



Regions to Boost
National Maritime
Spatial Planning



Co-funded by
the European Union



REGINA-MSP

Communication brief

DATA AND GEOPORTALS FOR MSP

A regional scale approach



REGINA-MSP
Regions to boost National Maritime Spatial Planning

Project Results Partners News Contact

Inventory of regional & European geoportals

An inventory of the main regional geoportals within the frame of the project. This map was developed by the SHOM (French naval hydrographic and oceanographic service).

Geoportals in the REGINA-MSP project

Geoportals in the REGINA-MSP project at regional level and above
Click on an area to discover the associated geoportals.

Legend

- Case study regions in REGINA-MSP
- National level
- European Union

County Mayo, Ireland, France, Pays de la Loire, Provence-Alpes-French Riviera, Italy, Sardinia, Greece, Central Macedonia, Region of Murcia, Galicia, Spain

Lon: 018° 55.61' E - Lat: 33° 28.10' N

OpenStreetMap contributors.

REGINA-MSP communication brief series

The REGINA-MSP project is a two-year project (2023-2024) that aims to greater integrate regional and sub-regional needs, perspectives and stakeholders in the development and implementation of national Maritime Spatial Planning (MSP). The project highlights potential challenges to this integration and opportunities to reduce them, based on a general analysis at the European level and an in-depth analysis in eight case study regions in five European countries (France, Greece, Ireland, Italy and Spain).

A specific task of REGINA-MSP (task T3.2) was dedicated to the topic of data for MSP, since access to up-to-date and relevant data is essential for integrating regional perspectives and actors in MSP. This communication brief summarizes the findings concerning the topic of data for MSP, based on various activities carried out as part of the project (e.g., workshops, surveys, bibliographic analyses). A specific deliverable focusing on data for MSP (D3.2, available at <https://www.regina-msp.eu/deliverables>) provides a more comprehensive description of these outcomes. This brief is part of a series of communication briefs produced as part of REGINA-MSP, focusing on various topics related to MSP, and on each case study region and country part of the project.

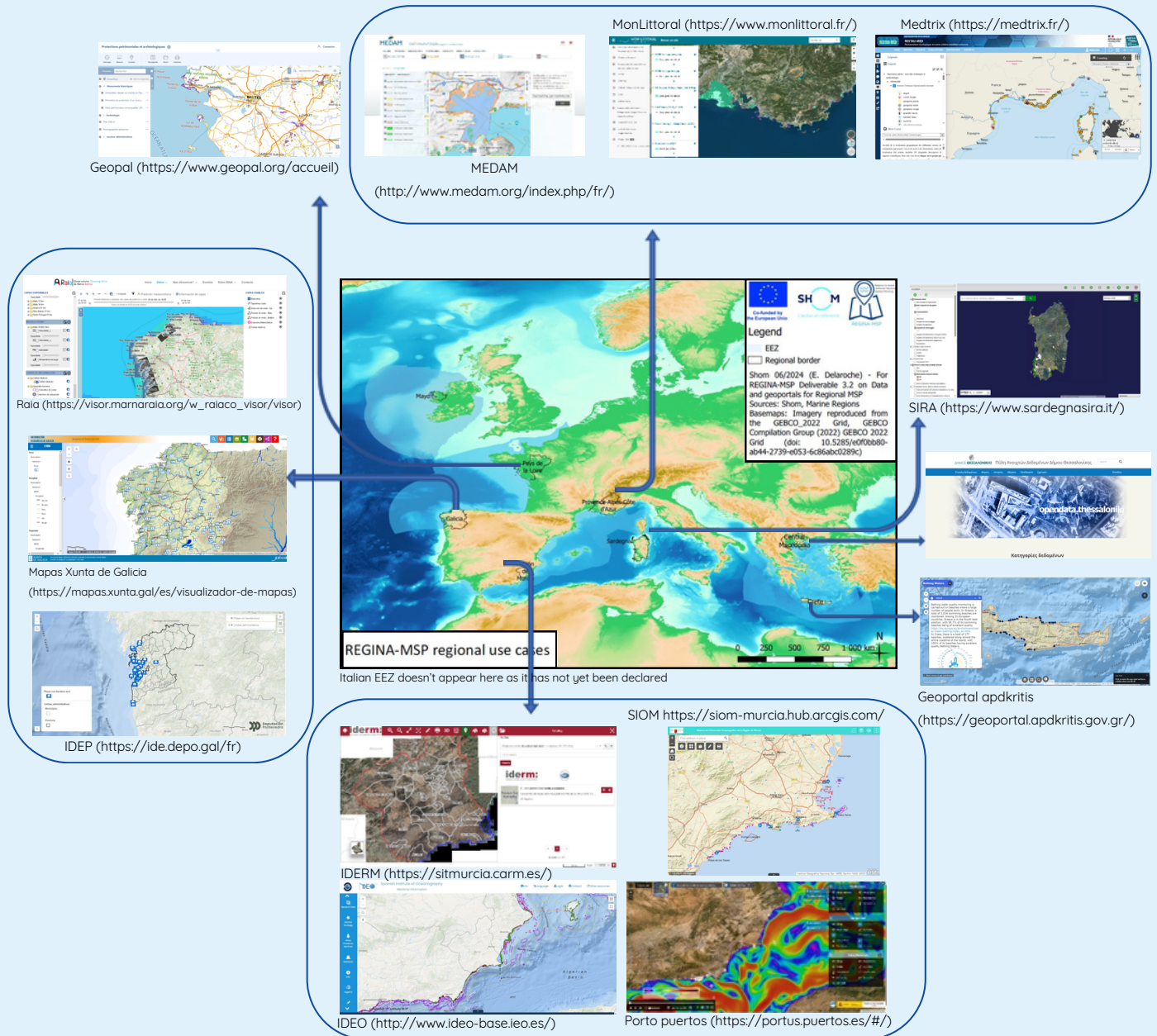
Data as a vector of integration of regional and local perspectives and needs for MSP

The development and access to locally-relevant and up to date data is one important way to better engage regional actors in the elaboration and implementation of MSP action. Through its task 3.2 dedicated to data, the REGINA-MSP project engaged European case study to specific regions to address their diverse data needs, tailored to their unique characteristics, through collaborative efforts. Building on the insights from previous European projects as well as workshops and online meetings conducted as part of the REGINA-MSP project with regional representatives, this communication brief explores the complex data landscape to address regional needs for MSP initiatives. This communication brief also describes the outcomes of the various actions undertaken as part of this task 3.2, such as the development of a platform for stakeholders to share their regional and national geoportals where marine organization and government share data for MSP. A geoportal grading scheme built with multiple regional geomatics experts also highlighted initiatives and tools supporting MSP, data sharing processes, which are further illustrated in this communication brief.

State of play for data access at regional, national and European level

Regional maritime and MSP geoportals and MSDI

Regional Maritime Spatial Data Infrastructures (MSDI) or regional geoportals with marine part are essential to support national and regional MSP. By providing a structured framework for managing, visualising and sharing spatial data, MSDIs facilitate better coordination between regional and national levels. They help integrate socio-economic, environmental, and spatial data, ensuring that decision-making is based on accurate, up-to-date information. Moreover, Regional MSDIs or geoportals enable the harmonization of data across different regions, promoting consistency and interoperability, which are critical for effective MSP.

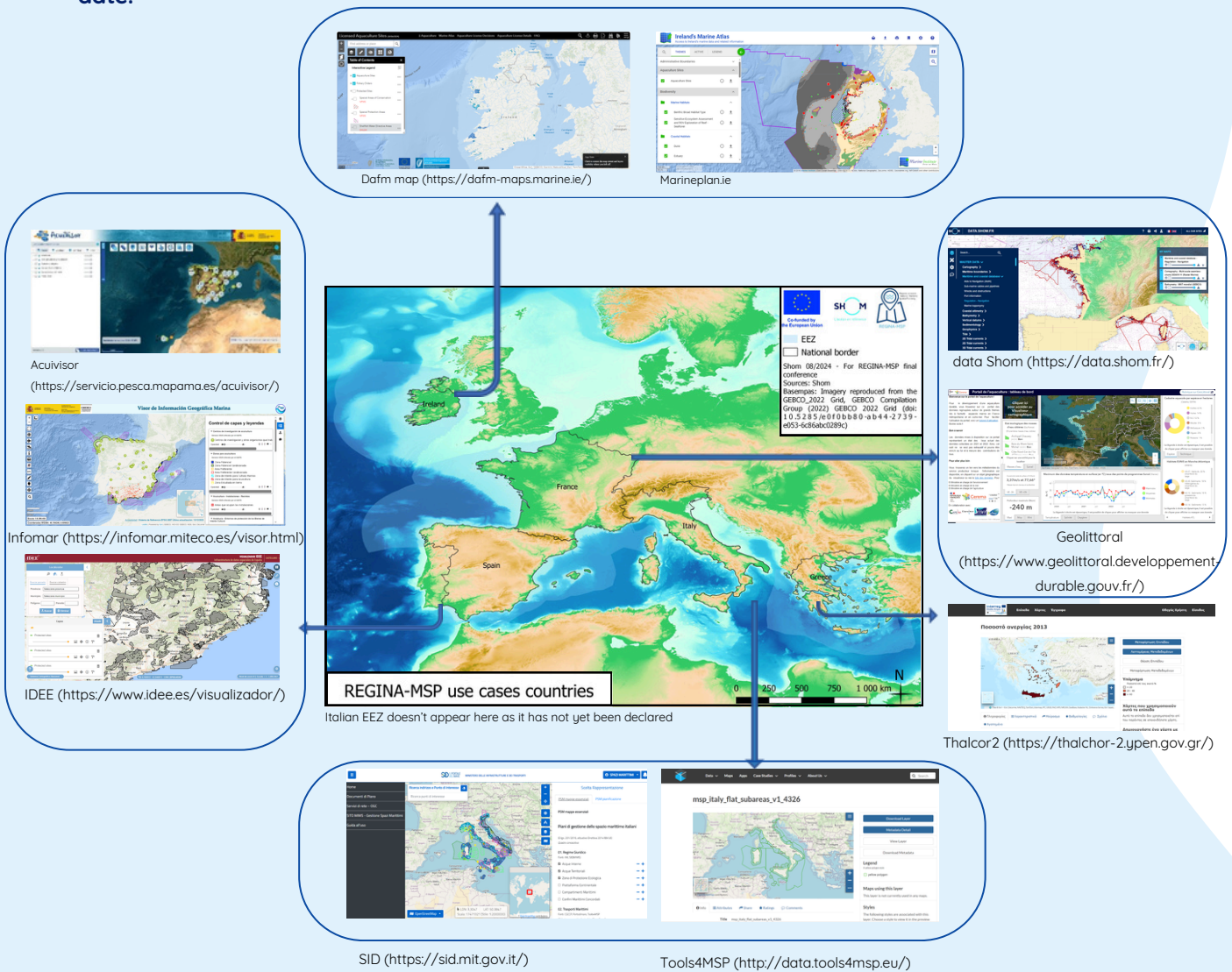


Regional MSDIs are represented here for each use case Region of REGINA-MSP project: Galicia, Murcia (Spain), the county of Mayo (Ireland), Central Macedonia and Crete (Greece); Provence-Alps-French Riviera - South Region, Pays de la Loire (France) and Sardinia (Italy). Ireland is an exception here, as the country already gathered MSP data harvested in one national geoportal, there is no regional MSP geoportal in this section.

Incorporating small scale harmonized data into national and European MSDIs: a key challenge

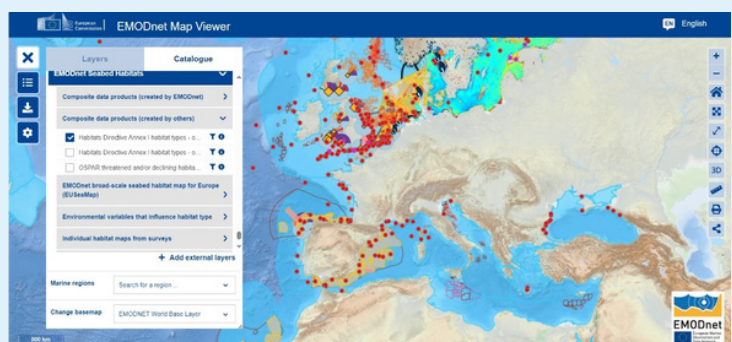
National maritime and MSP geoportal and MSDIs

Primary challenge for National MSDIs is to incorporate data from regional MSDIs into national and European geoportals in a harmonized manner, ensuring that the data is both consistent and up-to-date.



European reference in Maritime Spatial Planning data sharing

At the European level, **EMODnet** (European Maritime Observation Data network, <https://emodnet.ec.europa.eu/>) serves as reference for MSDI/geoportal. It is a comprehensive repository of harmonized and up-to-date data for MSP, delivered through OGC/INSPIRE-compliant web services. To support a digital MSP framework, it is recommended that national and regional MSP data be shared via this geoportal. This approach ensures that data is consistent, accessible, and integrated across Europe, enhancing a **pan-European MSP**.



<https://emodnet.ec.europa.eu/>

A geoportal grading scheme to harmonize MSDI and geoportals sharing regional, national, and international MSP and marine data

- Developed by several geomatic and data experts from 4 different countries (Spain, Italy, France and Greece) all along REGINA-MSP project
- 3 levels of categories graded: metadata, data and geoportals
- A grading scheme of geoportals and MSDI with more than 35 criterias



This project has received funding from the European Maritime, Fisheries and Aquaculture Fund (EMFAF) under Grant Agreement n°101081219. Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union.



Regions to boost National Maritime Spatial Planning

Geoportal grading scheme

Scan the QR code to access the geoportal website



Category 1 – Metadata

15 criteria – 8 High priority, 6 Medium, 1 Low

Criterion M1	Metadata objects exist for every data set, preferably in harmonized format	Priority
Details	Metadata objects can be pages, files, or any sort of digital object.	High
Notation	0 = No metadata found 1 = Only a few datasets have associated metadata 2 = Most if not all datasets have metadata, not harmonized 3 = Most if not all datasets have harmonized metadata	

Crit. M2	The metadata of a dataset contains access and reuse information for this set	Priority
Details	This includes the data identifier, any relevant information to access the data including limitations and restrictions or need for authentication, and license and openness.	High
Notation	0 = Metadata does not give enough information to access the data 1 = Metadata describes access to data (e.g. link, ID), but not the restrictions 2 = Metadata gives enough access information but not reuse information (license) 3 = All access and reuse information are provided	

Crit. M3	Metadata of datasets contains information on data quality	Priority
Details	Such information includes quality and precision of data, validity, and conformity with local rules on the implementation on European directives	High
Notation	0 = Metadata contains no information on data quality 1 = Metadata is implemented in conformity with local rules but other necessary information is missing 2 = Metadata contains all necessary information on data quality, precision, validity	

Policy proposals to better integrate regional and sub-regional needs, perspectives and stakeholders in MSP: focus on data

Technical actions for regional data collection

- **Map existing maritime activities** and identify potential expansion areas for sustainable development (regional and national aspect).
- **Evaluate sea-land interactions**, such as coastal erosion, floods, and pollution, to address local challenges (local, regional and national aspect).
- **Enhance socio-economic and spatial data collection**, focusing on MSP impacts, on benthic and pelagic habitat from small-scale fisheries, and recreational activities (regional, interregional and national aspect).
- **Update and improve Marine Strategy Framework Directive (MSFD) data collection part** and spatial representation to align with MSP needs (regional, interregional, national and European aspect).
- **Develop marine specialized regional geoportals** to facilitate data sharing and increase transparency across different stakeholders (regional and interregional aspect).
- **Increase water quality and pollution monitoring frequency** to comply with the Water Framework Directive (WFD) (local, regional and national aspect).
- **Map seabed habitats and unregulated anchorages**: initiate campaigns to map seabed habitats and develop methodologies to identify unregulated anchorages, supporting better vision of the impact of vessels anchorage on the benthic habitat (national and European aspect).
- **Leverage remote sensing technologies and develop hydrophone recording**: utilize satellite imagery, hydrophone records and AIS data to improve the precision and scope of environmental monitoring, enhancing the ability to track noise pollution, changes and impacts of human activities (national and European aspect).
- **Map birds and megafauna migration corridors**, and **birds' flight altitudes**, to manage windfarm installations **effectively** (national aspect).

Improve structural organization for data gathering

- **Bridge the gap between scientific research and public policy** and **improve communication** between central administrations, regional authorities, and departments to reduce data fragmentation (local, regional, interregional and national aspect).
- **Increase survey vessel availability** to enhance data collection and monitor maritime impacts, such as aquaculture and vessel anchorage on marine environments (regional and national aspect).
- **Invest in education and training programs** to build capacity and ensure data accuracy among new operators in the maritime sector (local, regional, interregional, national and European aspect).
- **Encourage citizen participation in biodiversity observation** to complement scientific data and enrich datasets (local, regional and national aspect).
- **Secure funding for research, ocean observation and data collection**, ensuring alignment with EU regulations to enhance data reliability (national and European aspect).
- **Establish MSP data working groups at the regional level** to foster collaboration and streamline data sharing (regional, interregional and national aspect).

Data harmonization recommendations from the Technical Expert Group on Data for MSP

- **Share data on EU-wide platforms** (e.g. EMODnet, WISE Marine, EUROSTAT, and Copernicus) to promote a standardized approach of MSP data sharing process for a pan-European MSP (regional, interregional, national and European aspect).
- Adhere to **EMODnet MSP data models**, incorporate INSPIRE and eHILUCS categories as attributes for spatial data (regional, interregional, national and European aspect).
- **Give specific access to regional structures to implement their data in EU MSDI platforms** easily following the primary principles of geoportals which is that it has to be user-friendly (European aspect).
- **Harmonize data formats** using **FAIR principles** and **OGC/INSPIRE web services format** (regional, interregional, national and European aspect).
- **Regularly update data** and **clarify ownership** to maintain utility and accessibility (regional, interregional, national and European aspect).

Regions	Focus on regional needs for data collection and sharing process
Murcia	<ul style="list-style-type: none"> • Develop knowledge on the effects of non-regulated boat anchoring in both protected and non-protected areas, focusing on risks to seabed habitats such as seagrass meadows and underwater cultural heritage. • Collect data on m��rl habitats to guide the placement of aquaculture facilities in ways that reduce their impact on these sensitive ecosystems, and enhance understanding of how aquaculture activities affect m��rl habitats to promote sustainable practices.
Galicia	<ul style="list-style-type: none"> • Assess the impact of economic activities, including tourism on marine resources, particularly in high-pressure areas. • Monitor and analyze underwater noise by integrating AIS data with hydrophone recordings, addressing gaps in the monitoring of smaller and auxiliary aquaculture vessels. • Collect detailed economic and social data on marine activities through surveys and interviews to map the socioeconomic value of tourism and its effects on the marine environment. • Ensure that MSP implementation is based on comprehensive knowledge of cumulative pressures, ecological impacts, and potential conflicts, with a focus on how wind farms might affect traditional fishing areas.
Pays de la Loire	<ul style="list-style-type: none"> • Develop knowledge to adapt coastal areas to human impact on ocean ecosystem by increasing the frequency of water quality monitoring and identifying marine pollution sources. • Improve monitoring of fishing fleet present in the maritime space of the Region, focusing on enhancing access to data about fishing volume, value, and incidental captures.
Provence-Alps-French Riviera (PACA)	<ul style="list-style-type: none"> • Utilize the Monlittoral geoplatform (https://www.monlittoral.fr/) to enhance data sharing between regional and local authorities on tourism, recreational activities, and fishing. Collaborate with Monlittoral and the Regional Biodiversity Environment Agency to build a comprehensive regional inventory of blue economy and maritime ecological data. • Use this data to support the development of Sch��mas de Coh��rence Territoriale - Territorial coherence scheme (SCoTs) and address regional needs for information on wave energy, wind farms, cumulative maritime impacts, tourism density, and beach visitation for better coastal management.
County of Mayo	<ul style="list-style-type: none"> • Evaluate the impact of economic activities on regional marine resources and develop knowledge on offshore renewable energy, subsea cables, MPAs, and bird migration data. • Create a digital twin of the ocean within MSP geoportal to integrate advanced technology into planning. • Ensure regional data interoperability with national and EU systems and implement the MAP Act which will enable the Minister to request data from applicants, thereby enhancing data accessibility. • Reactivate the Marine Coordination Group under Project Marine 2040 to streamline data collection and coordination.
Central Macedonia	<ul style="list-style-type: none"> • Address data gaps in the four Gulfs of Central Macedonia by standardizing and codifying MSP data to ensure consistency. • Establish specifications for accurate, up-to-date MSP maps and update the national data repository to enhance the national MSP framework. • Develop interoperable regional geoportals for seamless data sharing with the national MSP geoportal. • Consolidate fragmented information into a unified, accessible database and digitize existing data to enhance accessibility and preservation of the information.
Crete	<ul style="list-style-type: none"> • Organize MSP data at the regional level, including the development of geoportals and geo-processing tools relevant to the maritime domain. • Gather data related to the impact of fisheries to ensure sustainable practices and informed decision-making. Collect data regarding expected windfarms location to support renewable energy planning.
Sardinia	<ul style="list-style-type: none"> • Collect data on socio-governance, security, and the spatial distribution of small-scale fishing, recreational activities, and benthic habitats. • Monitor marine litter accumulation and its spatial patterns. • Develop or enhance regional spatial data portals and integrate MSP functions into existing platforms where needed. • Improve geospatial data usage among regional authorities with targeted training and user-friendly tools. • Ensure effective use of national geospatial portals and promote cross-regional collaboration. • Maintain and ensure national MSP geodatabase Tools4MSP (http://data.tools4msp.eu/) by incorporating data from various sources, accessible online for detailed spatial analysis and decision-making.

References

Brigolin, D., Carella, F., Didonna, R., et al., 2024. Regional actions for MSP. Fostering MSP implementation from regional needs. REGINA-MSP project, European Climate, Infrastructure and Environment Executive Agency.

Delaroche, E., Esquerré, A., Souf, A., Ramieri, E., Campillos, M., Bocci, M., Carella, F., Brigolin, D., Châles, F., Changeant, A., Porporato, E., Kyvelou, S., Sakellariou, S., Menegon, S., Leroy, Y., 2024. Data report: analysis on regional data and geoportal of interest for national MSP. REGINA-MSP project, European Climate, Infrastructure and Environment Executive Agency

Laroussinie, O., O'Hagan, A.-M., Ramieri, E., Bocci, M., Guennal, L., Delaroche, E., Châles, F., Cervera-Núñez, C., April 2024. Regions and Maritime Spatial Planning: what is at stake? REGINA-MSP project, European Climate, Infrastructure and Environment Executive Agency.

Citation

Delaroche E., Châles F., Souf A., Leroy Y., 2024. Communication brief on data and geoportals for MSP, a regional scale approach. REGINA-MSP project, European Climate, Infrastructure and Environment Executive Agency.

Disclaimer

This communication brief has been developed as part of the REGINA-MSP project. Its content is based on the activities carried within the framework of the project and does not necessarily represent the views of the authors' organizations and nations.



Co-funded by
the European Union



Regions to Boost
National Maritime
Spatial Planning



regina-msp.eu



An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department of the Environment,
Climate and Communications

