

# D3.3 SIMAtlantic data study: survey results March 2021



SIMAtlantic:

Supporting implementation of maritime spatial planning in the Atlantic region

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# List of acronyms

**CEREMA**: Centre for Studies and Expertise on Risks, Environment, Mobility and Planning (FR)

**DAERA**: Department of Agriculture, Environment & Rural Affairs (NI) **DG MARE**: Directorate-General for Maritime Affairs and Fisheries (EU)

**DGRM**: Directorate General for Natural Resources, Safety and Maritime Services (PT)

DHLGH: Department of Housing, Local Government and Heritage (IE)

**DIRM NAMO**: Interregional Directorate of the North Sea Atlantic-West Channel (FR)

**DIRM SA**: Interregional Directorate for the South Atlantic Sea (FR)

**DML**: Delegation to the sea and the coast (FR) **DSBM**: Maritime Basin Strategy document (FR)

**DSF**: Sea Basin Strategy document (FR)

EC: European Commission (EU))

**EMODnet**: European Marine Observation and Data Network (EU)

**EMSO**: European Multidisciplinary Seafloor and water column Observatory (EU) **GIMeL WG**: Working Group on Geo-information for Sea and Coastal Areas

H2020: Horizon 2020 (EU)

ICES: International Council for the Exploration of the Sea

**INFOMAR**: The Integrated Mapping for the Sustainable Development of Ireland's Marine Resource (IE)

INSPIRE: Infrastructure for Spatial Information in Europe (EU)

**Interreg Va COMPASS Project**: Collaborative Oceanography and Monitoring for Protected Areas and Species

MarSP: Macaronesian Maritime Spatial Planning (PT)

MI: Marine Institute (IE)

MITECO: Ministry of Ecological Transition and Demographic Challenge (ES)

**MMO**: Marine Management Organisation (UK)

**MRE:** Marine Renewable Energy

MTES: Ministry of Ecological and Solidarity Transition (FR)

**OFB**: French Biodiversity Office (FR) **OGC**: Open Geospatial Consortium

OSPAR: Convention for the Protection of the Marine Environment of the North-East Atlantic

**PSOEM**: Maritime Spatial Planning Status Plan (PT)

SEANSE: Strategic Environmental Assessment North Seas Energy

**SIMAtlantic**: Supporting Implementation of Maritime Spatial Planning in the Atlantic **SIMCelt**: Supporting Implementation of Maritime Spatial Planning in the Celtic Seas

**SIMM**: Marine Environmental Information System (FR)

**SIMNORAT**: Supporting Implementation of Maritime Spatial Planning in the North Atlantic Region

**SIMWESTMED**: Supporting Implementation of Maritime Spatial Planning in the Western Mediterranean region project

UAV: University of Aveiro (PT)
UCC: University College Cork (IE)
URL: Uniform Resource Locator
WFS: Web Feature Service

**WMS**: Web Map Service

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# 1 Background

The SIMAtlantic project (July 2019 - June 2021) aims to support the implementation of the European Maritime Spatial Planning (MSP) Directive (Directive 2014/89/EU) and to improve cross-border cooperation between Spain, France, Ireland, Portugal and the United Kingdom of Great Britain and Northern Ireland in the Atlantic. The partnership is composed of universities, public scientific institutions and national authorities in charge of maritime spatial planning. During the two years of the project, the consortium will carry out studies and concrete actions identified as useful for their national authorities and develop cooperation between States.

Data and information are fundamental to the implementation of MSP, including cross-border cooperation. Previous transnational projects on MSP, SIMCelt, SIMNORAT, SIMWESTMED and SEANSE, have led to common conclusions, in particular a great heterogeneity of spatial data sharing between States through marine spatial data infrastructures, barriers to interoperability but also opportunities to overcome these blockages and improve information sharing. The need for a sustainable European tool dedicated to the dissemination of geographical information relating to MSP was also identified.

To follow up these results, it is essential to understand how the States produce and disseminate data relating to MSP, and to identify their needs in terms of spatial data and services, particularly those that would facilitate cooperation on the cross-border challenges of MSP.

## 1.1 Objectives

A survey was drawn up to specify, with regard to the countries of the SIMAtlantic project partnership, the organisation of geographical data relating to MSP, the service needs of a European portal dedicated to MSP, and the means and formats in which the national plans will be accessible.

In this way, results from the survey reveal the specific features of the Atlantic area and identifies priorities for improving cross-border cooperation.

This information helps to build a vision of MSP implementation process in each State and a vision of MSP in the Atlantic sea basin, and in particular the common issues, with regard to sharing geospatial data.

The results from this survey enable the sharing of information within the partnership on the priority needs, expectations and plans relating to the sharing of geographical data for MSP.

These results also provide useful feedback on the specificities of the countries, in particular on the tools useful for cross-border data sharing for MSP, just as EMODnet Human Activities is setting up new services for MSP and has been mandated by the European Commission to create a "plans" data layer.

The responses will also make it possible to update and adapt the services provided by the <a href="SIMAtlantic">SIMAtlantic</a> <sup>1</sup>project's geoportal and guide the data sharing demonstration work carried out via this geoportal. In particular, part 2 of the questionnaire identifies the resources available for sharing national maritime plans or draft plans on the SIMAtlantic geoportal.

### 1.2 Target

The survey took place within the framework of the European SIMAtlantic project. It was sent to all the States involved in this project: Ireland, France, Spain, Portugal, England and Northern Ireland. In order to have an overview of maritime spatial planning in the United Kingdom of Great Britain and Northern Ireland, the survey was also sent to Scotland and Wales.

Aimed at the actors involved in the organisation and sharing of geospatial data for the implementation of the MSP Directive, in the different countries, this survey was submitted to the competent authorities responsible for MSP, to State administrations and operators, as well as to operators of national geoportals dedicated to MSP.

A coordinated response by each agency was requested for all questions, both strategic and technical, in the survey.

## 1.3 Dissemination of the survey

The dissemination of the survey started on 5 May 2020. The survey's distribution was extended until September 2020 to take into account of the time needed for coordination within the organisations and the delays caused by the Covid-19 pandemic.

To facilitate participation in the survey, the questionnaire was distributed in two versions: online, via the *EU Survey* survey management system, and by e-mail, in Word format. A copy of the survey is included in Appendix 1.

#### 2 Results

# 2.1 Participation

#### 2.1.1 Participants

The survey was distributed to 5 States of the Atlantic region: Ireland, France, Spain, Portugal and the United Kingdom, in particular to the competent authorities responsible for the implementation of the MSP Directive.

The other bodies surveyed in these States are delegated authorities, the MSP actors who support the authorities, competent for data collection and dissemination issues, and the partners of the SIMAtlantic project.

<sup>&</sup>lt;sup>1</sup> SIMAtlantic data portal: https://simatlantic.mspdata.eu/

The organizations that contributed to the survey are listed in the table below:

COUNTRY	ACRONYM	ORGANISATION
England	MMO	Marine Management Organisation
	MTES	Ministry of Ecological and Solidarity Transition
_	CEREMA	Centre for Studies and Expertise on Risk, Environment, Mobility and Planning
France	OFB	French Biodiversity Office
	DIRM SA	Interregional Directorate of the South Atlantic Sea
	<b>DIRM NAMO</b>	Interregional Directorate North Sea Atlantic-West Channel
	UCC	University College Cork
Ireland	MI	Marine Institute
	DHLGH	Department of Housing, Local Government and Heritage
Northern Ireland	DAERA	Department of Agriculture, Environment & Rural Affairs (Northern Ireland)
	UAV	University of Aveiro
Portugal	DGRM	Directorate General for Natural Resources, Safety and Maritime Services
Scotland	1	Marine Scotland (Scottish Government)
Spain	MITECO	Ministry for Ecological Transition
Wales	1	Welsh Government

Figure 1: List of contributing organizations

#### 2.1.2 Processing of responses

The dissemination of the survey was restricted and the number of contributions obtained was 15 responses. Consequently, the responses to the survey allow the construction of a qualitative analysis based on a small sample.

To complete the qualitative analysis, however, some general statistics are produced (percentages, numbers). These figures should be considered with reservations regarding the low number of contributors. Indeed, this has a strong influence on the results of the analysis, particularly for multiple choice questions with prioritisation, where the absence of one answer to an option has a strong influence on the statistics.

#### 2.1.3 Distribution of responses

#### **Country representativeness**

The panel of respondents is distributed as follows:

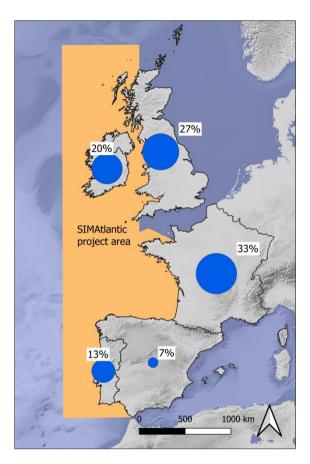


Figure 2: Distribution of contributions by country

The choice of actors, to whom the survey was disseminated, distributes the number of responses unevenly by country (Figure 1). This is over-represented for some countries. France, in particular, accounts for **33%** of the results. Conversely, some States are poorly represented, such as Spain with only **7%** of the results. It should be noted that the United Kingdom's contributions represent **27%** of the responses but include 4 countries.

Given this distribution, it is not possible to have a balanced comparison of countries within the Atlantic region. In particular, the analysis of the results needs to be qualified due to the significant weight of France in the responses. However, this analysis does make it possible to identify trends and reveal common issues and major differences.

#### **Representativeness of functions**

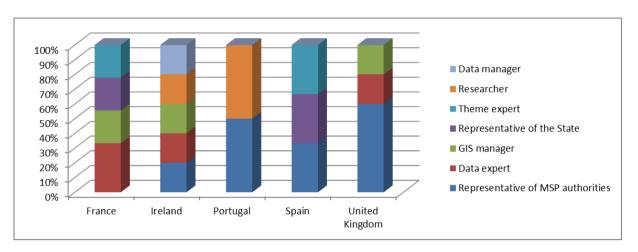


Figure 3: Distribution of contributors by country according to their role in the MSP process

The contributors are mainly representatives of the MSP competent authorities and to lesser extent GIS managers and data experts. Some of them sometimes combine several roles such as GIS manager and thematic expert.

## 2.2 Detailed analysis

#### 2.2.1 Specificities related to cross-border cooperation

What are the cross-border issues for which the data sharing seems to be a priority in the Atlantic region?

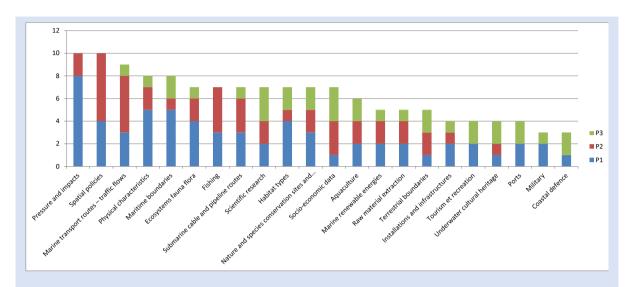


Figure 4: Number of cross-border issues by level of priority

The contributors' responses show that there is a consensus on the need to share data on pressures and impacts.

Two other themes are highlighted in priority 1:

- physical characteristics;
- maritime boundaries.

Data on spatial policies, fauna and flora ecosystems and habitat types are also ranked as priority 1, but to a lesser extent.

On the other hand, barely a third of the contributors ranked/evaluated data relevant to:

- installations and infrastructures;
- tourism and recreation:
- underwater cultural heritage;
- ports;
- military;
- and coastal defence.

#### **Comments from participants**

$\bigcirc$	To answer this question more precisely, we need to think about the objectives of cross-
	border data sharing, we need to know what the data will be used for. It is not enough to
	map the exit points, it is necessary to understand the causes and effects of the different
	problems, because this makes it possible to provide a more specific and coherent policy
	response across borders.

Some contributors mention that the most important issues have a common EU legal framework, such as the Birds and Habitats Directives, the Marine Strategy Framework Directive (MSFD), the Common Fisheries Policy (CFP), etc. The others have more or less the same priority.

#### Limits

In general, it was difficult for the contributors to answer this question, which was widely commented on, because MSP calls for a multiplicity of data on both environmental characteristics and anthropogenic activities and uses. As a result, the answers provided are very varied.

The classification itself may explain these difficulties as respondents view it differently. For example, the class "socio-economic data" may group together aquaculture, fisheries, MREs, etc.

Moreover, it is difficult to generalise. Specificities depend on MSP policies and cross-border parameters/issues. Despite the major challenges for MSP, the prioritisation of the associated data to be shared across borders is delicate, and their access is subject to several constraints. Indeed, some data are specific to each state, while others are difficult to access or cannot be shared, such as certain border or military boundaries. In addition, empirical data are not produced or are of lower priority for cross-border sharing because they are much more localised.

Furthermore, some themes refer to interpretations and not to raw data. The sharing effort should rather focus on raw data. Environmental data, valid at the ecosystem level, make them a priority to share.

Considering the establishment of technical European working groups driven by EC/DG Mare, to cooperate in data sharing for MSP, what effort would be a priority?

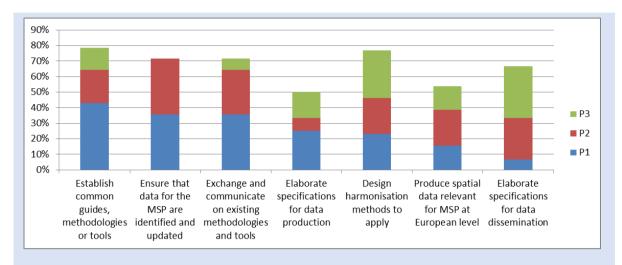


Figure 5: Prioritisation of efforts to cooperate on data sharing for MSP

Priority efforts to cooperate on data sharing in the framework of the European working groups are:

- Establish common guides, methodologies or tools;
- Ensure that data for MSP are identified and updated;
- Exchange and communicate on existing methodologies and tools.

To a lesser extent, the relevance of "design harmonisation methods to be applied" was noted.

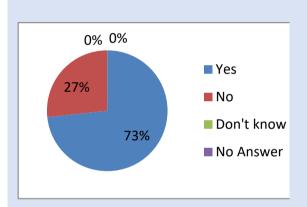
On the other hand, it seems that it is less of a priority to put the effort to "produce of spatial data relevant for MSP at European level" and to "elaborate specifications for data dissemination".

- The MSP Directive constitutes the common framework for countries to implement MSP in the Atlantic, nevertheless all the countries have interpreted and applied MSP in slightly different ways. Sustainable development is the common theme, but inequalities in environmental conditions, wealth, society and well-being dictate the specific formulation of policies, and the data are specific to the consideration of these MSP policies. It is therefore inevitable that there is no "one size fits all". It is therefore better to focus on understanding the rationale and content of existing methods and tools, to make the best use of what we have and to think about how best to share this data. Common standards and methods might work for some data, but they are unlikely to work for all.
- ☐ The effort must focus on transformation/conversion tools between standards and formats. Indeed, data standards and formats already exist, but the

transformation/conversion between these standards is not simple. Efforts could focus on streamlining these processes or producing tools to facilitate operations. Data production at EU level would be useful, but would depend on the ability to access and use data from multiple sources, so the first task would be to convert and harmonise them. Interoperability is important to enable the provision of data. It is all the more important for cross-border States.

- It is important that the data is available and interoperable some countries with close neighbours will need this information.
- Simplicity is the key when it comes to data, especially in the marine field; there is never enough data or money to gather all the right data. There is a need for simple indicators that can be used to develop sound policies, which can be updated as better data become available.

In addition to European cross-border projects on MSP (EC / DG Mare), do you participate in approaches or actions leading to the harmonisation of data with data of the neighbouring States?



73% of organisations are involved in steps or actions on data harmonisation with their neighbours.

This reveals their real need to improve the sharing and use of data, and attests to the involvement of organisations in this work.

Figure 6: Share of participating organizations

The objectives of these cooperation approaches are to:

- explore and develop common approaches to environmental management;
- build common databases;
- ensure data compatibility and interoperability;
- work on data harmonisation.

These approaches and actions take various forms such as the <u>H2020 programme</u>, the <u>INFOMAR programme</u> in Ireland, <u>INTERREG projects</u> such as the <u>VA COMPASS Project</u>, the <u>SeaDataNet</u>, <u>SeaDataCloud</u>, <u>EMODnet</u>, <u>MarSP</u> projects, the <u>EMSO observatory</u>, the <u>OSPAR Convention</u> and the <u>ICES</u> working groups, the <u>GIMeL</u> working group and the MRE and DSF/DSBM projects, the construction of a database on <u>Marine Protected Areas in the Atlantic arc</u>, etc.

#### 2.2.2 National geoportal dedicated to MSP

Do you plan to set up a national geoportal to display the plans?

COUNTRY	STATUS	GEOPORTAL NAME	URL
England	Implemented	Explore Marine Plans	https://explore-marine- plans.marineservices.org.uk/
France	Implemented	Geolittoral	https://cerema.maps.arcgis.co m/apps/MapSeries/index.html ?appid=354ccc3737fe4df78e d82e184713ee0c https://www.milieumarinfrance
	development Implemented	SIMM  Maritime Boundaries National	.fr/ https://limitesmaritimes.gouv.fr
	•	Portal	Ĺ
Ireland	Under development	1	1
Northern Ireland	Implemented	Northern Ireland Marine Mapviewer	https://appsd.daera- ni.gov.uk/marinemapviewer/
Portugal	Implemented	PSOEM	https://www.dgrm.mm.gov.pt/ web/guest/geoportal-mar- portugues
Scotland	Implemented	National Marine Plan	https://marinescotland.atkinsg eospatial.com/nmpi/?
Spain	Implemented	Infomar	http://infomar.cedex.es/
Wales	Under development	Wales Marine Planning Portal	https://gov.wales/marine- planning

Figure 7: Setting up a national geoportal for displaying maps

NB: For France, Ireland and Portugal, only the answers of the Competent Authorities are returned.

Indeed, for these countries, contradictions in the answers were obtained due to the fact that the contributors may not have been aware of the governance of data sharing being set up in their country, or may have a different vision of what a portal dedicated to MSP may encompass. Several tools can, for example, be set up to meet different levels of needs, as in France for example.

The trend is to have a portal with a cartographic component.

- 6/8 States already have a geoportal;
- 2/8 have a geoportal under development.

The common practice in setting up spatial data infrastructure for the MSP is to combine data storage and the use of web services.

Do you plan to set up a national geoportal to display the planning evidence that means raw data used to establish the MSP plans?

COUNTRY	STATUS	GEOPORTAL NAME	URL
England	Implemented	Explore Marine Plans	https://explore-marine- plans.marineservices.org.uk/
France	Implemented	Geolittoral	https://cerema.maps.arcgis.c om/apps/MapSeries/index.ht ml?appid=354ccc3737fe4df7 8ed82e184713ee0c
Ireland	Under development	1	https://marineplan.gov.ie
Northern Ireland	Implemented	Northern Ireland Marine Mapviewer	https://appsd.daera- ni.gov.uk/marinemapviewer/
Portugal	Implemented	PSOEM	https://www.dgrm.mm.gov.pt/ web/guest/geoportal-mar- portugues
Scotland	Implemented	National Marine Plan	https://marinescotland.atkinsg eospatial.com/nmpi/?
Spain	Under development	Infomar	http://infomar.cedex.es/
Wales	Implemented	Wales Marine Planning Portal	http://lle.gov.wales/apps/marineportal/#lat=52.5145&lon=-3.9111&z=8

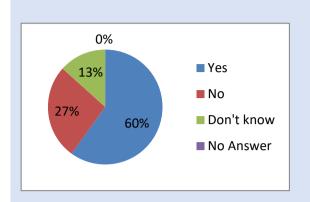
Figure 8: Implementation of a national geoportal for displaying raw data

NB: As with the previous question, for some countries several different answers were obtained. These are France, Ireland and Portugal. Only the answers of the Competent Authorities are presented in this table.

The trend is to set up a geoportal to display the data used to build the plans:

- 6/8 States have set up a national geoportal dedicated to MSP to display raw data;
- 2/8 States are developing it.

Are you considering services to share maps and related information in the form of spatialized datasets (downloading, web services...)?



**60%** of the respondents envisaged services to share maps and associated information in the form of spatialized datasets (downloading, web services, information centre...).

Figure 9: Services for sharing plans in the form of spatial data

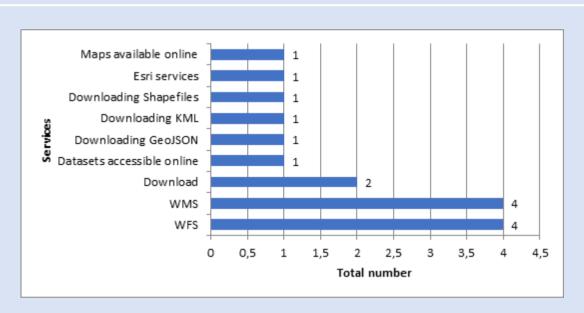


Figure 10: Types of services used

The most commonly cited services are web service access (WFS and WMS...) and download (GeoJSON, KML, Shapefile...)

Those responsible for data architectures can disseminate the data they own and with an open licence.

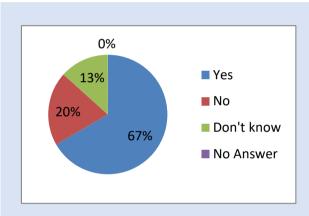
- Other services to share data are mentioned by contributors, namely the creation of online data catalogue, production on demand, creation of online map library and publication of monographs on a specific area.
- National data architectures or geoportals are administered by governments or delegated authorities. They have permission to display the data but not to disseminate

it, so that users can query and print outputs but not download source data (for which they would need permission from the data owners). As a result, maps can be shared but not the underlying data because the disseminator of the data is not always the producer. For example, in Wales, the national maritime planning portal displays the data and details where it comes from. However, much of it is owned by third parties and the government is allowed to display it but not to disseminate it.

#### Limits

This question reveals certain empirical limitations related in particular to data ownership.

If a MSP geoportal already exists at national level, are the MSP data producers clearly identifiable for portal users? If not, how can they be identified?



**67%** of respondents consider that data producers are clearly identifiable where a national geoportal for MSP already exists.

Figure 11: Identification of data producers

On the national geoportals in the Atlantic area, the information is generally found in the metadata.

It can also be found in the portal user guide, in annotations to the metadata sheets, in data-specific information sheets, or by displaying the logo on the geoportal viewer.

#### Do you plan to make MSP data openly available?

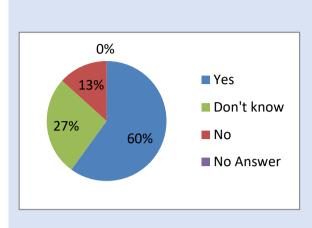


Figure 12: The data opening

Consistent with the answers obtained to question 10 on dissemination services, the trend is towards opening up MSP data where possible, i.e. when the data disseminators own the data or have the authorisations to open the data.

This opening of data, although desired, is sometimes slowed down or even blocked by licences and data distribution rights.

#### **Comments from participants**

- ☐ In the States that answered yes, some already have an Information System in which data is being made openly available and in others these developments are in progress.
- ☐ For others, whose objective is currently the definition of maritime plans, it is still too early to answer this question.

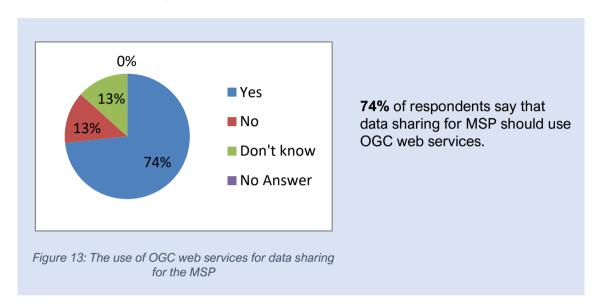
#### **Limits**

This question was not well understood by all contributors, among other things because it requires awareness of "openness of the data" which is usually determined by licensing agreements and ownership. Therefore, statistical analysis should be viewed with caution.

The web services are protocols dedicated to exchanging data between heterogeneous computer systems and applications.

As far as spatial data is concerned, in the European Union, the INSPIRE Directive sets OGC web services as the standard for sharing geographic data.

Should the data sharing for MSP have to use OGC web services?



- ☐ The OGC standards required by the INSPIRE Directive ensure the use of continuously updated data (updates being the responsibility of the producers via their OGC data dissemination services). The use of these standards is all the more desirable as the organisations involved in MSP are mostly public bodies. These data should be open to all.
- Providing the same type of service, such as OGC services, for example, is essential to have a comprehensive ecosystem approach and not to stop data collection at arbitrary boundaries. Agreeing on the same format would provide an accurate picture of the state of the seas (environmental and activities and uses).
- The principles of INSPIRE are sound, but the basic data (e.g. habitat classification) may vary from country to country depending on needs and objectives. Similarly, operating platforms may also vary (and technology is evolving rapidly), so it is important that these protocols are flexible and modifiable.
- The use of the same type of service can be an obstacle to innovation and could reduce the amount of web services developed.
- ☐ The use of ESRI services is also recommended.

Would you say that the INSPIRE Directive meets all the requirements for sharing the spatial data of MSP?

**53%** of the contributors consider that the INSPIRE Directive meets all the prerequisites for the sharing of spatial data in MSP, in particular for visualisation requirements.

**27%** of respondents are not familiar enough with the INSPIRE Directive to answer this question.

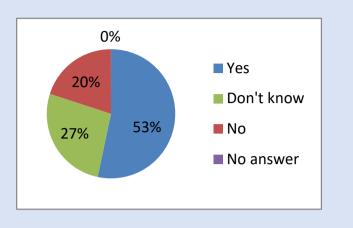
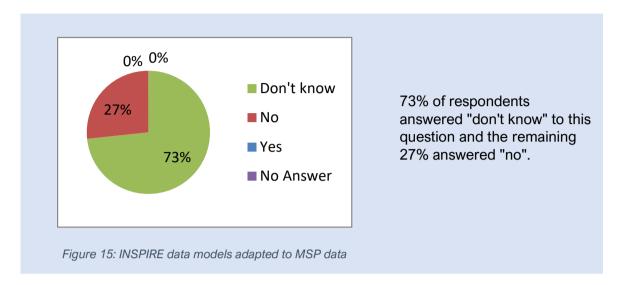


Figure 14: The INSPIRE Directive in response to data sharing for the MSP

- Its use in some countries is already well mastered, as in Ireland, and to date it does not present any specific deficiency that would make it unsuitable for an application in relation to MSP data.
- Several contributors state that it meets the requirements but they point out that its implementation is very difficult. For example, beyond the visualisation requirements, the additional specifications are very complex and difficult to implement.
- ☐ The complexity of this Directive leads some producers not to apply it to all their data but to identify a smaller subset to meet the INSPIRE Directive, which limits the amount of data shared.
- Some contributors suggest that the INSPIRE Directive may require more than adaptation for certain datasets, for example social and economic data.
- ☐ Furthermore, the specific keywords for marine spatial planning are not well defined. A dictionary specific to MSP should be defined e.g. within the DG-MARE expert group on Maritime Spatial Planning.

Do you think that the data models proposed by the INSPIRE Directive are suitable for MSP data?

For example, is the INSPIRE<sup>2</sup> data model for the "land use" theme suitable for MSP or should it be adapted and / or extended?



#### **Comments from participants**

- Some contributors answered "no" because they consider that the INSPIRE data models are too complex for all themes and that national transposition is not necessarily adapted to maritime themes and layers.
- Work has already been carried out to extend the data models to sea and coastal data. However, the marine environment is very different from land use. Thus a theme specific to maritime uses could be beneficial to ensure that data models are appropriate for data on MSP activities and uses.

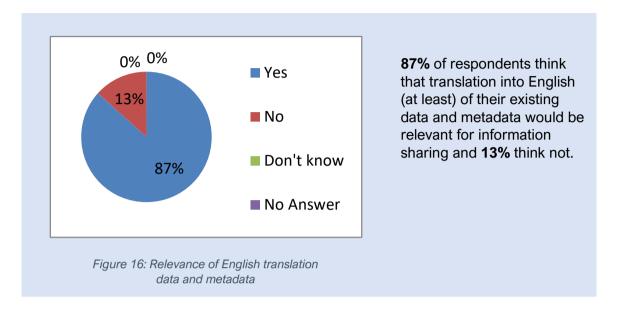
#### Limits

Not all contributors were able to answer this very specific question because they are not experts in data models, in particular the Land Use theme data model.

<sup>&</sup>lt;sup>2</sup> (Abramic A. and al. 2019. Data specification for Maritime Spatial Planning INSPIRE data model. Deliverable - D.5.1., under WP5 of MarSP: Macaronesian Maritime Spatial Planning project (GA n°EASME/EMFF/2016/1.2.1.6/03SI2.763106).

Data sharing improves cross-border cooperation. This sharing is fostered when the data is produced in several languages, in particular in English.

Do you think that a translation of your existing data and metadata into English (at least) would be relevant for information sharing, if this is not already the case?



- As acquisition and treatment protocols most often differ between countries, it is important that they are well understood to facilitate a cross-border approach. Translation is essential for good understanding of the information and to facilitate data sharing. When talking about data translation, one must obviously take into account the translation of the data, its attributes and metadata. One proposal would be to establish a central metadata catalogue in one language with translation tools.
- Some contributors point out the difficulty of translating metadata into English. In their view, it would be more feasible to translate the summary of the shared spatial data.
- Aware of this need, States are already making efforts to start translating information, e.g. France has produced summaries in English of the Strategic Sea Basin Documents and the data disseminated by web services is in English.
- ☐ The English-speaking countries are less concerned by this issue because the production of their data is already done in English. However, translation is still an issue. The Welsh Government proposes a Welsh/English bilingual system. While in Ireland there is a demand for a translation of data into Irish, particularly for legislative purposes.

#### 2.2.3 European geoportal

In addition to the national plans, what planning information from neighbouring states should be displayed by this geoportal?

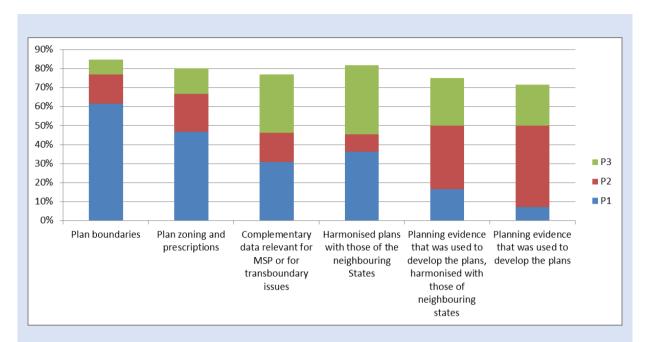


Figure 17: Number of information types by priority level

The information that should be displayed on a European geoportal for the MSP is first and foremost plan boundaries, then plan zoning and prescriptions.

Responses are mixed as regards "complementary data relevant for MSP or for transboundary issues" and "harmonised plans with those of neighbouring States". Respectively, **46%** and **45%** of respondents ranked them as priority 1 or 2.

It also appears that the raw data (evidence-based data) used to develop the plans, whether harmonised or not, are not prioritised.

- According to the comments, some contributors consider the harmonisation of plans as an obligation for the filing of plans and therefore do not take it into account in the response.
- An additional remark emphasises the need to share plan information in the form of geographical data rather than in the form of PDF documents, which are generally quite long.
- Respondents indicate that the determination of relevant functionalities depends on the audience targeted by such a geoportal (scientists, general public, decision-makers, administrations, developers).

For the Member States which already have a MSP national geoportal, what were the challenges faced? What lessons could be useful to transfer to define the specifications for a European geoportal?

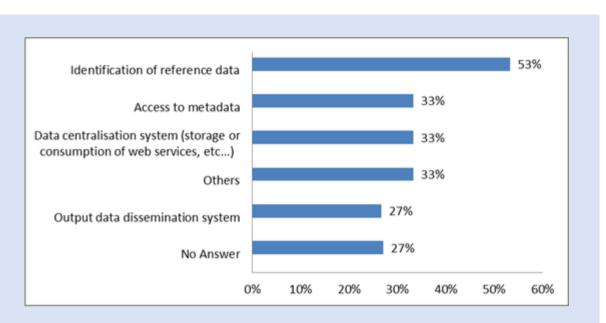


Figure 18: Challenges for the use of a national geoportal for the MSP

The major challenge is the identification of reference data.

Access to metadata and data centralisation systems are also identified as important issues.

- The objectives and users of such a tool must be clearly identified from the outset. The construction must be done with the users themselves so that it meets their needs. A portal needs to be developed that does not require training, which requires planning, reflection and iteration. The guides should not deal with the use of the portal itself, as no one has the time to read them.
- Spatial coverage and resolution are also challenges. When analysing spatial data, it is not uncommon to be confronted with the following dilemma: partial high-resolution data for local areas or low-resolution data with national coverage.
- Data availability is a constant problem.
- Contributors highlight as a challenge the capacity of the Geographic Information System (GIS) to manage and administer a large volume of data. A service containing a large number of data sets could be so large that it would overload most compatible tools/software. When designing such a tool, it is necessary to provide technical solutions capable of handling the management and dissemination of large datasets. This GIS must also allow and facilitate the administration and updating of data.

Also noteworthy is the aggregation of information at the national and even international level. The use of aggregated national data does not make it possible to go back to the original local data.

What functionalities or services should be provided by a European geoportal dedicated to MSP?

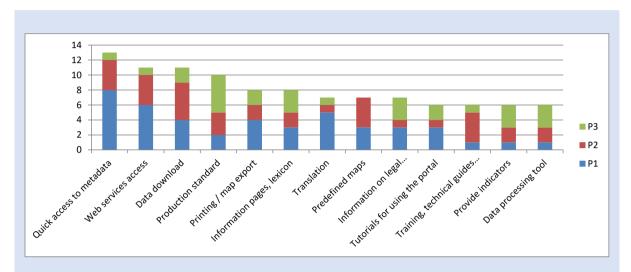


Figure 19: Priority functionalities of a European geoportal dedicated to the MSP

The graph above shows that there is a common need for the functionalities that a European geoportal for the MSP should have, such as quick access to metadata, access to web services and translation.

The downloading of data and the production of standards are not always at the top of the list of priorities, but are nevertheless regularly designated.

The contributors all listed the access to metadata. While only 10 of them listed the tutorials for using the portal, the training, technical guides (dissemination, data import...), and the provision of indicators.

The services or functionalities that were rarely designated as priorities by the contributors do not correspond to needs shared by all, but may correspond to more specific needs.

#### **Comments from participants**

In addition to this list, a proposal was made to provide planning policies and a tool for selecting an area to indicate to promoters/decision-makers which marine planning policies apply in certain areas, knowledge which is particularly important in crossborder areas. What mechanisms would you recommend for collaborating in cross-border areas?

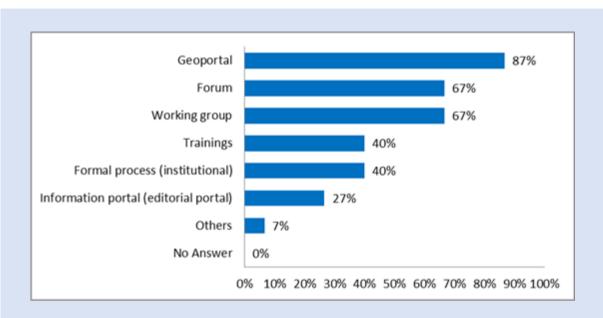


Figure 20: Mechanisms for collaboration in cross-border areas

With **87%** of the contributions, the geoportal represents a major tool for collaboration in cross-border areas. It is followed by forums and working groups.

In contrast, editorial information portals, formal processes and training are less popular as relevant mechanisms for cross-border collaboration.

#### **Comments from participants**

Ontributors completed this list by specifying that technical projects such as SIMAtlantic or Interreg are also good tools.

#### 2.2.4 The plans

In what formats will the national plans be available?

									Web	Web	
Country	PDF	WORD	ODT	PNG	JPEG	GEOTIFF	SHP	KML	services	pages	Others
England	x								x		X (hard copies are availabl e on request )
France	X	X	Х	Х	Χ	Χ	Х	Χ	Χ	X	,
Ireland	X								Χ	X	
Northern Ireland	X								x		
Portugal	X								Χ	X	
Scotland	x					x	x		x	x	X (online Geospa tial portal)
Spain	Х						Х			Х	1, 2)
Wales	X				X				Χ	X	

Figure 21: Formats of spatialized national maps / plans

It appears that all national MSP plans are or will be available in PDF format.

A large majority of the States covered by this survey also envisage the dissemination of the plans in web services and web pages.

The production of plans in GEOTIFF or SHP geographical formats only concerns France, Spain and Scotland. The GEOTIFF format is more commonly used for plans and maps, while the SHP format is used for raw data.

The opening of data in web services seems to be well integrated and desired by the States. On the other hand, making raw data available is less systematic.

#### **Comments from participants**

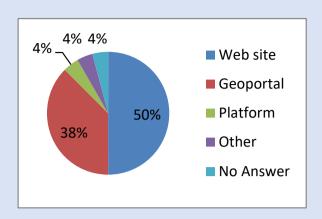
☐ It is noted that plans are not limited to spatialized data from planning: There is no clear link between spatialized data and the outcome of planning. Moreover, maritime spatial planning is carried out in a complementary way between map plans and more local planning.

	English	Country's language	Neighbouring countries' languages	Regional languages	Other	No answer
England	X					
France	X	X				
Ireland	X	X				
Northern Ireland	x					
Portugal	X	X				
Scotland	X					
Spain		X				
Wales	X	X				

Figure 22: Language(s) of dissemination of plans

States will produce the plans in the language of the country and most of them will also publish them in English where appropriate.

None of them envisage production in the languages of neighbouring States or in regional languages.



Information on national plans is already available for a number of States, mainly on websites and also on geoportals.

**50%** made information available on a website and **38%** on a geoportal.

Figure 23: Information available on national plans

The organisation of information in each States is very different.

Some have set up architectures consisting of both a website and a geoportal. Others have developed a geoportal and the information is disseminated on the national site by the competent authority.

Sometimes the information is disseminated on several websites according to the division of the decentralised administrations in charge of implementing the national plans. Some States have developed only the geoportal or, conversely, only the website.

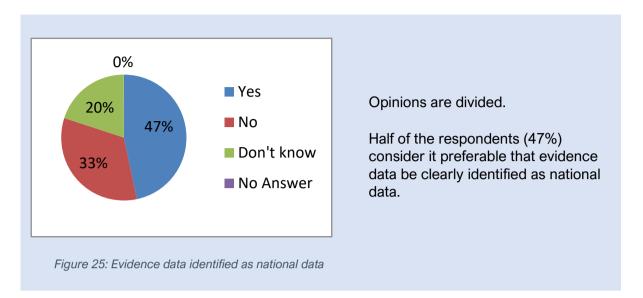
The following table summarises the different information for each State:

COUNTRY	WEB SITE	GEOPORTAL	PLATFORM	OTHER
England	https://www.gov.uk/government/collections/mari	https://explore-marine-	/	
<b>3</b> · ·	ne-planning-in-england	plans.marineservices.org.uk/		
France	The finalised parts of the national plans (sea basin strategic documents) are accessible at the URL: http://www.geolittoral.developpement-durable.gouv.fr/documents-strategiques-defacade-metropole-r560.html  Sites of the 4 DIRMs -http://www.dirm.memn.developpement-durable.gouv.fr/document-strategique-defacade-maritime-dsf-r268.html -http://www.dirm.nord-atlantique-manche-ouest.developpement-durable.gouv.fr/document-strategique-de-facade-dsf-r188.html -http://www.dirm.sud-atlantique.developpement-durable.gouv.fr/le-document-strategique-de-lafacade-dsf-sud-r484.html -http://www.dirm.mediterranee.developpement-durable.gouv.fr/le-document-strategique-de-facade-mediterranee-r335.html	The setting up of a geoportal dedicated to MSP is currently not defined.  Several MSDIs, portals and geoportals exist in France. The governance of marine space data is currently being defined, notably through the implementation of the Marine Environment Information System (SIMM) which includes a MSDI, based on Sextant. The SIMM will define an Information System for the Maritime Spatial Planning Framework Directive.  There is also a geoportal that was used during the MSP consultation phases, Geolittoral.  The "vocation map" areas of the planning can be consulted on the geolittoral portal: https://cerema.maps.arcgis.com/apps/webappviewer/index.html?i		A number of source data that have been analysed and used or published to draw up the plans are available in the MSDIs:  Portail national des limites maritimes (Shom): https://limitesmaritimes.gouv.fr/ Geolittoral (CEREMA): http://www.geolittoral.developpeme nt-durable.gouv.fr/ Sextant (Ifremer): https://sextant.ifremer.fr/  Geolittoral's web service: http://geolittoral.din.developpement -durable.gouv.fr/wxs
		d=3a1cc8e6d52c4c4cb85fc8fe4 04f5f06		
Northern Ireland	https://www.daera-ni.gov.uk/articles/marine-plan- northern-ireland	https://appsd.daera- ni.gov.uk/marinemapviewer/	1	
Ireland	-marineplan.gov.ie -https://www.housing.gov.ie/planning/marine- planning/public-consultation-draft-national- marine-planning-framework	1	1	

Portugal	https://www.psoem.pt/	https://www.psoem.pt/geoportal	/	
		psoem/		
Scotland	https://www.gov.scot/publications/scotlands-	http://maps.marine.gov.scot	http://marine.	
	national-marine-plan/		gov.scot	
Spain	Web page on the MITECO website:	http://infomar.cedex.es/	/	
•	https://www.miteco.gob.es/es/costas/temas/prot			
	eccion-medio-marino/ordenacion-del-espacio-			
	maritimo/default.aspx			
Wales	http://lle.gov.wales/apps/marineportal/?lang=cy#l	http://lle.gov.wales/apps/marinep	1	
	at=52.5129&lon=-3.9111&z=8&layers=231,390	ortal/?lang=en#lat=52.5129&lon		
		=-3.9111&z=8&layers=231,390		

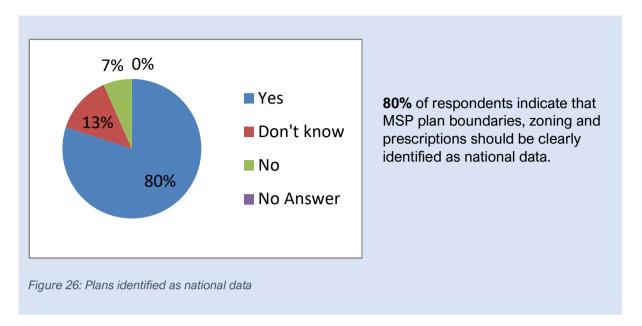
Figure 24: Availability of national plans

With regard to the INSPIRE Directive, do you think that the planning evidence must be clearly identified as national data?



	In view of the diversity of the themes and data covered by MSP, the data used to draw up the plans cannot be treated as a whole and qualified as national (including confidential data of which the national authority is aware and takes account, but does not divulge them). The answer is therefore yes, but not for everything.
<u></u>	Some of the data may only be relevant for a specific sector or region and should not all be considered as national data. In addition, only those that have been validated and qualified can be considered national.
$\supseteq$	The national data cover much broader themes not included in the INSPIRE data. National INSPIRE data must be clearly identified.
$\supseteq$	In all cases, the data used for planning must have clear metadata and their purpose must be clearly defined.
$\supseteq$	One proposal that has been put forward is to build up international datasets to inform national planning.

With regard to the INSPIRE Directive, do you think that the plan boundaries, zoning and prescriptions must be clearly identified as national data?



- ☐ The plans are derived from national policies, therefore they are de facto considered as national data.
- The MSP spatial data reflect the policies of the respective plans and must therefore be considered and interpreted in the context of these policies. There must therefore be a direct link/association with these policies.

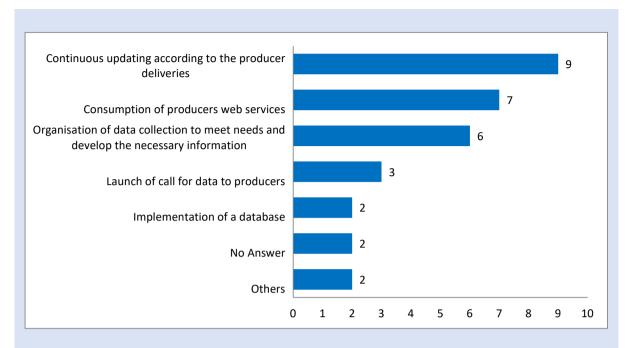


Figure 27: Methods of updating "evidence data".

The methods of updating the data are quite varied. A dominant one is "continuous updating according to producers' deliveries".

The "consumption of producers' web services" and "organising data collection to meet needs and develop the necessary information" will also be widely used.

"Launching a call for data to producers" and "implementation of a database" are not methods that are much considered by respondents.

The information for each State is presented in the following table:

	Continuous updating according to the producer deliveries	Organisation of data collection to meet needs and develop the necessary information	Consum- ption of producers' web services	Launch of call for data to producers	Implementation of a database	Other
England	X	Х				
France	X	X	X	X	X	X
Ireland	X	X	X	X	X	
Northern						
Ireland	X		X			
Portugal	X		X			
Scotland		X	X			
Spain	X		X			
Wales	X	X				

Figure 28: Methods of updating evidence data envisaged by State

Q	Some contributors argue that a combination of all these means will be needed to keep the data up to date.
Q	For France, this stage will be carried out within the framework of the monitoring systems of the Sea Basin Strategic Documents (DSF) (part 4) and by the implementation of the Marine Environment Information System (SIMM), fed in particular by the monitoring programmes of the DSF (environment and activities).
Q	In Portugal, the production of OGC web services is essential to share data and maintain continuous updating.
Q	In Scotland, the legislative framework requires an assessment before plans are updated. This process involves many organisations and reviews regarding the deletion or creation of new data. These processes will support any updating of the plan.
Q	In Ireland, the updating of the plan will be the responsibility of the Marine Institute as the provider of technical and scientific support to the DHPLG (now DHLGH), the Competent Authority. According to the Marine Institute, a combination of all proposals will be required.
Q	In England, much of the data used for maritime planning is not geospatial, for example, the production of methodologies or frameworks for decision-making on the seascape or cumulative effects. The data underpinning English marine plans are frequently updated, and marine plans have a 3-year report/review cycle. The data contained in Explore Marine Plans are updated according to data production cycles and customised evidence commissions.
Q	Northern Ireland, on the other hand, uses WMS-type web services when available and, failing that, keeps a copy of the data locally.

## **Appendix 1: Survey – Data use and sharing for maritime spatial planning in the Atlantic area**





## WP3 - THEME 3: DATA USE AND SHARING

## **SURVEY**

Also available online at <a href="https://ec.europa.eu/eusurvey/runner/SIMAtlantic">https://ec.europa.eu/eusurvey/runner/SIMAtlantic</a> MSPDataSurvey

Data use and sharing for Maritime Spatial Planning in the Atlantic area

	QUESTION	ANSWER
I.	PROFILE	
1.	Your contact details:	Last name*:  First name*:
		Mail*:
2.	Which country do you represent?*	Check the corresponding box:    France
3.	What organisation do you belong to?*	

4.	What is your role in the MSP Directive implementation?*	Check the corresponding box:
		D. Degrada and the of the Otate
		□ Representative of the State
		□ Local Government Representative
		<ul><li>Representative of MSP authorities</li></ul>
		☐ GIS manager / Data expert
		☐ Theme expert
		□ Data manager
		□ Researcher
		□ Stakeholder
		□ Sea professional
		□ Others:

II.	SPECIFICITIES RELATED TO CROSS-BORDER COOF	PERAT	ION
The	EU Directive on MSP implementation implies strengthening co-	operatio	n between states on cross-border issues, to limit conflicts and
deve	lop synergies linked to activities and uses of the maritime space.		
5.	What are the cross-border issues for which the data sharing	Prioritis	se:
	seems to be a priority in the Atlantic region?	«1» be	ing the most important information
			Maritime boundaries
			Terrestrial boundaries
			Physical characteristics
			Ecosystems fauna flora
			Habitat types
			Pressure and impacts
			Spatial policies
			Socio-economic data
			Aquaculture
			Fishing
			Marine renewable energies
			Installations and infrastructures
			Marine transport routes – trafic flows
			Ports
			Military areas
			Nature and species conservation sites and protected areas
			Raw material extraction
			Scientific research
			Submarine cable and pipeline routes
			Tourism et recreation
			Underwater cultural heritage
			Coastal defence

		□ Others:
		Explain:
6.	Considering the establishment of technical European working groups driven par EC/DG Mare, to cooperate in data sharing for MSP, what effort would be a priority?	Prioritize: «1» being the most important information
		<ul> <li>□ Produce spatial data relevant for MSP at European level</li> <li>□ Ensure that data for the MSP are identified and updated</li> <li>□ Elaborate specifications for data production</li> <li>□ Elaborate harmonisation methods to apply</li> <li>□ Elaborate specifications for data dissemination</li> <li>□ Establish common guides, methodologies or tools</li> <li>□ Exchange and communicate on existing methodologies and tools</li> <li>□ Others:</li> </ul>
7.	In addition to European cross-border projects on MSP (EC / DG Mare), do you participate in approaches or actions leading to the harmonisation of data with data of the neighbouring States?	☐ Yes ☐ No ☐ Don't know
		Explain:
		l

III.	NATIONAL GEOPORTAL DEDICATED TO MSP	
8.	Do you plan to set up a national geoportal to display the plans?	☐ Implemented ☐ In design ☐ No ☐ Don't know
		Explain:
9.	8. Do you plan to set up a national geoportal to display <b>the planning evidence</b> that means raw data used to establish the MSP plans?	☐ Implemented☐ In design☐ No☐ Don't know
		Explain:
10.	Are you considering services to share maps and related information in the form of spatialised datasets (downloading, web services,)?	☐ Yes☐ No☐ Don't know

		If yes, which ones:
11.	If a MSP geoportal already exists at national level, are the MSP data producers clearly identifiable for portal users?	□ Yes □ No
		☐ Don't know
		Explain:
12.	If not, how can the data producers be identified?	Explain:
13.	Do you plan to open MSP data?	□ Yes
		<ul><li>□ No</li><li>□ Don't know</li></ul>

		Explain:
14.	The web services are protocols dedicated to exchanging data	
	between heterogeneous computer systems and applications.	
	As far as spatial data is concerned, in the European Union, the	☐ Yes
	INSPIRE Directive sets OGC web services as the standard for	□ No
	sharing geographic data.	☐ Don't know
	Should the data sharing for MSP have to use OGC web	
	services?	Explain:
45	W	
15.	Would you say that the INSPIRE Directive meets all the	
	requirements for sharing the spatial data of MSP?	☐ Yes
		□ No
		☐ Don't know
		Fundain
		Explain:
	1	

16.	Do you think that the data models proposed by the INSPIRE Directive are suitable for MSP data?  For example, is the INSPIRE data model for the "land use" theme suitable for MSP or should it be adapted and / or extended?	☐ Yes☐ No☐ Don't know
	<sup>(</sup> Abramic A. et al. 2019. Data specification for Maritime Spatial Planning INSPIRE data model. Deliverable -D.5.1., under WP5 of MarSP: Macaronesian Maritime Spatial Planning project (GA n°EASME/EMFF/2016/1.2.1.6/03SI2.763106).	Explain:
17.	Data sharing improves the cross-border cooperation. This sharing is fostered when the data is produced in several languages, in particular in English.  Do you think that a translation of your existing data and metadata into English (at least) would be relevant for the information sharing, if this is not already the case?	☐ Yes☐ No☐ Don't know  Explain:

IV.	EUROPEAN GEOPORTAL				
be us	The actors in European cross-border projects on MSP have highlighted that a European geoportal centralizing spatial data on the MSP would be useful for MSP actors. In particular, the national plans would be shared there. Such a portal would be aimed at administrations in charge of MSP and their operators, scientists, the general public, etc				
18.	In addition to the national plans, what planning information from	Prioritize:			
10.	neighbouring states should be displayed by this geoportal?	«1» being the most important information			
		<ul> <li>□ Plans boundaries</li> <li>□ Plan zoning and prescriptions</li> <li>□ Complementary data relevant for MSP or for transboundary issues</li> <li>□ Planning evidence that was used to develop the plans</li> <li>□ Planning evidence that was used to develop the plans, harmonised with those of the neighbouring States</li> <li>□ Harmonised plans with those of the neighbouring States</li> <li>□ Others:</li> </ul> Explain:			
		Ελμιαιι.			
40	For the Marsham Oleter which already have a MOD C				
19.	For the Members States which already have a MSP national geoportal, what were the challenges faced? What lessons could be useful to transfer to define the specifications for a European geoportal?	For example:			
	• •				

		□ Identification of reference data □ Data centralisation system (storage or consumption of web services, etc) □ Output data dissemination system □ Access to metadata □ Others:
20.	What functionalities or services should be provided by a European geoportal dedicated to MSP?	Prioritize:  «1» being the most important information  □ Translation □ Predefined maps □ Tutorials for using the portal □ Training, technical guides (dissemination, data import) □ Information pages, lexicon □ Production standard □ Printing / map export □ Quick access to metadata □ Metadata download □ Web services access □ Provide indicators □ Data processing tool □ Information on legal references □ Others:

21.	What mechanisms would you recommend for collaborating in	Check the corresponding box:	
	cross-border areas?		
		<ul> <li>Information portal (editorial portal)</li> <li>Geoportal</li> <li>Working group</li> <li>Formal process (institutional)</li> <li>Trainings</li> <li>Forum</li> <li>Others:</li> </ul>	•
V.	PLANS		
00			
22.	In what formats will the national plans be available?	Check the corresponding box:	
		□ PDF	
		□ WORD □ ODT	
		□ ODT □ PNG	
		□ JPEG	
		☐ GEOTIFF	
		□ SHP	
		□ KML	
		<ul><li>□ Web services</li><li>□ Web pages</li></ul>	

		☐ Others:	
23.	In what languages will the national plans be available?	Check the corresponding box:  Country's language English Neighbouring countries' languages Regional languages Other:	
24.	Is information on the national plans already available?	Check the corresponding box:  Web site URL: Geoportal URL: Platform URL: Other:	
25.	Can you provide Shom with a national point of contact for more information on the documents already available, as part		

	of its work on testing the sharing of the national plans on the data portal (https://simatlantic.mspdata.eu)?	Organisation:     Name:     Function:     Mail:
26.	With regard to the INSPIRE Directive, do you think that the planning evidence must be clearly identified as national data?	☐ Yes☐ No☐ Don't know  Explain:
27.	With regard to the INSPIRE Directive, do you think that the plan boundaries, zoning and prescriptions must be clearly identified as national data?	☐ Yes☐ No☐ Don't know

		Explain:
28.	How do you plan to update the planning evidence when the plans are revised?	For example:  ☐ Implementation of a database ☐ Consumption of producers web services ☐ Launch of call for data to producers ☐ Organisation of data collection to meet needs and develop the necessary information ☐ Continuous updating according to the producer deliveries ☐ Others:
		Finition
		Explain:
29.	Do you have any other comments, questions or concerns on	
	the themes addressed in this survey?	