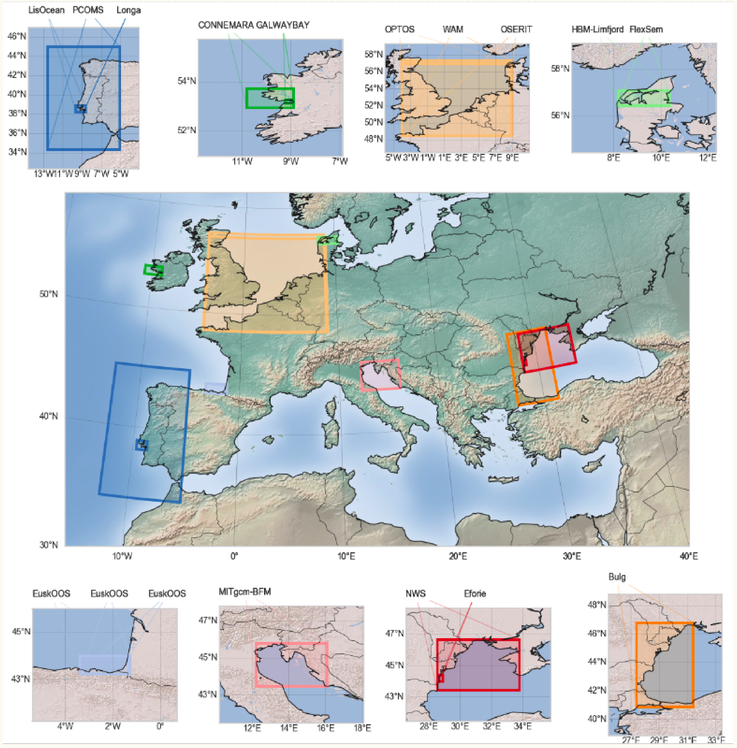
FORCOAST : Earth Observation Services for Wild Fisheries, Oystergound Restoration and Bivalve Mariculture along European Coasts

Arthur Capet[1,*], Luc Vandenbulcke[1,*], Marilaure Grégoire[1,*], Luis Rodriguez Galvez[2], Daniel Twigt[2], Anna Rubio[3], Vicente Fernandez[4], Tomasz Dabrowski[5], Daan Delbare[6], Ghada El Serafy[2]

[1] MAST-FOCUS, Liège University, Belgium, [2] Deltares, The Netherlands, [3] AZTI, Spain, [4] EuroGOOS, Belgium, [5] Marine Institute, Ireland, [6] ILVO, Belgium

8 Pilots

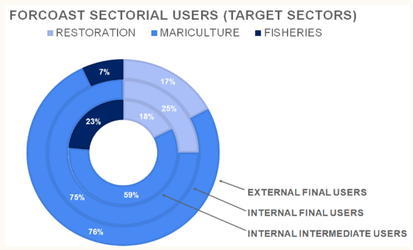
Each pilot gathers high resolution downscaled models (incl. waves, BGC, physics and sediments, depending on site), researchers, intermediate service providers and users commmunity.



3 Sectors

Services are co-designed with internal and external user communities, issued from the sectors:

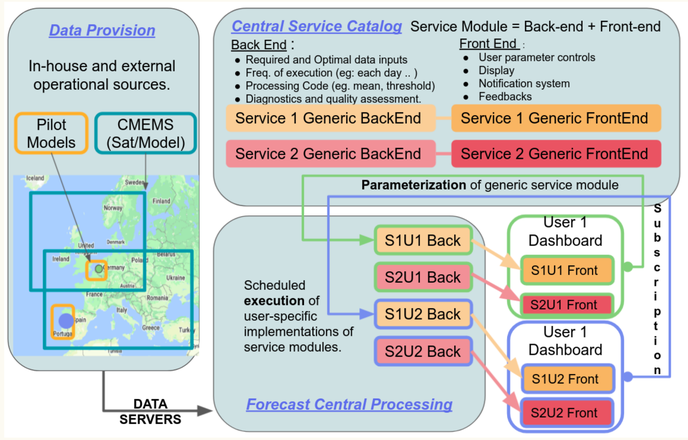
- Wild Fisheries
- Oystergound Restoration
- Bivalve Mariculture



What is FORCOAST ?

FORCOAST is a H2020 SPACE project, aiming at developing, testing and demonstrating novel Copernicus-based downstream information services.
FORCOAST will provide consistent coastal data products, based on a standardized data processing scheme and stimulate their exploitation within three targeted sectors.
FORCOAST builds on cloud computing and utilize one of the DIAS systems. A portfolio of services is accessible to eight pilot sites from the North Sea, Baltic Sea, Mediterranean Sea, Black Sea and the coastal Atlantic Ocean.

1 Central platform



Services modules are co-designed at pilot levels, involving local research groups, private entities and end-users.
Services modules are deployed on one central cloud-based platform, exploiting Earth Oservation and downscaled pilot models. The services are designed to be

- **Transferable** spatially, and adapt to model outputs from new Pilots,
- **Modular** to meet local requirements of new users,
- **Evolutive**, based on cloud computing, FORCOAST may ingest new sources of data.

9 Service Modules

Fish Index

Sector : **Fisheries**
Method : Habitat suitability model from remote sensing and wave forecasts.
Development : Bulgarian Pilot, Terrasigna, USOF.

Front Detection

Sector : **Fisheries**
Method : Front detection on SST & Chl remote sensing and forecasts.
Development : Spanish Pilot, AZTI

Marine Conditions

Sector : **Aquaculture**
Method : Met-Oceans services, based on forecasts.
Development : Danish & Portugese Pilot, DMI, MARETEC.

Land pollution

Sector : **Aquaculture**
Method : Lagrangian modelling of harmful releases, forecasts.
Development : Romanian Pilot, MAST-ULiege, Jailoo

Site prospection

Sector : **Aquaculture**
Method : Growth model, hindcasts.
Development : Danish Pilot, Aarhus University.

Spat Capture

Sector : **Aquaculture**
Method : Timing of spats arrival, lagrangian modelling.
Development : Belgian Pilot, RBINS

Suitable habitat

Sector : **Restoration**
Method : Habitat models, hindcasts
Development : Irish Pilot, Marine Institute.

Recruitement

Sector : **Restoration**
Method : Spawning grounds and Lagrangian.
Development : Irish Pilot, Marine Institute.

Harmful Events

Sector : **Restoration**
Method : Remote Sensing (Turbidity, SST, Chl), modelling (Salinity)
Development : Irish Pilot, Marine Institute.

More info ?

http://forcoast.eu

acapet@uliege.be