CoastPredict
with The Global Ocean Observing System

Decade Actions

Integrated coastal ocean observing and predicting (PredictOnTime) Core project of CoastPredict

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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.

It will include co-designing the infrastructure needed, and offering open and free access to coastal information to give us the ocean we need for the future we want.

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PredictOnTime

The Core project "PredictOnTime" will deliver new predictive capacities, services and products for the global coastal ocean based on innovative integrated observing systems and forecasting systems implemented and tested at selected Pilot areas.

The PredictOnTime will deliver a relocatable, easy to be deployed, cost effective observing and forecasting system of systems as well as best practices. The observing and forecasting systems will be deployed and tested with users and stakeholders in Pilot coastal areas in more than 20 nations in the global coastal ocean.

We will focus on observing and predicting natural extreme events in the global coastal ocean on due time and with the appropriate accuracy so that impacts on natural and human resources and assets will be minimized.

We will develop and consolidate the communities science observing capacities and support through the new predictive capability the innovative and sustainable applications for coastal solutions/services.

Start Date: 01/10/2022
End date: 30/11/2027
Estimated budget 30 Million Euro (5-10% Inkind)

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Parners

Lead Institution Name

Euro-Mediterranean Centre on Climate Change Foundation (CMCC)

Partners

2 NMEFC (China)
3 EUROGOOS (Belgium)
4 LEGOS (U.Toulouse/CNRS/CNES/IRD) (France)
5 Jupiter (USA)
6 Georgia Tech (USA)
7 Institute of Science Bengaluru (India)
8 SIFT Inc. (USA)
9 Fugro, Houston, Texas, (USA)
10 MIT (USA)
11 University of Thessaloniki (Greece)
12 SynObs, JMA/MRI (Japan)
13 RIKEN (Japan)
14 University of Liege, (Belgium)
15 NOLOGIN (Spain)
16 University of Cape Town, South African Environmental Observation Network (South Africa)
17 P.P.Shirshov Institute of Oceanology, Moscow (Russia)
18 Met-Ocean Solutions - Meteorological Service of New Zeland
19 University of Rio de Janeiro (Brazil)
20 CIMA - Universidad de Buenos Aires, IRL IFAECI (Argentina)
21 CNR-ISMAR – (Italy)
22 SOCIB (Spain)
23 University of Edinburgh (UK)
24 National and Kapodistrian University of Athens (Greece)

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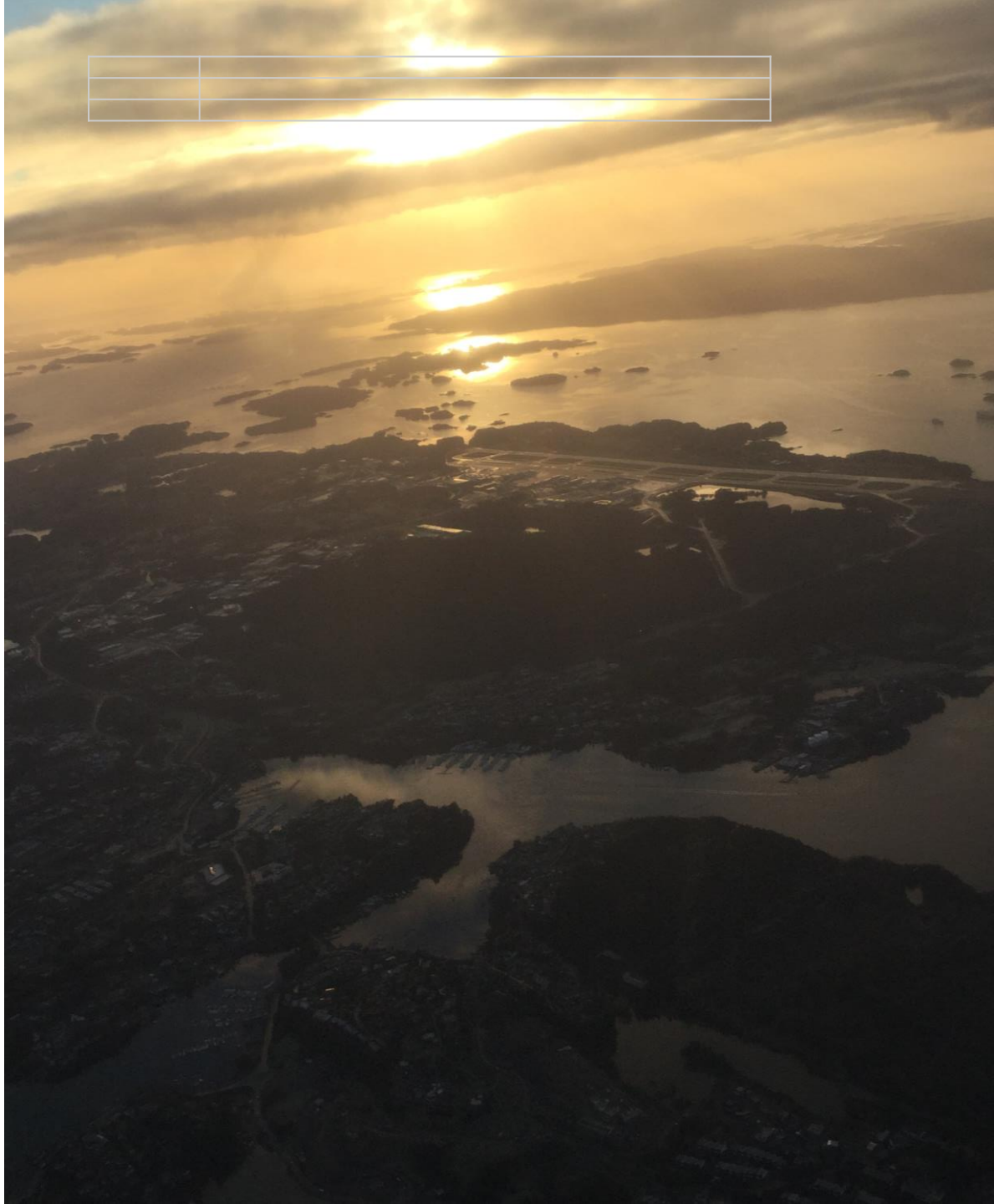
25 Pacific Commuty Center for Ocean Science (PCCOS) (Nuova Caledonia)
26 NERSC (Norway)
27 Nelson Mandela University, South African Environmental Observation Network (South Africa)
28 WWRP
29 ECCC, Canada
30 AZTI, Spain
31 DMI, Denmark
32 LAMMA, Italy
33 University of Philippines - Diliman
34 MetOcean Solutions, New Zeland
35 Puertos del Estado, Spain
36 Australia's Integrated Marine Observing System (IMOS)
37 JMA, Japan
38 NOAA (USA)
39 Hereon (DE)
40 Universiti Sains Malaysia
41 IEEE France



high-level objective of PredictOnTime

To improve the coastal observing systems and forecasting systems to drive a transformative change on how to predict the global coastal ocean, testing, evaluating and assessing observing and modelling capacities.

1.

Improving the understanding of functioning and predicting capacity of this complex global coastal ocean where the impacts of climate change are amplified.

2.

contribute to the UN Ocean Decade objective of “A predicted ocean” by improving our understanding of the coastal area processes using a multi-disciplinary and integrated approach

4.

Development of methods for **trusted data / information exchange and interoperability across the value chain.**

5.

Innovative and sustainable applications for coastal solutions/ services that directly benefit local populations including well-being and human health.

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The expected outcomes (1-7)

1. Observe and predict natural extreme events in the global coastal ocean on due time and with the appropriate accuracy so that impacts on natural and human resources and assets will be minimized.

2. Augment the integrated and comprehensive knowledge and prediction capabilities of the global coastal ocean for short time scale events;

3. Define and deliver advance and innovative integrated coastal **impact** observing and forecasting systems, complementing the open ocean ones for selected coastal areas;

4. Develop and consolidate the citizen science observing capacities;

5. Improved, multidisciplinary and short term **impact** predictive capabilities for the coastal zone;

6. Support through the new predictive capability the innovative and sustainable applications for coastal solutions/services.

7. Consolidated collaborative scientist/stakeholders and society context for coastal prediction

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The expected outcomes (8-14)

8. Operational prediction systems in places and tested at the identified Pilot areas

9. Identification of frameworks (e.g. institutional, private) and recurrent funding for the operational prediction activities expected as the legacy of the Project beyond the Ocean Decade

10. Engage coastal societies in designing, co-develop and test the ocean observing and forecasting systems.

11. Compile and make accessible best practices for coastal observing and forecasting systems (including in under-resourced countries)

12. Create responsive, co-designed impact observing and forecasting programs that are reasonably cheap to run and don't require expensive equipment and HPC resources.

13. Sustainably train and capacitate people in under-resourced countries to use observing equipment, implement and run forecasting systems and analyse samples and data

14. Develop Standard Operating Procedures to ensure interoperability on key coastal essential variables globally.

Activities in 2022-2023

- 2 KO meetings
- Elarging the parntership
- Preparation of the website
- Recruiting of dedicated human resources
- Work with Co-Design programme for the Storm surge exemplar
- Query and definition of Partnership existing activities and willing to participate to PredictoOnTime activiites
- Preparation of sub-projects and search for funding
- PredictOnTime workshop 10-12 May 2023 Lecce

PredicOnTime meeting
12-14 May 2023 Lecce, Italy
http://predictontime.org

Objetives:

1) Discuss Pilot Sites for contributing to the Global Coast Experiment
2) Planning site digital platform implementations
3) Organize WPs activities and plan join activities at each pilot sites
4) Training course
5) Collaboration with Flame and other CoastPredict projects
6) Plan future activities

Contacts

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