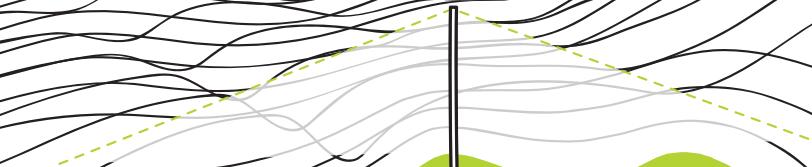
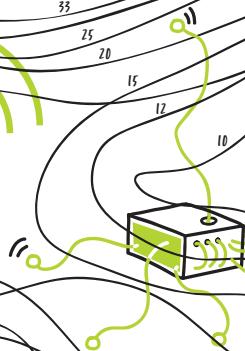
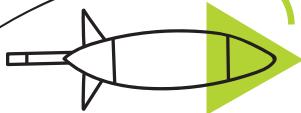
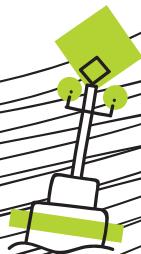
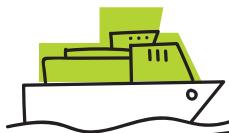


MARINE COASTAL OBSERVATORIES, FACILITIES, EXPERTISE AND DATA FOR EUROPE



WHY JERICO-RI*? OUR MISSION

Strengthening a European network of coastal observatories and providing a sound operational service for the delivery of high quality environmental (physical, biogeochemical and biological) data and information products related to the marine environment in European coastal seas.

These are the key words that have been guiding the development of the JERICO Research Infrastructure for almost 10 years. Discover in this booklet the how, the why, the who and the what: embark with us on the JERICO ship to share our vision, values and goals.



THE MISSION OF THE JERICO-RI

To provide a powerful and structured EU Research Infrastructure dedicated to observe and monitor the marine coastal domain to:

- Access **solutions** and facilities as **services** for researchers and users of the coastal marine domain.
- Create **product** prototypes for EU marine core services and **users** of the coastal domain.
- Support **excellence** in marine coastal **research**.

THE VALUES OF THE JERICO-RI

A strong joint effort at EU level to **harmonise observations**, from the sensors to the provision of **high quality data**.

The JERICO Research Infrastructure projects are investing in:

- Scientifically sound simultaneous **observations** of physical, chemical and biological parameters.
- **Innovation** in key areas of biogeochemical observing technologies.
- Synergy and **collaboration** to enhance efficiency and power of the coastal community.

*JOINT EUROPEAN RESEARCH INFRASTRUCTURE OF COASTAL OBSERVATORIES

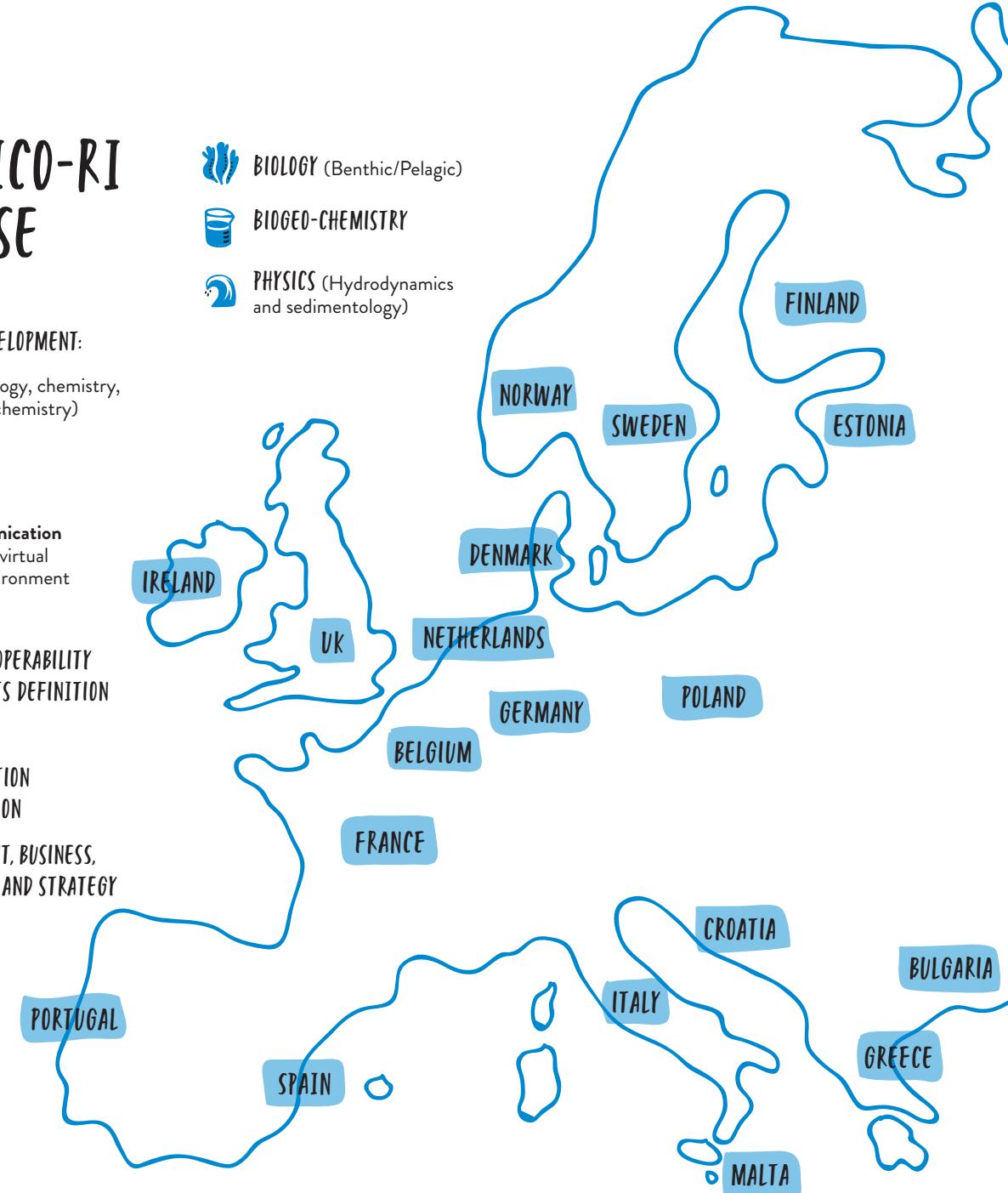


This project has received funding from the European Commission's Horizon 2020 Research and Innovation programme under grant agreement No 654410. Project coordinator: IFREMER, France.

THE JERICO-RI EXPERTISE

- BIOLOGY** (Benthic/Pelagic)
- BIOGEO-CHEMISTRY**
- PHYSICS** (Hydrodynamics and sedimentology)

- TECHNO DEVELOPMENT:**
 - Sensors** (biology, chemistry, physics, geochemistry)
 - System integration**
 - Information and Communication Technology** (virtual research environment and access)
- DATA, INTEROPERABILITY AND PRODUCTS DEFINITION**
- COMMUNICATION DISSEMINATION**
- MANAGEMENT, BUSINESS, EU POLICIES AND STRATEGY**



WHAT? JOINT OBSERVATION AND RESEARCH TOPICS

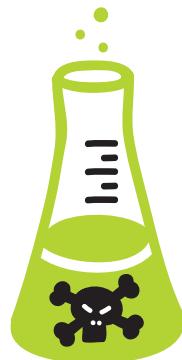


PELAGIC BIODIVERSITY: PHYTOPLANKTON, HARMFUL ALGAL BLOOM AND EUTROPHICATION

Microalgae or phytoplankton can proliferate and accumulate rapidly, in response to environmental changes. They are a good indicator of the quality of the coastal environment: some of them can be toxic for marine life and man. This activity assesses algal blooms in different trophic conditions, at different time scales.

CHEMICAL CONTAMINANTS AND BIOLOGICAL RESPONSES

To demonstrate the capacity for monitoring trace levels of hydrophobic substances such as organochlorine pesticides, PAHs and PCBs, and their impact on biological responses using dedicated biosensors.



BENTHIC BIODIVERSITY AND HABITATS

To monitor changes in macrobenthic biodiversity. Assessing potential environmental controls and functional consequences.

let's go!



HYDROGRAPHY AND TRANSPORT

Applied to floating matter distribution (marine litters, phytoplankton...). It provides information about hydrodynamics and derived transport to infer the spatial distribution of not-desirable material and living organisms.



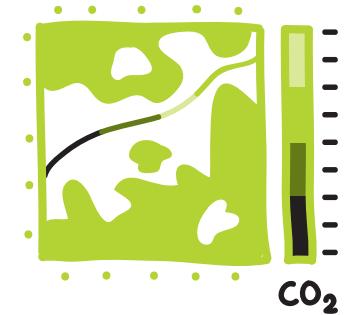
OPERATIONAL OCEANOGRAPHY AND FORECASTING

Shows how observations support operational oceanography in response to societal questions and policy requirements. It assesses regional operational models implemented in the coastal ocean, leading to recommendations for European coastal forecasting system improvements both in terms of models and observations.



COASTAL CARBON FLUXES: BUDGET, VARIABILITY AND ANTHROPOGENIC EFFECT

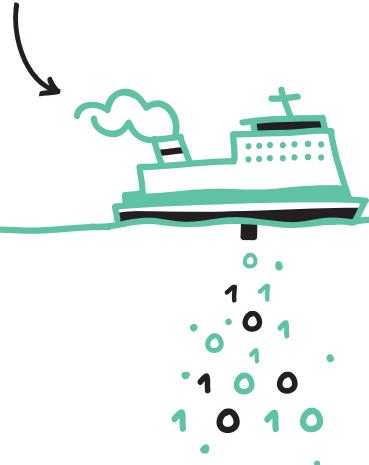
To assess the role and responses of the European coastal ocean and marginal seas in the global Carbon cycle, to provide recommendations for a European integrated monitoring.



HOW? OBSERVATION SYSTEMS

FERRYBOXES

Automated instrument packages mounted on 'ships of opportunity', for example on ocean liners cargo ships, ferries or research vessels. These devices can also be carried by private boats, and yachts that volunteer to participate in collecting measurements.



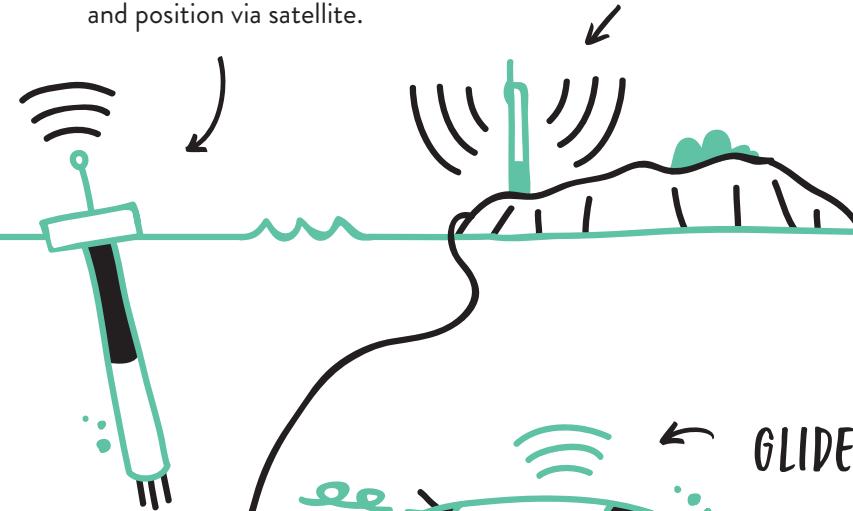
FIXED PLATFORMS

Anchored monitoring stations located on the sea-surface. They host different types of sensors to measure water parameters, marine life indicators and contaminants concentrations. Data transmission is performed in real time.



COASTAL PROFILERS

Perform periodic hydrology and biochemistry profiling measurements and helping to estimate underwater currents. Periodically, they return to the surface to transmit their data and position via satellite.



HF RADARS

Used for remotely measuring ocean currents, waves and sea states from shore. They have the ability to sample coastal areas and provide maps of the ocean surface velocities over hundreds of square km's simultaneously.



BOTTOM BASED OBSERVATORIES

Anchored monitoring stations located underwater and on the seabed. These stations can be connected to the seashore by a cable enabling a continuous high rate data transmission in real time and a high power supply.



GLIDERS

Small autonomous underwater vehicles that can be pre-programmed and/or remotely piloted. Gliders collect data in the water column such as the temperature, the density, the salinity, the depth, the turbidity, the oxygen and the chlorophyll contents.



HOW? PROVIDING ACCESS AND SERVICES

TRANS-NATIONAL ACCESS (TNA)

A **service** dedicated to promote and provide **access, free of charge**, to a selection of facilities (observation platforms, calibration laboratories, ...) of the JERICO Research Infrastructure **beyond national boundaries**.



VIRTUAL ACCESS (VA)

To provide **free access** to the **data and associated services** from the six *in situ* observation systems to any private or public user groups. It also promotes the improvement of existing services and the development of new ones.

IDENTIFIED OBJECTIVES

1 Support researchers from **academy** and **industry** to **mature** coastal scientific knowledge and technologies.

2 Build long-term **collaborations** between end-users and JERICO Research Infrastructure.

3 Promote **innovation** and the **transfer of know-how** in the coastal marine sector that offers rich promise for the future.



4 Assure **integration** with **Virtual Access and services**.

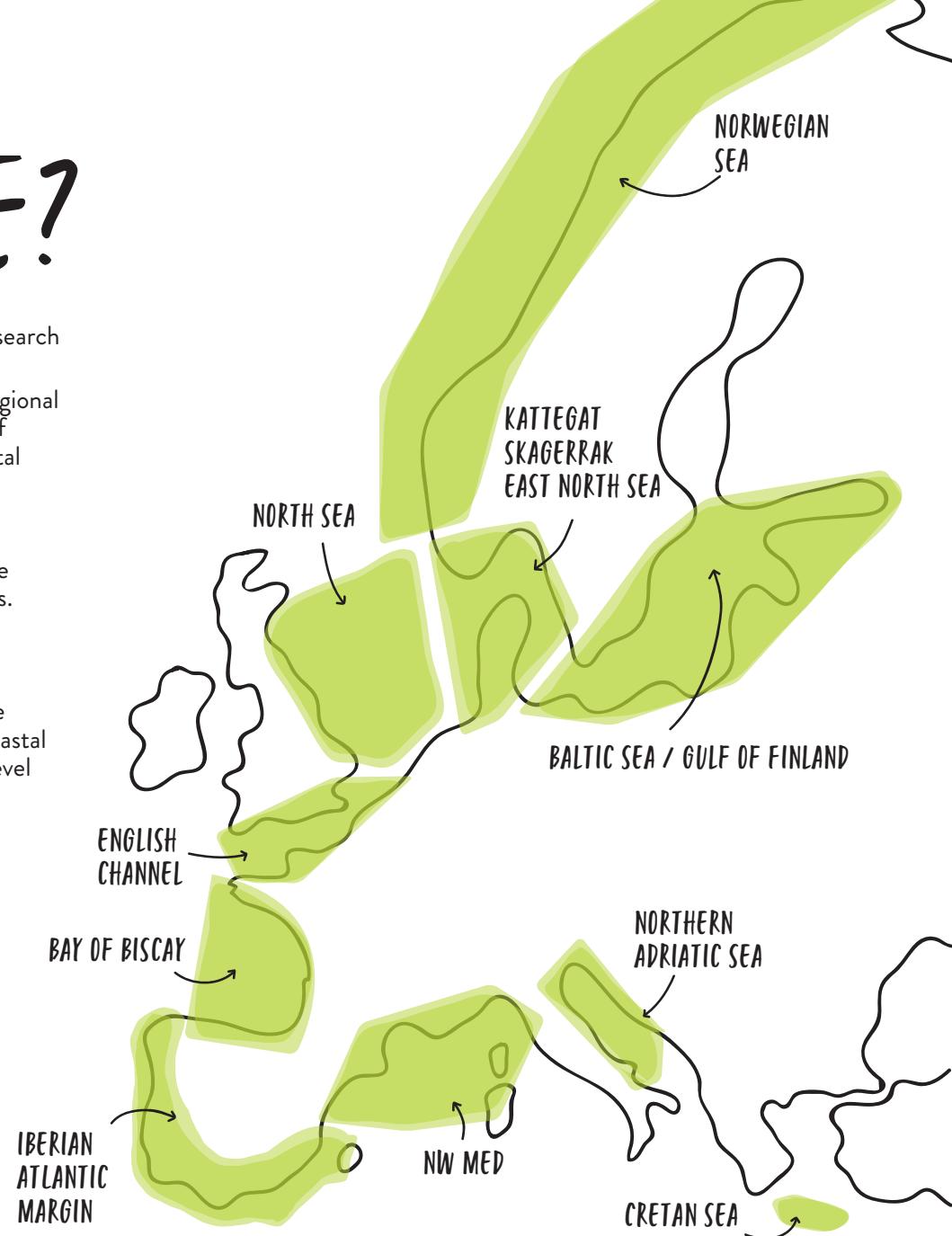


WHERE?

A distributed JERICO Research Infrastructure:

- Works across multiple regional sites that include most of European shelf and coastal seas.
- Involves key partners recognised for their complementary expertise and observing capabilities.

These regional sites will be the JERICO Research Infrastructure nodes where future engagements for coastal observing at the national level will be fostered.



FOR WHO?



PRIVATE SECTOR

- Shipping and transport
- Marine-based sustainable energies
- Aquaculture & fisheries
- Local authorities › harbour, coastal management



TECHNOLOGY PROVIDERS

- Sensor developers
- System providers



ENVIRONMENT AGENCIES

- National and EU Regulations (MSFD, WFD, ...)
- Regional commissions (OSPAR, HELCOM, ICES, ...)
- Other policy makers (monitoring programs)



OTHER OCEAN RELATED INFRASTRUCTURES FOR DATA, AND SERVICES

- EMODnet
- Copernicus
- EuroGOOS
- ...

MARINE RESEARCH



SERVICE PROVIDERS

SMEs providing intermediate products and services





SUSTAINABLE DESIGN

BUSINESS PLAN

GOVERNANCE

NATIONAL COMMITMENT

SERVICES

OPEN DATA

COASTAL OBSERVING
INFRASTRUCTURE

PROGRESS TOWARDS A SUSTAINABLE RESEARCH INFRASTRUCTURE

JERICO RI

STRATEGIC STEPS
FOR EUROPEAN COASTAL
PLURIDISCIPLINARY
COMMUNITY

JERICO

2011-2015

27 partners

First step to coastal
observation network

- > Physical data,
joint research

JERICO-NEXT

2015-2019

34 partners

- + Biological data,
interoperability
- > Ecosystem
and biodiversity

JERICO-S3

2020-2024

39 partners

- + Structured regional
sites: science, services,
sustainability
- > Long term vision

