



## Supporting Implementation of **M**aritime Spatial Planning in the **C**eltic Seas



### Component 1: Supporting Implementation of MSP

#### Component 1.2.2: Data and Information requirements for MSP Deliverable 4: Analysis of Data Needs and Existing Gaps – Specifically Relating to Transboundary Working



European Commission  
Directorate-General for Maritime Affairs and Fisheries

**Grant Agreement No. EASME/EMFF/2014/1.2.1.5/3/SI2.719473 MSP Lot 3**

## SIMCelt Partners



## Other Members of the Task Group on Data



**Deliverable Title:** Analysis of Data Needs and Existing Gaps – Specifically Relating to Transboundary Working

**Deliverable Lead Partner:** Shom

**Deliverable i.d.:** SIMCelt-C1-C1.2.2-D4



**Grant Call:** Action on Maritime Spatial Planning in the Northern European Atlantic

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**Recommended Citation:** Kato, Y., Carval, D..2017. SIMCelt Analysis of Data Needs and Existing Gaps – Specifically Relating to Transboundary Working. EU Project Grant No.: EASME/EMFF/2014/1.2.1.5/3/SI2.719473 MSP Lot 3. Supporting Implementation of Maritime Spatial Planning in the Celtic Seas (SIMCelt). Shom. 61 pp.

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## Version History

Version	Description	Author	Date
1	Analysis of data needs and gaps report – initial draft	Yuji Kato Dominique Carval	23/12/2016
2	Analysis of data needs and gaps report – Final version	Yuji Kato Dominique Carval	07/04/2017

## Table of contents

Table of contents.....	3
List of Figures.....	5
List of Tables.....	5
General Introduction.....	7
About SIMCelt .....	7
A European framework to support access to and use of data for MSP .....	7
Part 1. Guidance document.....	9
Introduction.....	9
1. General requirements .....	10
2. Selection criteria.....	10
3. Themes / data.....	10
Maritime delimitations (sovereignty, jurisdiction).....	10
Other proposed themes .....	10
4. Issues to progress on.....	11
Data quality .....	11
SIMCelt portal Data licencing .....	11
Requests to SIMCelt Steering Committee .....	11
5. Maritime Spatial Data Infrastructure supporting results of SIMCelt C1.2.2 .....	11
6. Resources .....	11
Vocabulary.....	12
Best practices .....	12
Quality of data .....	12
Coastline.....	12
Land and sea.....	12
Bathymetry.....	12
Part 2. Analysis .....	13
Introduction.....	13
How to read this document.....	14
Administrative borders.....	16
Terrestrial boundaries .....	16
Maritime boundaries.....	18
Physical, chemical & biological information.....	20

Physical characteristics.....	20
Types of habitats .....	22
Biological characteristics .....	24
Pressures & impacts .....	26
Activities / uses.....	28
Aquaculture .....	28
Fishing.....	30
Marine Renewable Energies.....	32
Maritime transport routes and traffic flows .....	34
Ports .....	36
Military .....	38
Nature and species conservation sites and protected areas .....	40
Raw material extraction areas .....	42
Submarine cables and pipeline routes .....	44
Tourism & recreation .....	46
Underwater cultural heritage.....	48
Coastal defence .....	50
Spatial policy.....	52
Conclusion .....	54
Some general issues .....	54
Other data sources to explore.....	54
Part 3. Action plan .....	56
Overview.....	56
Inspire-compliant metadata .....	57
Situation 1: data provider already has a CSW catalogue .....	57
Situation 2: data provider doesn't have a CSW catalogue .....	57
Portrayal harmonisation.....	58
Annex 1: List of sources.....	59
Annex 2: Inventory of selected datasets.....	61

## List of Figures

Figure 1 - Terrestrial boundaries .....	16
Figure 2 - Maritime delimitations.....	18
Figure 3 – Physical parameters, example of Bathymetry.....	20
Figure 4 - Marine Habitats.....	22
Figure 5 - Biological characteristics .....	24
Figure 6 – Pressures & impacts .....	26
Figure 7 - Aquaculture.....	28
Figure 8 - Fishing .....	30
Figure 9 - Marine renewable energies .....	32
Figure 10 - Maritime transportation .....	34
Figure 11 - Ports .....	36
Figure 12 - Defence .....	38
Figure 13 - Nature and species conservation sites and protected areas .....	40
Figure 14 - Raw material extraction areas .....	42
Figure 15 - Submarine cables & pipelines .....	44
Figure 16 - Tourism & recreation .....	46
Figure 17 - Underwater cultural heritage.....	48
Figure 18 - Coastal defence .....	50
Figure 19 – Spatial Policy.....	52
Figure 20 - Inspire-compliant metadata publication workflow with CSW catalogue .....	57
Figure 21 - Inspire-compliant metadata publication workflow without CSW catalogue .....	57
Figure 22 - Portrayal harmonisation workflow .....	58

## List of Tables

Table 1 - Terrestrial boundaries: selection of datasets.....	17
Table 2 - Maritime boundaries: selection of datasets.....	19
Table 3 - Physical parameters: selection of datasets .....	21
Table 4 - Types of habitats: selection of datasets .....	23
Table 5 - Biological characteristics: selection of datasets .....	25
Table 6 - Pressures and impacts: selection of datasets.....	27
Table 7 - Aquaculture: selection of datasets.....	29
Table 8 - Fishing: selection of datasets .....	31
Table 9 - Marine Renewable Energies: selection of datasets.....	33
Table 10 - Maritime transport: selection of datasets.....	35
Table 11 - Ports: selection of datasets .....	37
Table 12- Defence: selection of datasets .....	39
Table 13 - Marine Protected Areas: selection of datasets .....	41
Table 14 - Raw material extraction areas: selection of datasets .....	43
Table 15- Submarine cables and pipelines: selection of datasets.....	45
Table 16 - Tourism and recreation: selection of datasets.....	47
Table 17 - Underwater cultural heritage: selection of datasets.....	49
Table 18 - Coastal defence: selection of datasets.....	51
Table 19 - Marine Spatial Policy: selection of datasets.....	53
Table 20 - Actions points.....	56

## Acronyms

**AAMP:** Agence des Aires Marines Protégées

**AFB:** Agence Française de la Biodiversité (previously AAMP)

**CEFAS:** Centre for Environment, Fisheries and Aquaculture Science

**CSW:** Catalogue Service for the Web

**DAERA:** Department of Agriculture, Environment and Rural Affairs

**DAFM:** Department of Agriculture, Food and the Marine

**DCENR:** Department of Communications, Energy and Natural Resources

**DDTM29:** Direction Départementale des Territoires et de la Mer du Finistère

**DDTM35:** Direction Départementale des Territoires et de la Mer d'Ille-et-Vilaine

**DGEC:** Direction Générale de l'Energie et du Climat

**DREAL:** Direction Régionale de l'Environnement, de l'Aménagement et du Logement

**EEZ:** Exclusive Economic Zone

**ENC:** Electronic Navigational Chart

**EPCI:** Etablissement Public pour la Coopération Intercommunale

**GIS:** Geographic Information System

**GML:** Geography Markup Language

**IGN:** Institut National de l'Information Géographique et Forestière

**ISO:** International Organisation for Standardisation

**MaREI:** Marine and Renewable Energy Ireland

**MCA:** Maritime and Coastguard Agency

**MEEM:** Ministère de l'Environnement, de l'Energie et de la Mer

**MIG:** Mission de l'Information Géographique

**MMO:** Marine Management Organisation

**MS:** Member State

**MSDI:** Marine Spatial Data Infrastructure

**MSP:** Maritime Spatial Planning

**NMPi:** National Marine Plan interactive

**OGC:** Open geospatial Consortium

**ONS:** Office for National Statistics

**OSNI:** Ordnance Survey of Northern Ireland

**OSPAR:** Oslo-Paris Convention (for protection and conservation of North-East Atlantic)

**RCAHMS:** Royal Commission on the Ancient and Historical Monuments of Scotland

**SDI:** Spatial Data Infrastructure

**Shom:** French public establishment in charge of description and forecasting of ocean, from littoral to offshore

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

**SLD:** Style Layer Descriptor

**SOAP:** Simple Object Access Protocol

**UKHO:** United Kingdom Hydrographic Office

**WCS:** Web Coverage Service

**WFS:** Web Feature Service

**WMS:** Web Map Service

**WMTS:** Web Map Tile Service

# General Introduction

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## About SIMCelt

SIMCelt - Supporting Implementation of Maritime Spatial Planning in the Celtic Seas is a two-year €1.8 million project co-financed by DG Mare and focussed on promoting the development of transnational cooperation to support the implementation of EU Directive 2014/89/EU in the Celtic Seas. Led by University College Cork, the project consortium comprises both planners and researchers from seven partner institutes representing a mix of governmental authorities and academic institutes from Ireland, France and the United Kingdom of Great Britain and Northern Ireland. This consortium is particularly interested in developing meaningful cooperation between neighbouring Member States to support implementation of spatially coherent plans across transboundary zones of the Celtic Seas, building on previous work and leveraging new opportunities to identify and share best practice on technical, scientific and social aspects of transboundary MSP.

## A European framework to support access to and use of data for MSP

High quality maritime spatial data and information is a key element for implementing MSP. Data and information sharing is allowed by Marine Spatial Data Infrastructures which therefore support transboundary cooperation as well as national efforts linked to MSP. The associated tools are also critical to enable access to data and information as a basis for dialogue with the public and all interested parties, as well as providing support for decision making.

The Inspire Directive was published in 2007 by the European Commission in order to create a European Spatial Data Infrastructure to ensure interoperability between databases and to facilitate geographic data dissemination, availability and use. On the technical side, the directive relies on OGC standards for metadata elaboration (ISO19115 – ISO19139) as well as diffusion protocols (CSW, WMS, WFS, WCS), which allow to use and display data and metadata directly from the source. This ensures that the most up-to-date datasets are being used, following a core principle of Information Management: *“Collect once, use many”*.

The Inspire Directive implementation includes a timeline. For example, maritime delimitations, like the other data categories of the Annex I of the Directive must be Inspire-compliant before 23<sup>rd</sup> November,

2017<sup>1</sup>. In that context, an increasing amount of data has been made available during the last few years, and the dynamic is still on-going.

MSP is also taking advantage of this evolving situation, as a considerable amount of datasets has been published, either with European projects (e.g. EMODnet) or national MSDI (e.g. Marine Scotland NMPI).

In the Celtic Seas, the technical requirements for data and information to implement MSP in a transboundary context, particularly regarding interoperability, are investigated under SIMCelt component C1.2.2 data and information requirements for MSP, Deliverable 4: *Analysis of Data Needs and Existing Gaps – Specifically Relating to Transboundary Working*.

This report aims to give a description of the state of current data needs and gaps and to identify the challenges and opportunities associated to data and information in support of transboundary MSP in the Celtic Seas.

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<sup>1</sup> <http://inspire.ec.europa.eu/inspire-roadmap/61>

# Part 1. Guidance document

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## Introduction

The guidance document is an output of the workshop “Priorities for data & information requirements dedicated to Maritime Spatial Planning” of the Task Group on Data, held in Saint-Mandé, France, on 23<sup>rd</sup>-24<sup>th</sup> June 2016.

The Task Group on Data brings together experts on maritime spatial data, maritime spatial data infrastructures and portals, and maritime planners from SIMCelt Partners and/or Stakeholders<sup>2</sup>.

The guidance document objective is to define the ideal requirements to reach for data and information relevant for MSP in order to be shared and disseminated. It also describes the scope of the investigation.

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<sup>2</sup> Agence des Aires Marine Protégées (AAMP), Department for Agriculture, Environment and Rural Affairs (DAERA), Marine Interregional Direction, region North Atlantic Western Channel (DIRM NAMO), Marine Institute, Marine Management Organisation, Marine Scotland, United Kingdom Hydrographic Office, Préfecture maritime de l’Atlantique

## 1. General requirements

Data themes to be published together on a geographic portal for transboundary areas of the SIMCelt action area should reach the criteria below:

- Data must be available in WMS, WFS, WMTS and GML formats
- Priority themes must include compulsory sectors as listed in the EU MSP Directive
- Priority is given to datasets provided by SIMCelt partners and national MSP focused MSDI
- Datasets should be INSPIRE compliant
- Portrayal coherence (i.e. symbology) should be ensured between datasets concerning the same theme but from different sources
- Multilingual metadata would be an asset for transboundary data sharing
- Information about quality of data should be highlighted
- Interoperability between portals should be ensured

## 2. Selection criteria

To prioritize the selected datasets and themes for Spatial Data Infrastructure, selection criteria listed below can be used:

- They benefit from time commitment of the actors for data harmonization
- They are needed for Cases studies

## 3. Themes / data

### Maritime delimitations (sovereignty, jurisdiction)

Maritime delimitations are a major theme identified as a core data requirement for transboundary MSP. With the numerous spatial incongruences in the current delimitations of maritime boundaries between neighbouring MS, this theme highlights one of many issues regarding data requirements for transboundary MSP.

Issues to be dealt with to provide maritime delimitations theme on SIMCelt SDI are listed below:

- Ontology
- Data model (Inspire Annex 1 administrative units)
- Portrayal (SLD)
- Geometry
- Map

### Other proposed themes

A list of themes/data considered relevant for SIMCelt C1.2.2 is provided below:

- Marine limits (intertidal zones, ...)

- Maritime traffic, navigation:
  - Traffic separation schemes
  - Anchorage areas
  - Transports
  - Lanes (AIS data)
  - Ports
  - Buoys and obstacles
  - Navigation channels
  - ....
- Marine Protected Areas
- Fishing
- Aquaculture
- Marine renewable energy
- Additional themes/data related to SIMCelt C1.2.4 Case studies

#### **4. Issues to progress on**

##### **Data quality**

Shom will define a categorical method for defining the relative quality of aggregated data sets/themes.

##### **SIMCelt portal Data licencing**

The best approach to adopt regarding Data licencing has to be defined

##### **Requests to SIMCelt Steering Committee**

Sensitive issues are to be submitted for advice to SIMCelt Steering Committee e.g. maritime delimitations inconsistencies between national representations.

#### **5. Maritime Spatial Data Infrastructure supporting results of SIMCelt C1.2.2**

The name of the SDI has to be defined in relation with Component 3 (Communication and Dissemination). The Marine Spatial Data Infrastructure supporting results of SIMCelt C1.2.2 should be composed of elements listed below:

- master copy of Shom Geospatial Portal Infrastructure
- Viewer
- Dashboard comprising advice and information regarding the approaches of the portal and its limitations (differences observed regarding symbology, ...)

#### **6. Resources**

A shared excel file is created and shared to complete the preliminary list of ressources of interest below:

## Vocabulary

A standardized vocabulary for data related matters will be adopted in order to minimize misunderstandings going forward

- [BODC British Oceanographic Data Centre](#)
  - P22 – INSPIRE themes
  - Maritime delimitations :
    - BODC C16, C19
- GEMET
- <http://inspire.ec.europa.eu/codelist>
- DBpedia

## Best practices

- W3C Recommendations

## Quality of data

- [SeaDataNet flags](#)

## Coastline

- Coastal mapping project (EU Project)

## Land and sea

- BLAST (EU INTERREG)

## Bathymetry

- EMODnet bathymetry (EU Project)

# Part 2. Analysis

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## Introduction

The analysis is presenting an inventory of available data in Celtic Seas area for Maritime Spatial Planning and their analysis.

Data is selected on the basis of the scope defined by the general requirements listed in the Guidance document (Part1). The table of sources studied to select data is provided in annex n° 1.

The inventory below sets the baseline of a portal demonstrator for SIMCelt project in order to enhance data accessibility.

Selected data needed to reach some prerequisites:

- When possible choose one source covering the whole project area
- If not possible, favour data sources provided by national MSDI
- Data must be available through OGC / inspire compliant web services (WMS / WFS / WCS)
- Datasets must comply as much as possible with requirements listed in the guidance document

The categorisation used to present the inventory of data is based on the one established in the report on MSP Data Study led by S.Pro and Ecorys on behalf of DG MARE<sup>3</sup>.

Each category presentation is accompanied by an illustration of the view of the data layers displayed jointly. This illustration emphasizes the coverage of selected data sources, and the existing differences in the symbology.

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<sup>3</sup> *MSP Data Study Executive Summary*. Technical Study under the Assistance Mechanism for the Implementation of Maritime Spatial Planning, 2016.

## How to read this document

**Administrative borders**

Category

**Terrestrial boundaries**

Subcategory

**Short description of the subcategory**

includes seven countries, each with different structures of their administrative organisations. When there is one major administrative subdivision level in Scotland (Council areas), we can identify 4 levels in France (from largest to smallest: Regions, Departments, EPCI, municipalities).

**Summary of data coverage**

but it requires many data sources.



Illustration representing data coverage and differences of symbolologies

*Terrestrial boundaries: selection of datasets*

Theme	Layers	Area	Producer	SDI	Inspire Metadata	Diffusion	Openness
Terrestrial boundaries	Communes Départements Régions	France	IGN	Géobretagne, Géoportail	Yes	WFS	Open
Terrestrial boundaries	EPCI en Bretagne au 01/01/2017	Brittany	DREAL Bretagne	Géobretagne	Yes	WFS	Open
Terrestrial boundaries	Local authorities of Ireland Electoral division	Ireland	Central Statistics Office	Ireland's Marine Atlas	Yes	WFS	Open
Terrestrial boundaries	Local authority boundaries	Scotland	Ordnance Survey	Marine Scotland NMPI	Yes	WFS	Open
Terrestrial boundaries	Largescale boundaries NI outline Largescale boundaries - Local government districts	Northern Ireland	OSNI	Opendata NI	No	WMS	Open

**List of the selected datasets linked to the subcategory. Fields presented here give information on the degree of compliancy with the requirements. It is an extract of the complete inventory.**

*Assets*

- Most data sources are available in WFS and with an open licence
- Completeness: exhaustive coverage
- Authoritative data

*Barriers*

- Many different data sources, reflecting a great heterogeneity in terrestrial administrative organisations between jurisdictions

*Action needed*

- Portrayal harmonisation: unique style for boundaries at the same hierarchical level

**Analysis of the selection of datasets, focusing on assets, barriers, and first improvement propositions**

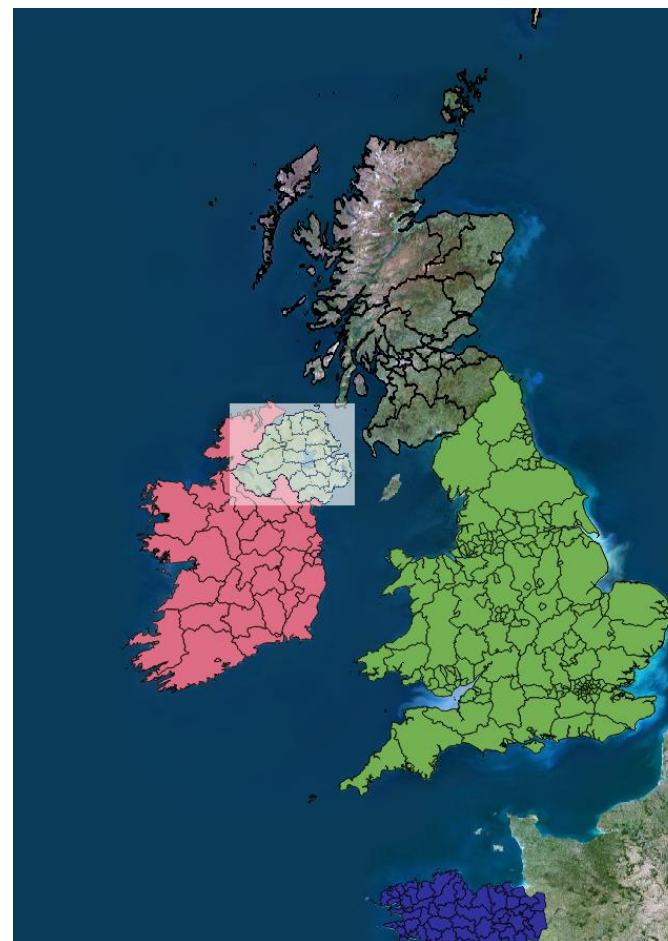
## Administrative borders

### Terrestrial boundaries

While the SIMCelt project area comprises three member states, in total it includes seven countries, each with different structures of their administrative organisations. When there is one major administrative subdivision level in Scotland (Council areas), we can identify 4 levels in France (from largest to smallest: Regions, Departments, EPCI, municipalities).

#### *Coverage*

Complete coverage of terrestrial boundaries in Celtic Seas area is reached, but it requires many data sources.



*Figure 1 - Terrestrial boundaries*

*Terrestrial boundaries: selection of datasets*

Theme	Layers	Area	Producer	SDI	Inspire Metadata	Diffusion	Openness
Terrestrial boundaries	Communes Départements Régions	France	IGN	Géobretagne, Géoportail	Yes	WFS	Open
Terrestrial boundaries	EPCI en Bretagne au 01/01/2017	Brittany	DREAL Bretagne	Géobretagne	Yes	WFS	Open
Terrestrial boundaries	Local authorities of Ireland Electoral division	Ireland	Central Statistics Office	Ireland's Marine Atlas	Yes	WFS	Open
Terrestrial boundaries	Local authority boundaries	Scotland	Ordnance Survey	Marine Scotland NMPI	Yes	WFS	Open
Terrestrial boundaries	Largescale boundaries NI outline Largescale boundaries - Local government districts	Northern Ireland	OSNI	Opendata NI	No	WMS	Open
Terrestrial boundaries	Regions	England	ONS	ONS Open geography portal	Yes	WFS	Open
Terrestrial boundaries	Counties and unitary authorities	England & Wales	ONS	ONS Open geography portal	Yes	WFS	Open

*Table 1 - Terrestrial boundaries: selection of datasets**Assets*

- Most data sources are available in WFS and with an open licence
- Completeness: exhaustive coverage
- Authoritative data

*Barriers*

- Many different data sources, reflecting a great heterogeneity in terrestrial administrative organisations between jurisdictions

*Action needed*

- Portrayal harmonisation: unique style for boundaries at the same hierarchical level

### **Maritime boundaries**

Maritime boundaries are key data when dealing with Maritime Spatial Planning, as it identifies which Member State has authority on which area.

#### *Coverage*

Data relative to maritime boundaries are provided by a reference producer in each member state: Shom for France, UKHO for United Kingdom and DCENR for Ireland. Coverage is nearly complete, apart from baselines.



*Figure 2 - Maritime delimitations*

*Maritime boundaries: selection of datasets*

Theme	Layers	Area	Producer	SDI	Inspire Metadata	Diffusion	Openness
Maritime boundaries	Délimitations maritimes	France	Shom	data.shom.fr	Yes	WMS	shared
Maritime boundaries	Straight baselines Maritime boundary territorial sea Maritime boundary contiguous zone Maritime boundary exclusive Economic Zone Designated maritime boundary Continental Shelf	Ireland	DCENR	Ireland's Marine Atlas	Yes	WFS	Open
Maritime boundaries	12 nautical miles limit UK EEZ Continental shelf limit Northern Ireland Adjacent Waters Limit Scottish Adjacent Waters Limit Wales Adjacent Waters Limit	United Kingdom	UKHO	UKHO Inspire portal	No	WMS	shared

*Table 2 - Maritime boundaries: selection of datasets**Assets*

- For maritime boundaries, producers providing official data for regulation are well identified.
- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.
- We can get exhaustive coverage of the Celtic Seas from identified sources

*Barriers*

- Portrayal of maritime delimitations completely different between France, Ireland and UK
- Data models based on different standards (S-57, Inspire)
- Some layers not available (ex: UK straight baseline)
- Availability of some data sources in WMS instead of WFS could make working with them more difficult

*Action needed*

- Step 1: portrayal harmonisation, in order to provide a single legend for all the data sources
- Step 2: light data structure harmonisation to ensure that all datasets contain compulsory Inspire fields
- Step 3: Agree on a common data model for the different data sources

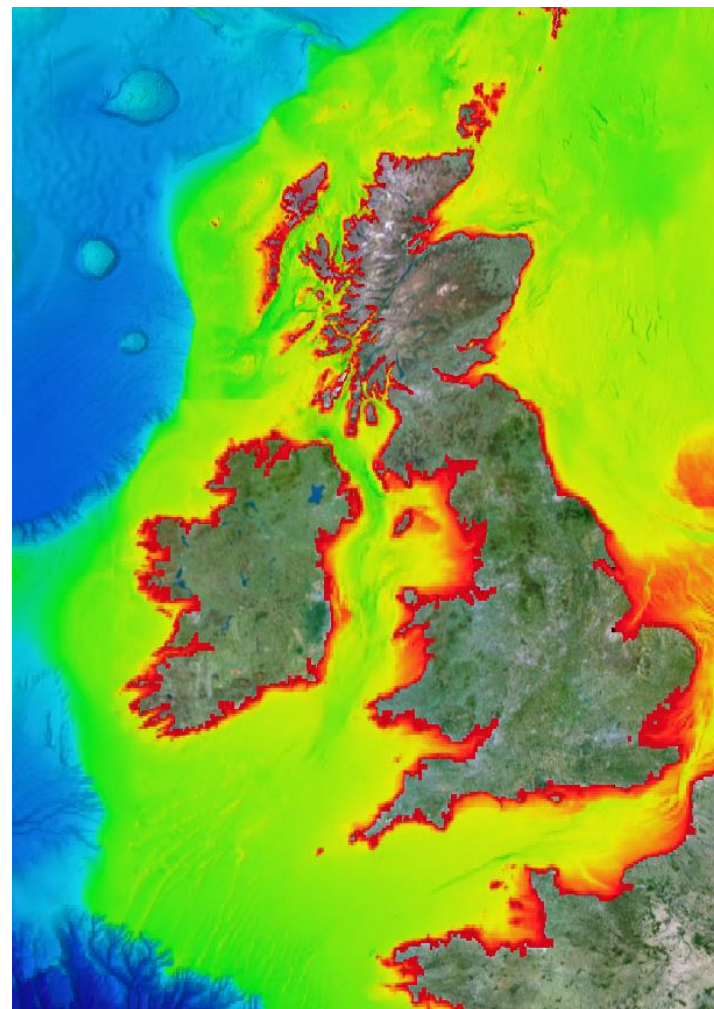
## Physical, chemical & biological information

### Physical characteristics

Physical characteristics include information about seabed like bathymetry and geology, but also data concerning the water column and surface: temperature, salinity, waves, currents, etc. For the most part of these parameters, it is possible to identify sources of information covering the whole project area and available by web service.

#### *Coverage*

For many physical parameters, it is possible to identify sources of information covering the whole project area and available by web service. Shom, known as a reference producer and partner in SIMCelt project, can provide some physical parameters datasets updated on a daily basis.



*Figure 3 – Physical parameters, example of Bathymetry*

*Physical parameters: selection of datasets*

Theme	Layers	Area	Producer	SDI	Inspire-compliant	Diffusion	Openness
Bathymetry	EMODnet Bathymetry EMODnet Bathymetry source references	Europe	EMODnet Bathymetry	EMODnet Bathymetry	Yes	WMS - WFS	Open
Geology	Carte sédimentaire mondiale	World	Shom	data.shom.fr	Yes	WMS	shared
Other parameters	Courant Température eau de mer Salinité eau de mer Vitesse et direction du vent Hauteur significative et direction mer totale Période mer totale	Europe	Shom	data.shom.fr	Yes	WMS	Open

*Table 3 - Physical parameters: selection of datasets**Assets*

- Usually possible to find one reference layer for the whole Celtic seas area for each physical parameter
- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.

*Barriers*

- No barrier identified

*Action needed*

- No action needed.

### Types of habitats

We can identify two types of data when dealing with marine habitats: data collected from surveys, and predictive maps based on models. When surveys bring accurate data on focused areas of interest, models try to extrapolate in order to provide regional maps. For the needs of SIMCelt portal demonstrator, predictive maps providing complete coverage of the project area is relevant.

#### *Coverage*

A complete map of marine habitats in Europe, therefore covering the Celtic Seas, is made available through EMODnet Seabed Habitats project.

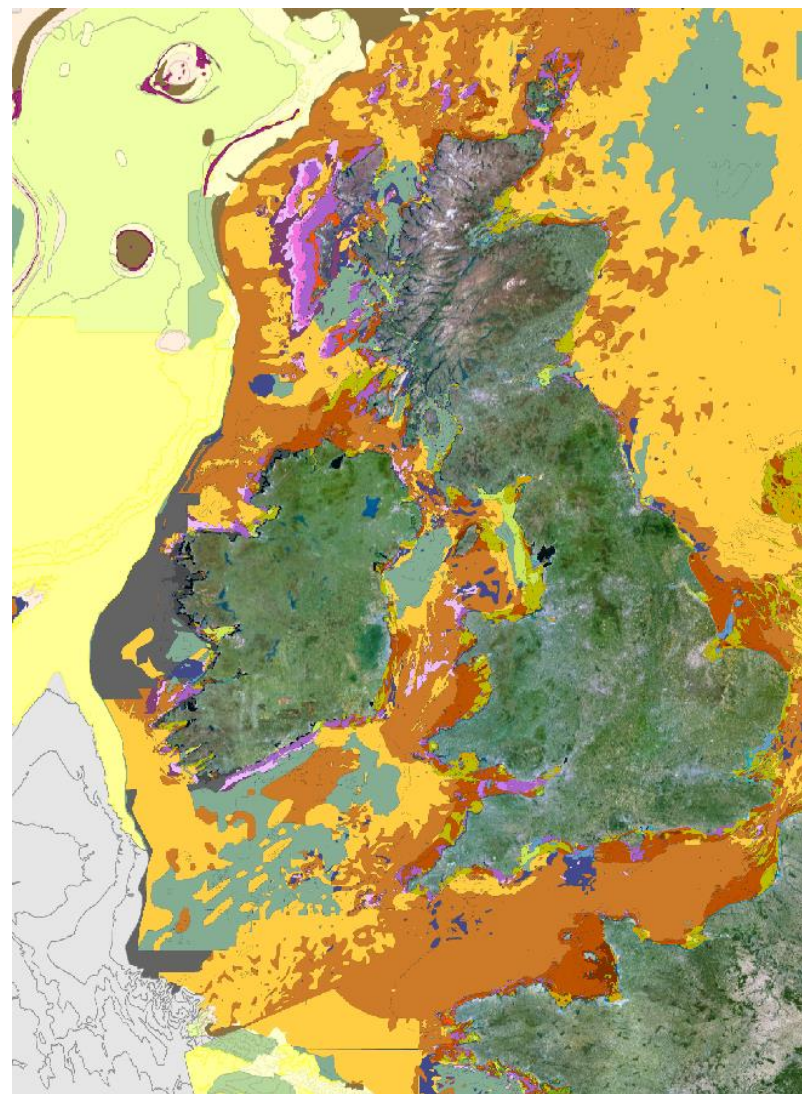


Figure 4 - Marine Habitats

*Types of habitats: selection of datasets*

Theme	Layers	Area	Producer	SDI	Inspire-compliant	Diffusion	Openness
Habitats	EUSEaMap2 (2016) Broad-Scale Predictive Habitat Map	Europe	EMODnet Habitats	EMODnet Habitats	Yes	WMS	shared

*Table 4 - Types of habitats: selection of datasets**Assets*

- One reference layer for the whole project area

*Barriers*

- Limit of confidence of modelled habitats maps

*Action needed*

- No action needed

## Biological characteristics

Marine SDI dedicated to maritime spatial planning in Celtic seas, especially in Ireland and Scotland, provide a wide range of datasets focused on species distribution. The EMODnet Biology project also releases datasets on taxa distribution, but provided information appears to be less accurate compared to datasets available on other Celtic Seas marine portals.

For the purpose of this report, it was not possible to commit on the analysis of the full list of available datasets for biological characteristics. The choice was thus made to focus on 2 species i.e. Grey Seals and Nephrops, with different relevance to the maritime economy e.g. one being a tourist attraction / hazard to fishing gear / nuisance to finfish aquaculture and the other being of major commercial relevance to the Irish Sea fishing industry.

### Coverage

Access to data about species distribution, spawning and nursery grounds is more difficult on the French seas part of the SIMCelt project area. No WMS or WFS layers were found available for these species.

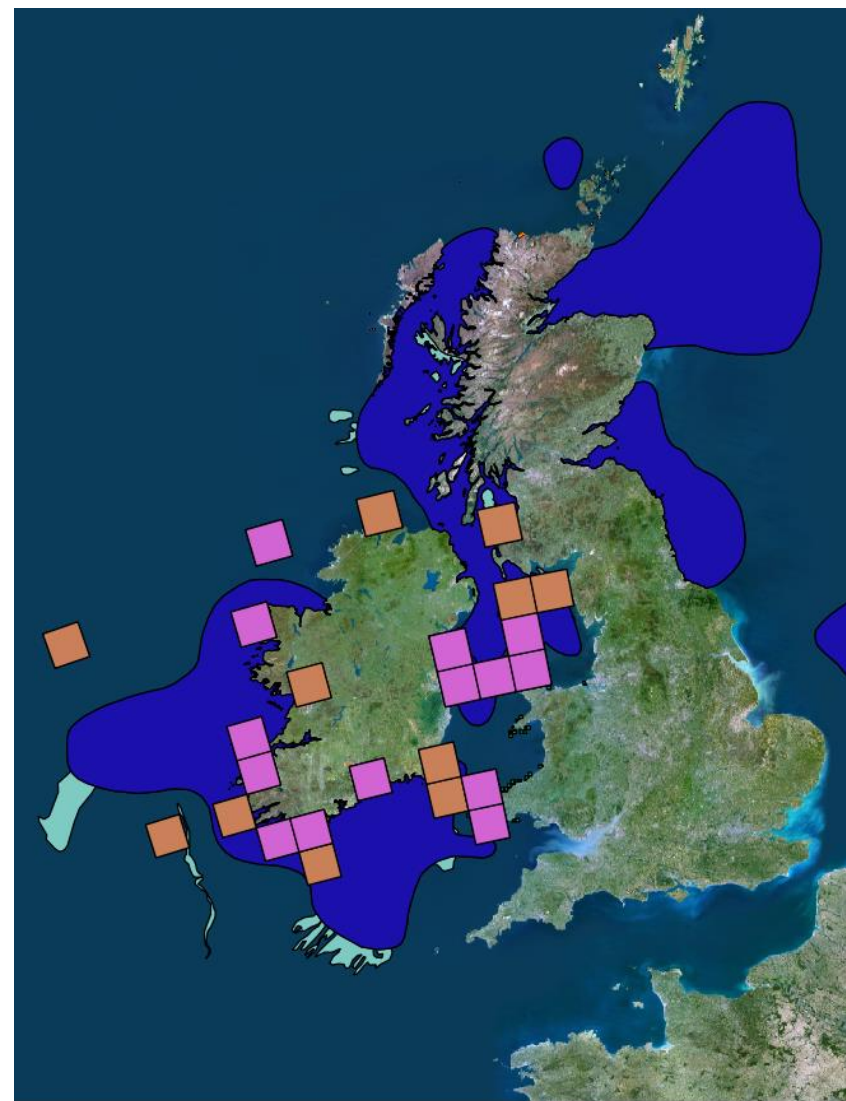


Figure 5 - Biological characteristics

*Biological Characteristics: selection of datasets*

Theme	Layers	Area	Source	SDI	Inspire Metadata	Diffusion	Openness
Nephrops	Nephrops Ground Nephrops Underwater Television Survey Stations	Ireland	Marine Institute	Ireland's Marine Atlas	Yes	WFS	Open
Nephrops	Nephrops Spawning Grounds Nephrops Nursery grounds	UK & Ireland	Marine Scotland	Marine Scotland NMPI	No	WMS	Shared
Nephrops	Nephrops Spawning Grounds	UK & Ireland	CEFAS	Wales Marine Planning Portal	No	WFS	Open
Grey Seal	Observations of Grey Seal Abundance of Grey Seal Search of Grey Seal Range of Grey Seal	Ireland	Irish Wales and Dolphin Group	Ireland's Marine Atlas	Yes	WFS	Open
Grey Seal	Seal Density	Celtic Seas	Marine Scotland	Marine Planning Evidence	No	SOAP	
Grey Seal	Grey Seal Pupping Sites	Scotland	Sea Mammal Research Unit	Marine Scotland NMPI	No	WMS	
Grey Seal	Grey Seal Pupping Haul Out	Wales	Natural Resources Wales	Wales Marine Planning Portal	No	WFS	

*Table 5 - Biological characteristics: selection of datasets**Assets*

- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.

*Barriers*

- Some issues when trying to combine data coming from different protocols (WxS vs SOAP)
- Information less accessible in France
- Some missing information about licences.

*Action needed*

- No action plan defined yet

## Pressures & impacts

It is possible to find many data sources for pressures on the Celtic Seas area. In the case of a portal demonstrator for maritime spatial planning, getting already harmonised sources for some example of pressures appears to be the most relevant, so the choice was made to select datasets provided by OSPAR Commission.

### Coverage

OSPAR datasets cover North-East Atlantic, and include SIMCelt project area in totality. They provide therefore a good representation of some pressures existing in this maritime zone.

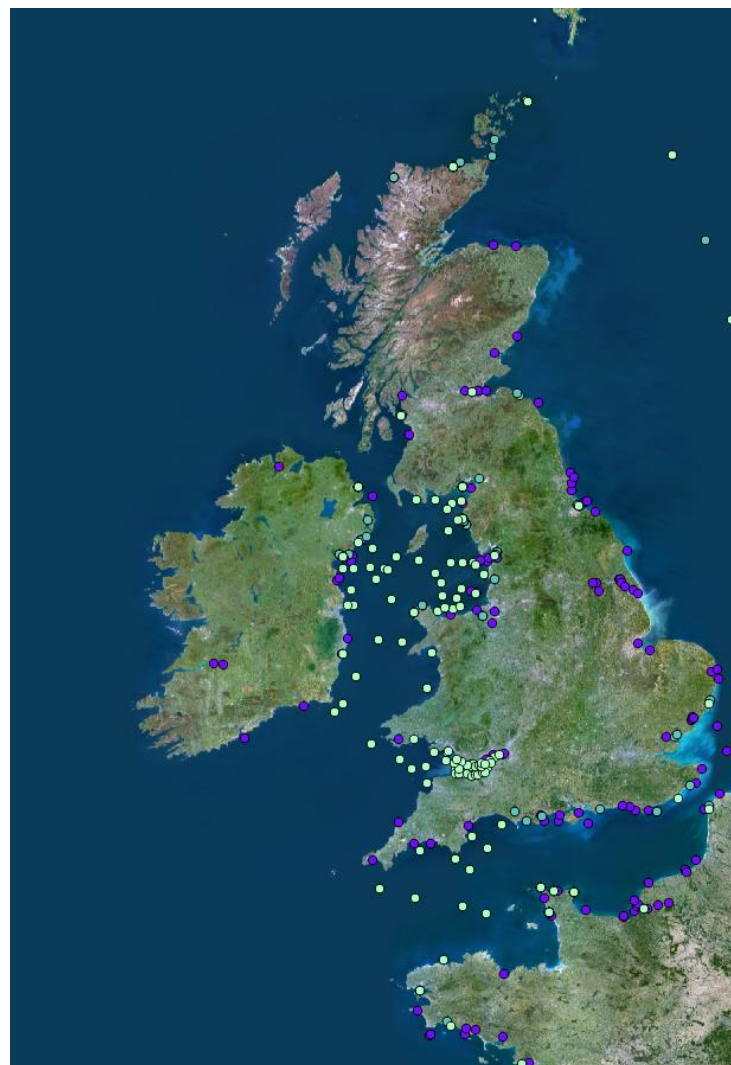


Figure 6 – Pressures & impacts

*Pressures and impacts: selection of datasets*

Theme	Layers	Area	Source	SDI	Inspire Metadata	Diffusion	Openness
Marine contaminants	OSPAR marine contaminants - biota OSPAR marine contaminants - Sediments OSPAR marine contaminants - water	Europe	OSPAR	OSPAR data portal	Yes	WFS	Shared
Dumping	OSPAR Dumping at sea	Europe	OSPAR	OSPAR data portal	Yes	WFS	Shared
Radioactive substances	Environmental Monitoring of Radioactive Substances in Biota Environmental Monitoring of Radioactive Substances in seawater	Europe	OSPAR	OSPAR data portal	Yes	WFS	Shared
Underwater noise	OSPAR impulsive underwater noise	Europe	OSPAR	OSPAR data portal	Yes	WFS	Shared

*Table 6 - Pressures and impacts: selection of datasets**Assets*

- All chosen datasets available in WFS
- Chosen layers cover the whole project area

*Barriers*

- Completeness: no complete coverage of the Celtic Seas area

*Action needed*

- No action needed

## Activities / uses

### Aquaculture

With respect to aquaculture, EMODnet Human Activities European program provides layers of information about finfish and shellfish production areas. These datasets are the result of harmonisation work at a European scale, partly based on previous projects, like [EUROSHELL<sup>4</sup>](http://www.euroshell-net.eu/Project) regarding shellfish production sites. There is no seaweed culture dataset coming from EMODnet Human activities program, so national datasets for Ireland, Scotland and France were added.

#### Coverage

EMODnet datasets for finfish and shellfish production areas seem to be accurate enough for United Kingdom and Ireland, and to provide less information for France, especially for finfish farming sites. Regarding seaweed culture, data for Scotland, Ireland and France can be accessed by web services.

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<sup>4</sup> <http://www.euroshell-net.eu/Project>



Figure 7 - Aquaculture

*Aquaculture: selection of datasets*

Theme	Layers	Area	Producer	SDI	Inspire Metadata	Diffusion	Openness
Shellfish	Shellfish production areas	Europe	EMODnet Human activities	EMODnet Human activities	yes	WFS	Open
Finfish	Finfish farming sites	Europe	EMODnet Human activities	EMODnet Human activities	yes	WFS	Open
Seaweed	Seaweed by culture type Seaweed by species type	Ireland	DAFM	Ireland's Marine atlas	Yes	WMS	Closed
Seaweed	Current green Seaweed harvesting methods Current kelp harvesting methods current red seaweed harvesting methods current wracks harvesting methods Proposed future resource harvesting locations Resource maps	Scotland	Marine Scotland	Marine Scotland NMPI	No	WMS	Shared
Seaweed	Lieux de pêche de laminaires du Finistère	France	DDTM29	Géobretagne	Yes	WFS	Open

*Table 7 - Aquaculture: selection of datasets**Assets*

- Datasets harmonisation work initiated through EMODnet and Euroshell projects
- Shellfish and finfish: data accessible in WFS for the whole project area
- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.

*Barriers*

- Completeness: EMODnet layers don't take into account seaweed culture
- Seaweed: Heterogeneity in datasets structures

*Action needed*

- No action plan defined yet

## Fishing

Fishing activity can be characterized by two kinds of information. The first one corresponds to regulation data, i.e. areas where fishing activity is restricted. The second one is the observed activity. Data relative to activity can be collected with Vessel Monitoring System (VMS), which is mandatory equipment for fishing vessels above 15 meters.

### Coverage

Aggregated VMS data is accessible for fishing vessels from United Kingdom and Ireland. In France, access to this kind of dataset is restricted.

For regulation data, datasets were available by web services for France, Ireland and Scotland.

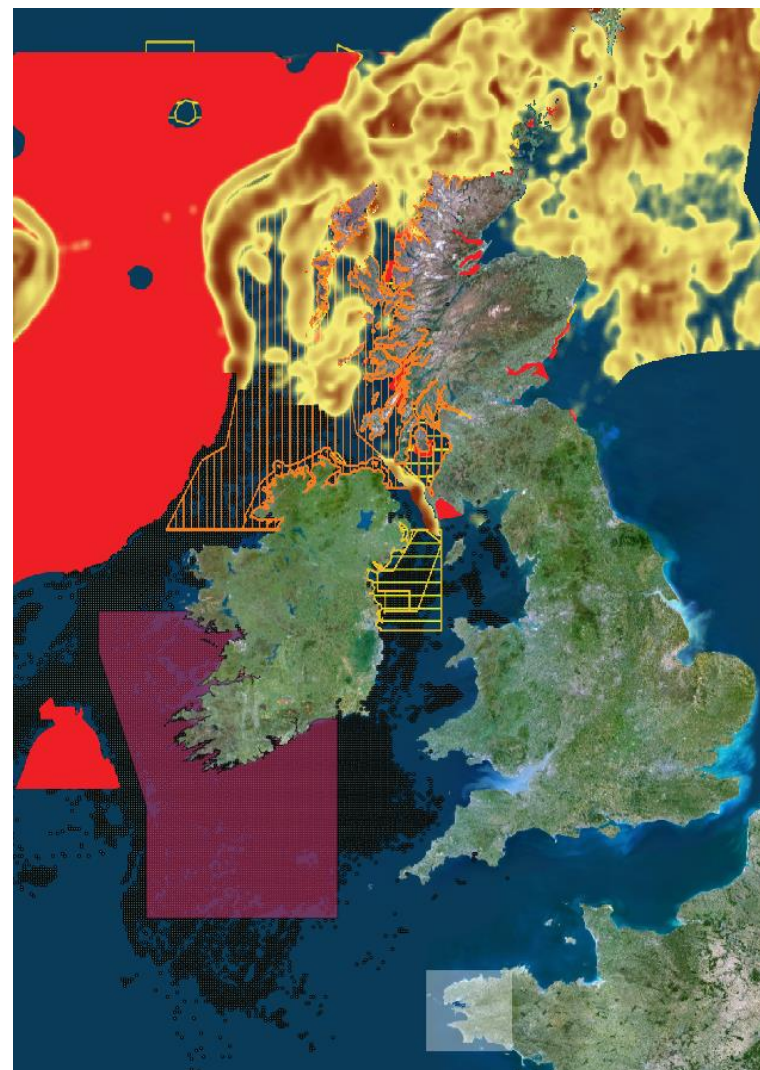


Figure 8 - Fishing

*Fishing: selection of datasets*

Theme	Layers	Area	Source	SDI	Inspire metadata	Diffusion	Openness
Regulation	Brest métropole : Zones de pêche en Rade de Brest	France	Brest Métropole	Géobretagne	Yes	WMS	Open
Regulation	Lignes interdiction de chalutage du Finistère	France	DDTM29	Géobretagne	Yes	WFS	Open
Regulation	Les cantonnements de pêche dans les eaux françaises	France	AAMP	Cartomer	Yes	WFS	Shared
Regulation	Fishing - managed areas	Scotland	Marine Scotland	Marine Scotland NMPI	No	WMS	Open
Regulation	Fisheries biologically sensitive areas Greencastle Codling Protected Area	Ireland	Marine Institute	Ireland's Marine Atlas	Yes	WFS	Open
VMS data	Commercial Fishing Intensity by Fishing Gear & Fishing Time	Ireland	Marine Institute	Ireland's Marine Atlas	Yes	WFS	shared
VMS data	VMS Amalgamated Fishing Intensity Layers	Scotland	Marine Scotland	Marine Scotland NMPI	No	WMS	Shared
VMS data	Fishing effort - VMS	United Kingdom	MMO	Marine planning evidence	No	SOAP	

*Table 8 - Fishing: selection of datasets**Assets*

- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.

*Barriers*

- Access to datasets relative to fishing sector sometimes very difficult (ex: VMS data in France)
- Some issues when trying to combine data coming from different protocols (WxS vs SOAP)
- Many data sources needed to cover the project area.

*Action needed*

- No action plan defined yet

## Marine Renewable Energies

Marine renewable energies concern offshore facilities dedicated to electricity production from wind, tides, waves and current. EMODnet Human Activities project and OSPAR Commission provide datasets related to marine renewable energies covering the whole Celtic Seas area. However, they are not exhaustive and need to be completed by national datasets.

### Coverage

Combination of data coming from EMODnet Human Activities project and from OSPAR Commission seem to provide a good coverage for the SIMCelt project area. Few sites can be added from Irish and Scottish data sources.



Figure 9 - Marine renewable energies

*Marine Renewable Energies: selection of datasets*

Theme	Layers	Area	Producer	SDI	Inspire metadata	Diffusion	Openness
Wind energy	Wind Farms	Europe	EMODnet Human activities	EMODnet Human activities	yes	WFS	Open
Wind energy	Wind Lease Sites	Scotland	The Crown Estate	Marine Scotland NMPI	No	WMS	Open
Ocean energy	Ocean energy facilities	Europe	EMODnet Human activities	EMODnet Human activities	yes	WFS	Open
Ocean energy	Galway Bay 1/4 Scale Wave Energy Test Site Atlantic Marine energy full scale test site	Ireland	Marine Institute	Ireland's Marine Atlas	Yes	WMS	Open
Ocean energy	Wave lease Sites Tidal Lease Sites	Scotland	The Crown Estate	Marine Scotland NMPI	No	WMS	Open
Wind & ocean energies	OSPAR Offshore Renewable Energy Developments	Europe	OSPAR Commission	OSPAR Data Portal	Yes	WFS	Shared

*Table 9 - Marine Renewable Energies: selection of datasets**Assets*

- Some data harmonisation work already initiated with EMODnet Human activities project and OSPAR commission
- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.

*Barriers*

- Some datasets only viewable on MSDI and not available by web services (ex: Wales)
- Heterogeneity in data models, object types, licencing, etc between the different sources.

*Action needed*

- No action plan defined yet

### Maritime transport routes and traffic flows

Maritime transport data are grouped into many different themes. Some can be retrieved on nautical charts, like navigational assistance data (anchorage areas, buoys, lights), or traffic separation schemes, but others concern traffic, either theoretical (for example indicative ferry routes) or collected by Automatic Identification System (AIS). In the Celtic Seas area, data can come from many different national sources while coverage of vessel type and transit can be limited.

#### Coverage

Maritime transport data is more easily available by webservice in United Kingdom and in Ireland than in France, where traffic separation schemes are not officially published yet and AIS data access is complicated.

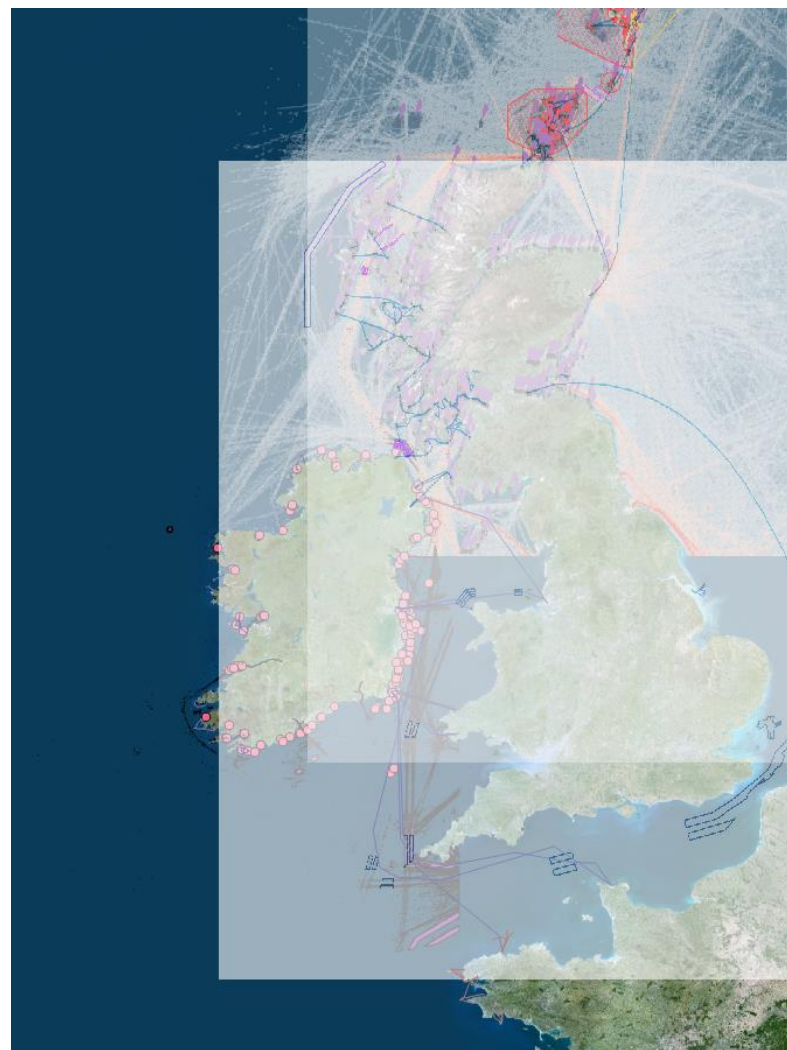


Figure 10 - Maritime transportation

*Maritime transport: selection of datasets*

Theme	Layers	Area	Producer	SDI	Inspire metadata	Diffusion	Openness
AIS Data	Coastguard AIS traffic frequency	Ireland	Irish coast guard	Ireland's Marine atlas	Yes	WFS	Closed
AIS Data	AIS - Shipping Traffic - Average weekly density of vessel types	Scotland	MMO MCA	Marine Scotland NMPi	No	WMS	Open
AIS Data	National Shipping density 2014	UK	MMO	Marine Planning Evidence	No	SOAP	Open
Navigational assistance	Commissioners of Irish Lights Buoy	Ireland	Commissioners of Irish Lights	Ireland's Marine atlas	Yes	WFS	Shared
Navigational assistance	Navigational lights and lighthouses	Scotland	Northern Lighthouse board	Marine Scotland NMPi	No	WMS	
Navigation channels	Navigational approaches	England		Marine Planning Evidence	No	WMS	
Navigation channels	Navigation channels	Scotland	OceanWise	Marine Scotland NMPi	No	WMS	Shared
Ferry routes	Ferry routes	Ireland	Marine Institute	Ireland's Marine atlas	Yes	WFS	Open
Ferry routes	Scottish ferry routes (indicative courses)	Scotland	Transport Scotland	Marine Scotland NMPi	No	WMS	Open
Ferry routes	Liaisons maritimes du finistère	France	DDTM29	Géobretagne	Yes	WFS	Open
Traffic separation scheme	Traffic separation scheme zone	UK	MMO	Marine Planning Evidence	No	WMS	
Traffic separation scheme	IMO traffic routing schemes	Scotland	IMO	Marine Scotland NMPi	No	WMS	Shared
Anchorage areas	Anchor berths and anchorage areas	Scotland	OceanWise	Marine Scotland NMPi	No	WMS	Shared
Anchorage areas	Anchoring areas	England		Marine Planning Evidence	No	WMS	

*Table 10 - Maritime transport: selection of datasets**Assets*

- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.

*Barriers*

- Some important datasets not published yet (ex: Traffic separation schemes for France) or not available by web services
- AIS data not easily available (even aggregated) in WMS
- Difficulties combining data coming from different protocols (WxS vs SOAP)
- Issues with some WMS coming from ArcGIS server: white background

- MMO metadata: information missing (producer, date, ...)

*Action needed*

- Protrayal harmonisation: provide a specific style for each theme

## Ports

Many sources provide information layers on ports in the Celtic Seas area, with a huge heterogeneity in data models: some sources indicate only the name and coordinates, when others include functional information, frequentation, etc.

### *Coverage*

2 kinds of datasets can be identified. At the project area scale, the layer coming from EMODnet Human Activities project gives harmonised information on the main ports. Then more detailed datasets can be provided by national sources. At national level, datasets from England and Wales are not available by webservice.

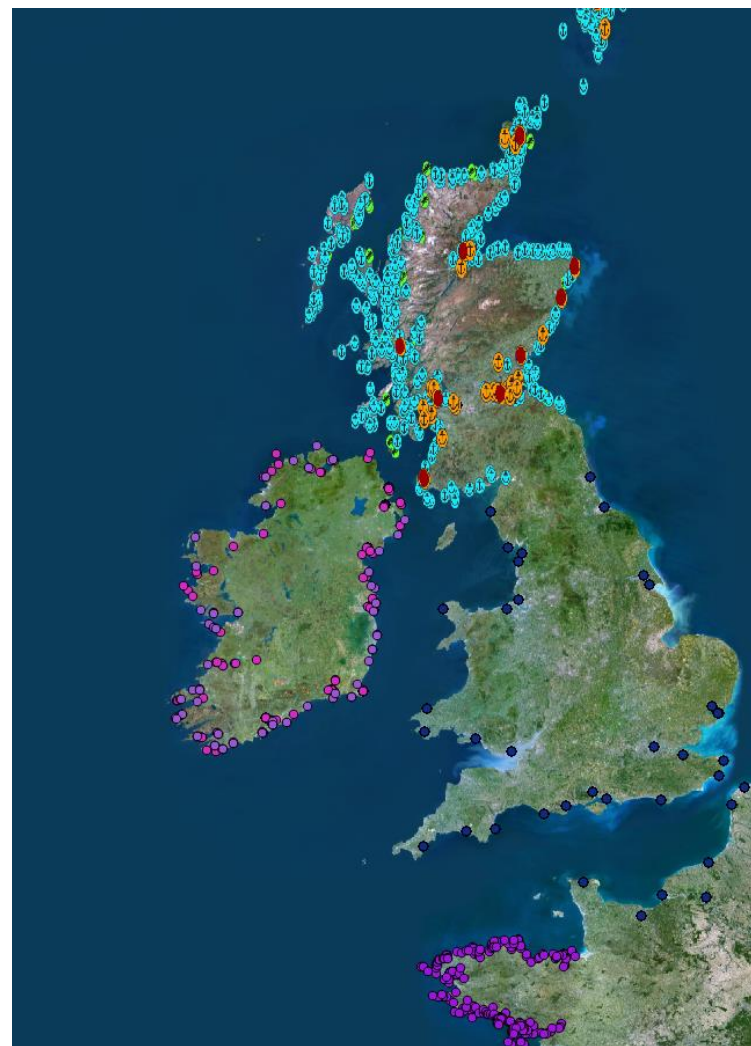


Figure 11 - Ports

*Ports: selection of datasets*

Theme	Layers	Area	Producer	SDI	Inspire metadata	Diffusion	Openness
Ports	Main ports	Europe	EMODnet Human activities	EMODnet Human activities	yes	WFS	Open
Ports	Ferry port Commercial port	Ireland	MaREI	Ireland's Marine Atlas	Yes	WFS	Open
Ports	Fishing port	Ireland	DAFM	Ireland's Marine Atlas	Yes	WFS	Open
Ports	Scottish ports and harbours	Scotland	Marine Scotland Transport Scotland	Marine Scotland NMPI	no	WMS	Shared
Ports	Ports de Bretagne	France	Région Bretagne	Géobretagne	Yes	WFS	Open

*Table 11 - Ports: selection of datasets**Assets*

- Majority of datasets available in WFS
- Some data harmonisation work already initiated with the EMODnet Human activities project
- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.

*Barriers*

- Different data models, some with very few information (name & location only)

*Action needed*

- portrayal harmonisation, in order to provide a single legend for all the data sources

## Military

As far as military data is concerned, some harmonisation work has been done by the EMODnet Human Activities project and the OSPAR commission on the theme of munition dumping sites. When dealing with zones restricted to military usage, less information can be found on the various official SDI, and datasets that are available come with specific usage restrictions.

### Coverage

Datasets on areas of military usage were available for the United Kingdom. In France they are not published yet, and they were not found for Ireland.



Figure 12 - Defence

*Defence: selection of datasets*

Theme	Layers	Area	Producer	SDI	Inspire metadata	Diffusion	Openness
Munition dumping	Munitions dumping sites	Europe	EMODnet Human Activities	EMODnet Human Activities	Yes	WMS	Open
Munition dumping	OSPAR Encounters with dumped chemical and conventional munitions	Europe	OSPAR	OSPAR MPA Map tool	Yes	WFS	Shared
Munition dumping	Historic munitions disposal sites	Scotland	National Archives	Marine Scotland NMPI	No	WMS	Shared
Munition dumping	Munition dumping ground	United Kingdom	MMO	Marine Planning Evidence	No	WMS	
Military areas	MOD establishments	Scotland	Ministry of Defence	Marine Scotland NMPI	No	WMS	Shared
Military areas	Military practice areas	United Kingdom	MMO	Marine Planning Evidence	No	WMS	

*Table 12- Defence: selection of datasets**Assets*

- No specific asset identified

*Barriers*

- Data not available in web service for all countries (e.g. France)
- Data accuracy not very good
- Issues with WMS layers coming from ArcGIS Server: white background

*Action needed*

- No action plan defined yet

### Nature and species conservation sites and protected areas

The Maia Network project aims at providing all the Marine Protected Areas located within the Atlantic Arc in a single database. It covers the entire SIMCelt area, except north Brittany. Through this dataset, a work of harmonisation has been led in order to provide a single data model for all the MPAs of Atlantic European countries, and especially Ireland, United Kingdom and France. The only missing data concerning SIMCelt area correspond to MPAs located around north Brittany, where we will get data from AAMP.

#### Coverage

Maia database combined with French MPA datasets for north Brittany provide very good coverage for this theme in the SIMCelt project area.



Figure 13 - Nature and species conservation sites and protected areas

*Marine protected areas: selection of datasets*

Theme	Layers	Area	Source	SDI	Inspire Metadata	Diffusion	Openness
Marine protected areas	Designated marine protected areas (point)	Europe	Maia Network	Maia portal	No	WFS	Open
	Designated marine protected areas (polygon)						
Marine protected areas	Aires marines protégées françaises	France	AFB	Cartomer	Yes	WFS	Open

*Table 13 - Marine Protected Areas: selection of datasets**Assets*

- All data is available through WFS protocol
- Completeness: Exhaustive coverage of the Celtic Seas area when combining these sources of information
- Databases coordinated by a SIMCelt partner, makes easier to process updates

*Barriers*

- No metadata accessible through CSW protocol

*Action needed*

- No specific action needed

### Raw material extraction areas

This raw material extraction theme covers marine aggregates and ore exploitation, but also hydrocarbon extraction. The EMODnet Human Activities project provides harmonised information for both subthemes.

#### Coverage

Regarding Hydrocarbon extraction, EMODnet layers seem complete enough as they match well with national datasets.

Complementary datasets are needed to get a better coverage of aggregate extraction subtheme, they are provided by Marine Institute for Ireland and the Crown Estate for United Kingdom.

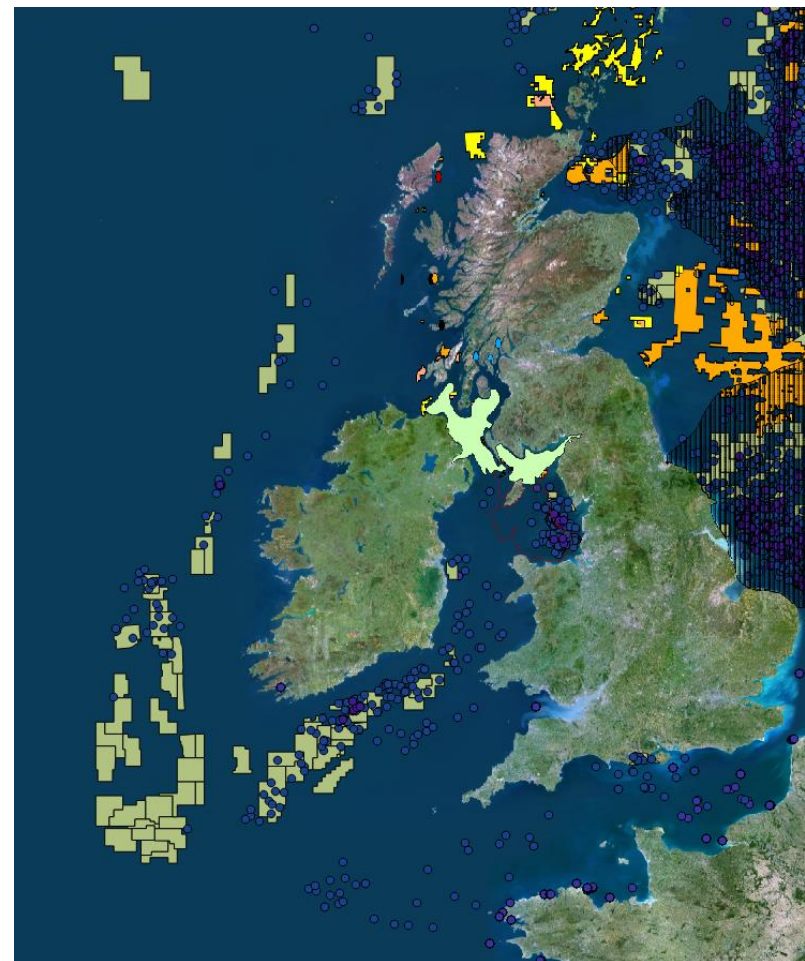


Figure 14 - Raw material extraction areas

*Raw material extraction areas: selection of datasets*

Theme	Layers	Area	Source	SDI	Inspire Metadata	Diffusion	Openness
Aggregate extraction	Aggregate extraction	Europe	AZTI- Tecnalia	EMODnet human activities	Yes	WFS	Open
Aggregate extraction	Irish sea aggregate resource area	Ireland	Marine Institute	Ireland's Marine atlas	Yes	WFS	Open
Aggregate extraction	Sand gravel resources prospective areas for sand gravel resources Evaporite Resources Metallic Mineral Resources	Scotland	The Crown estate	Marine Scotland NMPI	No	WMS	Shared
Aggregate extraction	MMO Legacy aggregate license areas Marine aggregate application areas Marine aggregate license areas Aggregate exploration and option areas	United Kingdom	The Crown estate	Marine Planning Evidence	No	WMS	Shared
Hydrocarbon extraction	Active Licenses Boreholes offshore installations	Europe	Cogea	EMODnet human activities	Yes	WFS	Open

*Table 14 - Raw material extraction areas: selection of datasets**Assets*

- Data harmonisation work already initiated with EMODnet Human activities project
- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.

*Barriers*

- Some datasets with no Inspire compliant metadata associated.
- Availability of some data sources in WMS instead of WFS could make working with them more difficult

*Action needed*

- No action plan defined yet

### Submarine cables and pipeline routes

We can identify 3 major sources dealing with submarine cables in the SIMCelt study area: one from the KIS-ORCA<sup>5</sup> European project and the other two from national hydrographical services (Shom and UKHO). Each data source contains different cables, with different attribute information associated to these cables. Some additional cables are brought with Irish and Scottish datasets. Regarding pipelines, the information is mainly coming from national producers.

#### Coverage

Putting all the listed sources together gives the appearance of a seemingly complete picture of the Celtic Seas area, but it is actually very difficult to say if we get a complete coverage. The main issue regarding submarine cables and pipelines concerns data accuracy. Many cables can be found in several of the identified datasets, but with divergent geometries, and different attributes.

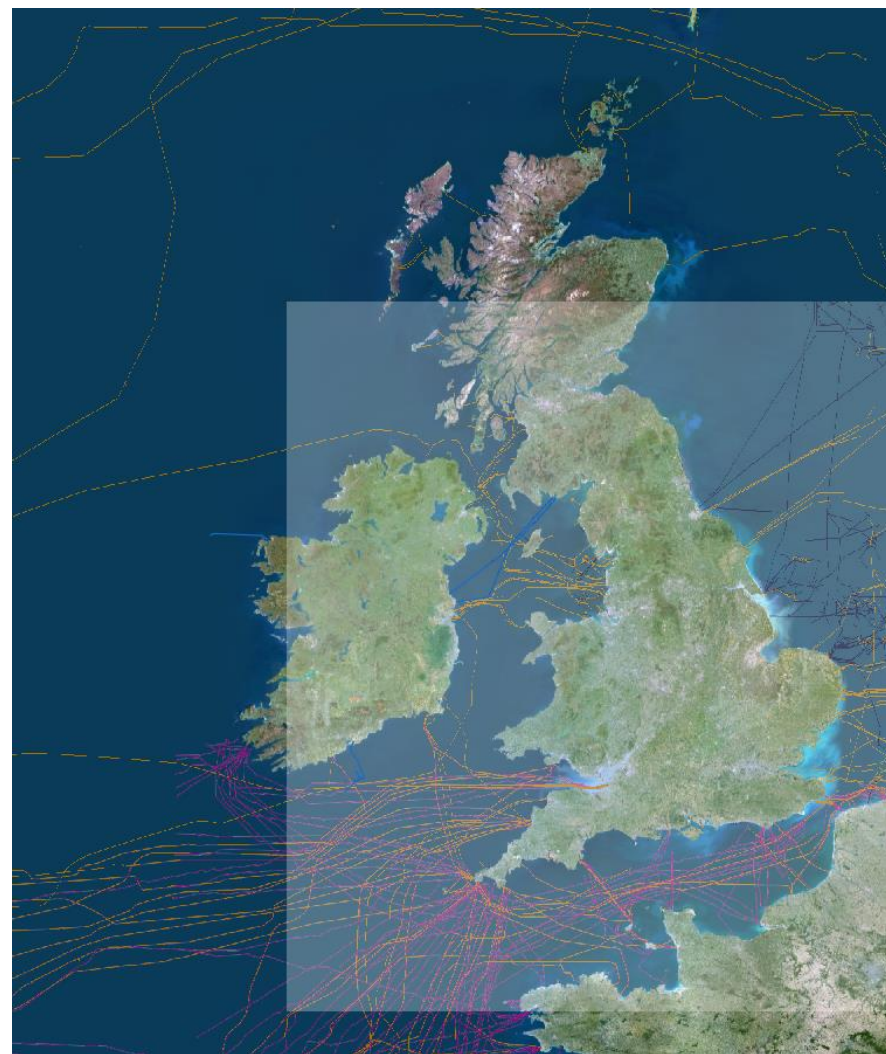


Figure 15 - Submarine cables & pipelines

<sup>5</sup> <http://www.kis-orca.eu>

*Submarine cables and pipelines: selection of datasets*

Theme	Layers	Area	Source	SDI	Inspire Metadata	Diffusion	Openness
Cables	KIS-Orca subsea cables	Europe	KIS-Orca project dpt	Marine Planning Evidence	No	WMS	Shared
Cables	submarine cables	United Kingdom	UKHO	Marine Planning Evidence	No	WMS	Shared
Cables	Telecommunication cables - Historic cables	Scotland	Marine Scotland	Marine Scotland NMPI	No	WMS	Open
Cables	Arklow Bank Wind Park Connection Cable	Ireland	Marine Institute	Marine Atlas	Yes	WFS	Open
Pipelines	Pipelines	England	UKHO	Marine planning evidence	No	WMS	Shared
Pipelines	Hydrocarbon pipelines	Scotland	CDA Limited	Marine Scotland NMPI	No	WMS	Shared
Pipelines	Offshore Gas Pipeline	Ireland	DCENR	Marine Atlas	Yes	WFS	Open
Cables & pipelines	Cables et conduites	France	Shom	data.shom.fr	Yes	WMS	Shared

*Table 15- Submarine cables and pipelines: selection of datasets**Assets*

- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.

*Barriers*

- Data portrayal: Each layer has its own symbology
- Difference of accuracy between layers, very difficult to identify which one is more accurate
- Availability of some data sources in WMS instead of WFS could make working with them more difficult
- Issues with WMS layers coming from ArcGIS Server: white background

*Action needed*

- Portrayal harmonisation, in order to provide a single legend for all the data sources

## Tourism & recreation

Access to information about tourism and recreation is far from easy. A large range of activities need to be considered, involving countless potential sources of information, each one providing data with different structure and representation.

Two activities are considered here: yachting and bathing, as they concern identified data from all the countries or the Celtic Seas.

### Coverage

Scottish Government carried out a marine recreation and tourism survey in 2015, aiming at filling the gaps on marine recreation data and providing baseline information for maritime spatial planning. Consequently many information layers are available online at Scottish National Marine Plan interactive (NMPi) WMS consolidated within the new Marine Scotland Information (MSI) webpages<sup>6</sup>. Aside from that, some datasets on leisure activity are provided for England, and very few are available on other Celtic Seas territories.

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<sup>6</sup> <http://marine.gov.scot>

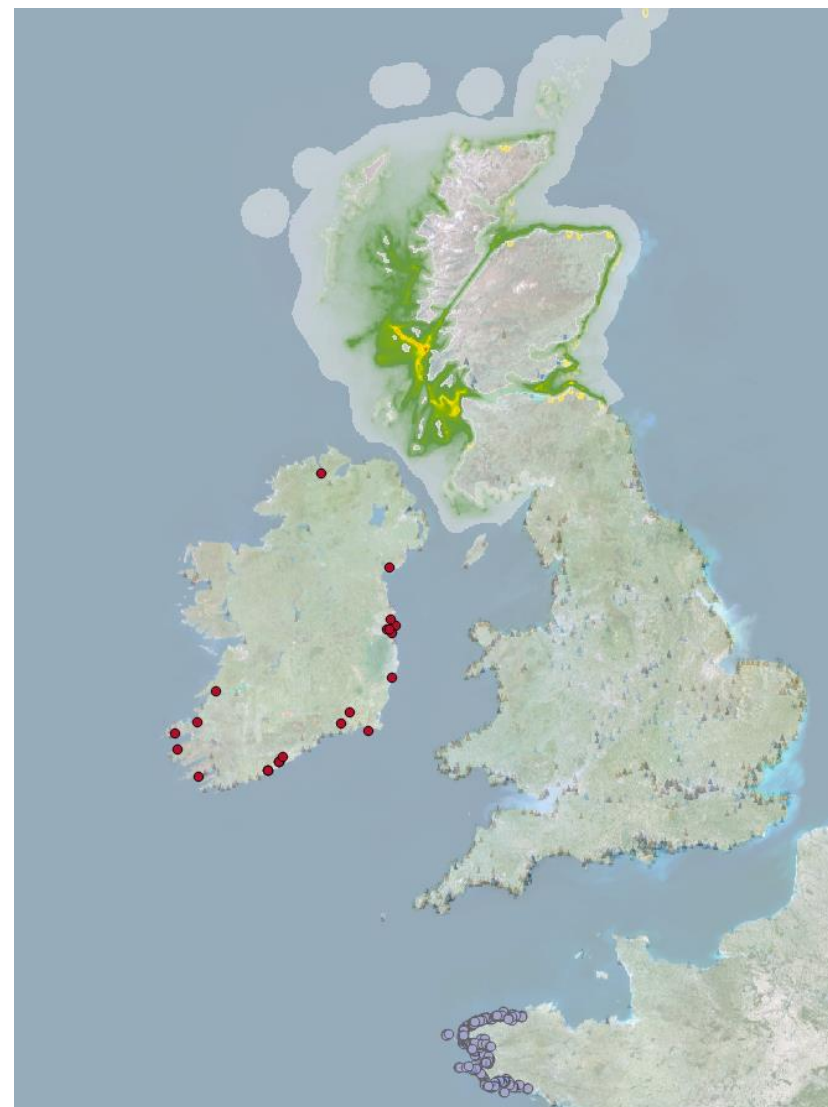


Figure 16 - Tourism & recreation

*Tourism & recreation: selection of datasets*

Theme	Layers	Area	Source	SDI	Inspire Metadata	Diffusion	Openness
All activities	Scottish Marine Recreation & Tourism Survey 2015	Scotland	Marine scotland	Marine Scotland NMPI	No	WMS	Shared
Yachting	Training Centres Scotland Marinas Sailing Clubs Sailing Areas Recreational cruising routes Racing areas	Scotland	Royal Yachting Association	Marine Scotland NMPI	No	WMS	Shared
Yachting	Scottish canals	Scotland	Scottish canals	Marine Scotland NMPI	No	WMS	Shared
Yachting	Slipways Marinas	Europe	<a href="http://www.boatlaunch.co.uk">http://www.boatlaunch.co.uk</a>	Marine Planning Evidence	No	WMS	Shared
Yachting	Marinas	Ireland	MaREI	Ireland's Marine Atlas	Yes	WFS	Open
Bathing	Blue flag and seaside awards since 2012	Scotland	Keep Scotland Beautiful	Marine Scotland NMPI	No	WMS	Shared
Bathing	Bathing Waters compliance	England	Environment Agency	Marine Planning Evidence	No	WMS	Shared
Bathing	Blue flag beaches	England	Keep Britain Tidy	Marine Planning Evidence	No	WMS	Shared
Bathing	Sites de baignade du Finistère	France	DDTM29	Géobretagne	Yes	WFS	Open

*Table 16 - Tourism and recreation: selection of datasets**Assets*

- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.

*Barriers*

- Few data available aside from Scotland and England
- Issues with WMS layers coming from ArcGIS Server: white background

*Action needed*

- No action plan defined yet

### Underwater cultural heritage

Underwater cultural heritage mainly relates to shipwrecks, but also integrates specific sites of interest, like historic marine protected areas or World Heritage sites.

#### *Coverage*

Some information on wrecks is present in both European projects EMODnet Bathymetry and EMODnet Human Activities, but data does not cover the Celtic Seas area. Instead, Shom for France and Infomar project for Ireland provide interesting datasets. UKHO also maintains a wrecks database, but it is not publicly available. Data for sites of interest linked to underwater cultural heritage were only found for Scotland.

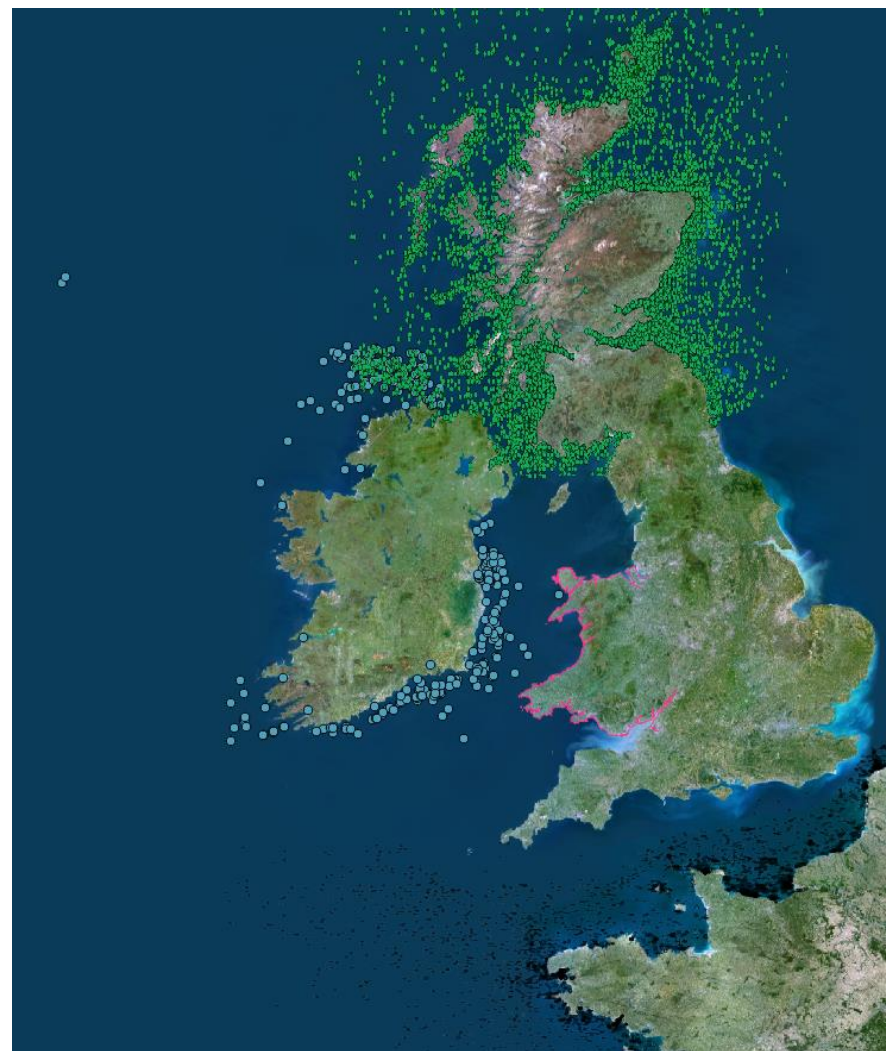


Figure 17 - Underwater cultural heritage

*Underwater cultural heritage: selection of datasets*

Theme	Layers	Area	Source	SDI	Inspire Metadata	Diffusion	Openness
Wrecks	Epaves et obstructions	France	Shom	data.shom.fr	Yes	WMS	Shared
Wrecks	Infomar seabed survey shipwrecks	Ireland	INFOMAR Project	Marine atlas	Yes	WFS	Open
Wrecks	Losses Vessels designated as Controlled Sites under the Protection of Military Remains Act 1986	Scotland	RCAHMS	Marine Scotland NMPI	No	WMS	Shared
Sites of Interest	Historic Marine protected areas World heritage sites	Scotland	Historic Environment Scotland	Marine Scotland NMPI	No	WMS	Shared

*Table 17 - Underwater cultural heritage: selection of datasets**Assets*

- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.

*Barriers*

- Data portrayal: Each layer has its own symbology
- Issues with WMS layers coming from ArcGIS Server: white background

*Action needed*

- No action plan defined yet

## Coastal defence

The coastal defence theme covers data about shoreline management and protection against coastal risks. Information types required for MSP include coastline position, shoreline management plans, dredging, and coastal hazard characterisation.

### *Coverage*

The EMODnet Human Activities project provides a layer with a good coverage of SIMCelt project areas, and containing already harmonised data. The other subthemes show important coverage variations on data availability by web services. When data on coastal hazards have easier access in France, more information can be found on shoreline management plans in England and Wales.



Figure 18 - Coastal defence

*Coastal defence: selection of datasets*

Theme	Layers	Area	Source	SDI	Inspire Metadata	Diffusion	Openness
Dredging	Dredging	Europe	AZTI- Tecalia	EMODnet human activities	Yes	WFS	Open
Shoreline management	Shoreline management plans	England	Environment Agency	MMO Marine Planning Evidence	No	SOAP	Shared
Shoreline management	Shoreline management plans	Wales	Natural Resources Wales	Wales Marine Planning Portal	No	WFS	Shared
Coastal protection Schemes	Coastal Protection and Flood Defence - Coast protection schemes since 2000 Coastal Protection and Flood Defence - Flood defence schemes since 1961 Coastal Protection and Flood Defence - Managed re-alignment schemes	Scotland	Scottish Government	Marine Scotland NMPI	No	WMS	Open
Coastal protection Schemes	Communes avec des PPRL approuvés	France	MEEM	Géolittoral	Yes	WFS	Shared
Coastline	Coastline	Ireland	Ordnance Survey Ireland	Ireland's Marine Atlas	Yes	WFS	Open
Coastline	Trait de côte Histolitt	France	Shom	data.shom.fr	Yes	WMS	Open
Hazard	Submersion marine Indicateur national de l'érosion côtière Nombre de catastrophes naturelles liées à la mer par commune	France	MEEM	Géolittoral	Yes	WFS	Shared

*Table 18 - Coastal defence: selection of datasets**Assets*

- Data partly comes from SIMCelt partner which will make it easier to provide updates to datasets.

*Barriers*

- Difficulties combining data coming from different protocols (WxS vs SOAP)

*Action needed*

- No action plan defined yet

## Spatial policy

Spatial policy data include marine planning zoning information. This kind of delimitation can be created at different scales, from regional planning to local partnerships.

### Coverage

Regional marine planning areas are currently provided for England and Scotland. Regarding Wales, a marine plan areas dataset is viewable on Wales Marine Planning portal<sup>7</sup>, but it is not reachable by using web services. France, Ireland and Northern Ireland have no marine plans adopted yet. Local partnerships were only found for Scotland.



Figure 19 – Spatial Policy

<sup>7</sup> <http://lle.gov.wales/apps/marineportal>

*Marine spatial policy: selection of datasets*

Theme	Layers	Area	Source	SDI	Inspire Metadata	Diffusion	Openness
Spatial policy	Coastal typologies	England	MMO	Marine planning evidence	No	WFS	Shared
Spatial policy	Scottish Marine Regions Local Coastal Partnerships	Scotland	Marine Scotland	Marine Scotland NMPi	No	WMS	Open

*Table 19 - Marine Spatial Policy: selection of datasets**Assets*

- Data for all approved plans are available.

*Barriers*

- No Inspire compliant metadata associated to datasets

*Action needed*

- No action plan defined yet

## Conclusion

### Some general issues

The analysis of data needs and existing gaps particularly highlights the issues below:

- There are many relevant layers for transboundary MSP. Some countries have conducted national inventories identifying reference data producers or sources to collect data. Considering transboundary issues, it is useful for Members States and planners to access to the knowledge related to neighbouring States waters. The minimum useful information is the availability and coverage of data. Webservices are an easy way to access to it as they allow reading data and information without having to collect or download it. These useful data formats are much less available. When some relevant data for MSP in a transboundary context is not listed in the inventory of this report, it is not denying that the data exists, but it highlights that it is not easily available in these useful formats.
- Data harmonisation is probably the main concern linked to data for transboundary MSP. Consistent layers covering the whole area of interest are indeed necessary, and very difficult to obtain when datasets from different jurisdiction have various portrayal, not the same attribute information, etc. The action plan led by SIMCelt C1.2.2 will have a large part dedicated to improving data harmonisation in Celtic Seas.
- Data publication progress: several important datasets for maritime spatial planning are not available in an Inspire-compliant format (and so it is for metadata publication). However the situation is gradually evolving.
- Licencing can become an essential issue in a cross-border context, and in a dynamic of sharing harmonised information. Many datasets have restrictive use, even for non-commercial purposes. However, there is positive progress encouraged by legislation evolution (for example, in France, data from public services will have to be open data).
- Finally several technical challenges are identified, like issues when trying to visualize data brought by different protocols. The problem is mainly met when trying to connect to SOAP protocol emitted by ArcGIS server. One possible answer could be to ask the responsible administrations to activate WMS services.

### Other data sources to explore

If usually data from State services or other official sources are preferred, some other sources may be worth exploring. It is the case of datasets coming from crowdsourcing, like OpenStreetMap<sup>8</sup> and its marine counterpart, OpenSeaMap<sup>9</sup>. These sources still raise some questions, like data reliability, but can

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<sup>8</sup> <http://www.openstreetmap.org>

<sup>9</sup> <http://openseamap.org>

bring some advantages. One is the high update frequency. It should be possible to identify some application areas where data from crowdsourcing could bring added value.

## Part 3. Action plan

### Overview

The action plan sets the guidelines of the operations conducted during year 2 of SIMCelt project on datasets identified in the analysis in order to increase interoperability and added value for MSP process.

Here are the proposed action points:

Theme	subtheme	action	Priority
administrative borders	terrestrial boundaries	Inspire-compliant metadata	low
administrative borders	terrestrial boundaries	portrayal harmonisation	Low
administrative borders	maritime boundaries	Inspire-compliant metadata	High
administrative borders	maritime boundaries	portrayal harmonisation	High
administrative borders	maritime boundaries	Inspire-compliant dataset	High
Physical, chemical & biological information	Biological characteristics	Inspire-compliant metadata	Low
Human activities	Aquaculture	Inspire-compliant metadata	High
Human activities	Aquaculture	portrayal harmonisation	High
Human activities	Fishing	Inspire-compliant metadata	High
Human activities	Fishing	portrayal harmonisation	High
Human activities	Marine Renewable energies	Inspire-compliant metadata	High
Human activities	Marine Renewable energies	portrayal harmonisation	High
Human activities	Maritime transport routes	Inspire-compliant metadata	High
Human activities	Maritime transport routes	portrayal harmonisation	High
Human activities	Ports	Inspire-compliant metadata	High
Human activities	Ports	portrayal harmonisation	High
Human activities	Defence	Inspire-compliant metadata	Low
Human activities	Defence	portrayal harmonisation	Low
Human activities	Raw material extraction areas	Inspire-compliant metadata	Low
Human activities	Raw material extraction areas	portrayal harmonisation	Low
Human activities	Submarine cables and pipeline routes	Inspire-compliant metadata	High
Human activities	Submarine cables and pipeline routes	portrayal harmonisation	High
Human activities	Tourism & recreation	Inspire-compliant metadata	High
Human activities	Tourism & recreation	portrayal harmonisation	High
Human activities	Underwater cultural heritage	Inspire-compliant metadata	Low
Human activities	Underwater cultural heritage	portrayal harmonisation	Low
Human activities	coastal defence	Inspire-compliant metadata	Low
Human activities	coastal defence	portrayal harmonisation	Low
Human activities	Spatial policy	Inspire-compliant metadata	Low

Table 20 - Actions points

SIMCelt meeting held in Liverpool on January 9<sup>th</sup> 2017 provided a list of major sectors to focus on. Those sectors are thus given a high priority.

Some identified action points will be found in nearly every category, and are subject to the same treatment.

### Inspire-compliant metadata

The goal is to be able to display metadata in the Inspire standard for every dataset provided in SIMCelt portal demonstrator. Two initial situations can be identified as starting points to reach this goal: either provider already has a harvestable catalogue or he has not.

#### Situation 1: data provider already has a CSW catalogue

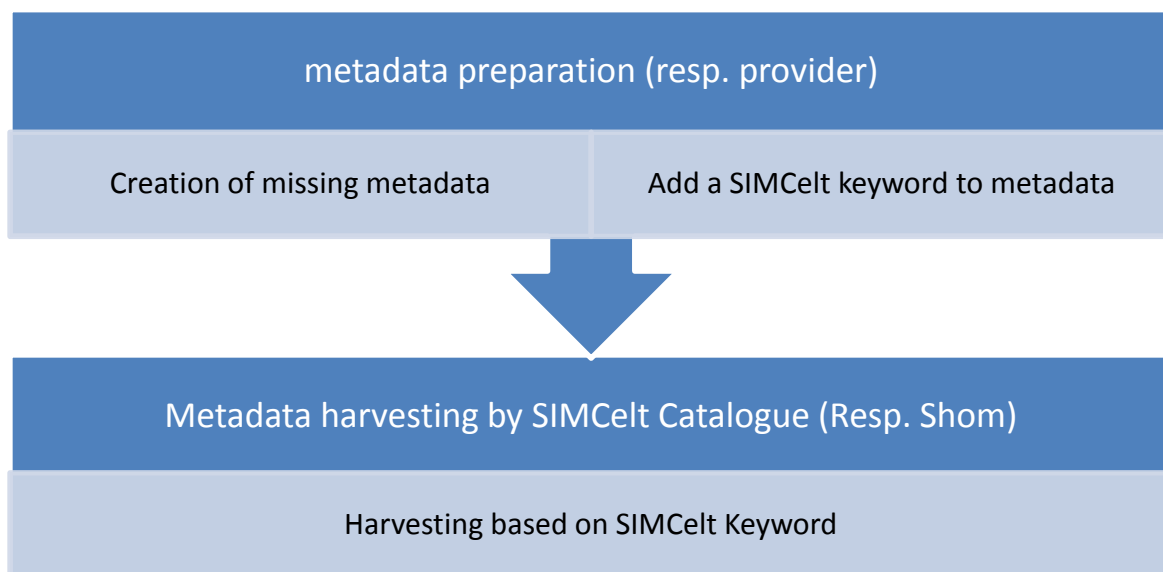


Figure 20 - Inspire-compliant metadata publication workflow with CSW catalogue

#### Situation 2: data provider doesn't have a CSW catalogue

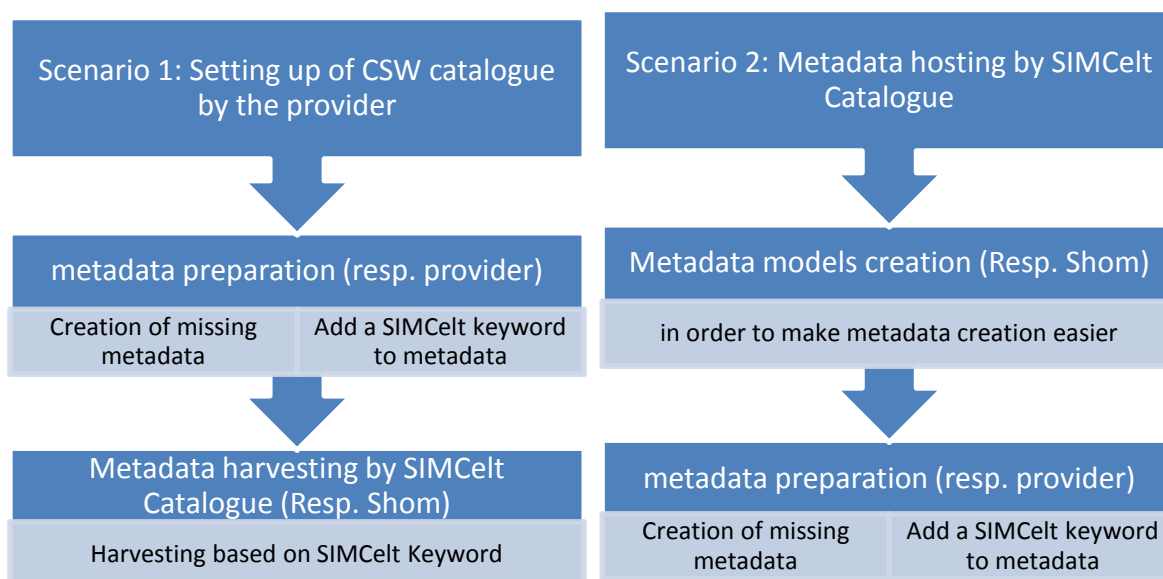


Figure 21 - Inspire-compliant metadata publication workflow without CSW catalogue

## Portrayal harmonisation

Displaying data from different sources on the same cartographic interface can create issues. One of them is that the different sources often don't use the same legend, making the map difficult to read and to understand. Therefore, there is a need to provide common symbologies for datasets on the same sector / theme

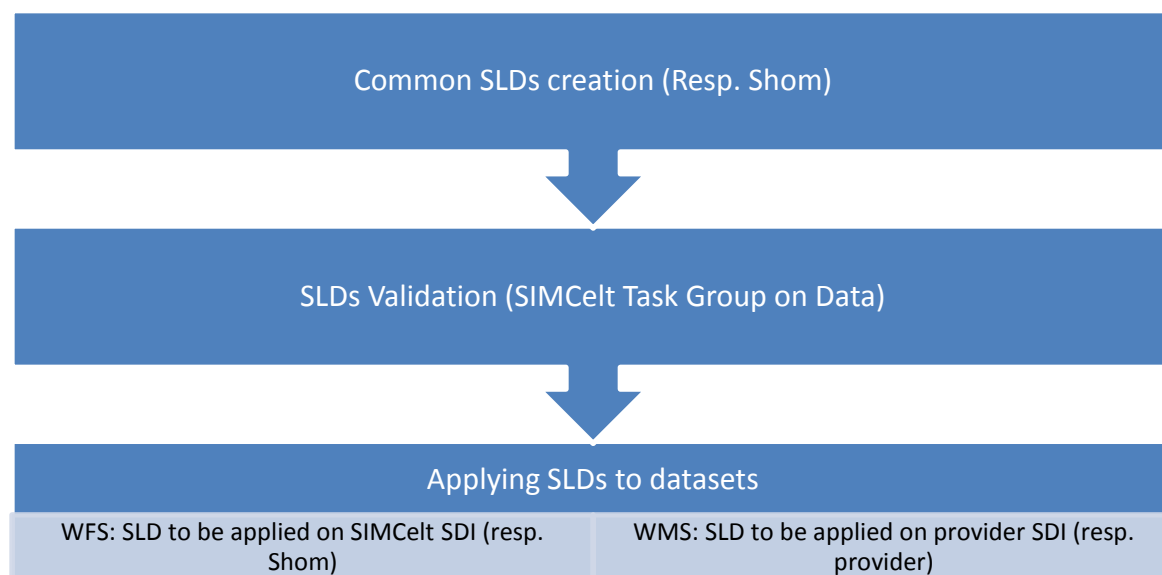


Figure 22 - Portrayal harmonisation workflow

**Annex 1: List of sources****National MSP Spatial Data Infrastructures**

Name	Organisation	area of interest	metadata	webservices
Ireland's Marine Atlas	Marine Institute	Ireland	Inspire	WMS - WFS
National Marine Plan Interactive	Marine Scotland	Scotland	Webpage	WMS
Marine Planning Evidence	Marine Management Organisation	England	Rest	SOAP - WMS
Wales Marine planning portal	Marine Institute	Ireland	Inspire	WMS - WFS

**SIMCelt Partner SDI**

Name	Organisation	area of interest	metadata	webservices
Data Shom	Shom	France	Inspire	WMS - WFS
Cartomer	AFB	France	Inspire	WMS - WFS
Irish Spatial Data Exchange	Marine Institute	France	Inspire	WMS - WFS

**European projects SDI**

Name	Organisation	area of interest	metadata	webservices
EMODnet Bathymetry portal	EMODnet	Europe	Inspire	WMS - WFS
EMODnet Biology portal	EMODnet	Europe	Inspire	WMS - WFS
EMODnet Geology portal	EMODnet	Europe	Inspire	WMS - WFS
EMODnet Seabed habitats portal	EMODnet	Europe	Inspire	WMS - WFS
EMODnet Chemistry portal	EMODnet	Europe	Inspire	WMS - WFS
EMODnet Physics portal	EMODnet	Europe	Inspire	WMS - WFS
EMODnet Human Activities portal	EMODnet	Europe	Inspire	WMS - WFS
EMODnet Coastal Mapping Portal	EMODnet	Europe	Inspire	
TPEA Viewer	TPEA	East-Atlantic	-	-
Inspire Geoportal	European Commission	Europe	Inspire	WMS - WFS
Natura 2000 Network Viewer	European Environment Agency	Europe	Inspire	WMS - WFS

Maia Web GIS	Maia network	East-Atlantic	Inspire	WMS - WFS
VALMER data hub	VALMER	Channel - French Atlantic side	Inspire	WMS - WFS

**Other SDI**

Name	Organisation	area of interest	metadata	webservice
OSPAR MPA Map tool	OSPAR Commission	North-East Atlantic	Inspire	WMS - WFS
UKHO Inspire portal & Bathymetry DAC	UKHO	United Kingdom		
INFOMAR	Geological Survey of Ireland Marine Institute	Ireland		
National Parks and wildlife service map viewer	National Parks and wildlife service	Ireland		WMS
SNH Interactive map	Scottish natural heritage	Scotland		
Marine Information System	MMO	England	Rest	SOAP - WMS
Sextant	Ifremer	France	Inspire	WMS - WFS
Geolittoral	CEREMA	France	Inspire	WMS - WFS
Global offshore windfarm database	4C Offshore	World		
Geobretagne	Préfecture de la région Bretagne Région Bretagne	Brittany	Inspire	WMS - WFS
BODC	British Oceanographic Data Center	United Kingdom		
MEDIN	MEDIN partnership	United Kingdom		
Data.gov.ie	Department of Public Expenditure and Reform	Ireland		WMS - WFS
data.gouv.fr	Mission Etalab	France	Inspire	WMS - WFS
data.gov.uk	Data Team - Cabinet Office	United Kingdom		
Geoportail	Institut National de l'Information Géographique et Forestière	France	Inspire	WMS - WFS
indigeo	Université de Bretagne Occidentale	Brittany	Inspire	WMS - WFS

Annex 2: Inventory of selected datasets

lvl1	lvl2	layer	Area	producer	provider	MD type	MD URL	Access type	Service URL	data type	date	Open-ness level	Licence type	Usage restrictions	Further information	Comment
Administrative boundaries	Terrestrial boundaries	Régions	France	Institut National de l'Information Géographique et Forestière	Géobretagne	Inspire	<a href="http://geobretagne.fr/geonetwork/apps/georchestra/?uuid=ce22dc5f-2b25-4881-876c-ade7d92aed40">http://geobretagne.fr/geonetwork/apps/georchestra/?uuid=ce22dc5f-2b25-4881-876c-ade7d92aed40</a>	WFS	<a href="http://geobretagne.fr/geoserver/mig/wfs">http://geobretagne.fr/geoserver/mig/wfs</a>	Vector - polygons	2015	Open		No usage restrictions		
Administrative boundaries	Terrestrial boundaries	Départements	France	Institut National de l'Information Géographique et Forestière	Géobretagne	Inspire	<a href="http://geobretagne.fr/geonetwork/apps/georchestra/?uuid=e16d50d4-746d-44e3-a5e7-5fc000f97665">http://geobretagne.fr/geonetwork/apps/georchestra/?uuid=e16d50d4-746d-44e3-a5e7-5fc000f97665</a>	WFS	<a href="http://geobretagne.fr/geoserver/dreal/_b/wfs">http://geobretagne.fr/geoserver/dreal/_b/wfs</a>	Vector - polygons	2010	shared	Licence: Restriction induite par l'existence d'une licence	Usage libre sous réserve des mentions obligatoires sur tout document de diffusion : "Source : IGN 2010..."		
Administrative boundaries	Terrestrial boundaries	Communes	France	Institut National de l'Information Géographique et Forestière	Géobretagne	Inspire	<a href="http://geobretagne.fr/geonetwork/apps/georchestra/?uuid=b08e6cb1-236c-49b7-88f9-42b500d274d5">http://geobretagne.fr/geonetwork/apps/georchestra/?uuid=b08e6cb1-236c-49b7-88f9-42b500d274d5</a>	WFS	<a href="http://geobretagne.fr/geoserver/dreal/_b/wfs">http://geobretagne.fr/geoserver/dreal/_b/wfs</a>	Vector - polygons	2016	Open	<a href="http://www.data.gouv.fr/Licence-Ouverte-Open-Licence">http://www.data.gouv.fr/Licence-Ouverte-Open-Licence</a>	Usage libre sous réserve des mentions obligatoires sur tout document de diffusion : "Source : IGN 2016"		
Administrative boundaries	Terrestrial boundaries	EPCI en Bretagne au 01/01/2017	Brittany	Direction Régionale de l'Environnement, de l'Aménagement et du Logement de la Bretagne	Géobretagne	Inspire	<a href="http://geobretagne.fr/geonetwork/apps/georchestra/?uuid=2298d744-49cb-4fcb-9487-26f916fecdff">http://geobretagne.fr/geonetwork/apps/georchestra/?uuid=2298d744-49cb-4fcb-9487-26f916fecdff</a>	WFS	<a href="http://geobretagne.fr/geoserver/dreal/_b/wfs">http://geobretagne.fr/geoserver/dreal/_b/wfs</a>	Vector - polygons	2017	Open	<a href="http://wiki.data.gouv.fr/wiki/Licence_Ouverte_-_Open_Licence">http://wiki.data.gouv.fr/wiki/Licence_Ouverte_-_Open_Licence</a>	Usage libre sous réserve des mentions obligatoires sur tout document de diffusion : "Source : DREAL Bretagne"		
Administrative boundaries	Terrestrial boundaries	Local authority boundaries of Ireland	Ireland	Central Statistics Office	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/23f5c449-d66e-4fab-ac7e-97bd9ce71dbf">http://www.isde.ie/#/23f5c449-d66e-4fab-ac7e-97bd9ce71dbf</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer</a>	Vector - polygons	2011	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Administrative boundaries	Terrestrial boundaries	Electoral divisions	Ireland	Central Statistics Office	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/23bbf5e5-ff24-47b9-9622-c2bd2a52b8f6">http://www.isde.ie/#/23bbf5e5-ff24-47b9-9622-c2bd2a52b8f6</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer</a>	Vector - polygons	2010	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Administrative boundaries	Terrestrial boundaries	Local authority boundaries	Scotland	Ordnance Survey	Marine Scotland NMPi	Webpage	<a href="http://marine.gov.scot/maps/1345">http://marine.gov.scot/maps/1345</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - polygons	2016	Open	<a href="http://marine.gov.scot/usage-licence/open-government-licence-ogl">http://marine.gov.scot/usage-licence/open-government-licence-ogl</a>			
Administrative boundaries	Terrestrial boundaries	Local government districts	Northern Ireland	Ordnance Survey of Northern Ireland	Opendata NI	CKAN page	<a href="https://www.opendatani.gov.uk/dataset/osni-open-data-largescale-boundaries-local-government-districts-1993">https://www.opendatani.gov.uk/dataset/osni-open-data-largescale-boundaries-local-government-districts-1993</a>	WMS	<a href="https://gisservices.spatialni.gov.uk/arcgis/services/OpenData/OSNIOpenData_LargescaleBoundaries/MapServer/WMServer?request=GetCapabilities&amp;service=WMS">https://gisservices.spatialni.gov.uk/arcgis/services/OpenData/OSNIOpenData_LargescaleBoundaries/MapServer/WMServer?request=GetCapabilities&amp;service=WMS</a>	Vector - polygons	2016	Open	<a href="http://reference.data.gov.uk/id/open-government-licence">http://reference.data.gov.uk/id/open-government-licence</a>			
Administrative boundaries	Terrestrial boundaries	Regions	England	Office for National Statistics	ONS Open Geography Portal	ISO19115-19139	<a href="https://www.arcgis.com/sharing/rest/content/items/8d3a9e6e7bd445e2bdcc26cdf007eac7/info/metadata/metadata.xml?format=default&amp;output=html">https://www.arcgis.com/sharing/rest/content/items/8d3a9e6e7bd445e2bdcc26cdf007eac7/info/metadata/metadata.xml?format=default&amp;output=html</a>	WFS	<a href="https://ons-inspire.esriuk.com/arcgis/services/Administrative_Boundaries/Region_December_2015_Boundaries/MapServer/">https://ons-inspire.esriuk.com/arcgis/services/Administrative_Boundaries/Region_December_2015_Boundaries/MapServer/</a>	Vector - polygons	2015	Open	<a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a>			
Administrative boundaries	Terrestrial boundaries	Counties and unitary authorities	England & Wales	Office for National Statistics	ONS Open Geography Portal	ISO19115-19139	<a href="https://www.arcgis.com/sharing/rest/content/items/0b09996863af4b5db78058225bac5d1b/info/metadata/metadata.xml?format=default&amp;output=html">https://www.arcgis.com/sharing/rest/content/items/0b09996863af4b5db78058225bac5d1b/info/metadata/metadata.xml?format=default&amp;output=html</a>	WFS	<a href="https://ons-inspire.esriuk.com/arcgis/services/Administrative_Boundaries/Counties_and_Unitary_Authorities_December_2015_Boundaries/MapServer/WFSServer">https://ons-inspire.esriuk.com/arcgis/services/Administrative_Boundaries/Counties_and_Unitary_Authorities_December_2015_Boundaries/MapServer/WFSServer</a>	Vector - polygons	2015	Open	<a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a>			
Administrative boundaries	Maritime boundaries	Maritime Limits Irish Baseline	Ireland	Department of Communications, Energy and Natural Resources	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/a9d2337a-94ab-4c75-abf0-7380aca06781">http://www.isde.ie/#/a9d2337a-94ab-4c75-abf0-7380aca06781</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer</a>	vector - polylines	1999	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Administrative boundaries	Maritime boundaries	Maritime Limits Irish Internal Waters	Ireland	Department of Communications, Energy and Natural Resources	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/1fb6d3b5-2f1f-4047-b287-7d7ee2759987">http://www.isde.ie/#/1fb6d3b5-2f1f-4047-b287-7d7ee2759987</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer</a>	vector - polygons	1999	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Administrative boundaries	Maritime boundaries	Maritime Limits Irish Territorial Sea	Ireland	Department of Communications, Energy and Natural Resources	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/2175d298-4af2-4ae4-947c-eaca320f4b4c">http://www.isde.ie/#/2175d298-4af2-4ae4-947c-eaca320f4b4c</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer</a>	vector - polylines	2006	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Administrative boundaries	Maritime boundaries	Maritime Limits Irish Contiguous Zone	Ireland	Department of Communications, Energy and Natural Resources	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/a151e59c-167e-40af-9bef-25c7b54869e3">http://www.isde.ie/#/a151e59c-167e-40af-9bef-25c7b54869e3</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer</a>	vector - polygons	1999	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Administrative boundaries	Maritime boundaries	Maritime Limits Exclusive Economic Zone	Ireland	Department of Communications, Energy and Natural Resources	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/417e3e52-0b33-4e03-beca-2abac64eddb8">http://www.isde.ie/#/417e3e52-0b33-4e03-beca-2abac64eddb8</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer</a>	vector - polylines	2006	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Administrative boundaries	Maritime boundaries	Delimitations maritimes	France	Shom	data.shom.fr	Inspire	<a href="http://services.data.shom.fr/geonetwork/srv/ire/catalog.search#/metadata/BDML-DELMAR.xml">http://services.data.shom.fr/geonetwork/srv/ire/catalog.search#/metadata/BDML-DELMAR.xml</a>	WMS	<a href="http://services.data.shom.fr/INSPIRE/wms/r">http://services.data.shom.fr/INSPIRE/wms/r</a>	vector - polylines	2015		restrictive (commercial product)	Données soumises à une tarification du droit d'utilisation. Les données ne peuvent pas se substituer aux textes de référence et cartes marines officielles en cas de litige.		
Administrative boundaries	Maritime boundaries	Territorial Sea	UK	UKHO	UKHO	Inspire	<a href="http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=f78ad1c8-2bc3-454d-b796-182ab3ac3aa5">http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=f78ad1c8-2bc3-454d-b796-182ab3ac3aa5</a>	WMS	<a href="http://aws2.caris.com/sfs/services/ows/download/feature/UKHO_AreaMan_DS">http://aws2.caris.com/sfs/services/ows/download/feature/UKHO_AreaMan_DS</a>	vector - polylines	2016				<a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/">http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/</a>	
Administrative boundaries	Maritime boundaries	EEZ Limit	UK	UKHO	UKHO	Inspire	<a href="http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=dfb246e7-d7e3-425c-842b-09b4e0a182dc">http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=dfb246e7-d7e3-425c-842b-09b4e0a182dc</a>	WMS	<a href="http://aws2.caris.com/sfs/services/ows/download/feature/UKHO_AreaMan_DS">http://aws2.caris.com/sfs/services/ows/download/feature/UKHO_AreaMan_DS</a>	vector - polylines	2016					
Administrative boundaries	Maritime boundaries	continental shelf Limit	UK	UKHO	UKHO	Inspire	<a href="http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df">http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df</a>	WMS	<a href="http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df">http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df</a>	vector - polylines	2016				viewable from UKHO portal, but can't get it by wms / wfs request	
Administrative boundaries	Maritime boundaries	Northern Ireland Adjacent Waters Limit	UK	UKHO	UKHO	Inspire	<a href="http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df">http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df</a>	WMS	<a href="http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df">http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df</a>	vector - polylines	2017					
Administrative boundaries	Maritime boundaries	Scottish Adjacent Waters Limit	UK	UKHO	UKHO	Inspire	<a href="http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df">http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df</a>	WMS	<a href="http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df">http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df</a>	vector - polylines	2018					

lvl1	lvl2	layer	Area	producer	provider	MD type	MD URL	Access type	Service URL	data type	date	Open-ness level	Licence type	Usage restrictions	Further information	Comment
Administrative boundaries	Maritime boundaries	Wales Adjacent Waters Limit	UK	UKHO	UKHO	Inspire	<a href="http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df">http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df</a>	WMS	<a href="http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df">http://aws2.caris.com/sfs/services/ows/csw/getrecordbyid?request=GetRecordById&amp;service=CSW&amp;version=2.0.2&amp;outputSchema=http://www.isotc211.org/2005/gmd&amp;id=86ed80d6-e40b-45bd-8397-ef1f7ed148df</a>	vector - polylines	2019					
Administrative boundaries	Maritime boundaries	Isle of man territorial sea	Isle of Man	Marine Scotland	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/540">http://marine.gov.scot/maps/540</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	vector - polylines	2014					
Physical, chemical & biological information	Physical	emodnet bathymetry	Europe	multiple producers	Emodnet Bathymetry	ISO19115-19139	<a href="http://www.emodnet-bathymetry.eu/v_cdi_v3/browse_step.asp">http://www.emodnet-bathymetry.eu/v_cdi_v3/browse_step.asp</a>	WMS	<a href="http://ows.emodnet-bathymetry.eu/wmts">http://ows.emodnet-bathymetry.eu/wmts</a>	Raster	2016					Composite product from various bathymetric surveyx led all around Europe
Physical, chemical & biological information	Physical	emodnet bathymetry source references	Europe	Emodnet Bathymetry	Emodnet Bathymetry	ISO19115-19139	<a href="http://www.emodnet-bathymetry.eu/v_cdi_v3/browse_step.asp">http://www.emodnet-bathymetry.eu/v_cdi_v3/browse_step.asp</a>	WFS	<a href="http://ows.emodnet-bathymetry.eu/wfs">http://ows.emodnet-bathymetry.eu/wfs</a>	vector - polygons	2016					All references for emodnet bathymetry layer
Physical, chemical & biological information	Physical	Courant	Europe	Shom	data.shom.fr	ISO19115-19139	<a href="http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/HYCO_M2D_MANGASC60_R1000_MANGA_20161212.xml">http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/HYCO_M2D_MANGASC60_R1000_MANGA_20161212.xml</a>	WMS	<a href="http://services.data.shom.fr/ncwms/wms">http://services.data.shom.fr/ncwms/wms</a>	Raster	2016	Open	<a href="http://www.data.gouv.fr/Licence-Ouverte-Open-Licence">http://www.data.gouv.fr/Licence-Ouverte-Open-Licence</a>			
Physical, chemical & biological information	Physical	température eau de mer	Europe	Shom	data.shom.fr	ISO19115-19139	<a href="http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/HYCO_M2D_MANGASC60_R1000_MANGA_20161212.xml">http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/HYCO_M2D_MANGASC60_R1000_MANGA_20161212.xml</a>	WMS	<a href="http://services.data.shom.fr/ncwms/wms">http://services.data.shom.fr/ncwms/wms</a>	Raster	2016	Open	<a href="http://www.data.gouv.fr/Licence-Ouverte-Open-Licence">http://www.data.gouv.fr/Licence-Ouverte-Open-Licence</a>			
Physical, chemical & biological information	Physical	salinité eau de mer	Europe	Shom	data.shom.fr	ISO19115-19139	<a href="http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/HYCO_M2D_MANGASC60_R1000_MANGA_20161212.xml">http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/HYCO_M2D_MANGASC60_R1000_MANGA_20161212.xml</a>	WMS	<a href="http://services.data.shom.fr/ncwms/wms">http://services.data.shom.fr/ncwms/wms</a>	Raster	2016	Open	<a href="http://www.data.gouv.fr/Licence-Ouverte-Open-Licence">http://www.data.gouv.fr/Licence-Ouverte-Open-Licence</a>			
Physical, chemical & biological information	Physical	Pression en surface	Europe	Shom	data.shom.fr	ISO19115-19139	<a href="http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/METEO_R1100_AROME-EURW15100-MER_20161220.xml">http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/METEO_R1100_AROME-EURW15100-MER_20161220.xml</a>	WMS	<a href="http://services.data.shom.fr/ncwms/wms">http://services.data.shom.fr/ncwms/wms</a>	Raster	2016	Open	<a href="http://www.data.gouv.fr/Licence-Ouverte-Open-Licence">http://www.data.gouv.fr/Licence-Ouverte-Open-Licence</a>			
Physical, chemical & biological information	Physical	Vitesse et direction du vent	Europe	Shom	data.shom.fr	ISO19115-19139	<a href="http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/METEO_R1000_ARPEGE-EURAT01-MER_20161212.xml">http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/METEO_R1000_ARPEGE-EURAT01-MER_20161212.xml</a>	WMS	<a href="http://services.data.shom.fr/ncwms/wms">http://services.data.shom.fr/ncwms/wms</a>	Raster	2016	Open	<a href="http://www.data.gouv.fr/Licence-Ouverte-Open-Licence">http://www.data.gouv.fr/Licence-Ouverte-Open-Licence</a>			
Physical, chemical & biological information	Physical	Hauteur significative et direction mer totale	Europe	Shom	data.shom.fr	ISO19115-19139	<a href="http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/WW3_R1000_EURAT01-MFWAM_20161220.xml">http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/WW3_R1000_EURAT01-MFWAM_20161220.xml</a>	WMS	<a href="http://services.data.shom.fr/ncwms/wms">http://services.data.shom.fr/ncwms/wms</a>	Raster	2016	Open	<a href="http://www.data.gouv.fr/Licence-Ouverte-Open-Licence">http://www.data.gouv.fr/Licence-Ouverte-Open-Licence</a>			
Physical, chemical & biological information	Physical	Période mer totale	Europe	Shom	data.shom.fr	ISO19115-19139	<a href="http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/WW3_R1000_EURAT01-MFWAM_20161220.xml">http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/WW3_R1000_EURAT01-MFWAM_20161220.xml</a>	WMS	<a href="http://services.data.shom.fr/ncwms/wms">http://services.data.shom.fr/ncwms/wms</a>	Raster	2016	Open	<a href="http://www.data.gouv.fr/Licence-Ouverte-Open-Licence">http://www.data.gouv.fr/Licence-Ouverte-Open-Licence</a>			
Physical, chemical & biological information	Physical	Carte sédimentaire mondiale	World	Shom	data.shom.fr	ISO19115-19139	<a href="http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/HOM_GEOL_SEDIM_MONDIALE.xml">http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/HOM_GEOL_SEDIM_MONDIALE.xml</a>	WMS	<a href="http://services.data.shom.fr/INSPIRE/wms/r">http://services.data.shom.fr/INSPIRE/wms/r</a>	vector - polygons	2016	Shared		Données soumises à une tarification du droit d'utilisation. La réutilisation commerciale des données fait l'objet d'un contrat spécifique.		
Physical, chemical & biological information	Habitats	EUSeaMap2 (2016) Broad-Scale Predictive Habitat Map	Europe	Emodnet Seabed Habitats	Emodnet Seabed Habitats	ISO19115-19139	<a href="http://gis.ices.dk/geonetwork/srv/eng/catalog.search#/metadata/02a444c8-bd2d-4e15-8e69-806059103760">http://gis.ices.dk/geonetwork/srv/eng/catalog.search#/metadata/02a444c8-bd2d-4e15-8e69-806059103760</a>	WMS	<a href="http://213.122.160.75/scripts/mapserver.exe?map=D:/Websites/MeshAtlantic/map/MESHAtlantic.map">http://213.122.160.75/scripts/mapserver.exe?map=D:/Websites/MeshAtlantic/map/MESHAtlantic.map</a>	vector - polygons	2016	shared	<a href="http://www.emodnet-seabedhabitats.eu/PDF/EMODnet_Seabed_Habitats_webGIS_Terms_and_Conditions_and_Privacy_Policy_(WEB).pdf">http://www.emodnet-seabedhabitats.eu/PDF/EMODnet_Seabed_Habitats_webGIS_Terms_and_Conditions_and_Privacy_Policy_(WEB).pdf</a>	Please cite EMODnet Seabed Habitats when using these data or products derived from these data		
Physical, chemical & biological information	Biology	Nephrops Grounds	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/eef716f7-83e6-4e46-b12b-e380054729e8">http://www.isde.ie/#/eef716f7-83e6-4e46-b12b-e380054729e8</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/SpeciesDistribution/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/SpeciesDistribution/MapServer/WFSServer</a>	vector - polygons	2014	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Physical, chemical & biological information	Biology	Nephrops Underwater Television Survey Stations	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/9410664b-6bf1-42aa-896f-1934ab1779e4">http://www.isde.ie/#/9410664b-6bf1-42aa-896f-1934ab1779e4</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/SpeciesDistribution/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/SpeciesDistribution/MapServer/WFSServer</a>	vector - polygons	2014	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Physical, chemical & biological information	Biology	Nephrops Spawning Grounds	United Kingdom & Ireland	Marine Scotland	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/654">http://marine.gov.scot/maps/654</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	vector - polygons	1998	Shared	<a href="http://www.gov.scot/CrownCopyright">http://www.gov.scot/CrownCopyright</a>			
Physical, chemical & biological information	Biology	Nephrops Nursery Grounds	United Kingdom & Ireland	Marine Scotland	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/649">http://marine.gov.scot/maps/649</a>		<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	vector - polygons	1998	Shared	<a href="http://www.gov.scot/CrownCopyright">http://www.gov.scot/CrownCopyright</a>			
Physical, chemical & biological information	Biology	Nephrops Spawning Grounds	United Kingdom & Ireland	Centre for Environment, Fisheries and Aquaculture Science	Wales Marine Planning Portal		<a href="http://data.cefas.co.uk/#/View/153">http://data.cefas.co.uk/#/View/153</a>			vector - polygons	2012	Open	Open Government Licence			
Physical, chemical & biological information	Biology	Observation of Gery Seal	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/e39ccc24-9af0-4ea2-800a-d7de85427f67">http://www.isde.ie/#/e39ccc24-9af0-4ea2-800a-d7de85427f67</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/SpeciesDistributionMarineMammals/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/SpeciesDistributionMarineMammals/MapServer/WFSServer</a>	vector - polygons	2015	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Physical, chemical & biological information	Biology	Abundance of Grey Seal	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/e39ccc24-9af0-4ea2-800a-d7de85427f67">http://www.isde.ie/#/e39ccc24-9af0-4ea2-800a-d7de85427f67</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/SpeciesDistributionMarineMammals/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/SpeciesDistributionMarineMammals/MapServer/WFSServer</a>	vector - polygons	2015	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Physical, chemical & biological information	Biology	Search of Grey Seal	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/e39ccc24-9af0-4ea2-800a-d7de85427f67">http://www.isde.ie/#/e39ccc24-9af0-4ea2-800a-d7de85427f67</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/SpeciesDistributionMarineMammals/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/SpeciesDistributionMarineMammals/MapServer/WFSServer</a>	vector - polygons	2015	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Physical, chemical & biological information	Biology	Range of Grey Seal	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/e39ccc24-9af0-4ea2-800a-d7de85427f67">http://www.isde.ie/#/e39ccc24-9af0-4ea2-800a-d7de85427f67</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/SpeciesDistributionMarineMammals/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/SpeciesDistributionMarineMammals/MapServer/WFSServer</a>	vector - polygons	2015	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Physical, chemical & biological information	Biology	Seal Density	Celtic Seas	Marine Scotland	MMO Marine Planning Evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Seal_density/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Seal_density/MapServer</a>	SOAP	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Seal_density/MapServer?wsdl">http://mmogis.services.defra.gov.uk/arcgis/services/Seal_density/MapServer?wsdl</a>	Raster	2011		<b>Copyright Text:</b> Marine Scotland			
Physical, chemical & biological information	Biology	Grey Seal Pupping Sites	Scotland	Sea Mammal Research Unit	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/766">http://marine.gov.scot/maps/766</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	vector - polygons	2015					
Physical, chemical & biological information	Biology	Grey Seal Pupping Haul Out	Wales	Natural Resources Wales	Wales Marine Planning Portal			WFS	<a href="http://lle.gov.wales/services/inspire-nrw/wfs">http://lle.gov.wales/services/inspire-nrw/wfs</a>	vector - polygons	2010					
Physical, chemical & biological information	Pressures	OSPAR Marine Contaminants - Biota	Europe	OSPAR Commission	OSPAR Data Portal	Inspire	<a href="http://odims.ospar.org/layers/geonode:geonode_OSPAR_OSPAR_contaminants_C_F_2015/metadata_detail">http://odims.ospar.org/layers/geonode:geonode_OSPAR_OSPAR_contaminants_C_F_2015/metadata_detail</a>	WFS	<a href="http://odims.ospar.org:80/geoserver/wfs">http://odims.ospar.org:80/geoserver/wfs</a>	Vector - points	2015	Shared	<a href="http://www.ospar.org/site/assets/files/1215/ospar_data_conditions_of_use.pdf">http://www.ospar.org/site/assets/files/1215/ospar_data_conditions_of_use.pdf</a>			
Physical, chemical & biological information	Pressures	OSPAR Marine Contaminants - Sediments	Europe	OSPAR Commission	OSPAR Data Portal	Inspire	<a href="http://odims.ospar.org/layers/geonode:geonode_OSPAR_OSPAR_contaminants_C_S_2014/metadata_detail">http://odims.ospar.org/layers/geonode:geonode_OSPAR_OSPAR_contaminants_C_S_2014/metadata_detail</a>	WFS	<a href="http://odims.ospar.org:80/geoserver/wfs">http://odims.ospar.org:80/geoserver/wfs</a>	Vector - points	2014	Shared	<a href="http://www.ospar.org/site/assets/files/1215/ospar_data_conditions_of_use.pdf">http://www.ospar.org/site/assets/files/1215/ospar_data_conditions_of_use.pdf</a>			

lvl1	lvl2	layer	Area	producer	provider	MD type	MD URL	Access type	Service URL	data type	Open-ness date level	Licence type	Usage restrictions	Further information	Comment
Physical, chemical & biological information	Pressures	OSPAR Marine Contaminants - Water	Europe	OSPAR Commission	OSPAR Data Portal	Inspire	http://odims.ospar.org/layers/geonode:geonode_OSPAR_OSPAR_contaminants_CW_2015/metadata_detail	WFS	http://odims.ospar.org:80/geoserver/wfs	Vector - points	2015 Shared	http://www.ospar.org/site/assets/files/1215/ospar_data_conditions_of_use.pdf			
Physical, chemical & biological information	Pressures	OSPAR Dumping at Sea	Europe	OSPAR Commission	OSPAR Data Portal	Inspire	http://odims.ospar.org/layers/geonode:ospar_dumping_at_sea_2014_01/metadata_detail	WFS	http://odims.ospar.org:80/geoserver/wfs	Vector - points	2014 Shared	http://www.ospar.org/site/assets/files/1215/ospar_data_conditions_of_use.pdf			
Physical, chemical & biological information	Pressures	Environmental Monitoring of Radioactive Substances in Biota	Europe	OSPAR Commission	OSPAR Data Portal	Inspire	http://odims.ospar.org/layers/geonode:ospar_biota_2013_01/metadata_detail	WFS	http://odims.ospar.org:80/geoserver/wfs	Vector - points	2013 Shared	http://www.ospar.org/site/assets/files/1215/ospar_data_conditions_of_use.pdf	no limitation		
Physical, chemical & biological information	Pressures	Environmental Monitoring of Radioactive Substances in Seawater	Europe	OSPAR Commission	OSPAR Data Portal	Inspire	http://odims.ospar.org/layers/geonode:ospar_seawater_2013_01/metadata_detail	WFS	http://odims.ospar.org:80/geoserver/wfs	Vector - points	2013 Shared	http://www.ospar.org/site/assets/files/1215/ospar_data_conditions_of_use.pdf	no limitation		
Human activities	Aquaculture	Seaweed by culture type	Ireland	Department of Agriculture, Food and the Marine	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/635059b6-e412-4c43-b758-07a4cc7d184b">http://www.isde.ie/#/635059b6-e412-4c43-b758-07a4cc7d184b</a>	WMS	http://atlas.marine.ie/arcgis/services/Fisheries/MapServer/WMServer	vector - polygons	2015 Closed		unavailable to the SIMCelt project until we have further clarification on the data sharing agreement for this data we have with the Department of Agriculture, Food and the Marine.		
Human activities	Aquaculture	Seaweed by species type	Ireland	Department of Agriculture, Food and the Marine	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/635059b6-e412-4c43-b758-07a4cc7d184b">http://www.isde.ie/#/635059b6-e412-4c43-b758-07a4cc7d184b</a>	WMS	http://atlas.marine.ie/arcgis/services/Fisheries/MapServer/WMServer	vector - polygons	2015 Closed		unavailable to the SIMCelt project until we have further clarification on the data sharing agreement for this data we have with the Department of Agriculture, Food and the Marine.		
Human activities	Aquaculture	Shellfish production areas	Europe	EUROSHELL project	Emodnet Human Activities	Inspire - download only	<a href="http://www.emodnet-humanactivities.eu/">http://www.emodnet-humanactivities.eu/</a>	WFS	<a href="http://77.246.172.208/WFSshellfish">http://77.246.172.208/WFSshellfish</a>	Vector - points	2016 Open		Re-use of content for commercial or non-commercial purposes is permitted free of charge, provided that the sources (both EMODnet - Human Activities, and primary sources) are acknowledged. EMODnet - Human Activities accepts no responsibility or liability whatsoever for the re-use of content accessible on its website.		
Human activities	Aquaculture	Finfish farming sites	Europe	Member states	Emodnet Human Activities	Inspire - download only	<a href="http://www.emodnet-humanactivities.eu/">http://www.emodnet-humanactivities.eu/</a>	WFS	<a href="http://77.246.172.208/WFSfinfish">http://77.246.172.208/WFSfinfish</a>	Vector - points	2016 Open		Re-use of content for commercial or non-commercial purposes is permitted free of charge, provided that the sources (both EMODnet - Human Activities, and primary sources) are acknowledged. EMODnet - Human Activities accepts no responsibility or liability whatsoever for the re-use of content accessible on its website.	Data for Ireland & UK, not France	
Human activities	Aquaculture	Strategic Environmental Assessment (SEA) of wild seaweed harvesting	Scotland	Marine Scotland	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/information/strategic-environmental-assessment-sea-wild-seaweed-harvesting">http://marine.gov.scot/information/strategic-environmental-assessment-sea-wild-seaweed-harvesting</a>	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	Vector - polygons	2016 Shared	http://www.gov.scot/CrownCopyright		6 layers: Resource map, green seaweed, kelp, red seaweed, wrack, future resource	
Human activities	Aquaculture	Lieux de pêche de laminaires du Finistère	Finistère	DDTM29	Géobretagne	Inspire	<a href="http://geobretagne.fr/geonetwork/apps/georchestra/?uuiid=bee15bd6-0ba8-4042-9eb5-207e1a50cc95">http://geobretagne.fr/geonetwork/apps/georchestra/?uuiid=bee15bd6-0ba8-4042-9eb5-207e1a50cc95</a>	WFS	http://geobretagne.fr/geoserver/ddtm29/wfs	Vector - polygons	2012 Open	http://wiki.data.gouv.fr/wiki/Licence_Ouverte/_Open_Licence	Usage libre sous réserve des mentions obligatoires sur tout document de diffusion : "Source : DDTM du Finistère"		
Human activities	Fishing	Commercial Fishing Intensity by Fishing Gear & Fishing Time	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/d869acb0-0f81-4711-984c-c25342d8b095">http://www.isde.ie/#/d869acb0-0f81-4711-984c-c25342d8b095</a>	WFS	http://atlas.marine.ie/arcgis/services/Fisheries/MapServer/WFSServer	Raster	2012 shared	<a href="https://creativecommons.org/licenses/by-nc-nd/3.0/ie/">https://creativecommons.org/licenses/by-nc-nd/3.0/ie/</a>	5 layers: all gear - mobile bottom - mobile other - mobile seine - passive		
Human activities	Fishing	VMS Amalgamated Fishing Intensity Layers	Scotland	Marine Scotland	Marine Scotland NMPI	webpage	<a href="http://marine.gov.scot/information/vms-amalgamated-fishing-intensity-layers-2009-2013">http://marine.gov.scot/information/vms-amalgamated-fishing-intensity-layers-2009-2013</a>	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	Raster	2013 Shared	http://www.gov.scot/CrownCopyright		10 layers:	
Human activities	Fishing	Fishing_effort_VMS	UK	MMO	MMO Marine planning evidence	Rest	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Fishing_effort_VMS/MapServer?wsdl	SOAP	http://mmogis.services.defra.gov.uk/arcgis/services/Fishing_effort_VMS/MapServer?wsdl	Raster	2014				
Human activities	Fishing	Brest métropole : Zones de pêche en Rade de Brest	Brest Bay	Brest Métropole	Géobretagne	Inspire	http://geobretagne.fr/geonetwork/apps/georchestra/?uuiid=ECO_PEC_ZonesPêche	WMS	<a href="http://geo.brest-metropole.fr/arcgis/services/public/GPB_ECO/MapServer/WMServer">http://geo.brest-metropole.fr/arcgis/services/public/GPB_ECO/MapServer/WMServer</a>	Vector - polygons	1998 Open	Open License (LO/OL)			
Human activities	Fishing	Lignes interdiction de chalutage du Finistère	Finistère	DDTM29	Géobretagne	Inspire	http://geobretagne.fr/geonetwork/apps/georchestra/?uuiid=6d379b7d-27c0-4a4b-8f9e-5fd4f209aa37	WFS	http://geobretagne.fr/geoserver/ddtm29/wfs	vector - polylines	2014 Open	http://wiki.data.gouv.fr/wiki/Licence_Ouverte/_Open_Licence	Usage libre sous réserve des mentions obligatoires sur tout document de diffusion : "Source : DDTM du Finistère"		
Human activities	Fishing	Fishing - Managed areas	Scotland	Marine Scotland	Marine Scotland NMPI	webpage	<a href="http://marine.gov.scot/information/fishing-managed-areas">http://marine.gov.scot/information/fishing-managed-areas</a>	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	Vector - polygons	2016 Open	http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/		24 layers	
Human activities	Fishing	Les cantonnements de pêche dans les eaux françaises	France	Agence des Aires Marines Protégées	Cartomer	ISO19115-19139	<a href="http://cartographie.aires-marines.fr/geosource/apps/search/?uuiid=17197870-0222-4f80-9961-0685dc7d06be">http://cartographie.aires-marines.fr/geosource/apps/search/?uuiid=17197870-0222-4f80-9961-0685dc7d06be</a>	WFS	http://cartographie.aires-marines.fr/wfs	Vector - polygons	2013 Shared		Utilisation interdite pour un usage commercial. Modification et diffusion soumise à accord du distributeur. Citation obligatoire sur les cartes de la référence suivante : "AAMP, 2013". Citation obligatoire dans la bibliographie de la référence suivante : "Agence des aires marines protégées, 2013".		
Human activities	Fishing	Fisheries Biologically Sensitive Area	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	http://www.isde.ie/#/8d43a523-ac83-4e48-b951-d27b268911b2	WFS	http://atlas.marine.ie/arcgis/services/ProtectedSites/MapServer/WFSServer	Vector - polygons	2015 Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Human activities	Fishing	Greencastle Codling Protected Area	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	http://www.isde.ie/#/7548872c-625b-4207-94b1-b6bd3d94040b	WFS	http://atlas.marine.ie/arcgis/services/ProtectedSites/MapServer/WFSServer	Vector - polygons	2007 Open	<a href="https://creativecommons.org/licenses/by-nc-nd/3.0/ie/">https://creativecommons.org/licenses/by-nc-nd/3.0/ie/</a>			
Human activities	Renewable energies infrastructures	Wind Farms	Europe	CETMAR	Emodnet Human Activities	Inspire - download only	<a href="http://www.emodnet-humanactivities.eu/">http://www.emodnet-humanactivities.eu/</a>	WFS	<a href="http://77.246.172.208/WFSwindfarms">http://77.246.172.208/WFSwindfarms</a>	Vector - points	2015 Open		Re-use of content for commercial or non-commercial purposes is permitted free of charge, provided that the sources (both EMODnet - Human Activities, and primary sources) are acknowledged. EMODnet - Human Activities accepts no responsibility or liability whatsoever for the re-use of content accessible on its website.		
Human activities	Renewable energies infrastructures	Ocean energy facilities	Europe	AZTI-Tecnalia	Emodnet Human Activities	Inspire - download only	<a href="http://www.emodnet-humanactivities.eu/">http://www.emodnet-humanactivities.eu/</a>	WFS	<a href="http://77.246.172.208/WFSoceanenergy">http://77.246.172.208/WFSoceanenergy</a>	Vector - points	2016 Open		Re-use of content for commercial or non-commercial purposes is permitted free of charge, provided that the sources (both EMODnet - Human Activities, and primary sources) are acknowledged. EMODnet - Human Activities accepts no responsibility or liability whatsoever for the re-use of content accessible on its website.		
Human activities	Renewable energies infrastructures	Galway Bay 1/4 Scale Wave Energy Test Site	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	http://www.isde.ie/#/ecff95db-3752-405e-93a0-315fdf349bd6	WFS	<a href="http://atlas.marine.ie/arcgis/services/EnergyResourcesInfrastructure/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/EnergyResourcesInfrastructure/MapServer/WFSServer</a>	Vector - polygons	2014 Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			

lvl1	lvl2	layer	Area	producer	provider	MD type	MD URL	Access type	Service URL	data type	Open-ness date level	Licence type	Usage restrictions	Further information	Comment
Human activities	Renewable energies infrastructures	Atlantic Marine energy full scale test site	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/df8385f6-b896-45a7-bd63-07f3cf52d415">http://www.isde.ie/#/df8385f6-b896-45a7-bd63-07f3cf52d415</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/EnergyResourcesInfrastructure/MapServer/WFSServer/">http://atlas.marine.ie/arcgis/services/EnergyResourcesInfrastructure/MapServer/WFSServer/</a>	Vector - polygons	2014 Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Human activities	Renewable energies infrastructures	Tidal Lease sites	Scotland	The Crown Estate	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/493">http://marine.gov.scot/maps/493</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>		2015 Open	<a href="http://marine.gov.scot/copyright/crown">http://marine.gov.scot/copyright/crown</a>			
Human activities	Renewable energies infrastructures	Wave lease sites	Scotland	The Crown Estate	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/494">http://marine.gov.scot/maps/494</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>		2015 Open	<a href="http://marine.gov.scot/copyright/crown">http://marine.gov.scot/copyright/crown</a>			
Human activities	Renewable energies infrastructures	wind lease sites	Scotland	The Crown Estate	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/605">http://marine.gov.scot/maps/605</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>		2016 Open	<a href="http://marine.gov.scot/copyright/crown">http://marine.gov.scot/copyright/crown</a>			
Human activities	Renewable energies infrastructures	OSPAR Offshore Renewable Energy developments	Europe	OSPAR Commission	ODIMS	Inspire	<a href="http://odims.ospar.org/layers/geonode:ospar_offshore_renewables_2014_01/metadata_detail">http://odims.ospar.org/layers/geonode:ospar_offshore_renewables_2014_01/metadata_detail</a>	WFS	<a href="http://odims.ospar.org:80/geoserver/wfs">http://odims.ospar.org:80/geoserver/wfs</a>	Vector - polygons	2015			1 Layer per year between 2009 & 2015	
Human activities	Maritime transport	AIS traffic frequency	Ireland	Irish coast guard	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/a396b48b-7eb1-4472-ab2a-d0574d7266b1">http://www.isde.ie/#/a396b48b-7eb1-4472-ab2a-d0574d7266b1</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer</a>	Vector - polygons	2014 Closed		unavailable to the SIMCelt project until we have further clarification on the data sharing agreement.		
Human activities	Maritime transport	Ferry routes	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/cfdde2d8-2862-412a-9cf3-b07c174dab19">http://www.isde.ie/#/cfdde2d8-2862-412a-9cf3-b07c174dab19</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer</a>	vector - polylines	2014 Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Human activities	Maritime transport	Navigation channels	Scotland	OceanWise	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/782">http://marine.gov.scot/maps/782</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - polygons	2014 shared	<a href="http://marine.gov.scot/copyright/contains-data-licenced-oceanwise">http://marine.gov.scot/copyright/contains-data-licenced-oceanwise</a>			
Human activities	Maritime transport	Scottish ferry routes (indicative courses)	Scotland	Scottish government	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/1353">http://marine.gov.scot/maps/1353</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	vector - polylines	Open	<a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/">http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/</a>	Copyright Crown		
Human activities	Maritime transport	IMO traffic routing schemes	Scotland	Marine Scotland	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/574">http://marine.gov.scot/maps/574</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - polygons	2014 Shared		Copyright Crown		
Human activities	Maritime transport	AIS - Shipping Traffic - Average weekly density of vessel types	Scotland	MMO - MCA	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/node/14617">http://marine.gov.scot/node/14617</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - polygons	2014 Open	<a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/">http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/</a>	Copyright Crown	11 layers	
Human activities	Maritime transport	Liaisons maritimes du finistère	France	DDTM29	Géobretagne	Inspire	<a href="http://geobretagne.fr/geonetwork/apps/georchestra/?uiid=a4a4770d-aafd-4b60-9ac7-62473bb51647">http://geobretagne.fr/geonetwork/apps/georchestra/?uiid=a4a4770d-aafd-4b60-9ac7-62473bb51647</a>	WFS	<a href="http://geobretagne.fr/geoserver/ddtm29/wfs">http://geobretagne.fr/geoserver/ddtm29/wfs</a>	vector - polylines	2012 Open	<a href="http://wiki.data.gouv.fr/wiki/Licence_Ouverte/_Open_Licence">http://wiki.data.gouv.fr/wiki/Licence_Ouverte/_Open_Licence</a>	Usage libre sous réserve des mentions obligatoires sur tout document de diffusion : "Source : DDTM du Finistère"		
Human activities	Maritime transport	Traffic separation scheme zone	UK	MMO	MMO Marine Planning Evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Shipping_and_navigation/MapServer/">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Shipping_and_navigation/MapServer/</a>	WMS	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Shipping_and_navigation/MapServer/WMServer">http://mmogis.services.defra.gov.uk/arcgis/services/Shipping_and_navigation/MapServer/WMServer</a>	Vector - polygons			<b>Copyright Text:</b> ABPmer, Anatec, United Kingdom Hydrographic Office, Marine Management Organisation		
Human activities	Maritime transport	National shipping density	UK	MMO	MMO Marine Planning Evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/AIS/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/AIS/MapServer</a>	SOAP	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/AIS/MapServer?wsdl">http://mmogis.services.defra.gov.uk/arcgis/services/AIS/MapServer?wsdl</a>	raster	2014 Open	<a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/">http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/</a>	<b>Copyright Text:</b> Marine Management Organisation	5 layers: total vessels, cargo vessels, tankers, passenger vessels, high speed crafts	
Human activities	Maritime transport	Commissioners of Irish Lights Buoy	Ireland	Commissioners of Irish Lights	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/cdf8675a-01ca-429c-b79b-62cd7ec2eb73">http://www.isde.ie/#/cdf8675a-01ca-429c-b79b-62cd7ec2eb73</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer</a>	Vector - points	2015 Shared	Commissioners of Irish Lights Data Licence			
Human activities	Maritime transport	Navigational lights and lighthouses	Scotland	Northern Lighthouse board	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/201">http://marine.gov.scot/maps/201</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - points	2014				
Human activities	Maritime transport	Navigational approaches	England		MMO Marine Planning Evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Shipping_and_navigation/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Shipping_and_navigation/MapServer</a>	WMS	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Shipping_and_navigation/MapServer/WMServer">http://mmogis.services.defra.gov.uk/arcgis/services/Shipping_and_navigation/MapServer/WMServer</a>	Vector - polygons					
Human activities	Maritime transport	Anchor berths and anchorage areas	Scotland	OceanWise	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/1006">http://marine.gov.scot/maps/1006</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - points	2014 Shared	<a href="http://marine.gov.scot/copyright/contains-data-licenced-oceanwise">http://marine.gov.scot/copyright/contains-data-licenced-oceanwise</a>			
Human activities	Maritime transport	Anchoring areas	England		MMO Marine Planning Evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Shipping_and_navigation/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Shipping_and_navigation/MapServer</a>	WMS	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Shipping_and_navigation/MapServer/WMServer">http://mmogis.services.defra.gov.uk/arcgis/services/Shipping_and_navigation/MapServer/WMServer</a>	Vector - points					
Human activities	Ports	Main ports	Europe	Eurofish	Emodnet Human Activities	Inspire - download only	<a href="http://www.emodnet-humanactivities.eu/">http://www.emodnet-humanactivities.eu/</a>	WFS	<a href="http://77.246.172.208/WFSports">http://77.246.172.208/WFSports</a>	Vector - points	2016 Open		Re-use of content for commercial or non-commercial purposes is permitted free of charge, provided that the sources (both EMODnet - Human Activities, and primary sources) are acknowledged. EMODnet - Human Activities accepts no responsibility or liability whatsoever for the re-use of content accessible on its website.		
Human activities	Ports	Ferry Port	Ireland	MaREI	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/40ae448c-7568-4dc6-bff1-f62a3f952af3">http://www.isde.ie/#/40ae448c-7568-4dc6-bff1-f62a3f952af3</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer</a>	Vector - points	2014 Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Human activities	Ports	Commercial Port	Ireland	MaREI	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/cab1c5c9-328e-4181-b13f-5ec18c0b6a09">http://www.isde.ie/#/cab1c5c9-328e-4181-b13f-5ec18c0b6a09</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer</a>	Vector - points	2014 Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Human activities	Ports	Fishing Port	Ireland	Department of Agriculture, Food and the Marine	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/e50e5b6c-f742-4914-b0e0-07b6219c23ca">http://www.isde.ie/#/e50e5b6c-f742-4914-b0e0-07b6219c23ca</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer</a>	Vector - points	2014 Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Human activities	Ports	Ports, harbours, marinas, and slipways	Scotland	Marine Scotland - Transport Scotland	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/23">http://marine.gov.scot/maps/23</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - points	2016 Shared	<a href="http://www.nationalarchives.gov.uk/information-management/re-using-public-sector-information/copyright-and-re-use/crown-copyright/">http://www.nationalarchives.gov.uk/information-management/re-using-public-sector-information/copyright-and-re-use/crown-copyright/</a>			
Human activities	Ports	Ports de Bretagne	France	Région Bretagne	Géobretagne	ISO19115-19139	<a href="http://geobretagne.fr/geonetwork/apps/georchestra/?uiid=c55c4fba-6a37-48ea-8754-a1bf770a684b">http://geobretagne.fr/geonetwork/apps/georchestra/?uiid=c55c4fba-6a37-48ea-8754-a1bf770a684b</a>	WFS	<a href="http://ows.region-bretagne.fr/geoserver/rb/wfs">http://ows.region-bretagne.fr/geoserver/rb/wfs</a>	Vector - points	2006 Open	<a href="http://wiki.data.gouv.fr/wiki/Licence_Ouverte/_Open_Licence">http://wiki.data.gouv.fr/wiki/Licence_Ouverte/_Open_Licence</a>			
Human activities	Ports	Ports	UK		MMO Marine Planning Evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Ports/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Ports/MapServer</a>	SOAP	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Ports/MapServer?wsdl">http://mmogis.services.defra.gov.uk/arcgis/services/Ports/MapServer?wsdl</a>	Vector - points					
Human activities	Military	MOD establishments	Scotland	Ministry of Defence	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/109">http://marine.gov.scot/maps/109</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - polygons	2015	<a href="http://marine.gov.scot/copyright/contains-data-licenced-defence-infrastructure-organisation">http://marine.gov.scot/copyright/contains-data-licenced-defence-infrastructure-organisation</a>			

lvl1	lvl2	layer	Area	producer	provider	MD type	MD URL	Access type	Service URL	data type	date	Open-ness level	Licence type	Usage restrictions	Further information	Comment
Human activities	Military	Dumped munitions - point	Europe	CETMAR	Emodnet Human Activities	Inspire - download only	<a href="http://www.emodnet-humanactivities.eu/">http://www.emodnet-humanactivities.eu/</a>	WFS	<a href="http://77.246.172.208/WFSmunitions">http://77.246.172.208/WFSmunitions</a>	Vector - points	2015	Open		Re-use of content for commercial or non-commercial purposes is permitted free of charge, provided that the sources (both EMODnet - Human Activities, and primary sources) are acknowledged. EMODnet - Human Activities accepts no responsibility or liability whatsoever for the re-use of content accessible on its website.		
Human activities	Military	Dumped munitions - polygon	Europe	CETMAR	Emodnet Human Activities	Inspire - download only	<a href="http://www.emodnet-humanactivities.eu/">http://www.emodnet-humanactivities.eu/</a>	WFS	<a href="http://77.246.172.208/WFSmunitionspoly">http://77.246.172.208/WFSmunitionspoly</a>	Vector - polygons	2015	Open		Re-use of content for commercial or non-commercial purposes is permitted free of charge, provided that the sources (both EMODnet - Human Activities, and primary sources) are acknowledged. EMODnet - Human Activities accepts no responsibility or liability whatsoever for the re-use of content accessible on its website.		
Human activities	Military	OSPAR Encounters with Dumped Chemical and Conventional Munitions	North Atlantic	OSPAR Commission	ODIMS	ISO19115	<a href="http://odims.ospar.org/geoportal/rest/document?id=%7B08306F50-5D21-4C68-9A6F-49AFA0975990%7D">http://odims.ospar.org/geoportal/rest/document?id=%7B08306F50-5D21-4C68-9A6F-49AFA0975990%7D</a>	WFS	<a href="http://odims.ospar.org:80/geoserver/wfs">http://odims.ospar.org:80/geoserver/wfs</a>	Vector - points	2013	Shared				Problem accessing OSPAR WFS layers: query time out
Human activities	Military	Military practice areas	UK		MMO Marine planning evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Defence_data/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Defence_data/MapServer</a>	WMS	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Defence_data/MapServer/WMSServer">http://mmogis.services.defra.gov.uk/arcgis/services/Defence_data/MapServer/WMSServer</a>	Vector - polygons		Shared		Copyright Text: © British Crown Copyright. All rights reserved. Permission number Defra 012012.003.		
Human activities	Military	Munition dumping ground	UK		MMO Marine planning evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Defence_data/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Defence_data/MapServer</a>	WMS	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Defence_data/MapServer/WMSServer">http://mmogis.services.defra.gov.uk/arcgis/services/Defence_data/MapServer/WMSServer</a>	Vector - points		Shared		Copyright Text: © British Crown Copyright. All rights reserved. Permission number Defra 012012.003.		
Human activities	Military	historical munition disposal sites	UK		MMO Marine planning evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Disposal_sites/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Disposal_sites/MapServer</a>	SOAP	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Disposal_sites/MapServer?wsdl">http://mmogis.services.defra.gov.uk/arcgis/services/Disposal_sites/MapServer?wsdl</a>	Vector - points						
Human activities	Nature and species conservation sites and protected areas	Designated marine protected areas (points)	Atlantic Arc	AAMP	Maia portal	Inspire	<a href="http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=ospar_mpa_2014_01">http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=ospar_mpa_2014_01</a>	WFS	<a href="http://datacarto.maia-network.org/WFS/1/maia">http://datacarto.maia-network.org/WFS/1/maia</a>	Vector - points	2016	Open	<a href="https://www.etalab.gouv.fr/licence-ouverte-open-licence">https://www.etalab.gouv.fr/licence-ouverte-open-licence</a>		<a href="http://www.maia-network.org/upload/iedit/11/pj/2773_8350_Brochure_MAI_A_expoAMPatlantiques_BD.pdf">http://www.maia-network.org/upload/iedit/11/pj/2773_8350_Brochure_MAI_A_expoAMPatlantiques_BD.pdf</a>	
Human activities	Nature and species conservation sites and protected areas	Designated marine protected areas (polygons)	Atlantic Arc	AAMP	Maia portal	Inspire	<a href="http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=ospar_mpa_2014_01">http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=ospar_mpa_2014_01</a>	WFS	<a href="http://datacarto.maia-network.org/WFS/1/maia">http://datacarto.maia-network.org/WFS/1/maia</a>	Vector - polygons	2016	Open	<a href="https://www.etalab.gouv.fr/licence-ouverte-open-licence">https://www.etalab.gouv.fr/licence-ouverte-open-licence</a>		<a href="http://www.maia-network.org/upload/iedit/11/pj/2773_8350_Brochure_MAI_A_expoAMPatlantiques_BD.pdf">http://www.maia-network.org/upload/iedit/11/pj/2773_8350_Brochure_MAI_A_expoAMPatlantiques_BD.pdf</a>	
Human activities	Nature and species conservation sites and protected areas	Aire de protection du biotope	France	AAMP	Cartomer	Inspire	<a href="http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=5ec5bc51-3533-4648-a836-c72132199492">http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=5ec5bc51-3533-4648-a836-c72132199492</a>	WFS	<a href="http://cartographie.aires-marines.fr/wfs">http://cartographie.aires-marines.fr/wfs</a>	Vector - polygons	2017	Open	<a href="https://www.etalab.gouv.fr/licence-ouverte-open-licence">https://www.etalab.gouv.fr/licence-ouverte-open-licence</a>			
Human activities	Nature and species conservation sites and protected areas	Réserve naturelle	France	AAMP	Cartomer	Inspire	<a href="http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=42f12513-a875-4172-8dfb-aca8cde12411">http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=42f12513-a875-4172-8dfb-aca8cde12411</a>	WFS	<a href="http://cartographie.aires-marines.fr/wfs">http://cartographie.aires-marines.fr/wfs</a>	Vector - polygons	2017	Open	<a href="https://www.etalab.gouv.fr/licence-ouverte-open-licence">https://www.etalab.gouv.fr/licence-ouverte-open-licence</a>			
Human activities	Nature and species conservation sites and protected areas	site d'importance communautaire	France	AAMP	Cartomer	Inspire	<a href="http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=7624364c-e548-4298-af61-e318ef6ae055">http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=7624364c-e548-4298-af61-e318ef6ae055</a>	WFS	<a href="http://cartographie.aires-marines.fr/wfs">http://cartographie.aires-marines.fr/wfs</a>	Vector - polygons	2017	Open	<a href="https://www.etalab.gouv.fr/licence-ouverte-open-licence">https://www.etalab.gouv.fr/licence-ouverte-open-licence</a>			
Human activities	Nature and species conservation sites and protected areas	Zone spéciale de conservation	France	AAMP	Cartomer	Inspire	<a href="http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=7624364c-e548-4298-af61-e318ef6ae055">http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=7624364c-e548-4298-af61-e318ef6ae055</a>	WFS	<a href="http://cartographie.aires-marines.fr/wfs">http://cartographie.aires-marines.fr/wfs</a>	Vector - polygons	2017	Open	<a href="https://www.etalab.gouv.fr/licence-ouverte-open-licence">https://www.etalab.gouv.fr/licence-ouverte-open-licence</a>			
Human activities	Nature and species conservation sites and protected areas	Zone de protection spéciale	France	AAMP	Cartomer	Inspire	<a href="http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=f7e485d5-bd02-496c-a749-5af9505271a5">http://cartographie.aires-marines.fr/geosource/apps/search/?uuid=f7e485d5-bd02-496c-a749-5af9505271a5</a>	WFS	<a href="http://cartographie.aires-marines.fr/wfs">http://cartographie.aires-marines.fr/wfs</a>	Vector - polygons	2017	Open	<a href="https://www.etalab.gouv.fr/licence-ouverte-open-licence">https://www.etalab.gouv.fr/licence-ouverte-open-licence</a>			
Human activities	raw material extraction	Aggregate extraction	Europe	AZTI- Tecnalia	Emodnet Human Activities	Inspire - download only	<a href="http://www.emodnet-humanactivities.eu/">http://www.emodnet-humanactivities.eu/</a>	WFS	<a href="http://77.246.172.208/WFSaggregate">http://77.246.172.208/WFSaggregate</a>	Vector - points	2016	Open		Re-use of content for commercial or non-commercial purposes is permitted free of charge, provided that the sources (both EMODnet - Human Activities, and primary sources) are acknowledged. EMODnet - Human Activities accepts no responsibility or liability whatsoever for the re-use of content accessible on its website.		
Human activities	raw material extraction	Underground coal gasification	UK		MMO Marine planning evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Carbon_capture_storage/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Carbon_capture_storage/MapServer</a>	WMS	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Carbon_capture_storage/MapServer/WMSServer?request=GetCapabilities&amp;service=WMS">http://mmogis.services.defra.gov.uk/arcgis/services/Carbon_capture_storage/MapServer/WMSServer?request=GetCapabilities&amp;service=WMS</a>	Vector - polygons				<b>Copyright Text:</b> Marine Management Organisation, Coal Authority, British Geological Society, Department for Environment and Climate Change		
Human activities	raw material extraction	Aquifers	UK		MMO Marine planning evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Carbon_capture_storage/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Carbon_capture_storage/MapServer</a>	WMS	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Carbon_capture_storage/MapServer/WMSServer?request=GetCapabilities&amp;service=WMS">http://mmogis.services.defra.gov.uk/arcgis/services/Carbon_capture_storage/MapServer/WMSServer?request=GetCapabilities&amp;service=WMS</a>	Vector - polygons				<b>Copyright Text:</b> Marine Management Organisation, Coal Authority, British Geological Society, Department for Environment and Climate Change		
Human activities	raw material extraction	Irish Sea Marine Aggregates Initiative	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/78a0d7e0-5cfc-4c33-a6d2-1e524f534b04">http://www.isde.ie/#/78a0d7e0-5cfc-4c33-a6d2-1e524f534b04</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/Geology/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/Geology/MapServer/WFSServer</a>	Vector - polygons	2008	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Human activities	raw material extraction	Sand gravel resources	Scotland	The Crown Estate	Marine Scotland NMPI	webpage	<a href="http://marine.gov.scot/maps/451">http://marine.gov.scot/maps/451</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - polygons	2014	Shared				
Human activities	raw material extraction	Prospective areas for sand and gravel resources	Scotland	The Crown Estate	Marine Scotland NMPI	webpage	<a href="http://marine.gov.scot/maps/452">http://marine.gov.scot/maps/452</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - polygons	2014	Shared				
Human activities	raw material extraction	Evaporite resources	Scotland	The Crown Estate	Marine Scotland NMPI	webpage	<a href="http://marine.gov.scot/maps/448">http://marine.gov.scot/maps/448</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - polygons	2014	Shared				
Human activities	raw material extraction	Metallic mineral resources	Scotland	The Crown Estate	Marine Scotland NMPI	webpage	<a href="http://marine.gov.scot/maps/449">http://marine.gov.scot/maps/449</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - polygons	2014	Shared				

lvl1	lvl2	layer	Area	producer	provider	MD type	MD URL	Access type	Service URL	data type	Open-ness level	Licence type	Usage restrictions	Further information	Comment
Human activities	raw material extraction	MMO legacy aggregate licence areas	England	The Crown Estate	MMO Marine planning evidence	Rest	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Marine_aggregates/MapServer	SOAP	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Marine_aggregates/MapServer	Vector - polygons	Shared				
Human activities	raw material extraction	Marine aggregate application areas	England	The Crown Estate	MMO Marine planning evidence	Rest	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Marine_aggregates/MapServer	SOAP	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Marine_aggregates/MapServer	Vector - polygons	Shared				
Human activities	raw material extraction	Marine aggregate license areas	England	The Crown Estate	MMO Marine planning evidence	Rest	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Marine_aggregates/MapServer	SOAP	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Marine_aggregates/MapServer	Vector - polygons	Shared				
Human activities	raw material extraction	Aggregate exploration and option areas	England	The Crown Estate	MMO Marine planning evidence	Rest	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Marine_aggregates/MapServer	SOAP	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Marine_aggregates/MapServer	Vector - polygons	Shared				
Human activities	raw material extraction	Hydrocarbon extraction - active licenses	Europe	Cogea	Emodnet Human Activities	Inspire - download only	http://www.emodnet-humanactivities.eu/	WFS	http://77.246.172.208/WFSactiveLICENSES	Vector - polygons	2012 Open		Re-use of content for commercial or non-commercial purposes is permitted free of charge, provided that the sources (both EMODnet - Human Activities, and primary sources) are acknowledged. EMODnet - Human Activities accepts no responsibility or liability whatsoever for the re-use of content accessible on its website.		
Human activities	raw material extraction	Hydrocarbon extraction - Boreholes	Europe	Cogea	Emodnet Human Activities	Inspire - download only	http://www.emodnet-humanactivities.eu/	WFS	http://77.246.172.208/WFShydrocarbons	Vector - points	2014 Open		Re-use of content for commercial or non-commercial purposes is permitted free of charge, provided that the sources (both EMODnet - Human Activities, and primary sources) are acknowledged. EMODnet - Human Activities accepts no responsibility or liability whatsoever for the re-use of content accessible on its website.		
Human activities	raw material extraction	Hydrocarbon extraction - Offshore installations	Europe	Cogea	Emodnet Human Activities	Inspire - download only	http://www.emodnet-humanactivities.eu/	WFS	http://77.246.172.208/WFShydrocarbons	Vector - points	2014 Open		Re-use of content for commercial or non-commercial purposes is permitted free of charge, provided that the sources (both EMODnet - Human Activities, and primary sources) are acknowledged. EMODnet - Human Activities accepts no responsibility or liability whatsoever for the re-use of content accessible on its website.		
Human activities	Submarine cables	Arklow Bank Wind Park Connection Cable	Ireland	Marine Institute	Ireland's Marine Atlas	ISDI (ISO19115)	http://www.isde.ie/#/338ceac3-40f7-4fdb-a192-4cdd8066f6af	WFS	http://atlas.marine.ie/arcgis/services/EnergyResourcesInfrastructure/MapServer/WFSServer	vector - polylines	2014 Open	https://creativecommons.org/licenses/by/4.0/			
Human activities	Submarine cables	Cables et conduites	France	SHOM	data.shom.fr	ISO19115	http://services.data.shom.fr/csw/ISOAP?service=CSW&version=2.0.2&request=GetRecordById&Id=BDML_CABLES.xml	WMS	http://services.data.shom.fr/INSPIRE/wms/t	vector - polylines	2013 Shared		Données soumises à Copyright. NE PAS UTILISER POUR LA NAVIGATION.		
Human activities	Submarine cables	Telecommunication cables - Historic cables	Scotland	Marine Scotland	Marine Scotland NMPI	Webpage	http://marine.gov.scot/maps/768	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	vector - polylines	2016 open	http://www.gov.scot/CrownCopyright		http://www.gov.scot/Publications/2015/03/6517/15	
Human activities	Submarine cables	submarine cables	UK	UKHO	MMO Marine planning evidence	Rest	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Cables/MapServer/WmssServer	WMS	http://mmogis.services.defra.gov.uk/arcgis/services/Cables/MapServer/WmssServer	vector - polylines					
Human activities	Submarine cables	subsea cables	UK	KIS-ORCA project	MMO Marine planning evidence	Rest	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Cables/MapServer	WMS	http://mmogis.services.defra.gov.uk/arcgis/services/Cables/MapServer/WmssServer	vector - polylines					
Human activities	Submarine cables	SIGCables Submarine Cables Routes	Europe	Cogea	Emodnet Human Activities	ISO19115	http://www.emodnet-humanactivities.eu/search-results.php?dataname=SIGCables+Submarine+Cables+Routes	WFS	http://77.246.172.208/WFSsigcables	vector - polylines	2014 Shared	(e) intellectual property rights	Citation : EMODnet Human Activities: Telecom cables		
Human activities	Submarine cables	Pipelines	England	UKHO	MMO Marine planning evidence	Rest	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Pipelines/MapServer/WMSServer	WMS	http://mmogis.services.defra.gov.uk/arcgis/services/Pipelines/MapServer/WMSServer	vector - polylines	Shared	British Crown Copyright			
Human activities	Submarine cables	Hydrocarbon pipelines	Scotland	Common Data Access Limited	Marine Scotland NMPI	Webpage	http://marine.gov.scot/maps/515	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	vector - polylines	2015				
Human activities	Submarine cables	Offshore Gas Pipeline	Ireland	Department of Communications, Energy and Natural Resources	Ireland's Marine Atlas	ISDI (ISO19115)	http://www.isde.ie/#/bcb37dbc-2a0f-446b-a4fb-9c363bfe0846	WFS	http://atlas.marine.ie/arcgis/services/EnergyResourcesInfrastructure/MapServer/WFSServer	vector - polylines	2014 Open	https://creativecommons.org/licenses/by/4.0/			
Human activities	Tourism	Scottish Marine Recreation & Tourism Survey 2015	Scotland	Marine Scotland	Marine Scotland NMPI	Webpage	http://www.gov.scot/Topics/marine/sea-management/national/RecandTourism	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	raster	2015			25 layers, by activity	
Human activities	Tourism	Training Centres	Scotland	Royal Yachting Association	Marine Scotland NMPI	Webpage	http://marine.gov.scot/maps/224	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	Vector - points	2016 Shared		RYA copyright material requires the consent of the RYA for any reproduction, adaptation, manipulation, extraction or other use. Images from NMPI based on RYA data should not be reproduced by third parties. Users wishing access to the data should contact the RYA: follow link under Data Owner to RYA web page for details.		
Human activities	Tourism	Scotland Marinas	Scotland	Royal Yachting Association	Marine Scotland NMPI	Webpage	http://marine.gov.scot/maps/225	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	Vector - points	2016 Shared		RYA copyright material requires the consent of the RYA for any reproduction, adaptation, manipulation, extraction or other use. Images from NMPI based on RYA data should not be reproduced by third parties. Users wishing access to the data should contact the RYA: follow link under Data Owner to RYA web page for details.		
Human activities	Tourism	Sailing Clubs	Scotland	Royal Yachting Association	Marine Scotland NMPI	Webpage	http://marine.gov.scot/maps/223	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	Vector - points	2016 Shared		RYA copyright material requires the consent of the RYA for any reproduction, adaptation, manipulation, extraction or other use. Images from NMPI based on RYA data should not be reproduced by third parties. Users wishing access to the data should contact the RYA: follow link under Data Owner to RYA web page for details.		
Human activities	Tourism	Sailing areas	Scotland	Royal Yachting Association	Marine Scotland NMPI	Webpage	http://marine.gov.scot/maps/leisure-and-recreation-rya-sailing-areas-march-2011	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	Vector - polygons	2011				
Human activities	Tourism	Recreational Cruising Routes	Scotland	Royal Yachting Association	Marine Scotland NMPI	Webpage	http://marine.gov.scot/maps/leisure-and-recreation-rya-recreational-cruising-routes-march-2011	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	vector - polylines	2011				

lvl1	lvl2	layer	Area	producer	provider	MD type	MD URL	Access type	Service URL	data type	date	Open-ness level	Licence type	Usage restrictions	Further information	Comment
Human activities	Tourism	Racing Areas	Scotland	Royal Yachting Association	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/leisure-and-recreation-rya-racing-areas-march-2011">http://marine.gov.scot/maps/leisure-and-recreation-rya-racing-areas-march-2011</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - polygons	2011					
Human activities	Tourism	Scottish Canals	Scotland	Scottish Canals	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/759">http://marine.gov.scot/maps/759</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - polygons	2015	Shared				
Human activities	Tourism	Slipways	Europe	<a href="http://www.boatlaunch.co.uk">http://www.boatlaunch.co.uk</a>	MMO Marine planning evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Recreation_national/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Recreation_national/MapServer</a>	WMS	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Recreation_national/MapServer/WMSServer?request=GetCapabilities&amp;service=WMS">http://mmogis.services.defra.gov.uk/arcgis/services/Recreation_national/MapServer/WMSServer?request=GetCapabilities&amp;service=WMS</a>	Vector - points						
Human activities	Tourism	Marinas	Europe	<a href="http://www.boatlaunch.co.uk">http://www.boatlaunch.co.uk</a>	MMO Marine planning evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Recreation_national/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Recreation_national/MapServer</a>	WMS	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Recreation_national/MapServer/WMSServer?request=GetCapabilities&amp;service=WMS">http://mmogis.services.defra.gov.uk/arcgis/services/Recreation_national/MapServer/WMSServer?request=GetCapabilities&amp;service=WMS</a>	Vector - points						
Human activities	Tourism	Marinas	Ireland	MaREI	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/faf0b5fd-1a3e-450b-9ce0-7fa3e46c0271">http://www.isde.ie/#/faf0b5fd-1a3e-450b-9ce0-7fa3e46c0271</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/TransportNetworks/MapServer/WFSServer</a>	Vector - points	2014	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Human activities	Tourism	Blue flag and seaside awards since 2012	Scotland	Keep Scotland Beautiful	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/851">http://marine.gov.scot/maps/851</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - points	2016					
Human activities	Tourism	Bathing Waters compliance	England	Environment Agency	MMO Marine planning evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Recreation_national/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Recreation_national/MapServer</a>	WMS	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Recreation_national/MapServer/WMSServer?request=GetCapabilities&amp;service=WMS">http://mmogis.services.defra.gov.uk/arcgis/services/Recreation_national/MapServer/WMSServer?request=GetCapabilities&amp;service=WMS</a>	Vector - points						
Human activities	Tourism	Blue flag beaches	England	Keep Britain Tidy	MMO Marine planning evidence	Rest	<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/Recreation_national/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/Recreation_national/MapServer</a>	WMS	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/Recreation_national/MapServer/WMSServer?request=GetCapabilities&amp;service=WMS">http://mmogis.services.defra.gov.uk/arcgis/services/Recreation_national/MapServer/WMSServer?request=GetCapabilities&amp;service=WMS</a>	Vector - points						
Human activities	Tourism	Sites de baignade du Finistère	France	Direction Départementale de la Mer et des Territoires du Finistère	Géobretagne	Inspire	<a href="http://geobretagne.fr/geonetwork/apps/georchestra/?uuid=e6bcea0c-23c2-42f6-92ab-2f2bc98f64b1">http://geobretagne.fr/geonetwork/apps/georchestra/?uuid=e6bcea0c-23c2-42f6-92ab-2f2bc98f64b1</a>	WFS	<a href="http://geobretagne.fr/geoserver/ddtm29/wfs">http://geobretagne.fr/geoserver/ddtm29/wfs</a>	Vector - points	2012	Open	<a href="http://wiki.data.gouv.fr/wiki/Licence_Ouverte/_Open_Licence">http://wiki.data.gouv.fr/wiki/Licence_Ouverte/_Open_Licence</a>			
Human activities	Cultural Heritage	INFOMAR Seabed Survey Surveyed Shipwrecks	Ireland	INFOMAR Project	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://www.isde.ie/#/b9a22ad2-85ad-48aa-adcb-2f2084f0ca4b">http://www.isde.ie/#/b9a22ad2-85ad-48aa-adcb-2f2084f0ca4b</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/ProtectedSites/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/ProtectedSites/MapServer/WFSServer</a>	Vector - points	2015	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>	You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.		
Human activities	Cultural Heritage	Epaves et obstructions	France	Shom	data.shom.fr	Inspire	<a href="http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/BDML_EPAVES.xml">http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/BDML_EPAVES.xml</a>	WMS	<a href="http://services.data.shom.fr/INSPIRE/wms/r">http://services.data.shom.fr/INSPIRE/wms/r</a>	Vector - points	2016	Shared		Données soumises à une tarification du droit d'utilisation. La réutilisation commerciale des données fait l'objet d'un contrat spécifique. Ne pas utiliser pour la navigation.		
Human activities	Cultural Heritage	Losses	Scotland	RCAHMS	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/118">http://marine.gov.scot/maps/118</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - points		Shared	<a href="https://www.historicenvironment.scot/terms-conditions/">https://www.historicenvironment.scot/terms-conditions/</a>			
Human activities	Cultural Heritage	Vessels designated as Controlled Sites under the Protection of Military Remains Act 1986	Scotland	RCAHMS	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/606">http://marine.gov.scot/maps/606</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - points	2014	Shared				
Human activities	Cultural Heritage	Historic Marine protected Areas	Scotland	Historic Environment Scotland	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/743">http://marine.gov.scot/maps/743</a>	WMS	<a href="http://sedsh127.sedsh.gov.uk/arcgis/services/HS/Historic_Scotland/MapServer/WMSServer?">http://sedsh127.sedsh.gov.uk/arcgis/services/HS/Historic_Scotland/MapServer/WMSServer?</a>	Vector - Polygons		Shared				
Human activities	Cultural Heritage	World Heritage Sites	Scotland	Historic Environment Scotland	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/741">http://marine.gov.scot/maps/741</a>	WMS	<a href="http://sedsh127.sedsh.gov.uk/arcgis/services/HS/Historic_Scotland/MapServer/WMSServer?">http://sedsh127.sedsh.gov.uk/arcgis/services/HS/Historic_Scotland/MapServer/WMSServer?</a>			Shared				
Human activities	Coastal Defence	Dredging	Europe	AZTI-Tecnalia	EMODnet Human Activities	Inspire - download only	<a href="http://www.emodnet-humanactivities.eu/">http://www.emodnet-humanactivities.eu/</a>	WFS	<a href="http://77.246.172.208/WFSdredging">http://77.246.172.208/WFSdredging</a>	Vector - points	2016	Open		Re-use of content for commercial or non-commercial purposes is permitted free of charge, provided that the sources (both EMODnet - Human Activities, and primary sources) are acknowledged. EMODnet - Human Activities accepts no responsibility or liability whatsoever for the re-use of content accessible on its website.		
Human activities	Coastal Defence	Shoreline Management Plans	England	Environment Agency	MMO Marine planning evidence		<a href="http://mmogis.services.defra.gov.uk/arcgis/rest/services/SMP/MapServer">http://mmogis.services.defra.gov.uk/arcgis/rest/services/SMP/MapServer</a>	SOAP	<a href="http://mmogis.services.defra.gov.uk/arcgis/services/SMP/MapServer?wsdl">http://mmogis.services.defra.gov.uk/arcgis/services/SMP/MapServer?wsdl</a>	vector - polylines		Shared				
Human activities	Coastal Defence	Shoreline Management Plans	Wales	Natural Resources Wales	Wales Marine Planning Portal			WFS	<a href="http://lle.gov.wales/services/inspire-nrw/wfs">http://lle.gov.wales/services/inspire-nrw/wfs</a>	vector - polylines	2014	Shared				
Human activities	Coastal Defence	Coastal Protection and Flood Defence - Coast protection schemes since 2000	Scotland	Scottish Government	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/198">http://marine.gov.scot/maps/198</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - points	2010	Open				
Human activities	Coastal Defence	Coastal Protection and Flood Defence - Flood defence schemes since 1961	Scotland	Scottish Government	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/199">http://marine.gov.scot/maps/199</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - points	2011	Open				
Human activities	Coastal Defence	Coastal Protection and Flood Defence - Managed re-alignment schemes	Scotland	Scottish Government	Marine Scotland NMPI	Webpage	<a href="http://marine.gov.scot/maps/200">http://marine.gov.scot/maps/200</a>	WMS	<a href="http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?">http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?</a>	Vector - points	2011	Open				
Human activities	Coastal Defence	Communes avec des PPRL approuvés	France	MEEM	Géolittoral	Inspire	<a href="http://www.geocatalogue.fr/Detail.do?id=367664">http://www.geocatalogue.fr/Detail.do?id=367664</a>	WFS	<a href="http://geolittoral.application.developpement-durable.gouv.fr/wms2/metropole">http://geolittoral.application.developpement-durable.gouv.fr/wms2/metropole</a>	Vector - polygons	2009	Shared	Droit d'auteur / droit moral (copyright)	Utilisation libre sous réserve de mentionner la source (a minima le nom du producteur) et la date de sa dernière mise à jour		
Human activities	Coastal Defence	Coastline	Ireland	Ordnance Survey Ireland	Ireland's Marine Atlas	ISDI (ISO19115)	<a href="http://data.osi.opendata.arcgis.com/datasets/3f9c392e26ce420aaa91d2fc5d48a96_2_35">http://data.osi.opendata.arcgis.com/datasets/3f9c392e26ce420aaa91d2fc5d48a96_2_35</a>	WFS	<a href="http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer">http://atlas.marine.ie/arcgis/services/AdministrativeUnits/MapServer/WFSServer</a>	vector - polylines	2016	Open	<a href="https://creativecommons.org/licenses/by/4.0/">https://creativecommons.org/licenses/by/4.0/</a>			
Human activities	Coastal Defence	Trait de côte Histolitt	France	Shom	data.shom.fr	Inspire	<a href="http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/BDML_TCH.xml">http://services.data.shom.fr/geonetwork/srv/fre/catalog.search#/metadata/BDML_TCH.xml</a>	WMS	<a href="http://services.data.shom.fr/INSPIRE/wms/r">http://services.data.shom.fr/INSPIRE/wms/r</a>	vector - polylines	2007	Open	Licence Opendata "Licence Ouverte" (version 1.0 d'octobre 2011), définie par la mission Etalab.			
Human activities	Coastal Defence	Submersion marine	France	MEEM	Géolittoral	Inspire	<a href="http://www.geocatalogue.fr/Detail.do?id=367668">http://www.geocatalogue.fr/Detail.do?id=367668</a>	WFS	<a href="http://geolittoral.application.developpement-durable.gouv.fr/wms2/metropole">http://geolittoral.application.developpement-durable.gouv.fr/wms2/metropole</a>		2009	Shared	Droit d'auteur / droit moral (copyright)	Utilisation libre sous réserve de mentionner la source (a minima le nom du producteur) et la date de sa dernière mise à jour		

lvl1	lvl2	layer	Area	producer	provider	MD type	MD URL	Access type	Service URL	data type	date	Open-ness level	Licence type	Usage restrictions	Further information	Comment
Human activities	Coastal Defence	Indicateur national de l'érosion côtière	France	MEEM	Géolittoral	Inspire	http://www.geocatalogue.fr/Detail.do?id=367700	WFS	http://geolittoral.application.developpement-durable.gouv.fr/wms2/metropole		2015	Shared	Droit d'auteur / droit moral (copyright)	Utilisation libre sous réserve de mentionner la source et la date de sa dernière mise à jour : © Evolution du trait de côte – Cerema-MEEM.		
Human activities	Coastal Defence	Nombre de catastrophes naturelles liées à la mer par commune	France	MEEM	Géolittoral	Inspire	http://www.geocatalogue.fr/Detail.do?id=367673	WFS	http://geolittoral.application.developpement-durable.gouv.fr/wms2/metropole		2009	Shared	Droit d'auteur / droit moral (copyright)	Utilisation libre sous réserve de mentionner la source (a minima le nom du producteur) et la date de sa dernière mise à jour		
Spatial policy	Spatial policy	Coastal typologies	England	MMO	MMO Marine planning evidence	Rest	http://mmogis.services.defra.gov.uk/arcgis/rest/services/Coastal_typologies/MapServer	SOAP	http://mmogis.services.defra.gov.uk/arcgis/services/Coastal_typologies/MapServer?wsdl	Vector - polygons				<b>Copyright Text:</b> Marine Management Organisation		
Spatial policy	Spatial policy	Scottish Marine regions	Scotland	Marine Scotland	Marine Scotland NMPi	Webpage	<a href="http://marine.gov.scot/maps/765">http://marine.gov.scot/maps/765</a>	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	Vector - polygons	2015	Open	<a href="http://marine.gov.scot/usage-licence/open-government-licence-ogl">http://marine.gov.scot/usage-licence/open-government-licence-ogl</a>	http://marine.gov.scot/copyright/crown		
Spatial policy	Spatial policy	Local Coastal Partnerships	Scotland	Marine Scotland	Marine Scotland NMPi	Webpage	<a href="http://marine.gov.scot/maps/187">http://marine.gov.scot/maps/187</a>	WMS	http://msmap1.atkinsgeospatial.com/geoserver/ows/nmp?	Vector - polygons	2012					