

COORDINATED ATLANTIC COASTAL OPERATIONAL OCEANOGRAPHIC OBSERVATORY (MyCOAST)

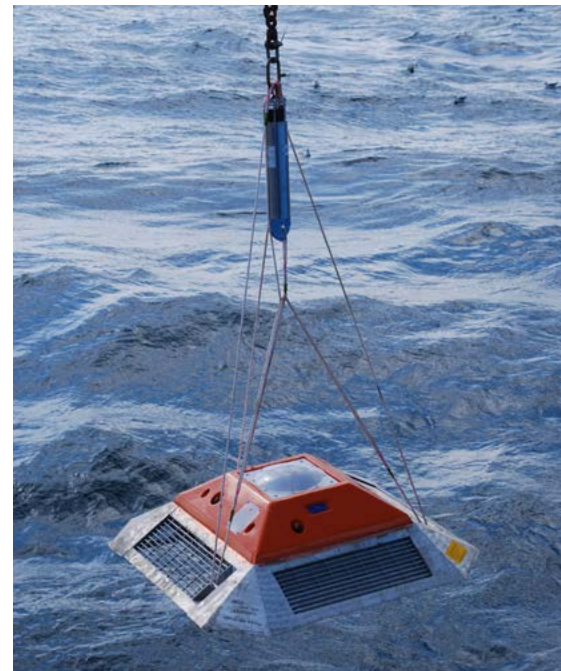
Project partners: AZTI (Lead Partner), IEO, INTECMAR,
IMI, USC, SHOM, PdE, IFREMER, CEFAS, IST, PML, MSS,
DXCACC-METEOGALICIA, IH and QUALITAS

MyCOAST is a project funded by the INTERREG Atlantic Area European transnational cooperation programme. It includes 15 partners from 5 Member States plus 7 associated partners, made up of national and regional public institutions, R&D organisations and a SME. The project runs between November 2017 and June 2021.

BACKGROUND

The EU has been funding large scale initiatives and programmes with the main objective of protecting, securing and developing the potential of marine and coastal environments. MyCOAST will fill the gap between products at regional scales and the end-users, whilst addressing a transnational handling of coastal observatories. The resulting synergy will allow to deploy and capitalize innovative and standardized risk management systems and tools which can be applied in areas such as extreme weather events leading to flooding, maritime safety or coastal pollution prevention and mitigation.

The common challenge addressed by MyCOAST is the need to secure the improvement in the capacity of the Atlantic territories to manage the existing coastal risks. The identified opportunities arising in the European Blue Economy along the Atlantic coast coexist with natural and anthropogenic threats in a sensitive coastal area that is often highly impacted. Extreme storms events, increasing human activities in renewable energy or offshore aquaculture need reinforced environmental monitoring and prevention systems. Maritime security and prevention and mitigation of pollution are all important issues in the Atlantic area in need of an integrated and interoperable smart system encompassing European, national, regional and local infrastructures in order to achieve sustainable monitoring and prevention coastal systems.





OVERALL OBJECTIVE

The aim of MyCOAST is to enhance the capability of risk management systems in the Atlantic region by improving co-operation between national and regional observational and forecasting systems, and end users (citizens, public administrations, etc). MyCOAST is building a coordinated Atlantic Coastal Operational Observatory in the Atlantic area, joining capabilities along the five Member State partners, and leveraging efforts from already existing cross-border cooperation activities, European projects (best-practices and new technologies from JERICO-NEXT; links with open ocean observations from AtlantOS), and from long-term synergies already created in the framework of the IBIROOS regional alliance. All efforts are targeted towards the improvement of coastal monitoring and forecasting tools to support threat and emergency response.



OUR APPROACH

MyCOAST has strengthened a transnational perspective for the coastal observatories. The actions on data management are promoting open and free information sharing and interoperability between coastal observatories and the common European data systems (EMODnet, Copernicus INSTAC, SeaDataNet). Then, the technical networking and specific synergies are strengthened the use and dissemination of downstream applications of the Copernicus Marine and Environmental Monitoring Service (CMEMS) in order to address the common challenge of resilience to coastal risks.

The integration of interoperable data from the coastal observatories into risk management tools is ensuring replicability and transferability along the Atlantic Area. To ensure effective implementation, the tools have been jointly developed and validated together with key actors involved in managing and preventing coastal risks such as flooding or coastal erosion, water quality issues, and those responsible for managing maritime safety and response to pollution incidents. Finally, MyCOAST is improving the awareness to these risks in the Atlantic Area, and helping to identify and promote opportunities for the private sector.





MAIN OUTPUTS & RESULTS

The contributions and impacts of MyCOAST spread across and align with the EuroGOOS strategy and priorities

Priority 1 : Sustained Observing Systems

- Inventory of observing platforms, gap analysis and cost-benefit studies, developments of observing capabilities in the Atlantic Area.
- The integration of established coastal observing systems by sharing data best practices, experiences and resources.

Priority 2 : Marine data management

- Development of standardized and interoperable data systems, delivering real-time observations and model outputs across the 9 coastal observatories connected with European structures (CMEMS INSTAC, EMODnet, SeaDataNet), INSPIRE compliant, using state of the art data standards.
- Guidelines and handbooks to support data providers.

Priority 3 : Marine products and services

- Optimization, validation and intercomparison of 9 different forecasting coastal and local models connected to the Copernicus core service.
- Development of pilot tools and instruments applied to specific coastal risks along the Atlantic coast.
- Support and transfer of opportunities to the private sector.

Priority 4 : Communication

- Dissemination actions (stakeholders events, participation in scientific conferences and events, regional workshops, etc.). Technical and scientific publications.
- Increased awareness of the importance of marine observations, data management in the mitigation of coastal extreme events, risk assessment and marine pollution.

A COLLABORATIVE EFFORT

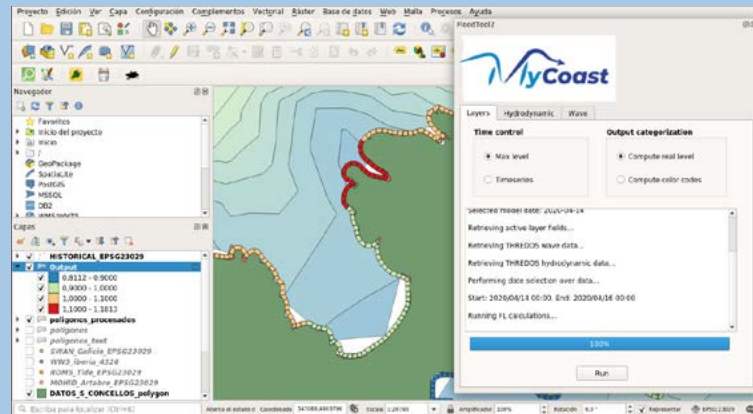
The development and demonstration of marine services has been achieved with a high level of partner cooperation in supporting observing systems and data dissemination, and also in the joint development and validation of coastal tools and forecasts. We have focused on improving the software for efficiency, inter-operability and linkage to in-situ and model data sources. See the Coastal Risk Tool examples over page.



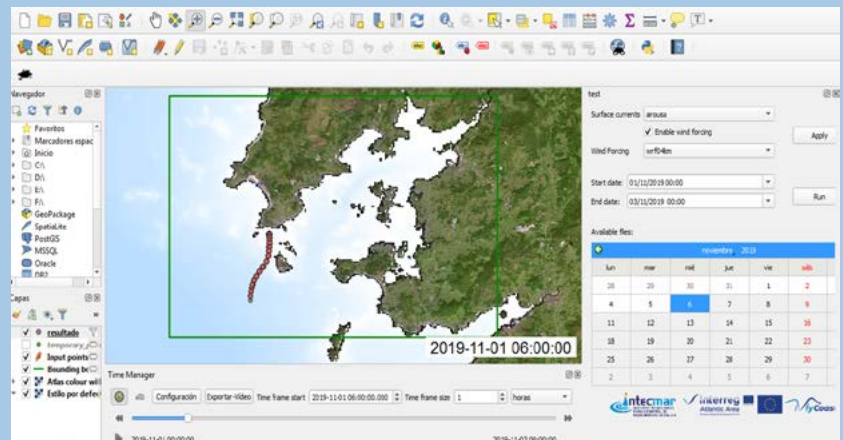


EXAMPLES – COASTAL RISK TOOLS

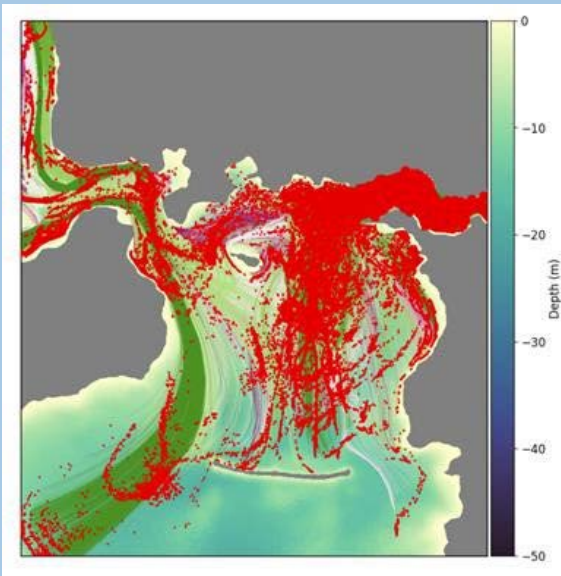
Flood risk tool (FloodTool):



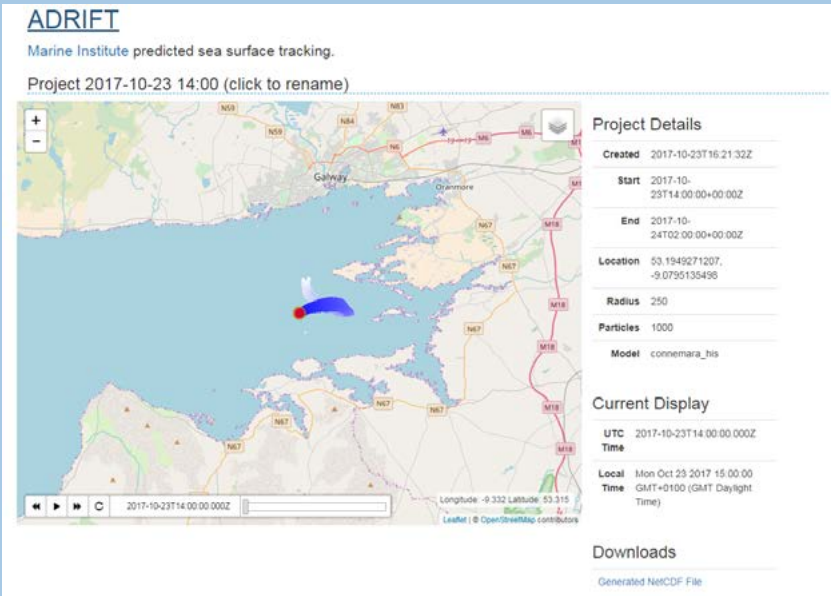
Oil Spill & HNS forecast tool:



Litter tool (MyCoast-FTLE):



Search and rescue tool (ADRIFT):

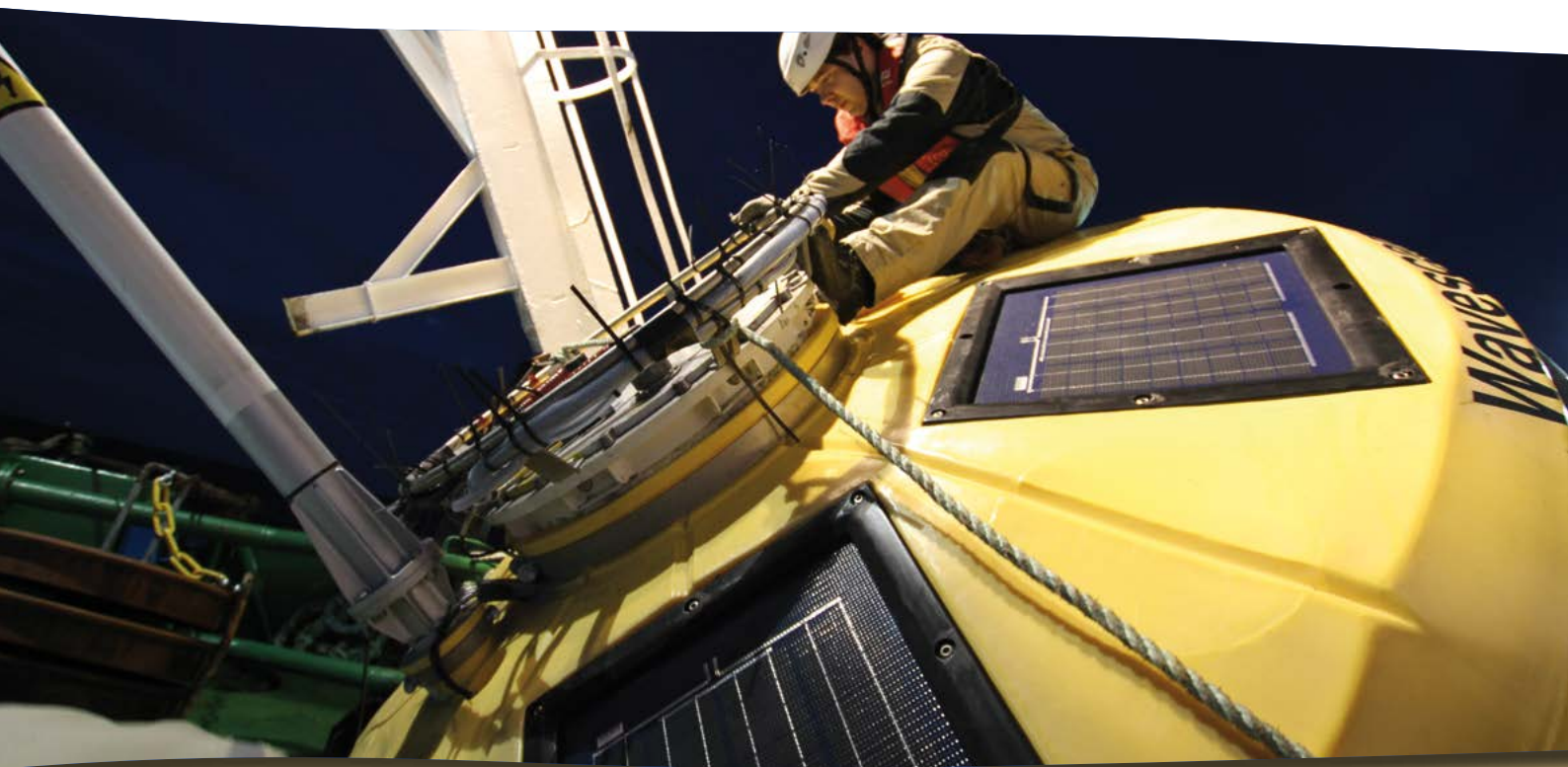




Maritime safety tool ('Weather Window' tool):



Coastal risk tool	Contact
Coastal Flooding	pablo.enrique.carracedo.garcia@xunta.gal
Oil Spill & HNS Forecasting	pmontero@intecmar.gal
Litter	rito@pml.ac.uk
Search & Rescue	ocean.modelling@marine.ie
Weather Window	ocean.modelling@marine.ie



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