

INTERGROUP



Seas, Rivers, Islands  
&  
Coastal Areas

PANEL

## Sharing responsibility - a coherent approach to European ocean observation

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Tuesday 23 February 2021



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# Region Emilia-Romagna role within European and National initiatives on coastal and marine integrated management, observation and monitoring



- ❖ **promoter and coordinator of Bologna Charter initiative, in frame and with the support of CPMR/IMC**
  - BC-Joint Action Plan lines on knowledge development for ICZM and MSP <http://www.bolognacharter.eu/the-joint-action-plan/>
  - **developing interregional cooperation** in C&M space integrated management (i.e. projects BEACHMED / MAREMED / COASTANCE / COASTGAP/ SHAPE / CO-EVOLVE / PORTO DI MARE / CHANGE WE CARE / ADRIACLIM) including knowledge development & platforms.
- ❖ **coordinator of the Italian Regions for the EUSAIR Pillar 3 “Environmental Quality”** and component of the Thematic Steering Group of Pillar 3 with MATTM (Ministry of Environment and Protection of Territory and Sea).
- ❖ **collaboration in the formation of the BLUEMED SRIA (Strategic Research & Innovation Agenda)**
  - contributions to the strand “key enabling knowledge for the Mediterranean” C. Hazards and protection of coastal areas and open sea in the Mediterranean (Data & Observing systems, for Planning and Integrated Management).
- ❖ **component of the TNEC Steering Committee (National Board on Coastal Erosion) MATTM-Regions,**
  - “National Guidelines for Coastal Protection against Erosion and the effects of Climate Change” (2019), with ISPRA and GNRAC.
  - TNEC collaboration in the National Plan for Space Economy, definition of needs by coastal Regions on «Coastal Belt Services» (Copernicus services, remote sensing services, etc.), about coastal observation and monitoring for management purposes.
- ❖ **component of the MSP national Technical Committee (MIT, MATTM, MPAAF, MISE, MIBACT, Regions)**
  - role of Regions: data provision on coastal and marine space of their competence, census and check of consistency of their relevant plans with MSP, contributing to the Knowledge Framework composition and to the planning and consultation processes.
  - RER takes also part in the “Subcommittee Data” and “Subcommittee Adriatic basin”.
- ❖ **member of ECOMONDO TSC** → collaboration with TSC, MATTM, TNEC, ISPRA, GNRAC in organising annual events/conferences in the Ecomondo manifestation, on coastal-marine Blue Growth themes, integrated management of coasts, sediments, ports and rivers.



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# BC-JAP → an Action Plan for the protection and sustainable development of Mediterranean coasts, the enhancement of coastal systems resilience and adaptation to CC effects



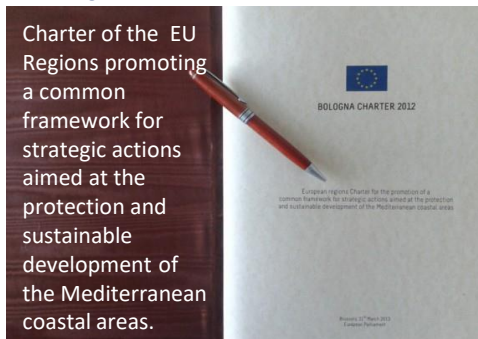
Seas, Rivers, Islands  
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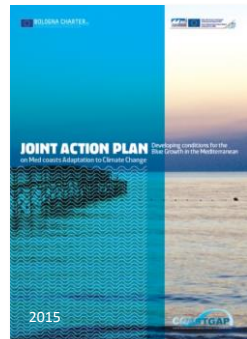
Initiative  
acknowledged by:

- ✓ Interreg MED program 2014-2020
  - ✓ WESTMED initiative, Framework for Action
- [www.bolognacharter.eu](http://www.bolognacharter.eu)

Policy Document  
Signature 2013 in Brussels EP



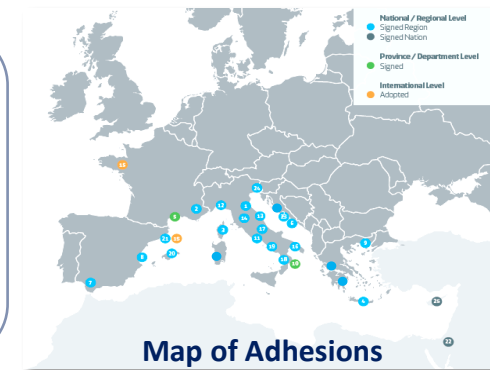
Joint Action Plan  
2014-2020



2021-2027



concrete actions  
& projects:  
more than  
500 MEuro  
of coastal works  
and info systems



## 3 Pillars

1. **knowledge, research and monitoring** on the status and evolution of Mediterranean coastal areas.
2. **integrated planning**, for the sustainable development of Coastal and Maritime space.
3. **coastal works and solutions** for Climate Change adaptation needs and resilience of coastal systems.

## 4 Strategic Themes (12 Joint Action lines, 15 Major coastal projects and 7 monitoring infrastructures projects):

- ST1 - Developing Knowledge, network-based monitoring and Data Management systems;
- ST2 - Sustainable use of strategic resources for the Blue Growth in the Mediterranean;
- ST3 - Supporting Research & Innovation, Clustering and Implementation;
- ST4 - Responding to the Challenge driven by Climate Change.



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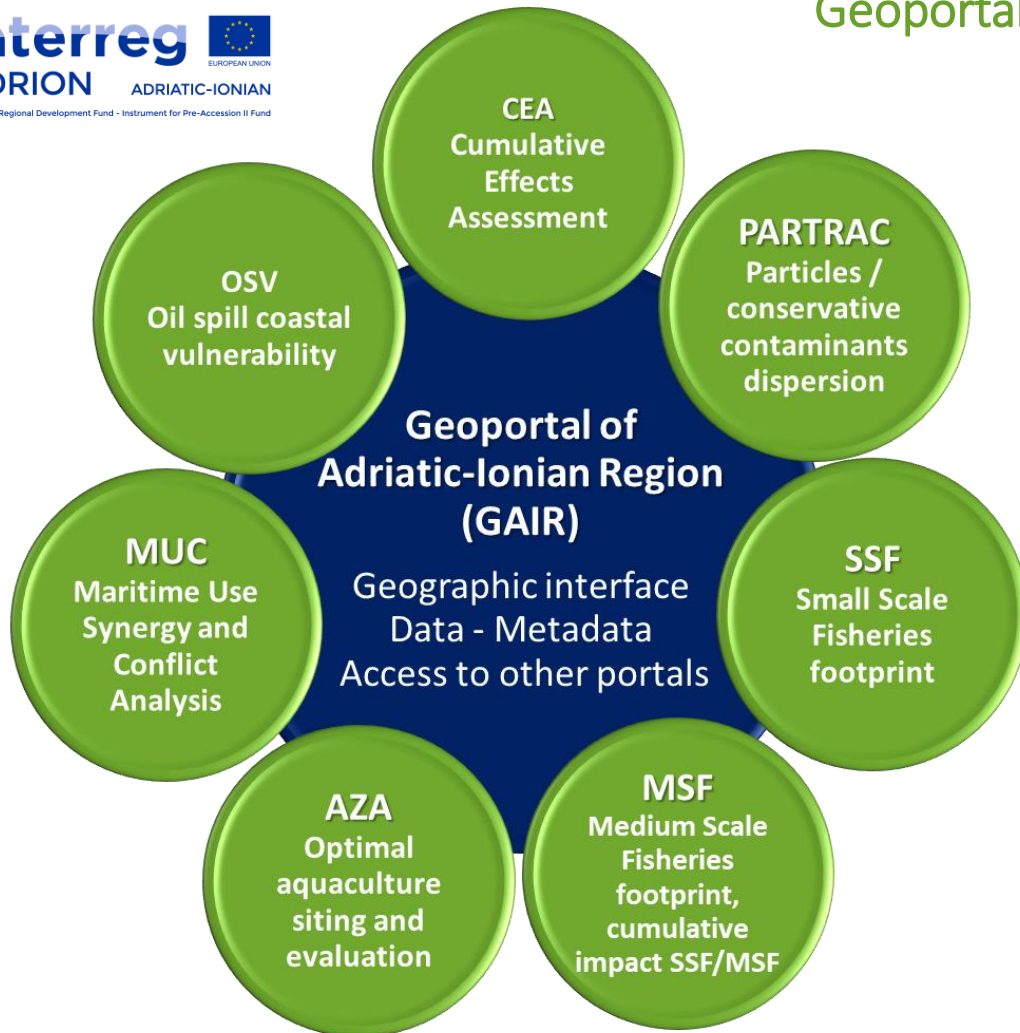
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## Regions both as End users of observational data and Providers of detailed knowledge basis

- **on shore:** topobathymetric data, geological, geomorphological and geognostic data, water quality, status of littorals and of protection works, erosion and coastal dynamics, meteo-marine climate.
- **in land:** scenarios and marine flood risk maps (Flood Risk Management Plans), contribution to the hydrographic basin planning on the coastal areas, climate change effect impacts maps, geological and geomorphological maps, dynamics evolutive maps.
- **offshore:** characterisation of sand deposits on the continental shelf, geophysics surveys, geognostic cores, grainsize and biochemical analysis, sizing of volumes available for coastal nourishment, monitoring their exploitation and effects on marine environment. E-R regional in\_Sand Database <https://ambiente.regione.emilia-romagna.it/it/geologia/geologia/costa/sistema-informativo-per-la-gestione-dei-depositi-di-sabbia-sommersi>
- **for MSP:** Geoportal of Adriatic-Ionian Region (GAIR) <https://www.portodimare.eu/> and the Emilia-Romagna regional database on Sea Uses (in\_Sea) <https://ambiente.regione.emilia-romagna.it/it/geologia/geologia/costa/database-delluso-del-mare>



## Geoportal of Adriatic-Ionian Region



<https://www.portodimare.eu/>

## GAIR Modules & Tools4MSP

- **FOSS**-based technological stack (Free and Open-Source Software)
- **data** portal (528 layers at the moment)
- **modular approach**: access to 7 Modules, innovative tools for maps creation and analysis on ICZM/MSP
- **knowledge-driven** approach: the results of each module run are available in the GAIR
- **multi-objective**: each module can have single or multiple objectives
- **8 interfaces** (1 general + 7 for the modules)
- **remote services** available through GAIR
- **user profiles** of different level

# Regions both as End users of observational data and Providers of detailed knowledge basis



The screenshot shows the website header with logos for Interreg ADRION and PORTODIMARE, navigation menus for Data, Maps, Case Studies, and About, and search/register/sign in options. The main banner features the title 'PORTODIMARE' and the subtitle 'geoPORTal of TOols & Data for sustainable Management of coAstal and maRine Enviroment'. Below this is a 'Welcome to the Geoportal of Adriatic-Ionian Region' section with a paragraph describing the portal's purpose and a note that it is the main output of the PORTODIMARE project.

## Discover the available datasets.

- |  |   |  |   |   |  |  |   |   |   |   |
|--|---|--|---|---|--|--|---|---|---|---|
| <br>AQUACULTURE     | <br>BIOLOGICAL CHARACTERISTICS | <br>SUBMARINE CABLE & PIPELINE ROUTES | <br>COASTAL DEFENCE | <br>COASTAL LAND USES / ACTIVITIES | <br>UNDERWATER CULTURAL HERITAGE                              | <br>RAW MATERIAL EXTRACTION AREAS | <br>FISHING          | <br>MARITIME BOUNDARIES      | <br>MARITIME TRANSPORT AND TRAFFIC FLOWS | <br>MILITARY           |
| <br>MODULE OUTPUT | <br>OIL AND GAS              | <br>PHYSICAL CHARACTERISTICS        | <br>PORTS         | <br>PRESSURES IMPACTS            | <br>NATURE AND SPECIES CONSERVATION SITES & PROTECTED AREAS | <br>RENEWABLE ENERGIES          | <br>SPATIAL POLICY | <br>TERRESTRIAL BOUNDARIES | <br>TOURISM & RECREATION               | <br>TYPES OF HABITAT |

<https://www.portodimare.eu/>



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## Regions both as End users of observational data and Providers of detailed knowledge basis

### Ocean observation is essential for

- coastal protection
- adapting to climate change
- implementing early warnings systems
- planning new coastal or offshore activity

### and moreover, useful for

- ecosystems understanding and protection
- complying with environmental measures
- fisheries management
- dealing with algal blooms

### There are some uncertainties that we need to narrow, concerning:

1. magnitude and frequency of extreme events (geohazards, coastal risks, impacts on the coasts)
2. ocean circulation (affecting water temperature, coastal currents and highwater phenomena)
3. ice melting (geohazards, coastal risks, sea level rise)
4. coastal resilience (self-adaptation capacity degree of coastal ecosystems and littoral systems to CC effects)



## new technologies or initiatives that could be implemented or more widely used

- **development of new sensors and/or detection systems** would be needed in order to evaluate with more accuracy the solid transport along the terminal sections of rivers and alongshore.
- **LiDAR surveys** could be more widely used, and possibly implemented in degree of accuracy, for coastal bathymetric campaigns, and drove also to a further lowering of costs if committed by a central Authority, national or European.
- **GAIR platform**, set up within PortoDiMare (Interreg Adrion project), contains several information layers but also tools for spatial analysis useful MSP activities, it is expected to be used and further implemented by the partners and other actors of the Adriatic-Ionian Region, and possibly taken as an example for the implementation of other maritime basins platforms.
- **Ecosystem-oriented Plant for Sediments Management** could be more widely used: a submerged ejector devices and by-pass system, new approach and technology for a continuous and more sustainable management of sedimentation in ports area or artificial basins (aimed at overcoming traditional dredging operations).  
*applied in LIFE+ “MARINAPLAN” project (ports mouth safety navigation, Cervia Port) and in “CO-EVOLVE” Interreg MED Project (management of internal river-port basins, Cattolica Port), was also the focus of the “ECOMEDPORT” BLUEMED Start-up-Action (feasibility studies for application in fishery and commercial ports in Tunisia and Lebanon).*





# Thanks for you attention!

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