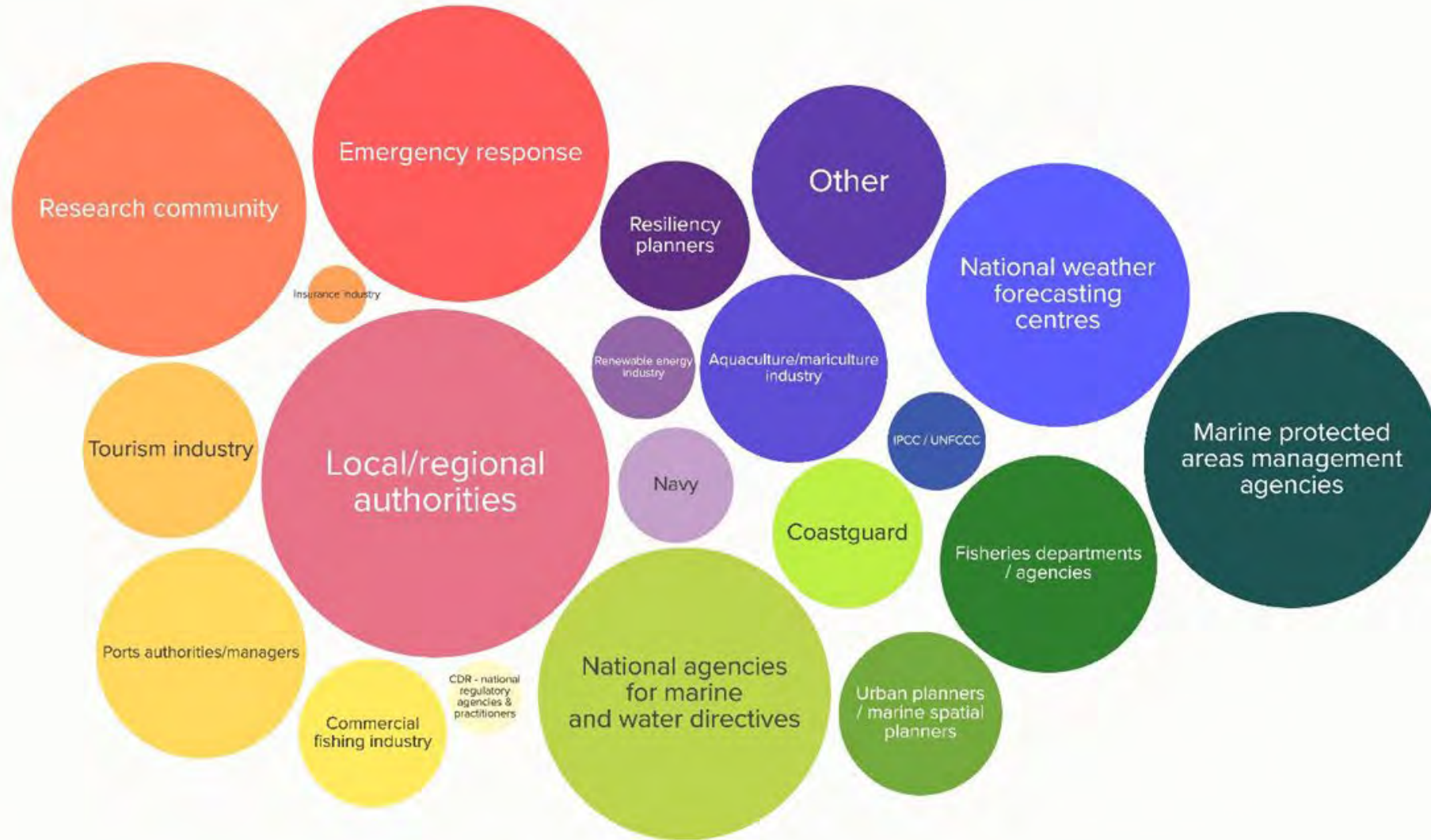
PRIORITY IMPACT AREAS

Q: Select up to three impact areas that will be addressed in your Pilot Site

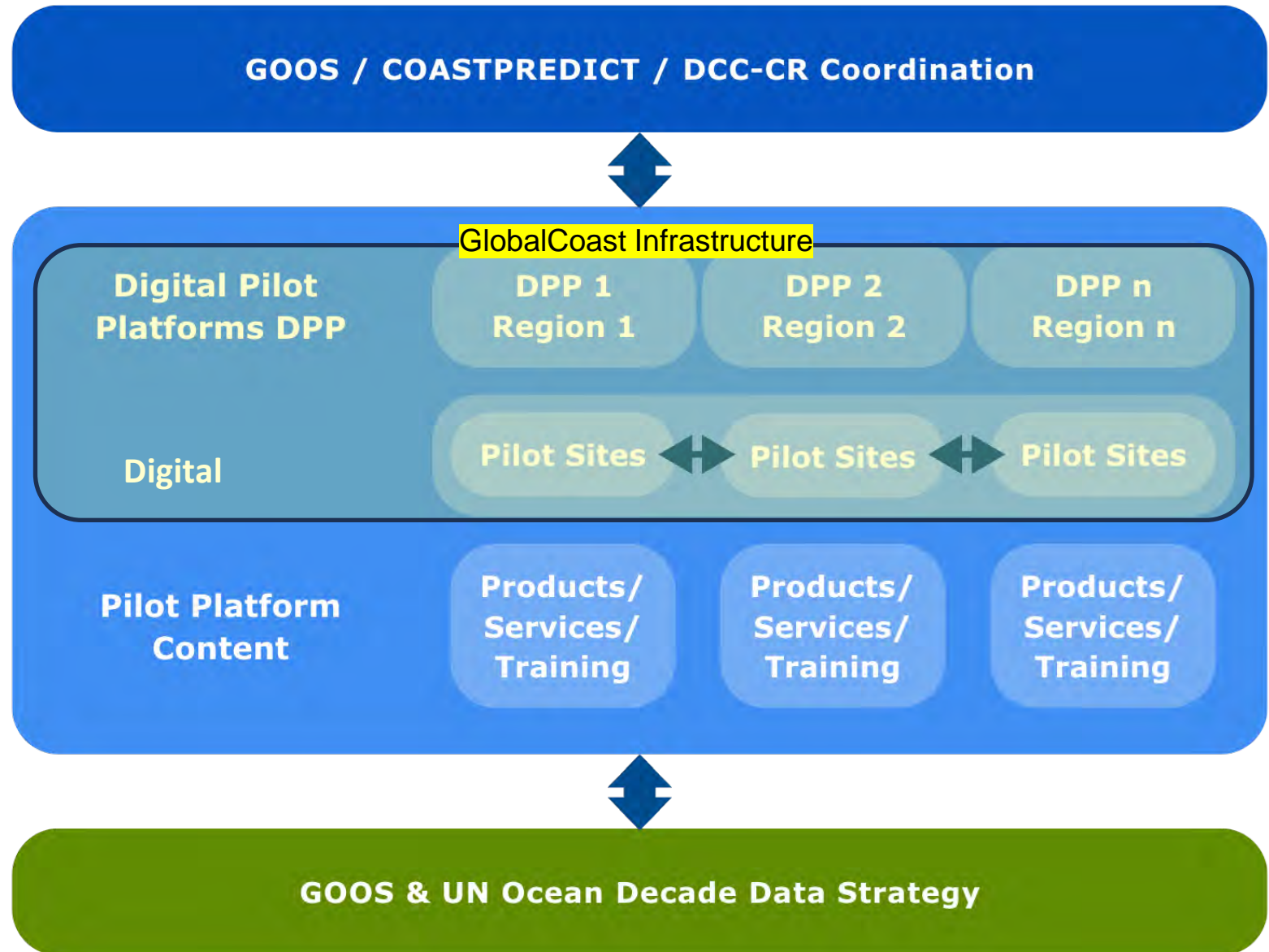


STAKEHOLDER GROUPS

Q: Who are the key intermediate and end-users for the integrated observing and predicting system to be implemented in your Pilot Site?



Create globally replicable solutions, standards, and applications that enhance coastal resilience



The Decade Collaborative Centre for Coastal Resilience



UN Decade
Collaborative Centre
for **COASTAL
RESILIENCE**

The main mission of the DCC-CR is to strengthen the connection between the new science and technology developed in the Ocean Decade and coastal stakeholders. DCC-CR will support stakeholder engagement activities in the GlobalCoast Experiment

Job Opportunities – join the DCC-CR!

1. Program Manager

- Support the development and organization of activities within the DCC-CR
- Deadline to apply: November 20th, 2023

2. Research Fellow

- Responsible for implementing teaching modules for the course “Resilient Coastal Business Models”
- Deadline to apply: November 30th, 2023



<https://centri.unibo.it/dcc-cr/en/news/job-opportunities-at-the-dcc-cr>