GOOS | CoastPredict

with The Global Ocean Observing System

Revolutionising Global Coastal Ocean observing and forecasting

Co-designing the infrastructure needed, and offering open and free access to coastal information

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

This programme is endorsed by the **UN Decade of Ocean Science**

CoastPredict will redefine the science of observing and predicting the Global Coastal Ocean to help the Ocean Decade succeed in its aims and give us the ocean we need for the future we want.

— The challenge

Reducing risks and improving lives requires us to understand the coastal natural system as well as respond to ways in which climate change is affecting coastal populations.

With increasing coastal urbanisation, cities and megacities, and increasing coastal impact from climate change, there is greater need for advanced monitoring of habitat health. We also need more accurate predictions of extreme events such as flooding, as well as pollution and other hazards.

We need funding and support from regional governments as well as end users of forecasts to make a difference to the outcomes for vulnerable, underfunded coastal communities.

"We will spread the ability to put systems designed in a global framework and implemented locally to other coastal locations worldwide.

— The answer

CoastPredict is a co-designed transformative response to science and societal needs.
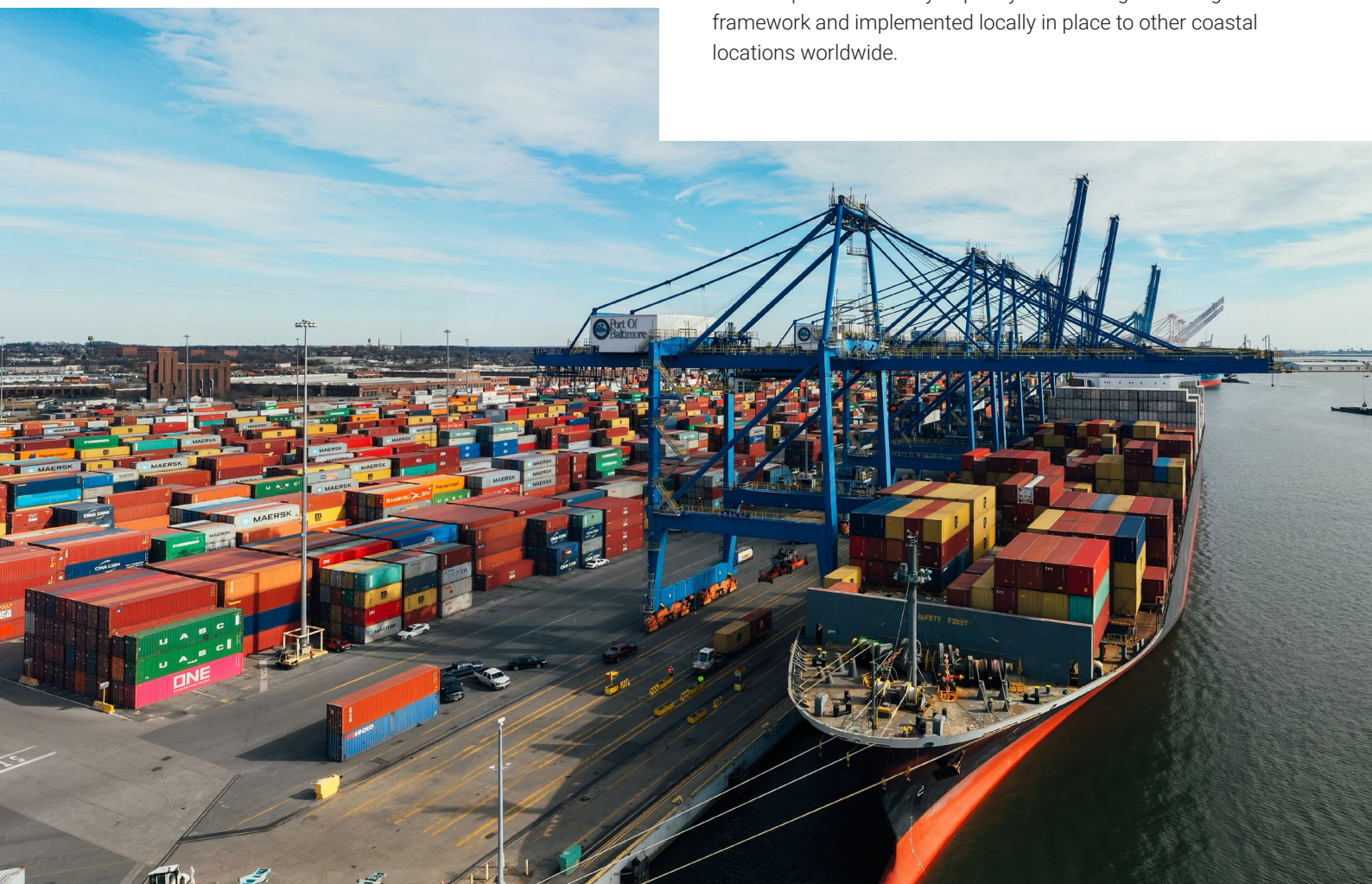
It is the result of significant input from GOOS, OceanPredict, young scientists, and global bodies active in international data and best practice systems.

The Global Coastal Ocean concept at the centre of CoastPredict considers all coastal ocean regions as an interface area. Atmosphere, land, ice, hydrology, coastal ecosystems, open ocean and humans interact on a multiplicity of space and time scales that need to be resolved with proper scientific methods and consideration of uncertainties.

A coastal focus will engage island nations and indigenous or local people and inspire early career ocean professionals.

CoastPredict can make a real difference to the outcomes for vulnerable, currently underserved coastal communities. We will be able to support sustainable marine activity and adaptation around climate change as well as warnings and preparation for extreme weather and coastal events.

We will spread the ability to put systems designed as a global framework and implemented locally in place to other coastal locations worldwide.

— The objectives

1. A predicted Global Coastal Ocean.

2. A fit-for-purpose oceanographic information infrastructure benefiting stakeholders such as specialised users who interpret, share and sometimes sell information to end users such as businesses, government and individuals.

3. An integrated coastal ocean observing and forecasting system adhering to best practices and standards, designed as a global framework and implemented locally.

4. Open and free access to coastal information and the growth of ocean literacy.

5. Innovative and sustainable applications for coastal solutions/services.

— The benefits

CoastPredict will offer us an integrated and comprehensive knowledge of the Global Coastal Ocean, including the urban ocean, from short timescale events to climate change, as well as impacts of societal drivers.

It will result in an integrated coastal and open ocean observing and modelling system and improved, multidisciplinary, and extended range predictive capability for the coastal zone. By the end of the Ocean Decade, observations and modelling will be integrated in the coastal ocean and we will be closer to having the ocean we need for the future we want.

Specifically, we will be able to:

— Enhance the value of and quality of end-user products such as forecasts.

— Offer reliable predictions of different potential futures.

— Develop new multi-platform observing and modelling technologies and expand coverage into regions and communities where before this would have been economically unviable.

— Improve human interaction with our oceans.

— Mitigate the impact of climate change, restore habitats and advance sustainable and blue economies.

— Get involved

CoastPredict will make vital, real and lasting change. If you would like to support us please get in touch to start the conversation about how you can help and what your contribution will enable us to achieve together.

Potential investors and supporters please contact us to discuss possible projects and funding opportunities that align with your needs.

goosocean.org →

GOOS | CoastPredict
with The Global Ocean Observing System

GOS

Operational services

Climate

Ocean health

GOS | At the heart of the Ocean Decade

Our work is at the heart of every activity carried out by the Ocean Decade. We observe the ocean to increase our knowledge, help keep humanity and our planet safe, while playing our part in enabling environmental regeneration and economic growth for the future.

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