



# JERICO-RI

**JOURNEE ANNUELLE SEXTANT 2021**

22 Juin 2021

**Speakers** : Laurent Delauney (Ifremer)

**Contributor** : JERICO Consortium





Joint European Research Infrastructure for Coastal Observatories



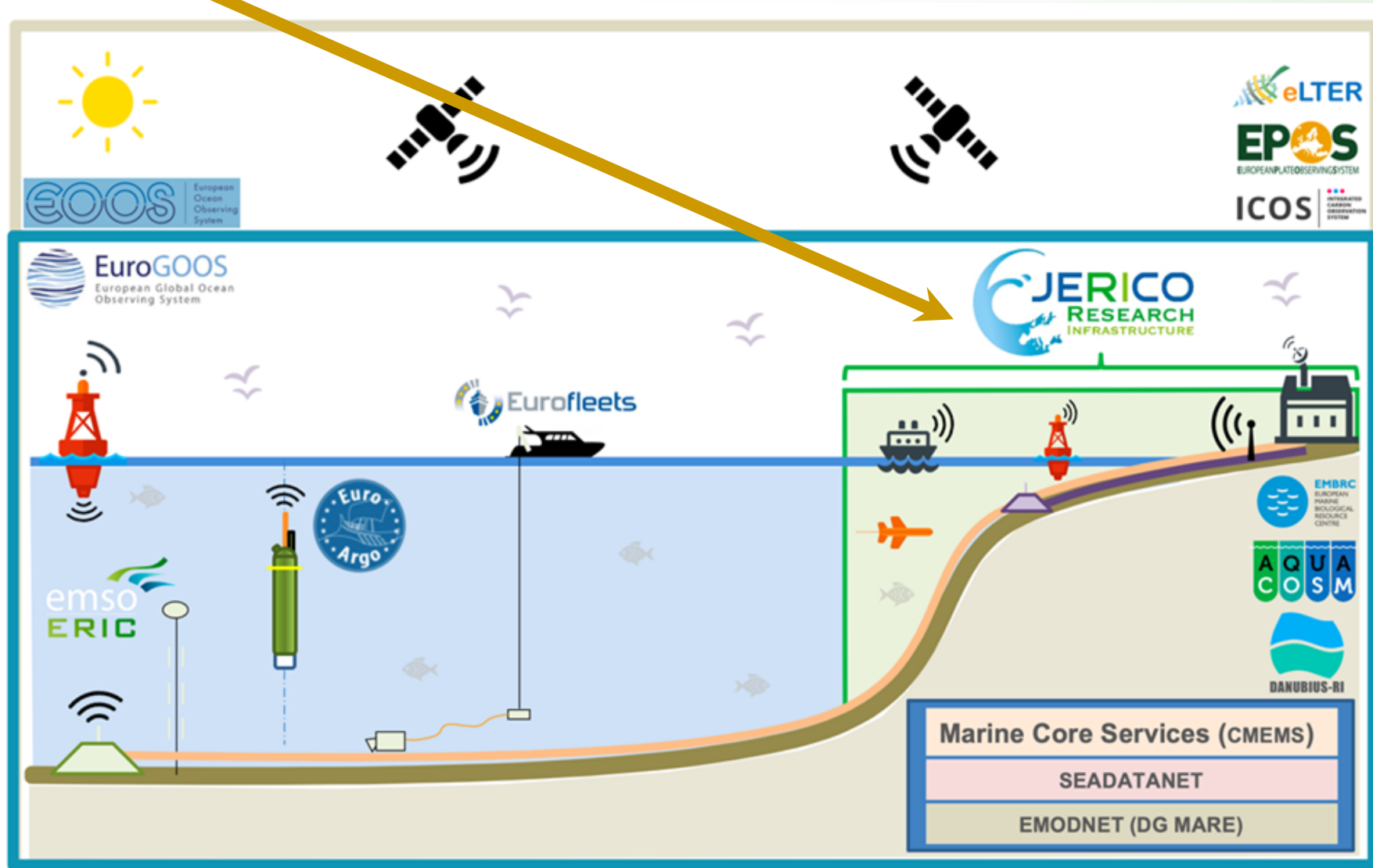
## VISION

*“By 2030, JERICO-RI will be the **European gateway to long-term scientific observations and related services** for **European coastal marine systems** at the **convergence between the land, open ocean and atmosphere**; **empowering European research excellence and expertise for the benefit of society.**”*



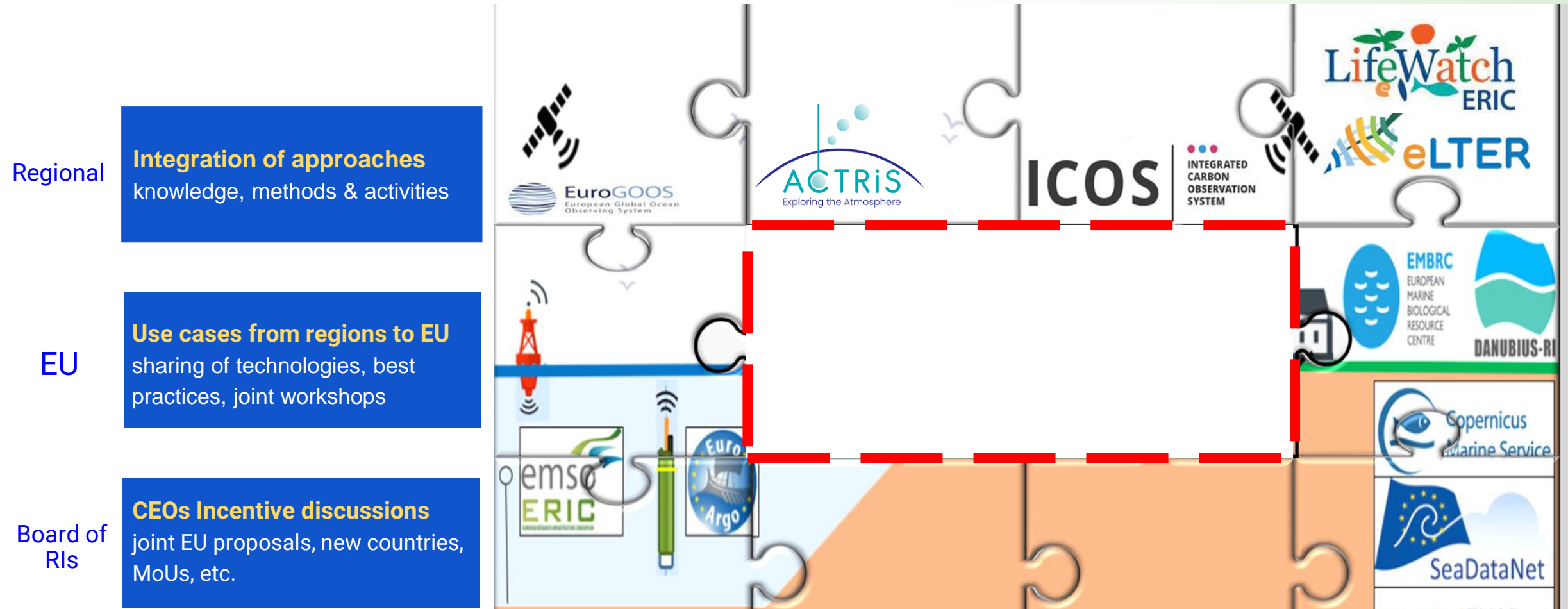


*The Coastal Domain is at the interface btw. Land and Ocean*





=> *RI / RI collaboration*



**Objective:**

***Engage a synergy to coordinate, optimize and generate added value***

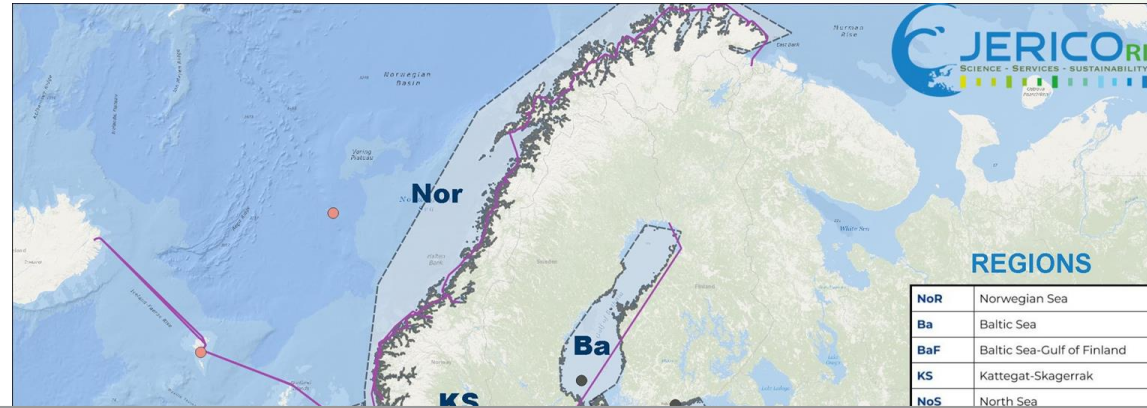


## The potential of a European coastal system

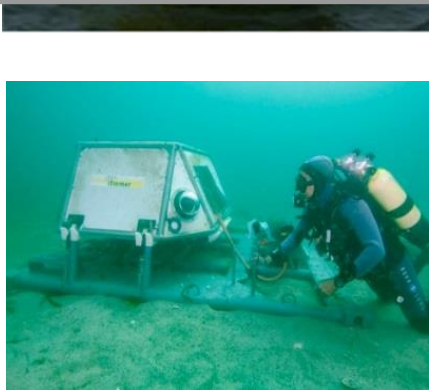
- Physical integration: a system of local and regional platforms
- Virtual integration: building on national and EU e-Infra
- Geopolitical integration: building on national capacities



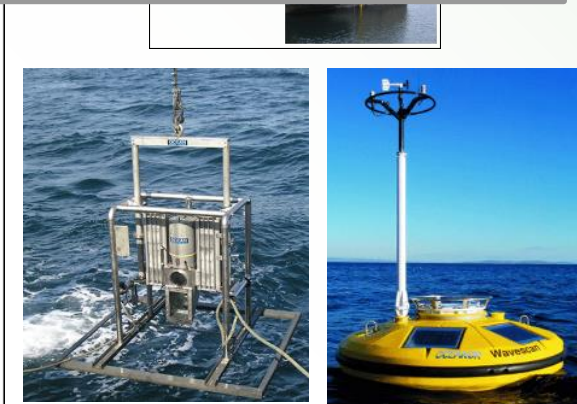
- More than 500 platforms
- 12 European Regions
- 19 European countries
- ~ 40 partners

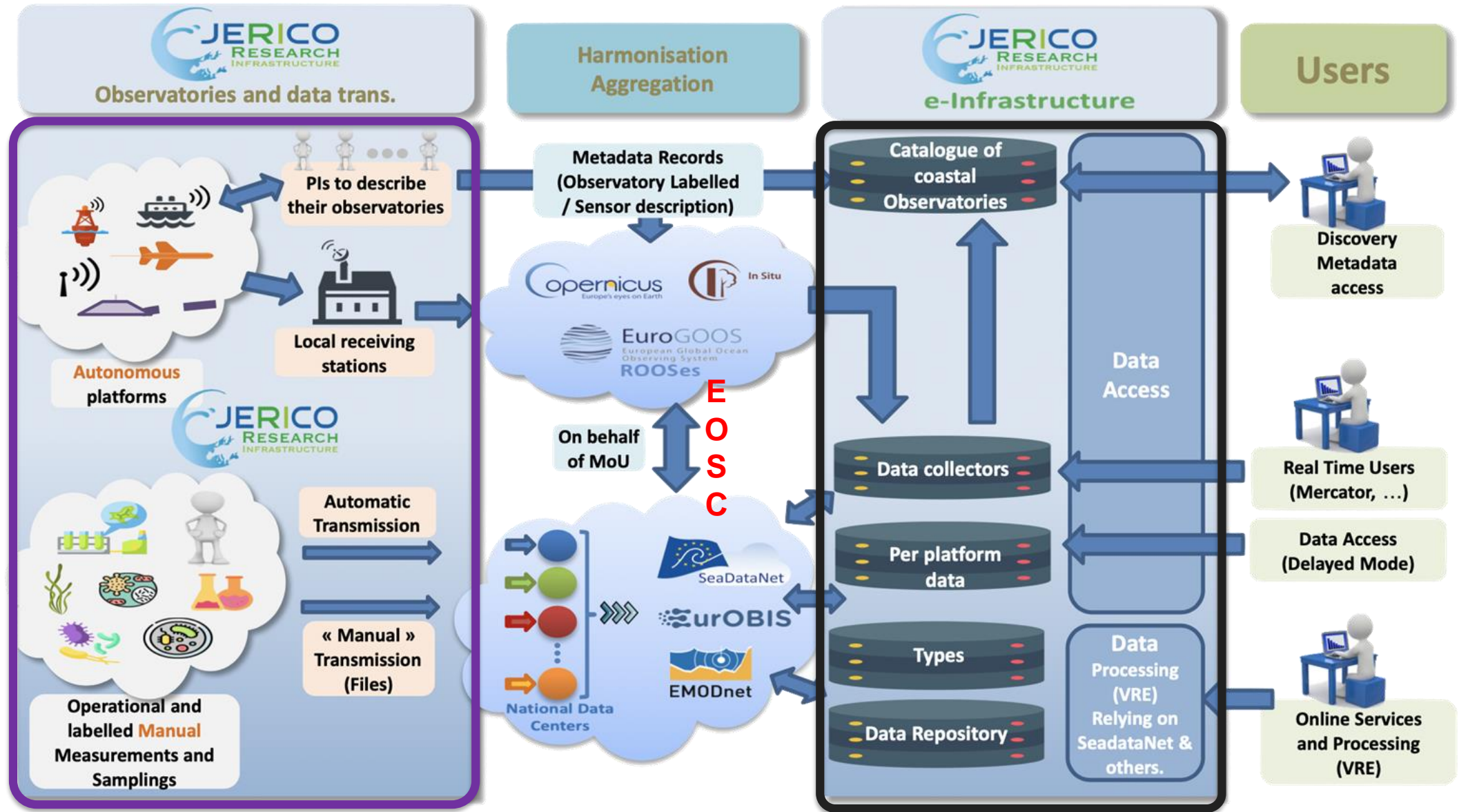


Only an integrated multiplatforms approach can address the complexity of the coastal ocean in time and in space



- Stations (point)
- Bottom-based obs.
  - Fixed platform
  - HF Radar
  - Manual sampling
- Stations (line)
- Ferrybox
  - Glider
  - Profilers
  - Research Vessel
  - Surface drifters
- Regions





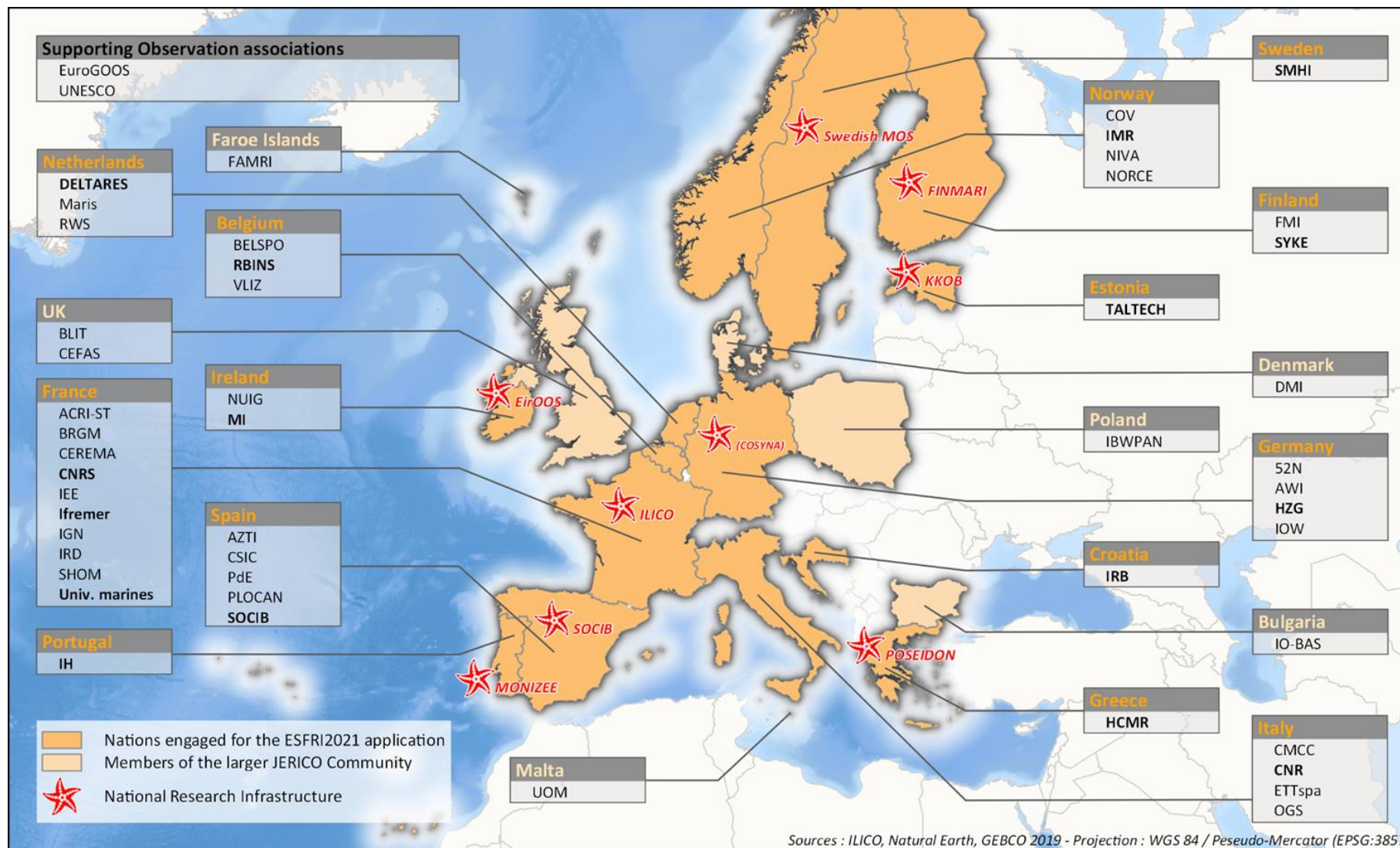


## International expertise for an integrated multidisciplinary approach

### Connection of National Networks: Σ National Roadmaps

19 nations  
≈ 40 partners,  
**9 National RIs**

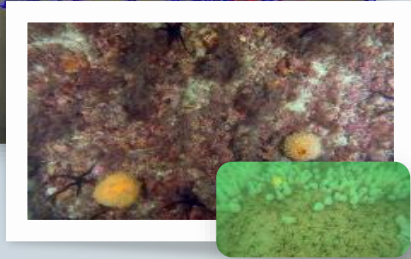
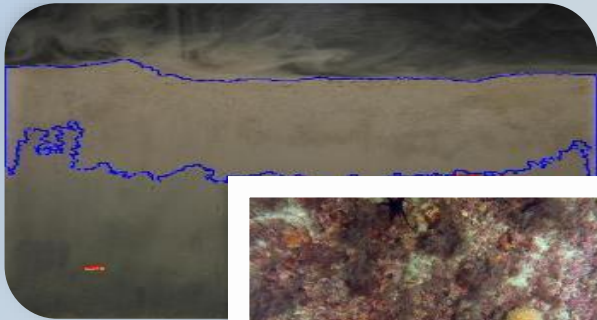
∫ EU



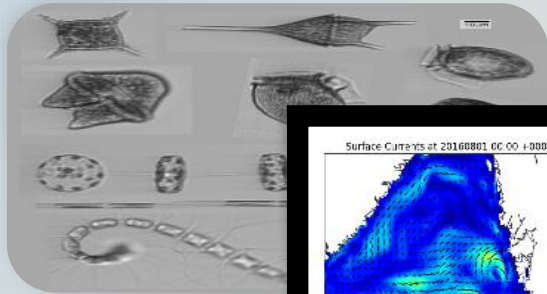




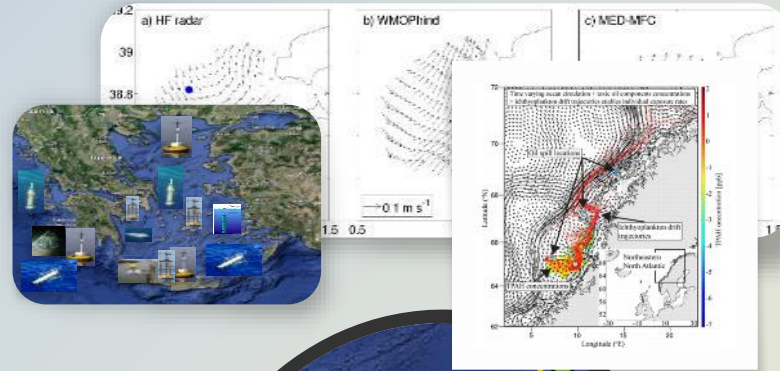
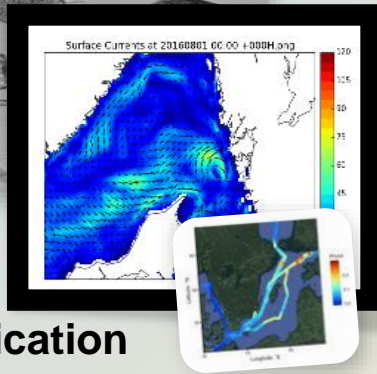
## ❖ 6 topics // MSFD



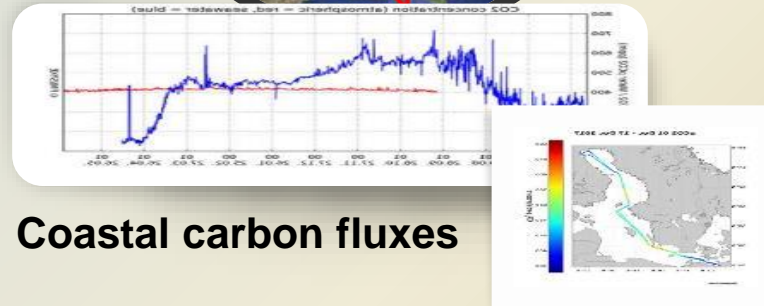
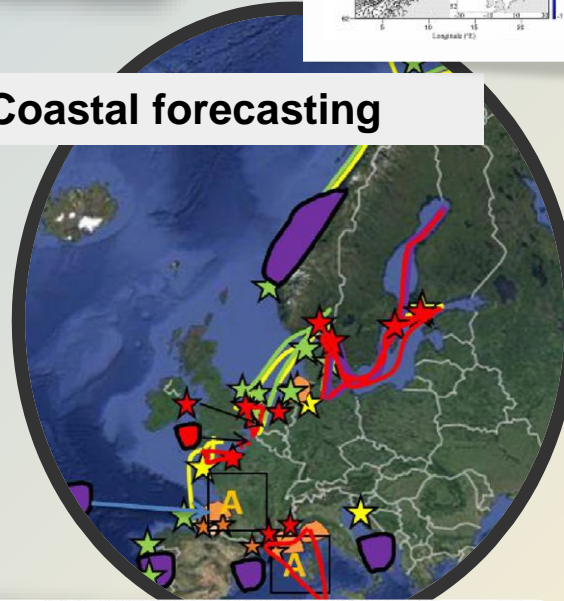
**Macrobenthic biodiversity**



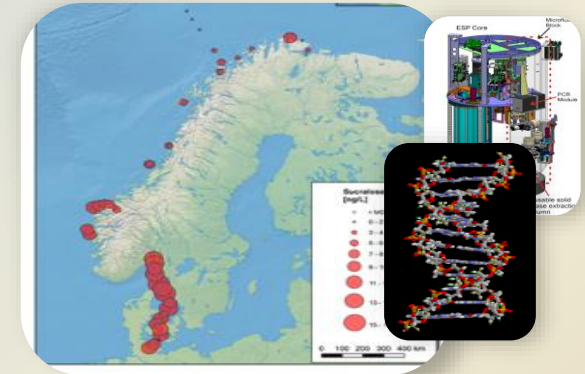
**Phytoplankton,  
HAB & eutrophication**



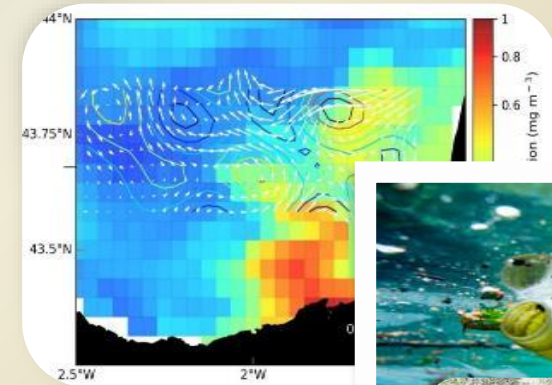
**Coastal forecasting**



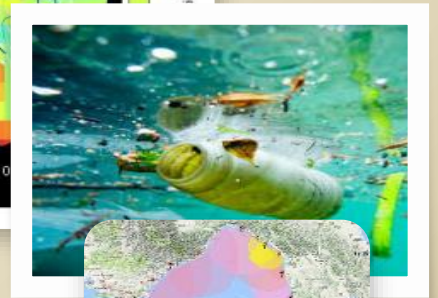
**Coastal carbon fluxes**



**Chemical contaminants  
& biological responses**



**Hydrography  
& transport**





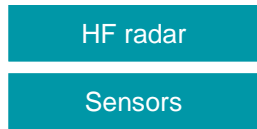
2005



2011-2015



2015-2019



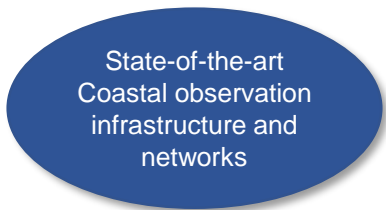
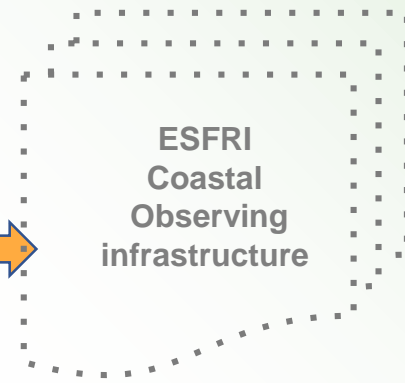
2020-2024



2020-2023



EOOS/EuroGOOS



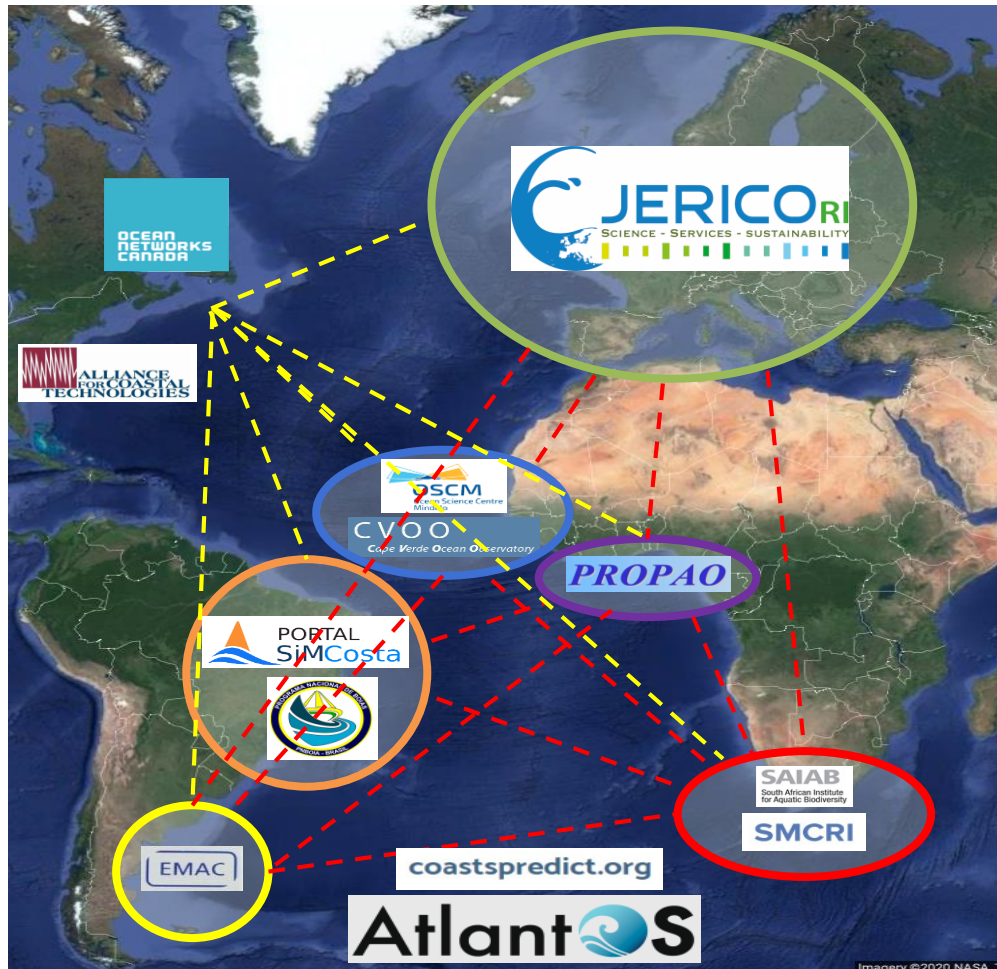
Horizon 2020  
European Union Funding  
for Research & Innovation

Strategic step for European Coastal ocean pluridisciplinary community



## AA-COASTNET: All Atlantic COASTal observing and technology NETwork

A network dedicated to  
**Marine Coastal Observations**  
with the countries part of the Belém and Galway Statements



### BRAZIL

- SIMCosta: Brazilian Coastal Monitoring System
- PNBoia: The National Buoy Program
- MePro initiative: Best Practices in Ocean Observations

### ARGENTINA

- EMAC low-cost buoys and stations monitoring network

### SOUTH AFRICA

- SMCRI: Shallow Marine and Coastal Research Infrastructure
- SAIAB: South African Institute for Aquatic Biodiversity

### WEST AFRICA

- PROPAO: Coastal sea Surface temperature network

### CABO VERDE

- CVOO: Cabo Verde Ocean Observatory
- OSCM infrastructure: Ocean Science Center of Mindelo

### EUROPE

- JERICO-RI: Joint European Research Infrastructure for Coastal Observations

### And as advisory entities:

- AtlantOS (EU, Trans-Atlantic)
- CoastPredict.org
- Alliance for coastal technologies (US)
- Ocean Network Canada (Canada)

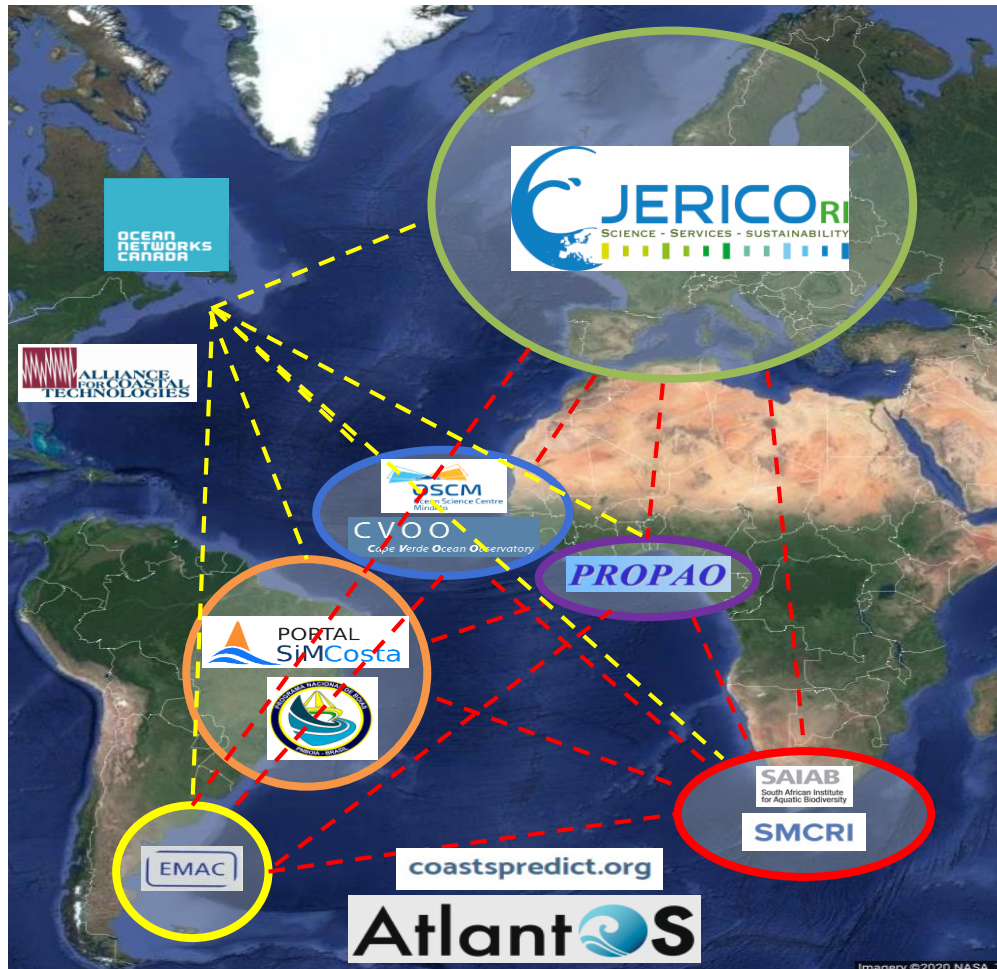


## AA-COASTNET: All Atlantic COASTal observing and technology NETwork

JOURNEE ANNUELLE  
SEXTANT 2021



A network dedicated to  
**Marine Coastal Observations**  
with the countries part of the Belém and Galway Statements



### Long term objectives

- promote a **better scientific knowledge** about the links and exchanges between offshore and inshore/coastal regions.
- to **connect, align** and **maximize** the coastal observation efforts already existing in both edges of the tropical and southern Atlantic,
- inducing the **use of common guidelines** that lead to the improvement of the best observation practices,
- **keep a close link** with open ocean observing networks in the All Atlantic basin
- **promote cooperation and ship-time/equipment sharing**, once ships necessarily cross shelf break-shelf-coastal areas
- to **encourage and identify new sources of funds** for its maintenance, especially those made available in calls for proposals from international and trans-national funding agencies
- contributing to the « **Predicting Global Coastal Ocean** **Toward a More Resilient Society** » as proposed for the **United Nations Decade**
- to **follow the UN Ocean Decade implementation plan** and to apply for endorsement by the UN Ocean Decade



JERICO-RI is seen as the coastal component of the **European Ocean Observing System (EOOS)**  
=> **U.N. Decade of Ocean Science for Sustainable Development**

**Application to the ESFRI roadmap 2021: answer in July 2021**





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### Sextant Catalogue

Marine and coastal geographic data infrastructure

[Read More](#)

#### What is the JERICO Research Infrastructure?

JERICO-RI is an integrated pan-European multidisciplinary and multi-platform research infrastructure dedicated to a holistic appraisal of coastal marine system changes.

It is seamlessly bridging existing continental, atmospheric and open ocean RIs, thus filling a key gap in the ESFRI landscape. JERICO-RI establishes the framework upon which coastal marine systems are observed, analysed, understood and forecasted.

JERICO-RI enables open-access to state-of-the-art and innovative facilities, resources, FAIR data and fit-for-purpose services, fostering international science collaboration.

**Physical Infrastructure**

- On Land:** Tide Gauges, HF Radar, Sampling Station
- Fixed Platforms:** Moorings, Wave Buoys, Cabled Station, Multi-parametric Buoys, Benthic Landers
- On Board:** (Icons for various vessels)

**Sensors:** Physical, BGC, Sedimentary

**Measurements:** Real Time, Delayed

**Usage:** Operational Forecasting, Crisis response, Planning Observations, Research, Outreach and education, Environment Management, Marine Environment Policies

**Stakeholders:** Local Authorities, General Public, Policymaker

**Technological Development**

**JERICO RI**  
SCIENCE - SERVICES - SUSTAINABILITY

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Background map: Arcgis ocean

Filter

- JERICO - Station (line)
- JERICO - Station (point)
- Regions
  - JERICO - Regions (version 2020-08-04)
  - PSS-Baltic Sea/Gulf of Finland
  - PSS-Cretan Sea
  - PSS-English Channel
  - PSS-North Sea

**LEGENDS SORT SOURCES**

**JERICO - Station (point)**

- Bottom-based obs.
- Fixed platforms
- HF Radar
- Manual sampling

**JERICO - Station (line)**

- Ferrybox
- Glider
- Profilers
- Research Vessel
- Surface drifters

**JERICO - Regions (version 2020-08-04)**

- JERICO - Regions (version 2020-08-04)

WGS84 1000 km





Part of this work was supported by the JERICO-S3 project. This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n° 871153."

Part of this work was supported by the JERICO-DS project. This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n° 951799





# JERICO-RI

**JOURNEE ANNUELLE SEXTANT 2021**

22 juin 2021

**Speakers** : Julien Meillon (Ifremer)

**Contributor** : JERICO Consortium





## Le cadre de l'implication de Sextant dans le projet :

- JERICO Next : catalogue de métadonnées
- JERICO S3 : Tâche 6.2
- JERICO-RI : Inventaire des plate-formes, des données et des produits

## Le contexte :

Les partenaires couvrent une large zone géographique et gèrent un certain nombre de plates-formes liées à l'observation des côtes. Certaines d'entre elles viennent alimenter le projet JERICO.

## L'objectif pour JERICO S3 et RI :

Améliorer la vue d'ensemble des plates-formes impliquées dans le projet au travers d'une interface cartographique afin notamment de mieux rendre compte de la contribution des différents partenaires.

Les plate-formes : marégraphes, bouées, Radars HF, ferrybox, échantillons manuels, etc.



# L'inventaire des plateformes

## Construction d'un tableur unique pour décrire les plateformes

- Une vingtaine de colonnes à renseigner
- Aide à la saisie (listes déroulantes)
  - /!\ Le choix des paramètres
- Adapté pour les différents types de géométrie (point, ligne, polygone, autres)
  - /!\ la saisie des géométries
- Dupliqué pour chaque partenaire

## Sur les 39 partenaires

- 29 concernés
  - 25 complétés
  - 2 en cours
  - 2 pas débutés
- 10 non concernées



# Le template

A	B	C	D	E
ID	COUNTRY	INSTITUTE (operating the platform in JERICO) <i>(closed list)</i>	IS PLATFORM PART OF A NATIONAL RI ?	STATION NAME
1	FRANCE (example line)	IFREMER	ILICO	MAREL-Carnot multi-instrumented coastal site (example line)
2		IFREMER		
3				
4				
5				

[...]

AC	AD
END DATE (platform/observation) DD/MM/YYYY OR "ON-GOING"	LINK TO DATA ACCESS (DOI, websites, archive etc.)
ON-GOING	<a href="https://data.coriolis-cotier.org/platform/6200443?start=1581379200000&amp;end=1583798400000">https://data.coriolis-cotier.org/platform/6200443?start=1581379200000&amp;end=1583798400000</a>

- Geometric object type
- Type of platform
- Contact email author
- Author name
- Contact email scientific
- Scientific name
- Link to online resource
- Included in TNA/VA
- In a PSS or IRS Regions
- Parameters
- Latitude
- Longitude
- Start date



# Les étapes de preparation du fichier

Un fichier par type de données

- Points : 642
- Lignes : 30
  
- Harmonisation des informations de géométrie (latitude/longitude et fichiers externes)
- Concatenation des paramètres pour pouvoir ensuite les proposer dans les filtres
- Création des shapefile dans Qgis



# Le travail dans l'outil QGIS

- Choix des représentation des shapefile dans Qgis
  - Stations ponctuelles
  - Stations linéaires
  - Régions : PSS/IRS/Future site

## JERICO - Station (point)

- Bottom-based obs.
- Fixed platform
- HF Radar
- Manual sampling
- Coastal profiler
- Ferrybox

## JERICO - Station (line)

- Ferrybox
- Glider
- Profilers
- Research Vessel
- Surface drifters



yeah!

- Avec le projet Qgis, mise en place de services OGC :

- de visualisation - WMS

<https://www.ifremer.fr/services/wms/jerico>

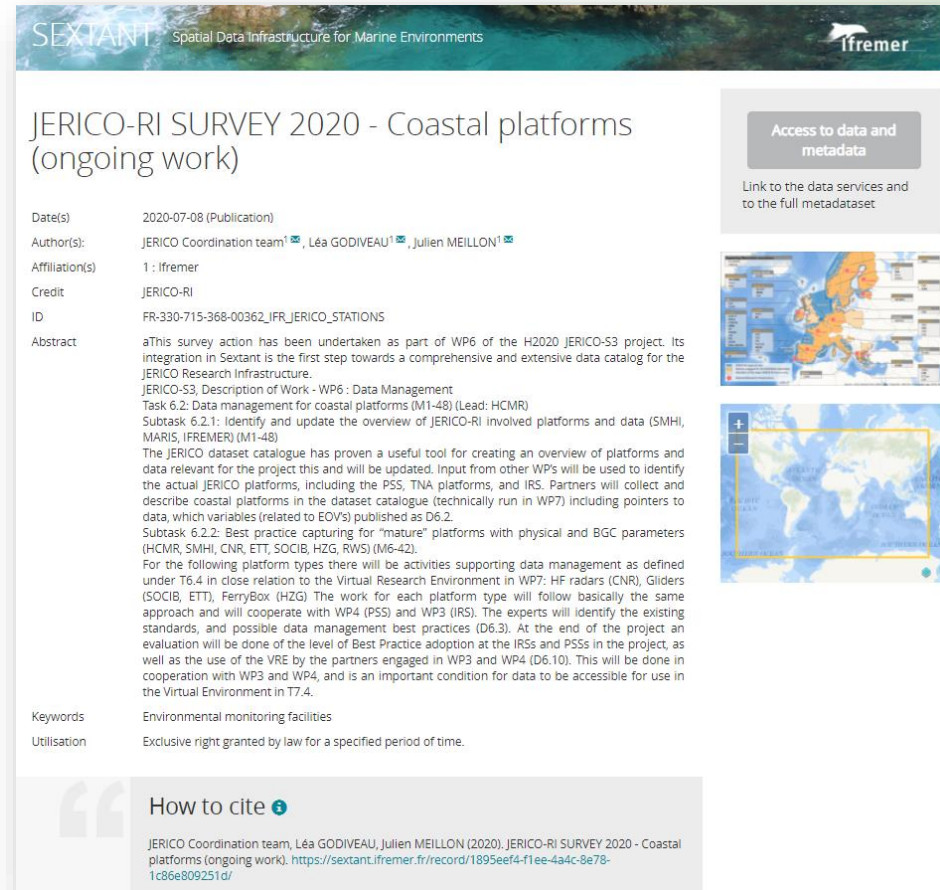
- de téléchargement - WFS

<https://www.ifremer.fr/services/wfs/jerico>

- Rédaction d'une métadonnée dans Sextant

- répondant aux standard (ISO, INSPIRE)

- pour y associer les services OGC



**SEXTANT** Spatial Data Infrastructure for Marine Environments **ifremer**

## JERICO-RI SURVEY 2020 - Coastal platforms (ongoing work)

**Access to data and metadata**  
Link to the data services and to the full metadataset

Date(s)	2020-07-08 (Publication)
Author(s)	JERICO Coordination team <sup>1</sup> , Léa GODIVEAU <sup>1</sup> , Julien MEILLON <sup>1</sup>
Affiliation(s)	1 : Ifremer
Credit	JERICO-RI
ID	FR-330-715-368-00362_IFR_JERICO_STATIONS
Abstract	<p>aThis survey action has been undertaken as part of WP6 of the H2020 JERICO-S3 project. Its integration in Sextant is the first step towards a comprehensive and extensive data catalog for the JERICO Research Infrastructure.</p> <p>JERICO-S3, Description of Work - WP6 : Data Management            Task 6.2: Data management for coastal platforms (M1-48) (Lead: HCMR)            Subtask 6.2.1: Identify and update the overview of JERICO-RI involved platforms and data (SMHI, MARIS, IFREMER) (M1-48)</p> <p>The JERICO dataset catalogue has proven a useful tool for creating an overview of platforms and data relevant for the project this and will be updated. Input from other WPs will be used to identify the actual JERICO platforms, including the PSS, TNA platforms, and IRS. Partners will collect and describe coastal platforms in the dataset catalogue (technically run in WP7) including pointers to data, which variables (related to EOVS) published as D6.2.</p> <p>Subtask 6.2.2: Best practice capturing for "mature" platforms with physical and BGC parameters (HCMR, SMHI, CNR, ETT, SOCIB, HZG, RWS) (M6-42).</p> <p>For the following platform types there will be activities supporting data management as defined under T6.4 in close relation to the Virtual Research Environment in WP7: HF radars (CNR), Gliders (SOCIB, ETT), FerryBox (HZG) The work for each platform type will follow basically the same approach and will cooperate with WP4 (PSS) and WP3 (IRS). The experts will identify the existing standards, and possible data management best practices (D6.3). At the end of the project an evaluation will be done of the level of Best Practice adoption at the IRSs and PSSs in the project, as well as the use of the VRE by the partners engaged in WP3 and WP4 (D6.10). This will be done in cooperation with WP3 and WP4, and is an important condition for data to be accessible for use in the Virtual Environment in T7.4.</p>
Keywords	Environmental monitoring facilities
Utilisation	Exclusive right granted by law for a specified period of time.

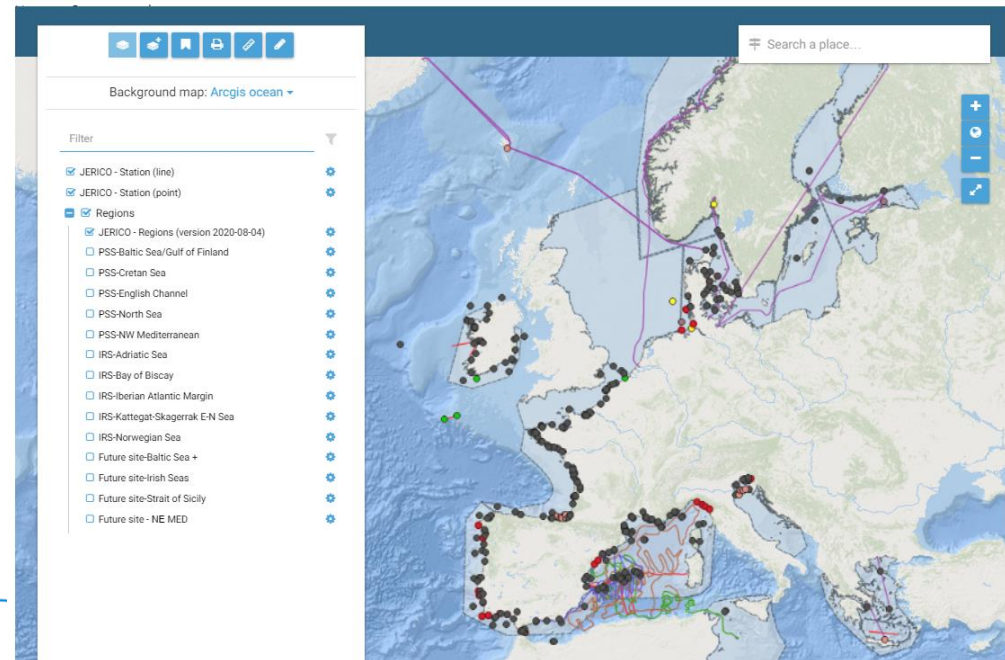
**How to cite**

JERICO Coordination team, Léa GODIVEAU, Julien MEILLON (2020). JERICO-RI SURVEY 2020 - Coastal platforms (ongoing work). <https://sextant.ifremer.fr/record/1895ee4f41ee-4a4c-8e78-1c86e809251d/>



# L'interface graphique

- Page HTML externe non indexée pour avis et commentaires
- Page externe encapsulée dans le site web du projet
- Intégration de l'API dans le site web du projet



# Les pistes d'amélioration

- Ajout d'autres plateformes (nouvelles ou manquantes lors de l'inventaire)
- Utilisation de vocabulaire standardisé notamment pour la liste des paramètres.
- Délimitation plus officielles des régions – topologie

[Démonstration en ligne](#)

<https://www.jerico-ri.eu/sextant-catalogue/>

