



Main achievements in the last year and EuroGOOS integrated strategy



EuroGOOS annual General Meeting , Brussels,
23-25 May 2018

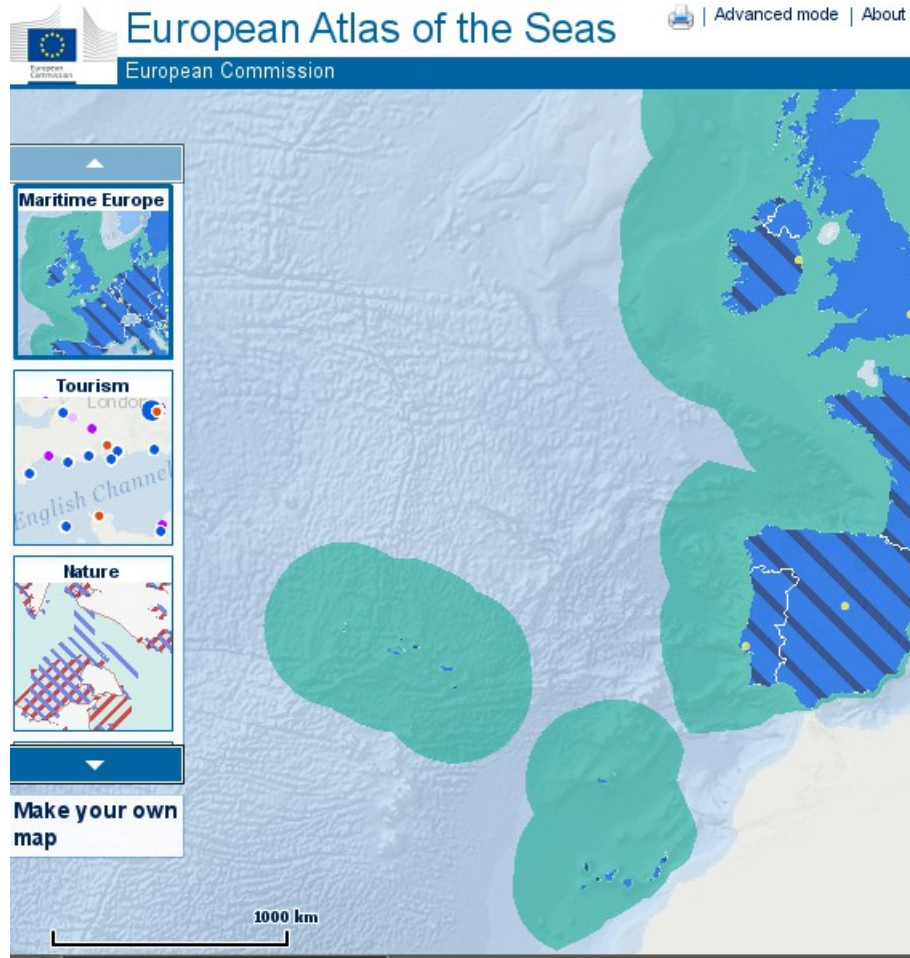
Extension of IBIROOS focus

Annual meetings

- 5-7 April 2016, Tenerife (Canary Islands, Spain), 13 attendees
- 7-9 March 2017, Funchal (Madeira Island, Portugal), 17 attendees, hosted by Madeira Ocean Observatory
- 22-23 April 2018, Bordeaux (France), 23 attendees, hosted by Ifremer and University of Bordeaux). IBI week (3 meetings)
- 2019 IBI meeting in the UK. Joint meeting with NOOS in 2019?

Most IBI members active, new “observers” (Madeira Observatory, Marine Scotland, PML...)

IBI EEZ ZONES



Task 4.1 Gap analysis and critical assessment of coastal observing systems

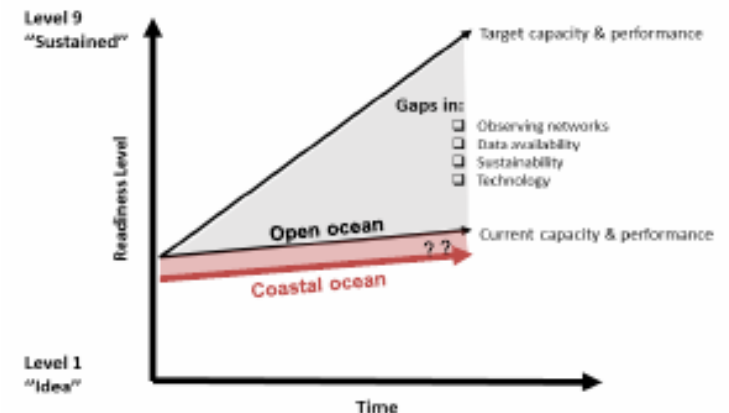
Outline status quo and develop strategies to link EU coastal observing activities (e.g. JERICO NEXT) to large scale Atlantic – with reference to the GOOS Regional Alliances (EuroGOOS)

This Thursday ...

Next workshop (April/Bordeaux, FR): **Shelf & Shelf break observing strategy in the Atlantic**

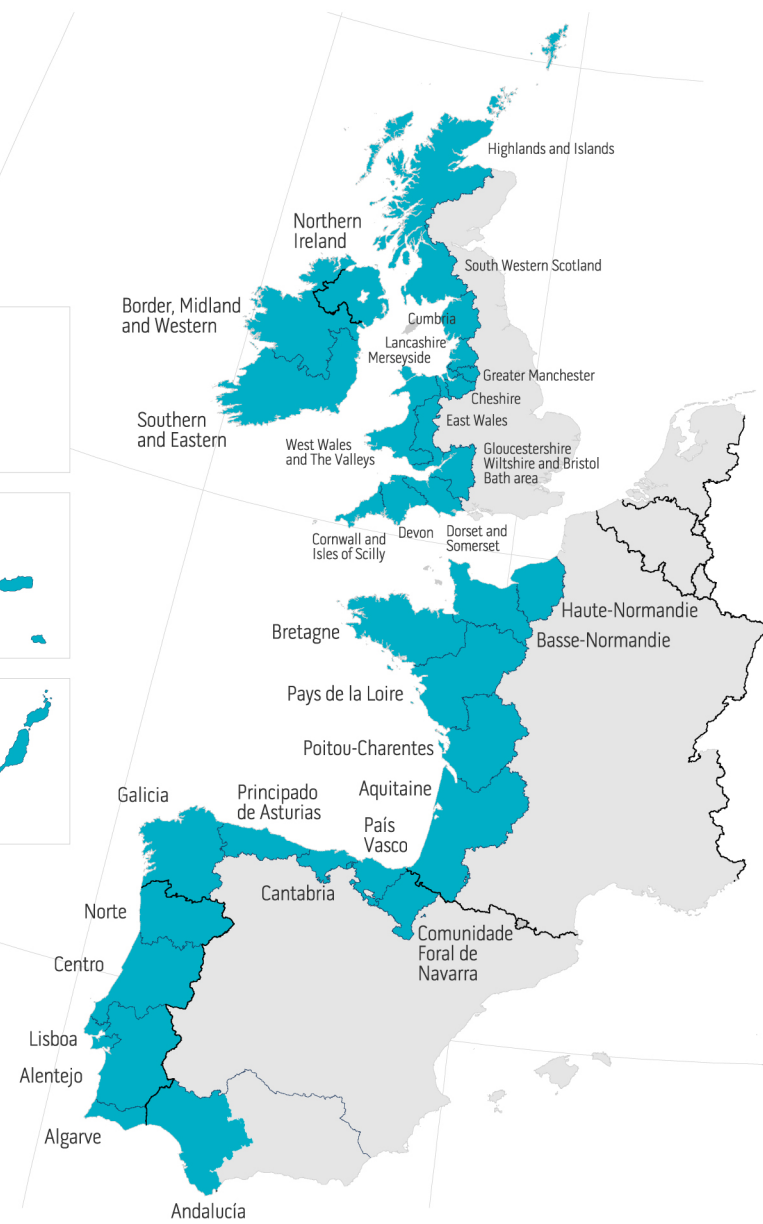
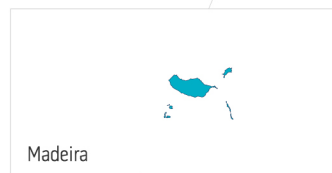
- identification of major observing and processing gaps
- recommendations for future integrate observing systems

GAP ANALYSIS STRATEGY FOR ATLANTIC OOS



Modified from AtlantOS D1.3
 “Analysis of the capacities and gaps of the present Atlantic Ocean Observing System”

IBIROOS “week” in Bordeaux: joint meeting with Mycoast Interreg Atlantic Area and ATLANTOS workshop



ATLANTIC AREA PROGRAMME 2014-2020

Partner involvement will be organised in sub-regions where the pilot demonstrations will be performed: Ireland-UK (Scottish West Coast; Irish seas; Liverpool Bay; Western Channel - IMI, MSS, PML, CEFAS), Bay of Biscay-LOREA (Iroise Sea; French Atlantic coast; Cantabrian coast - SHOM, IFREMER, AZTI), Galicia-Portugal (RAIA) and Cantabrian Sea (INTECMAR, USC, DXCACC, IEO), Portugal-Gulf of Cadiz (Portuguese Atlantic coast; OCASO - PdE, IST, IH, QUALITAS, IEO), Macaronesian Islands (IEO, IH, IST). To ensure effectiveness and quality of implementation, the risk management tools will be validated jointly with the co-developers from WP7 and with the key actors involved in managing and preventing coastal risk

IBIROOS strategy

i. Sustained observing system:

IBI showcases the impact of regional cooperation in maintenance and development of sustained observing systems funded by member states, regional governments, FEDER and other EU instruments

EOOS is expected as a framework for sharing strategies, gap analysis, etc

ii. Data:

The coordination between EMODnet, Copernicus and SeaDataNet is improving significantly for maintaining a European data structure. The commitment of the IBI community for contributing in the general data system is high.

Ongoing pilot demonstrations of data set formatting following OGC standards and dissemination to existing data hubs

WP6: Complying with Data Interoperability Standards

| | AZTI | IEO | IFREMER | IH | INTECMAR | MI | MSS | PdeE | PML | TOTAL |
|---------------------|------|-----|---------|----|----------|----|-----|------|-----|----------|
| CTD Profiles | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | 7 |
| HFRadar | 1 | | | 1 | 1 | | | | | 3 |
| Automatic Platforms | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 8 |
| Model Outputs | | | | | | 1 | | | | 1 |
| Current Profiles | | | | | | | | 1 | 1 | 2 |

Survey: Datasets to harmonise, degree of current harmonisation, standards, European initiatives to reach

Chosen Datasets to harmonise

- Automatic Platforms
- CTD Profiles
- HF Radar

Successes 2017-2018

High level of cooperation and member activity focused on products:

- “Classical”: HAB warning system, oil spill, chemicals, search and rescue..
- “Emergent”: marine litter, renewable energies, offshore aquaculture, marine spatial planning, support to MFSD implementation in offshore areas

Joint development of new products is ongoing in different areas.

Participation in several INTERREG and H2020 projects for regional cooperation in development and demonstration of marine services and enhancement of coastal observing systems and modelling systems.

Products: HAB Early warning

Pilot HAB Bulletin [status of harmful and toxic algae]

Week 30: 21 – 27 July, 2013
Week runs from Sunday to Saturday

Phytoplankton general observations (last week):

Phytoplankton are in full bloom.

| Region | Predominant Phytoplankton |
|------------------|--|
| northwest-north: | Microflagellates (~10 million cells/L) and diatoms (e.g. " <i>P. delicatissima</i> " group & <i>Leptocylindrus minimus</i>) Highest dinoflagellate counts represented by <i>Alexandrium</i> spp. (2,500 cells/L) |
| west: | Diatoms (" <i>Pseudo-nitzschia delicatissima</i> " size group ~ 4 million cells/L; <i>Chaetoceros</i> spp. ~ 0.5 million cells/L; <i>Leptocylindrus minimus</i> ~400,000 cells/L etc.). Highest dinoflagellate counts represented by <i>Azadinium</i> / <i>Heterocapsa</i> spp. (8,000 cells/L) |
| southwest: | Diatoms (<i>Chaetoceros</i> spp. ~400,000 cells/L; (" <i>P. delicatissima</i> " size group >100,000 cells/L) and the dinoflagellate <i>Prorocentrum micans</i> (150,000 cells/L). |
| south: | Microflagellates (90,000 cells/L), diatoms (e.g. <i>Chaetoceros</i> spp. ~10,000 cells/L) and low levels of dinoflagellates (<i>Prorocentrum micans</i> 2,000 cells/L) |
| east-southeast: | Assorted diatoms (<i>Chaetoceros</i> spp. ~ 0.5 million cells/L; <i>Lauderia</i> / <i>Detonula</i> spp. ~350,000 cells/L) and Euglenoids (~300,000 cells/L) |

Comments:

Surface chlorophyll levels have declined on the east coast with the collapse of the *Phaeocystis* bloom replaced by diatoms and euglenoids.

A microflagellate bloom on north coast has doubled in size since last week.

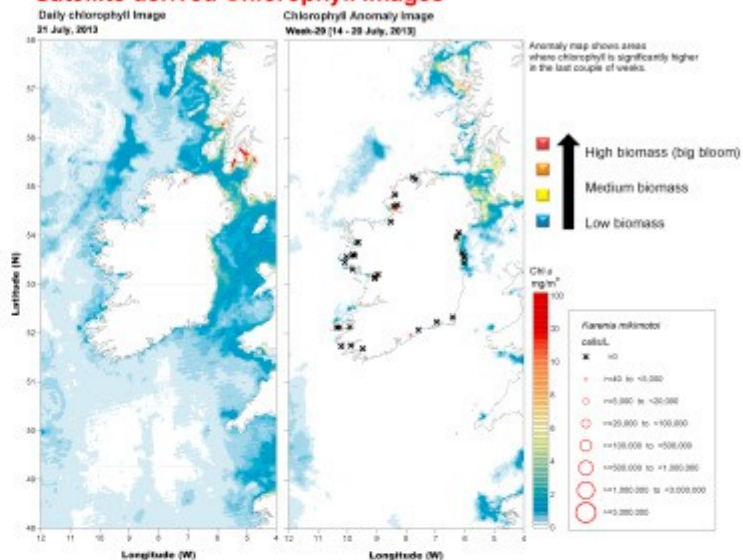
A *Pseudo-nitzschia* bloom is present on the west coast.

Elevated chlorophyll levels present in offshore waters on northwest coast –phytoplankton assemblage likely to be diatoms based on inshore station results.

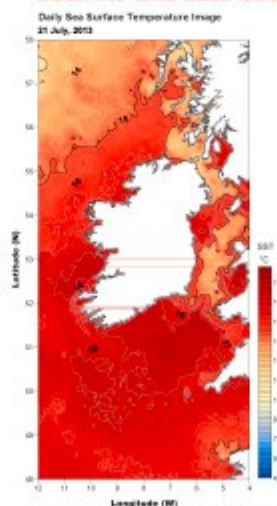


20 July 2013
Northwest coast Ireland
NASA (Modis Aqua)

Satellite derived Chlorophyll images



Satellite and data buoy derived Sea Surface Temperature (SST)



IFREMER's modelled SST product (MyOcean)

SST (°C) anomaly:

Data taken from the Irish data buoy network where the anomaly is the weekly difference in SST compared to the long term mean (~ 10 yrs)

Celtic Sea (M5) above average by plus 2.1 °C

SST 15 July = 18.1 °C; SST 23 July = 17.8 °C;

Southwest coast (M3) offline

Northwest coast (M4) above average by plus 0.2 °C;

SST 15 July = 14.9 °C; SST 23 July = 17.3 °C

ASIMUTH

Atlantis

Published a community “best” practice document, developed to share knowledge on “how to create a weekly HAB bulletin” with those interested in developing a HAB bulletin for other regions in the Atlantic and elsewhere. Link:

<http://hdl.handle.net/10793/1344>.



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Creating a weekly Harmful Algal Bloom bulletin

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HAB-Bulletin-Process_11April20 ...
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Author

Leadbetter, A.
Silke, J.
Cusack, C.

Keyword

Phytoplankton biomass and diversity
Sea surface temperature
Ocean colour
Ocean surface stress
Sea surface height

Abstract

This document describes the procedural steps in creating an information product focused on toxic and harmful phytoplankton. The product is an online Harmful Algal Bloom (HAB) bulletin for aquaculturists, who can face serious operational challenges in the days after a HAB event. Data from satellite, numerical hydrodynamic models and in-situ ocean observations are organised and presented into visual information products. These products are enhanced through local expert evaluation and their interpretation is summarised in the bulletin. This document aims to provide both process overviews (the “what” of the Best Practice in producing the bulletins) and detail procedures (the “how” of the Best Practice”) so that the bulletins may be replicated in other geographic regions.

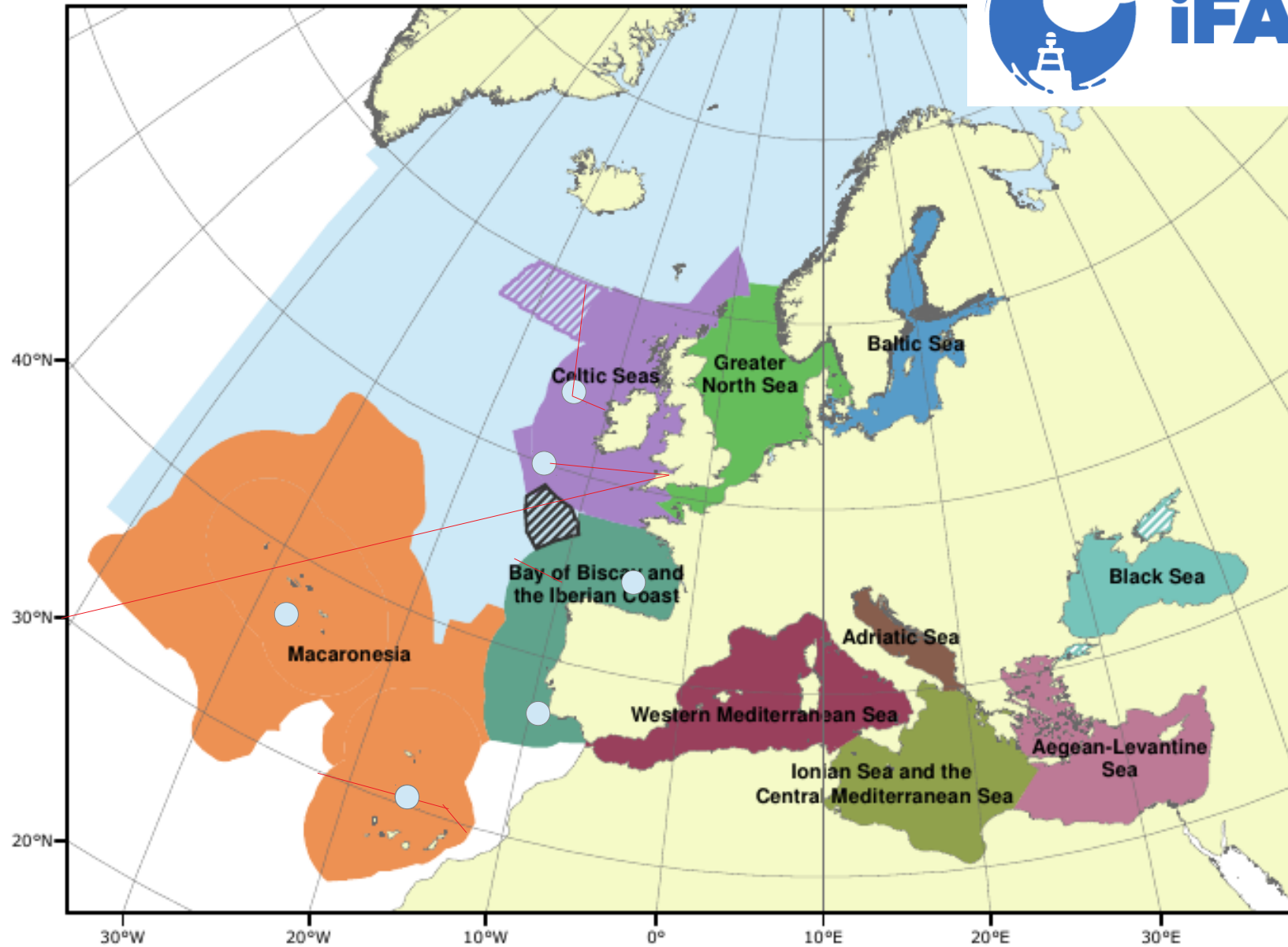


IBIROOS strategy

Contribution to best practices exercises in observing systems, products and links to stakeholders



iFADO



Representation of the marine regions and subregions of MSFD Article 4
RV cruises and transits, Fixed point observatories, MPA surveys, Ferrybox
(optimisation/valorisation of monitoring campaigns)

MyCoast: Atlantic Area observatories

Brief summary

The EU has funded large scale initiatives to protect, secure and develop the potential of marine and coastal environments. **MyCoast will fill the gap between the large scale products and the end-users** whilst addressing a **transnational handling of the coastal observatories**. The resulting synergy will allow deploying and capitalizing innovative and **standardized tools in the risk management systems** applied mainly to extreme weather events leading to flooding, maritime safety and coastal pollution.

Applications (WP8)

- Forecasting extreme events and providing **flood risk warnings** for municipalities
- Case studies for **coastal pollution management**
- Implementation of MyCoast tools for **maritime security** and **harbour Operations**
- Transboundary demonstrations of **search and rescue** and **oil spill** prediction and management
- Demonstration of standardised and relocatable MyCoast tools for tackling risks in **marine renewable energy** and **offshore aquaculture**

Weather window for percebeiros (barnacle harvester) in Galicia

<http://ww3.intecmar.gal/percebeiros/>



Mapa inicial Manual informativo

Seleccione...

Confraría: Seleccione unha confraría...

Data: 23/04/2018

Vista Xeral

Lenda

Altura da Onda

- < 2 m
- 2-3 m
- > 3 m

Bancos Percebeiros

Axuda

Datos

Seleccione unha confraría...

Prognóstico día 23/04/2018
(Prema nun semáforo para ver o prognóstico)

| Mar de Fondo | |
|----------------------|---|
| Altura máx. onda (m) | - |
| Dirección | - |
| Periodo (s) | - |

| Mar de Vento | |
|---------------|---|
| Vento máximo | - |
| Forza | - |
| Estado da mar | - |

| Temperaturas | |
|-------------------|---|
| T° máx. aire (°C) | - |
| T° auga (°C) | - |

| Mareas en horario local | | |
|-------------------------|-------|-----|
| | Hora | m |
| Baixamar | 04:57 | 1,2 |
| Preamar | 11:24 | 3,1 |
| Baixamar | 17:25 | 1,4 |
| Preamar | 23:57 | 3,2 |

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RAIA OBSERVATORIO OCEANOGRÁFICO

UE FEDER

INTECMAR INSTITUTO TECNOLÓXICO PARA O CONTROL DO MEDIO MARINO DE GALICIA

meteogalicia

XUNTA DE GALICIA

Launched 2012 (RAIA observatory) 100 points. In 2018, 1000 points
Stakeholder involvement



Unfavourable wind and current direction for your service boat to operate ?



Too high waves to clean your nets ?



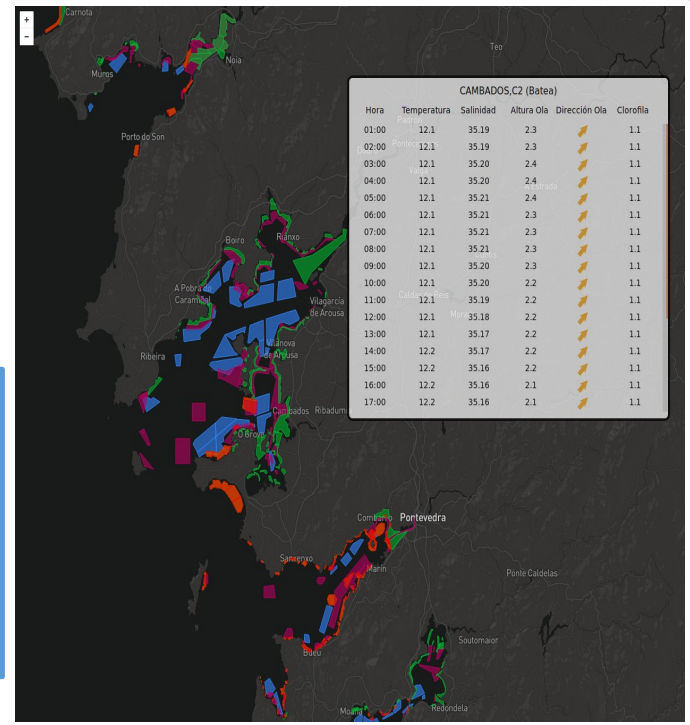
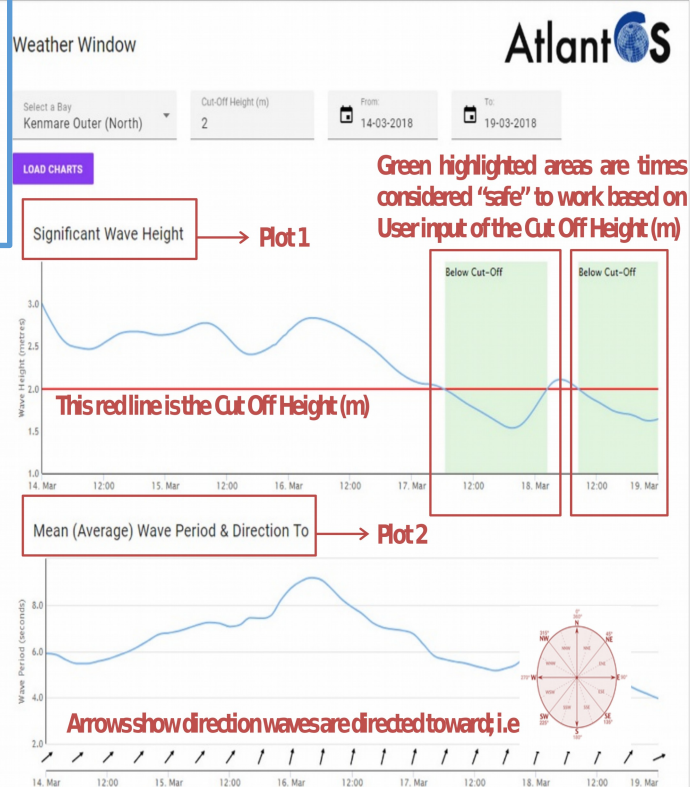
Too high waves to harvest your mussels ?

Photo: Trip Advisor

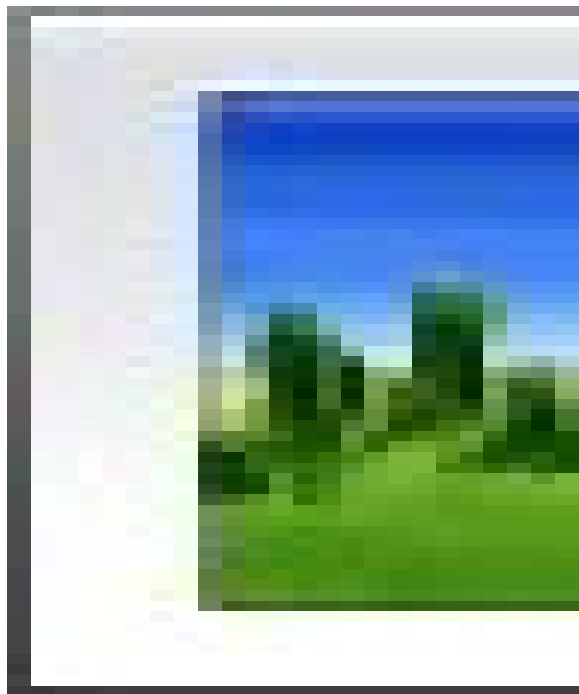
Salmon farms in northwestern Ireland

Vital operations depends on weather windows lasting from hours to days depending of the operation in question

Mussel harvesting areas in northwestern Spain

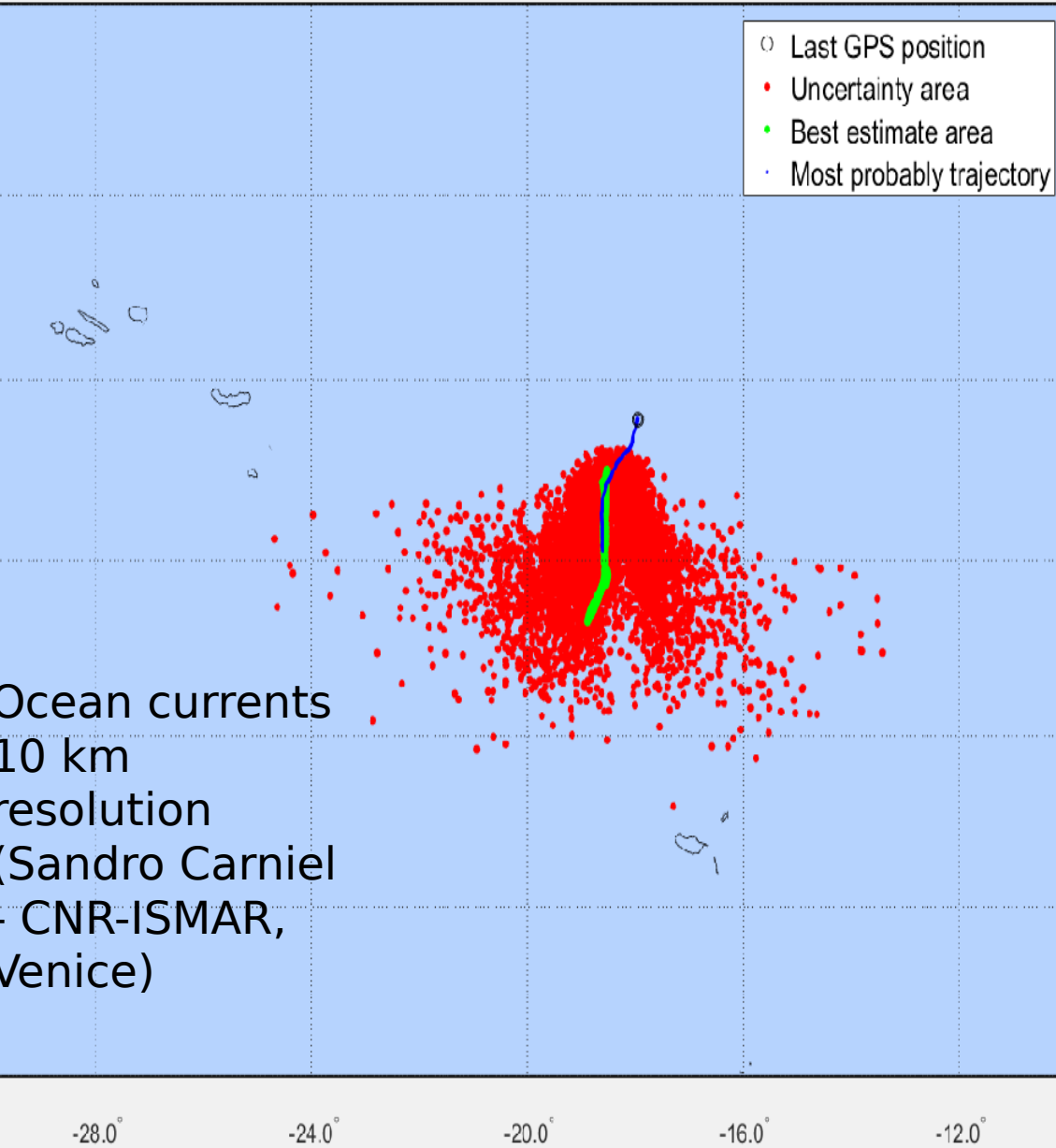


Velisti dispersi, il Cnr precisa la posizione potenziale della zattera a circa 150 miglia da Madeira

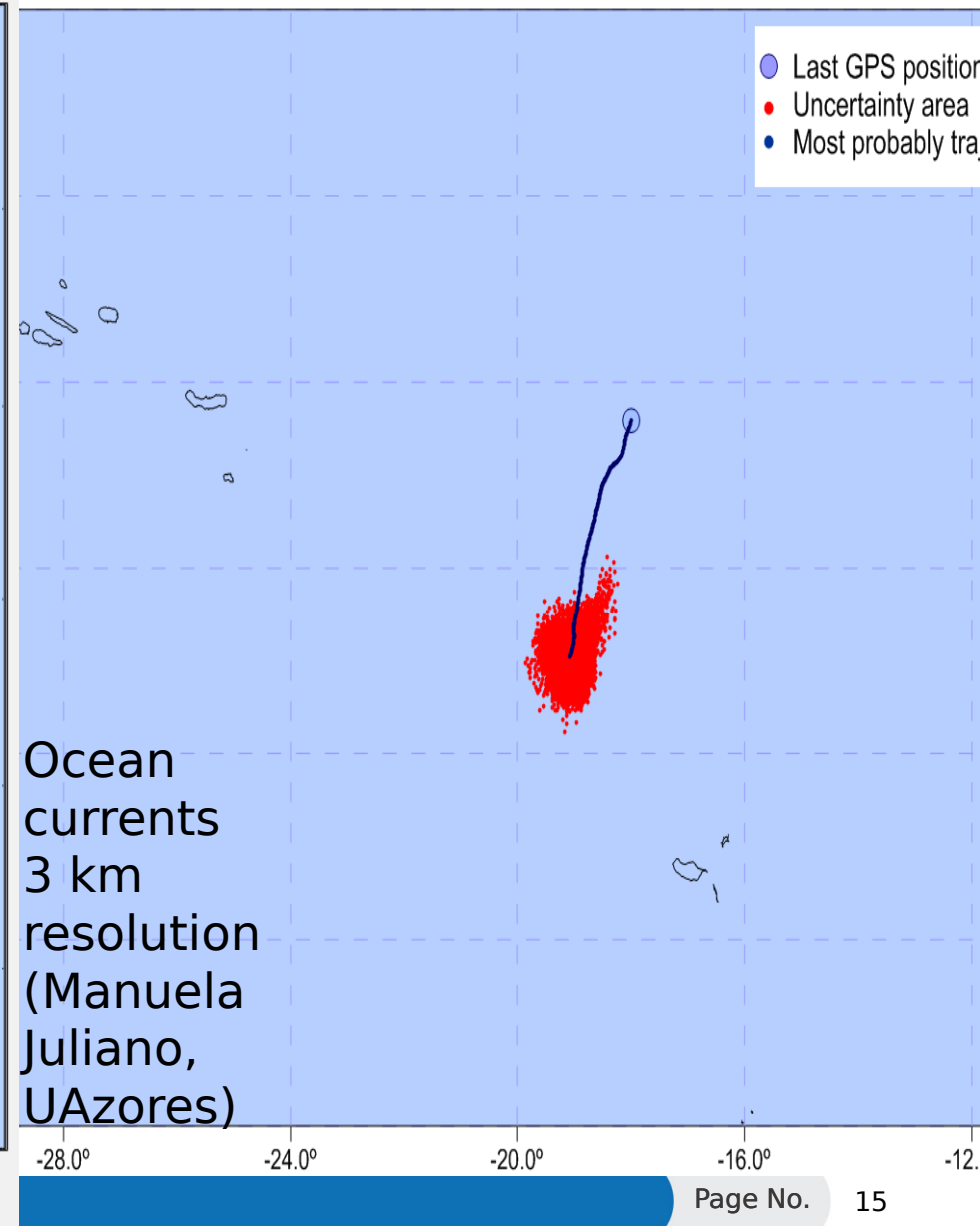


Cronaca | 9 maggio 2018

Raft trajectory (without ballast system), valid for: 20180509 13:40UTC



Raft trajectory valid for 20180510 00:00 UTC





Evolving E00S: connecting communities for end-to-end solutions

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Conference 21-23 November 2018 | Brussels

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E00S Conference
 21-23 November 2018 | Brussels

This event will bring together and connect diverse ocean observing stakeholder communities, from science, public authorities, industries including fisheries, energy, transport, and wider society.

The Conference is all about connecting communities, building on progress made at the E00S Forum, taking place on 8 March 2018, to launch an E00S strategy and implementation plan, together with a strong call to action.

It's an opportunity to showcase your work, network with stakeholders across Europe and help shape the future European Ocean Observing System (E00S)!

European Ocean Observing System

21-23 November 2018, Brussels - Register now! www.E00SConference2018.eu

**Evolving the European Ocean Observing System (E00S)
 Connecting communities for end-to-end solutions**

