

Interreg
Mediterranean



EUROPEAN UNION



SHAREMED

SHAREMED

First Capitalisation Workshop

*Designing the future system of observing systems to assess and address threats to the Mediterranean marine ecosystem
- State-of-the-art, needs and future direction*

Webinar: 14-15th December, 2020



João Vitorino
Instituto Hidrográfico - Portugal
JERICO-RI

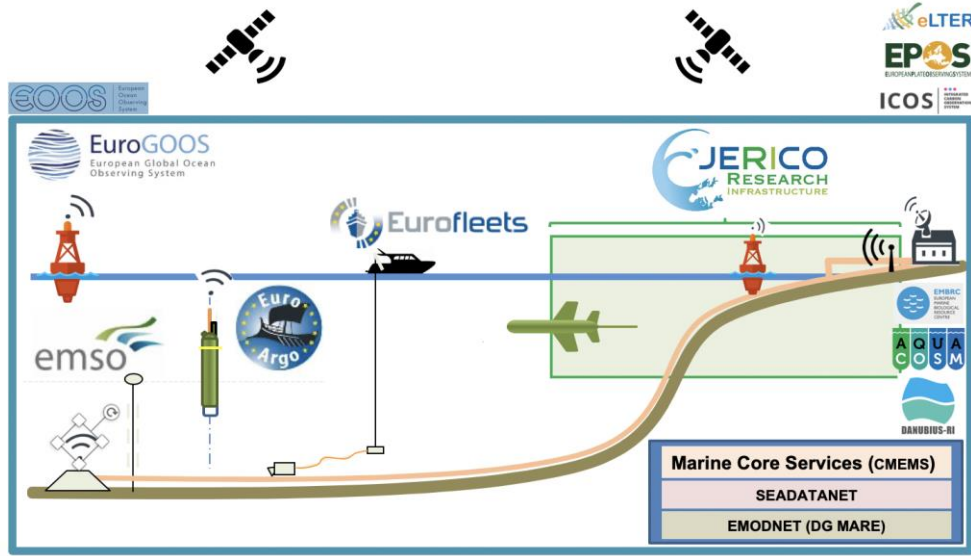
Joint European Research Infrastructure for Coastal Observation

Coordinator: IFREMER

- Concept Development: JERICO-S3
- Design Study: JERICO-DS

Design duration: 2020-2024

Funding authority: H2020-INFRAIA

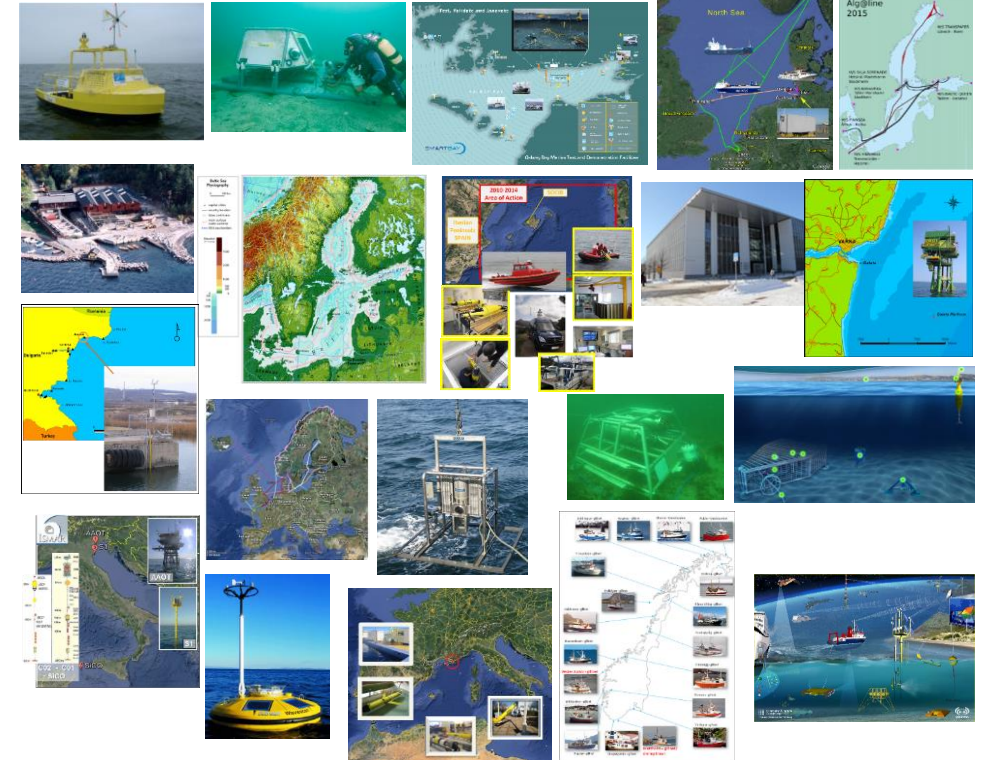
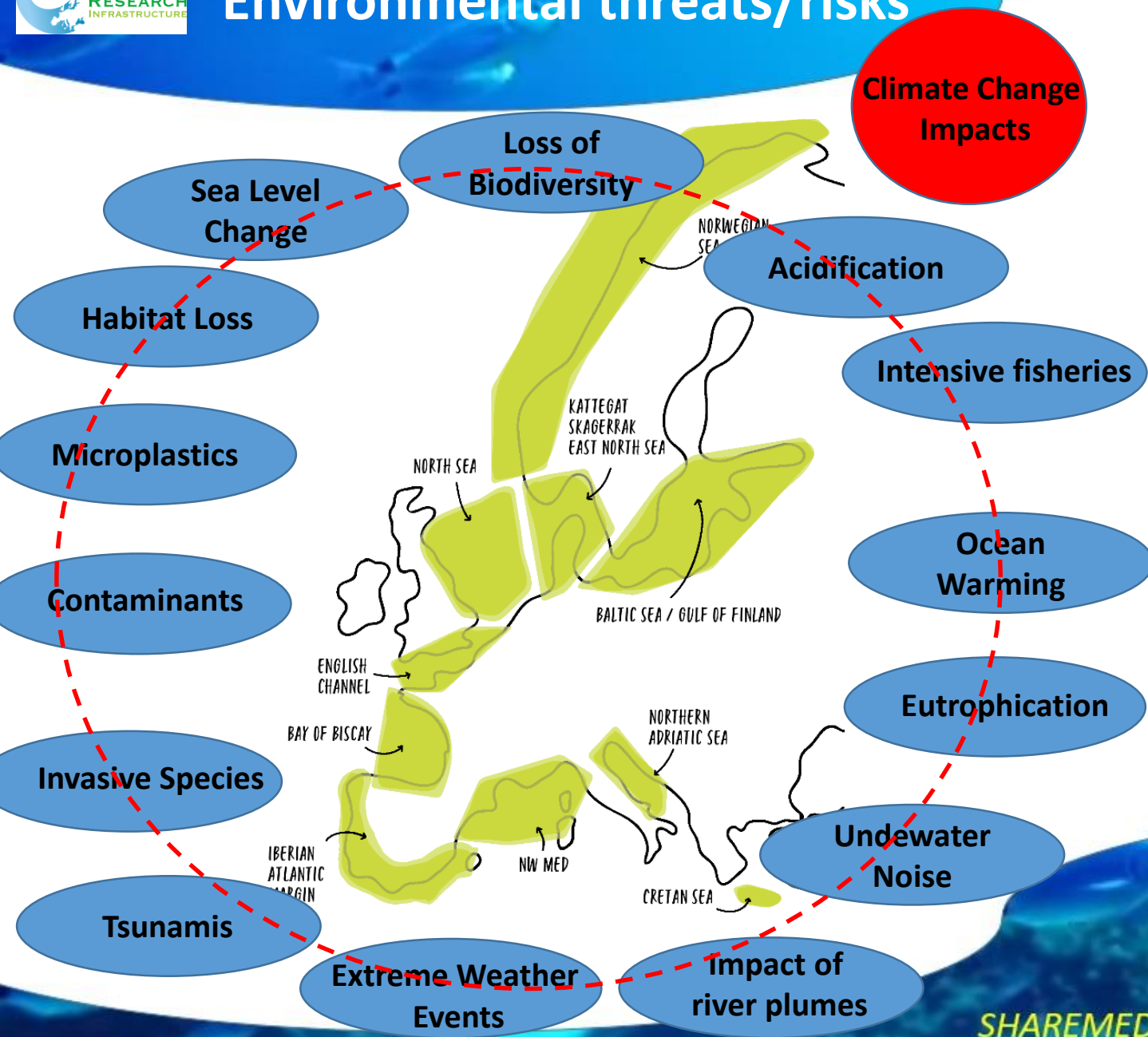


- France:** IFREMER, CNRS, ACRI-ST, IEEE
- Estonia:** TALTECH
- Finland:** SYKE, FMI
- Greece:** HCMR
- Ireland:** MI
- Spain:** SOCIB, AZTI, PdE, PLOCAN,UPC
- Belgium:** RBINS, VLIZ
- Croatia:** IRB
- Italy:** CNR, OGS, ETT
- Germany:** HZG, AWI, IOW
- Netherlands:** DELTARES, RWS, MARIS
- Norway:** IMR, NIVA, NORCE, COVARTEC
- Portugal:** IH
- Sweden:** SMHI
- UK:** CEFAS, BLIT
- Europe:** EUROGOOS.



Environmental threats/risks

A broad range of monitoring infrastructures combining real-time and standalone capacities



- Ferrybox Lines
- Gliders
- Cable Observations
- Fixed Platforms & Moorings
- HF radar stations
- Tidal Gauges
- Specific Systems
- Metrology Infrastructures
- ...

A broad range of Space/Time scales covered



Z

O (1 mabs)

Surface



O (1 m)



O (10m)



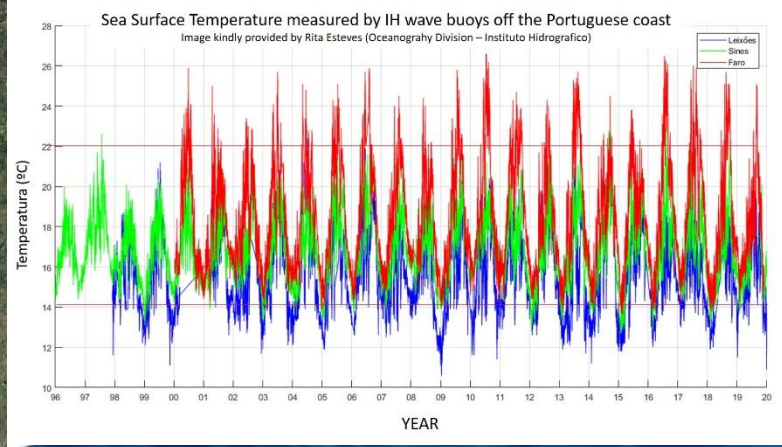
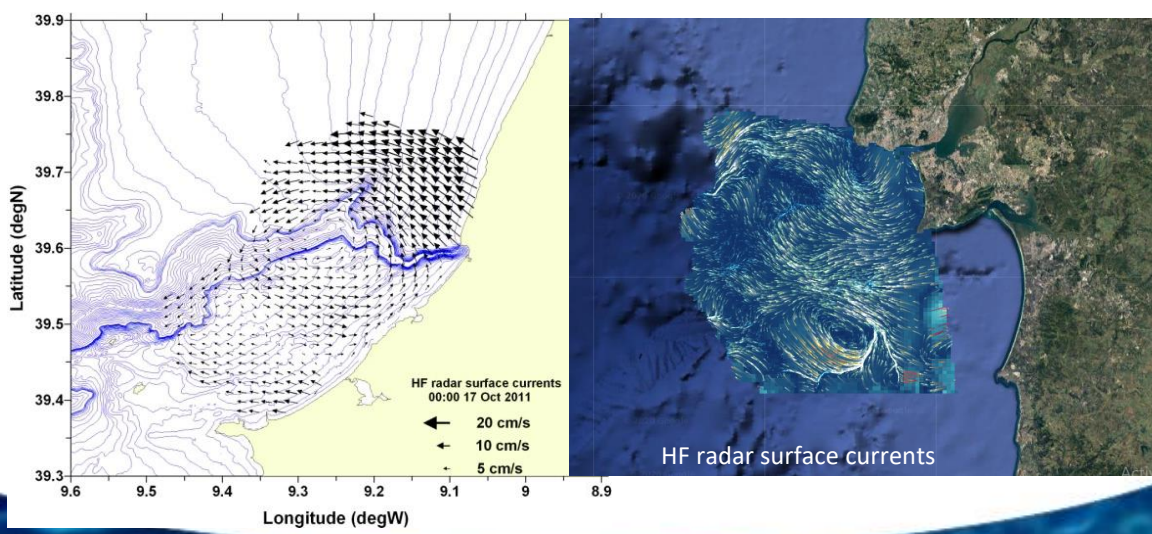
full water column



X,Y

Coastal Mesoscale O (1 km) O (10 km) Regional Processes O (100 km) Pan-European O(1000 km)

Time O (sec/min) O (hour) O (week) O (seasonal) O (decadal/multidecadal)



Scientific & Technological Gaps/Needs and JERICO-RI answer

SCIENCE:

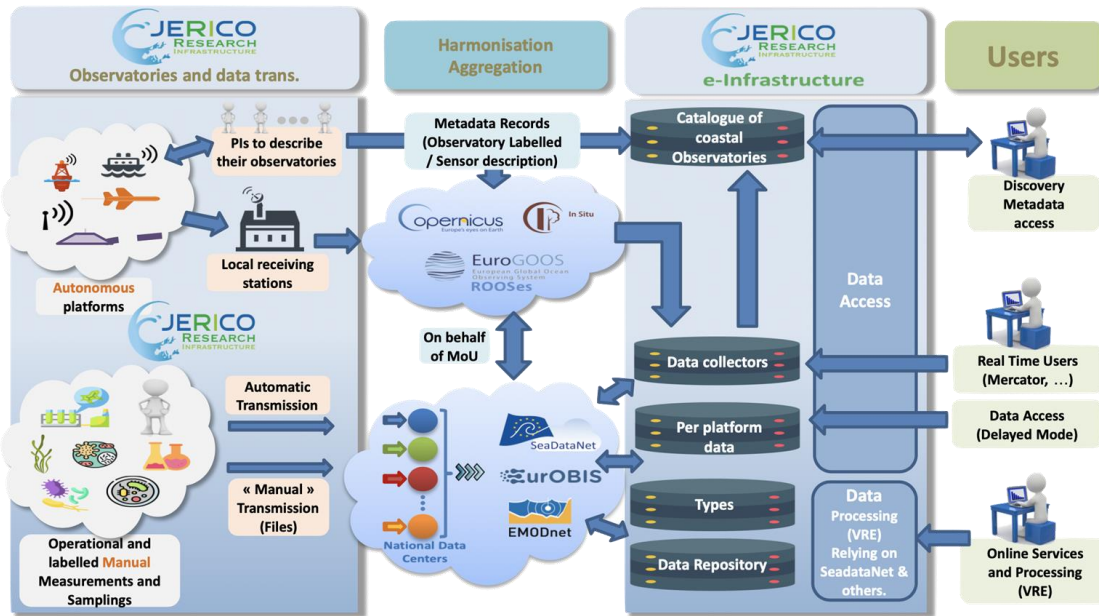
- Impacts of physical events on marine life
- Unveil the multiscale complexity of coastal ocean process
- Characterize long-term variability and climate change impacts

TECHNOLOGY:

- Integration of biogeochemistry observations
- Maintain the observational 'presence'
- Assure a capacity for long term observation

Development of a Coastal Interoperable Instrument Module based on the EMSO EGIM concept & Test for integrated observation of plankton dynamics (*JERICO-S3*)

Development/Testing of Low Cost Passive Contaminant Samplers (*JERICO-NEXT*)



A strategy based on

INTEROPERABILITY from sensor to data dissemination

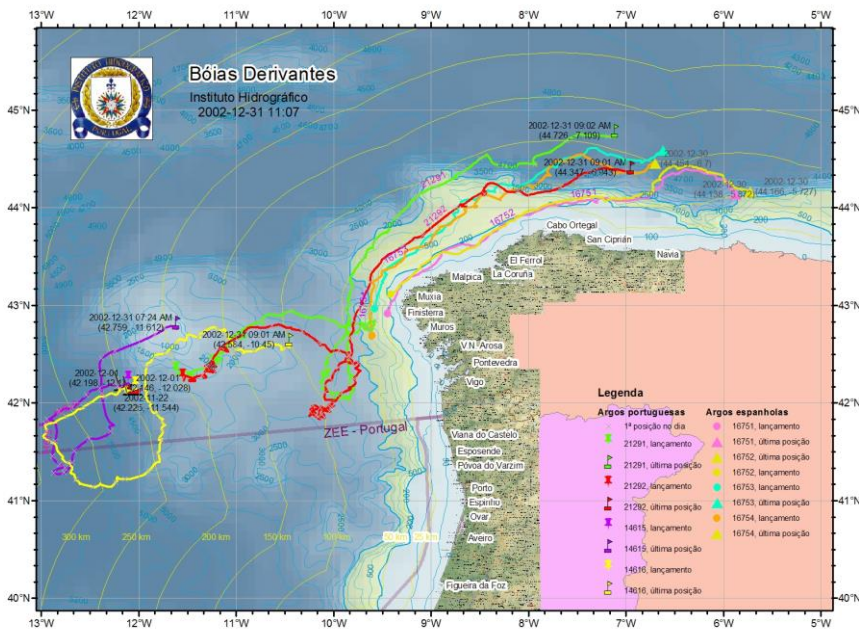
Lessons Learn Prestige Oil Spill Crisis



19 November 2002

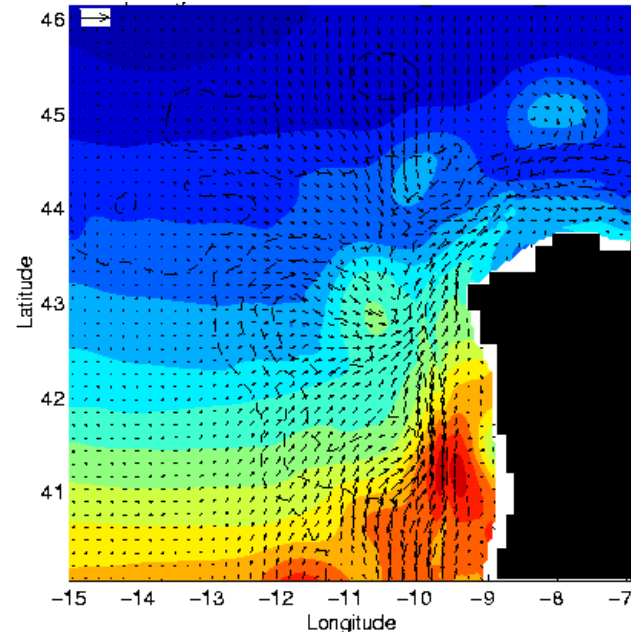
- Articulation/Harmonization between partners in regional domain
- Articulation with the numerical modelling & remote sensing communities
- Articulation between different observing systems & partners
- Potential role of Citizen Science contributions

Fundamental Role of Slope Circulation - IP(S)C



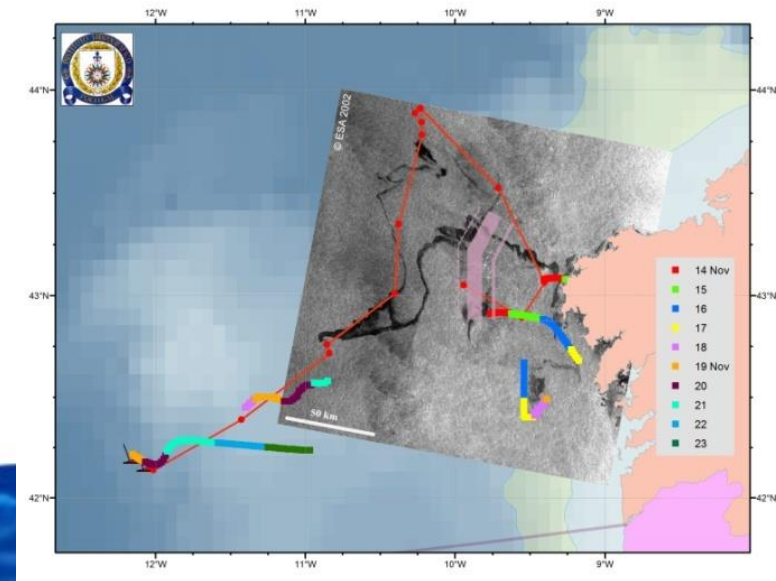
Tracks of surface floats

Key Importance of Assimilation of Subsurface Observations in the Coastal Ocean



Assimilation Model - 50m depth

Impact of remote sensing products



SAR image 19 November 2002

Articulation & Harmonization

GEOGRAPHICAL FRAMEWORK



TEMPORAL FRAMEWORK

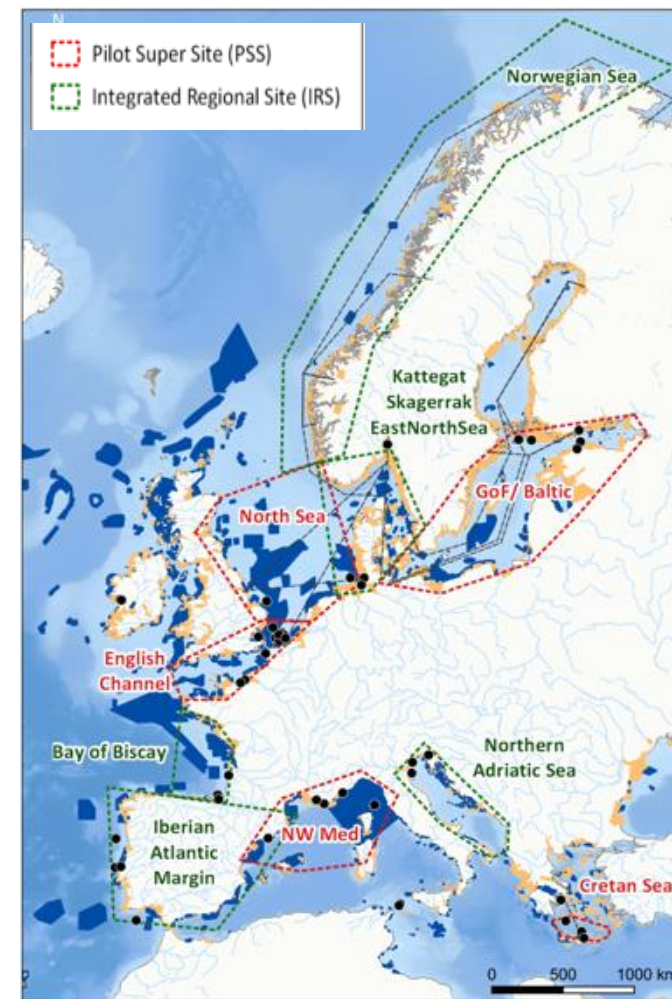


CONVENTIONS: UNEP-MAP, Barcelona, OSPAR, HELCOM

EU DIRECTIVES: MSFD, WFD, Inspire

EUROPEAN & INTERNATIONAL INITIATIVES:

EuroGOOS, ICES, CMEMS, MERCATOR Ocean International, GLOSS, E-SurfMar, NEAMTWS, Global HF-radar network, IHO, IMO, EMODNET

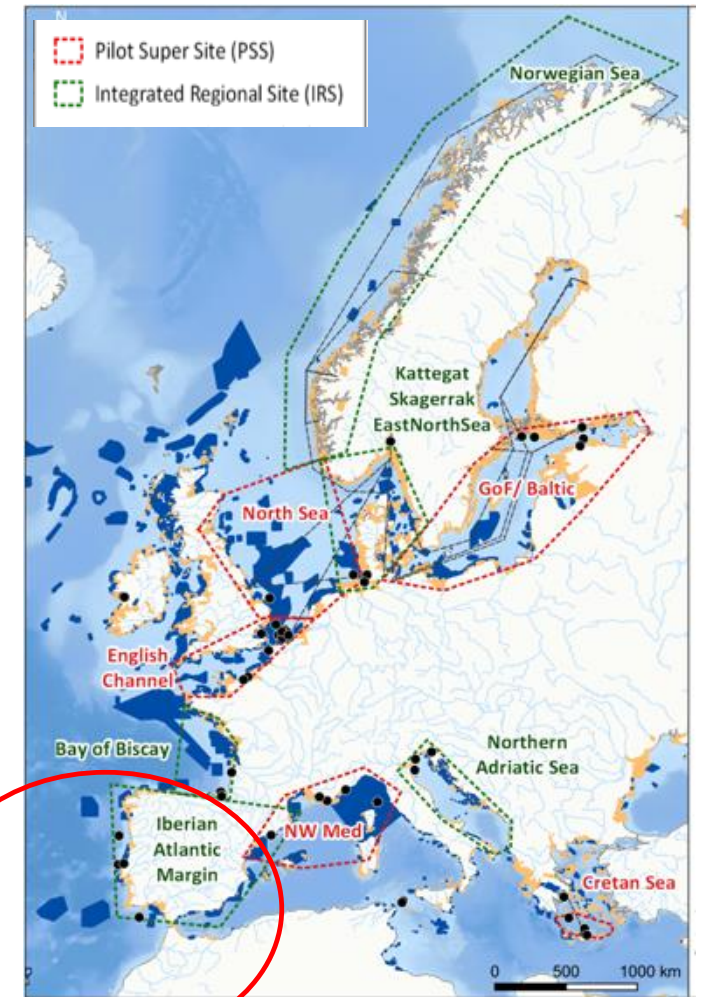
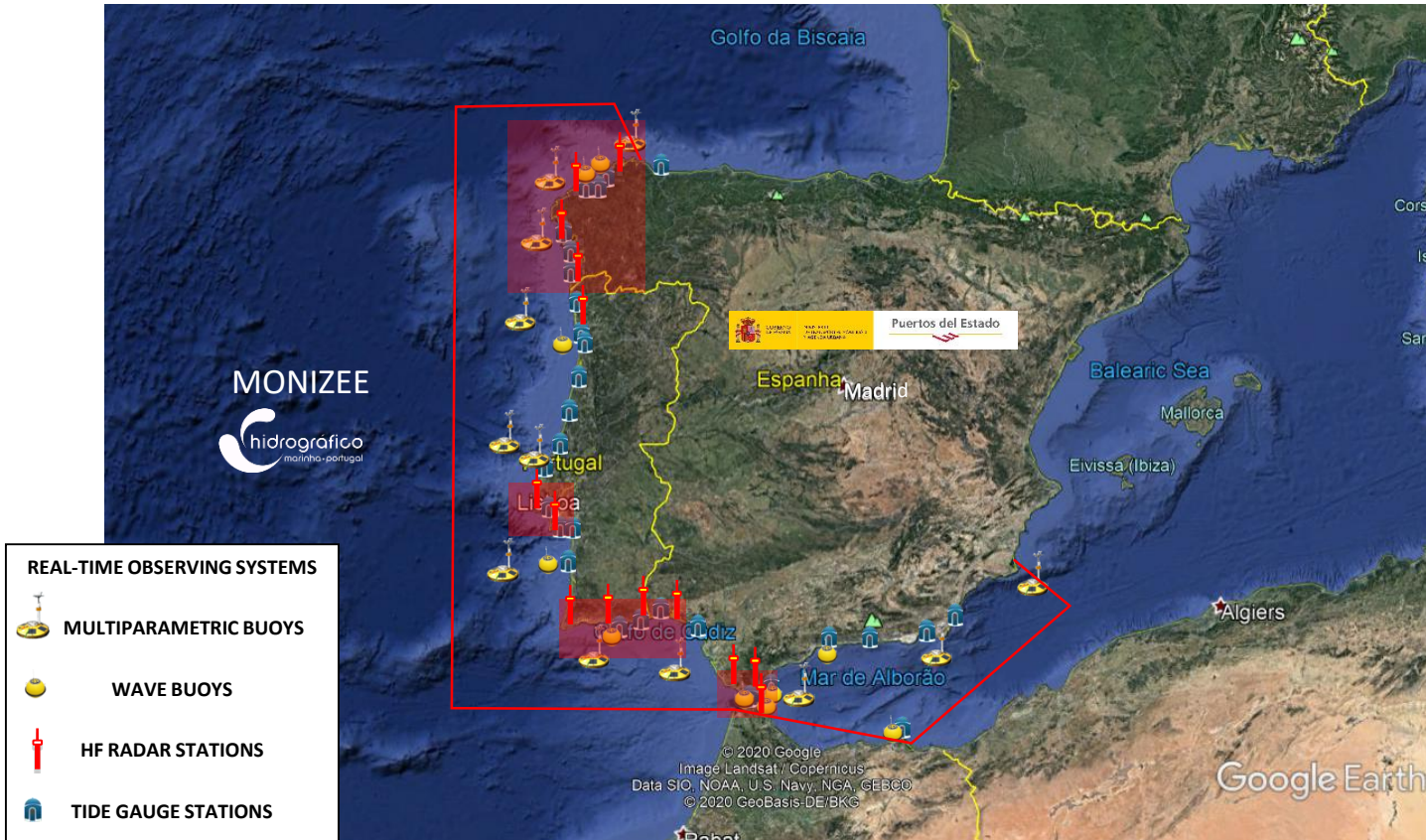


Sources :
Marine Institute (JERICO-S3 TA
Installations), WDPA (MPAs), GEBCO -
GSHHG - OSM (Basemap)
Coordinate system : Pseudo-Mercator

Articulation & Harmonization

4 PILOT SUPERSITES (PSS)
5 INTEGRATED REGIONAL SITES (IRS)

Continental component of IBERIAN ATLANTIC MARGIN IRS



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