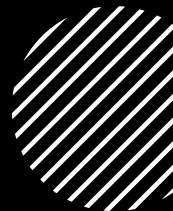


Metadata Standard for Maritime Spatial Plans

A common structure to describe data
associated with Maritime Spatial Plans



Agenda



What is metadata?



Why are we doing this?



Design Approach & Use Cases



Metadata Profile



Examples

What is metadata?

DATA



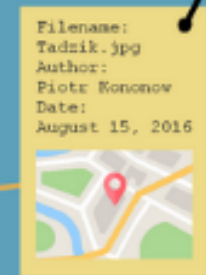
METADATA



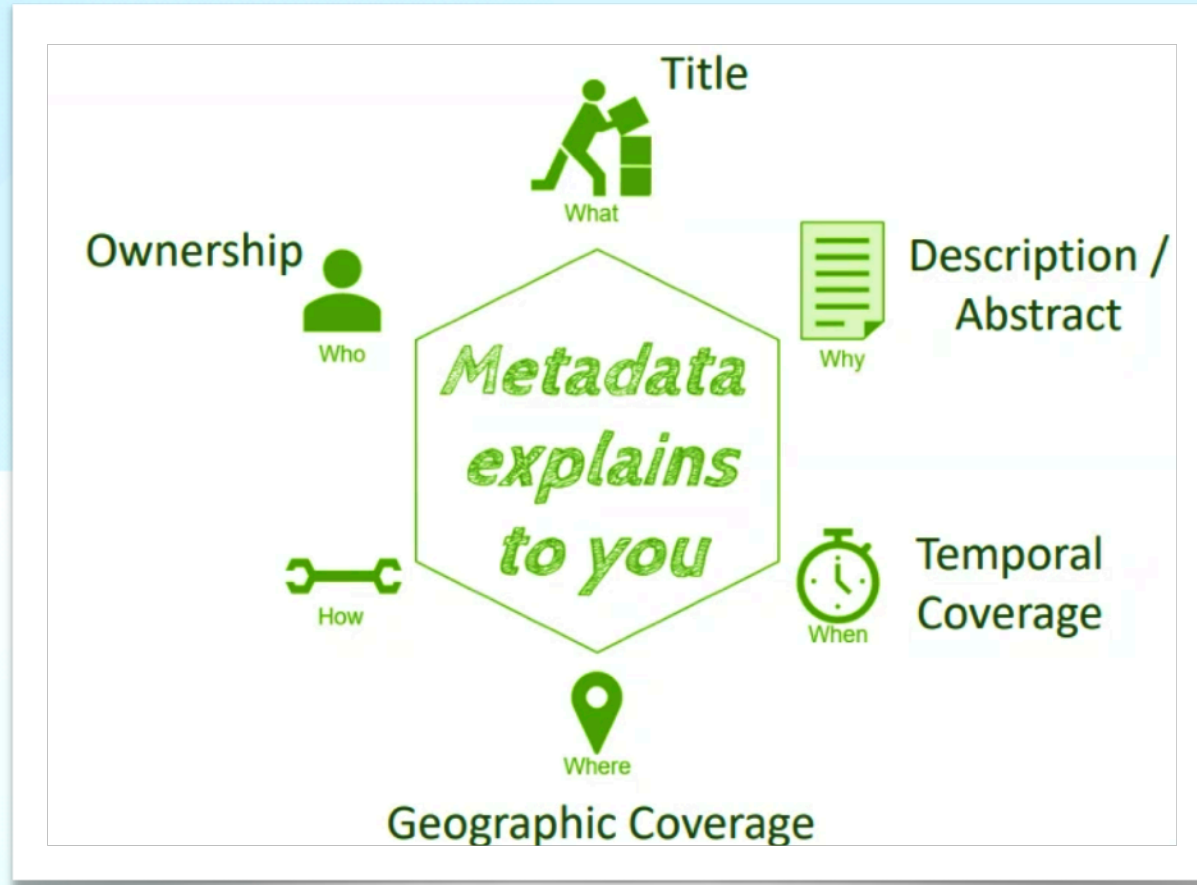
Data



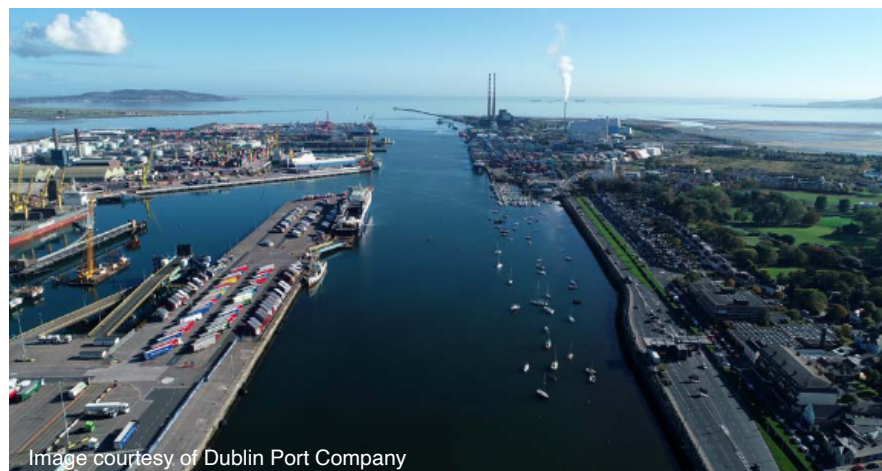
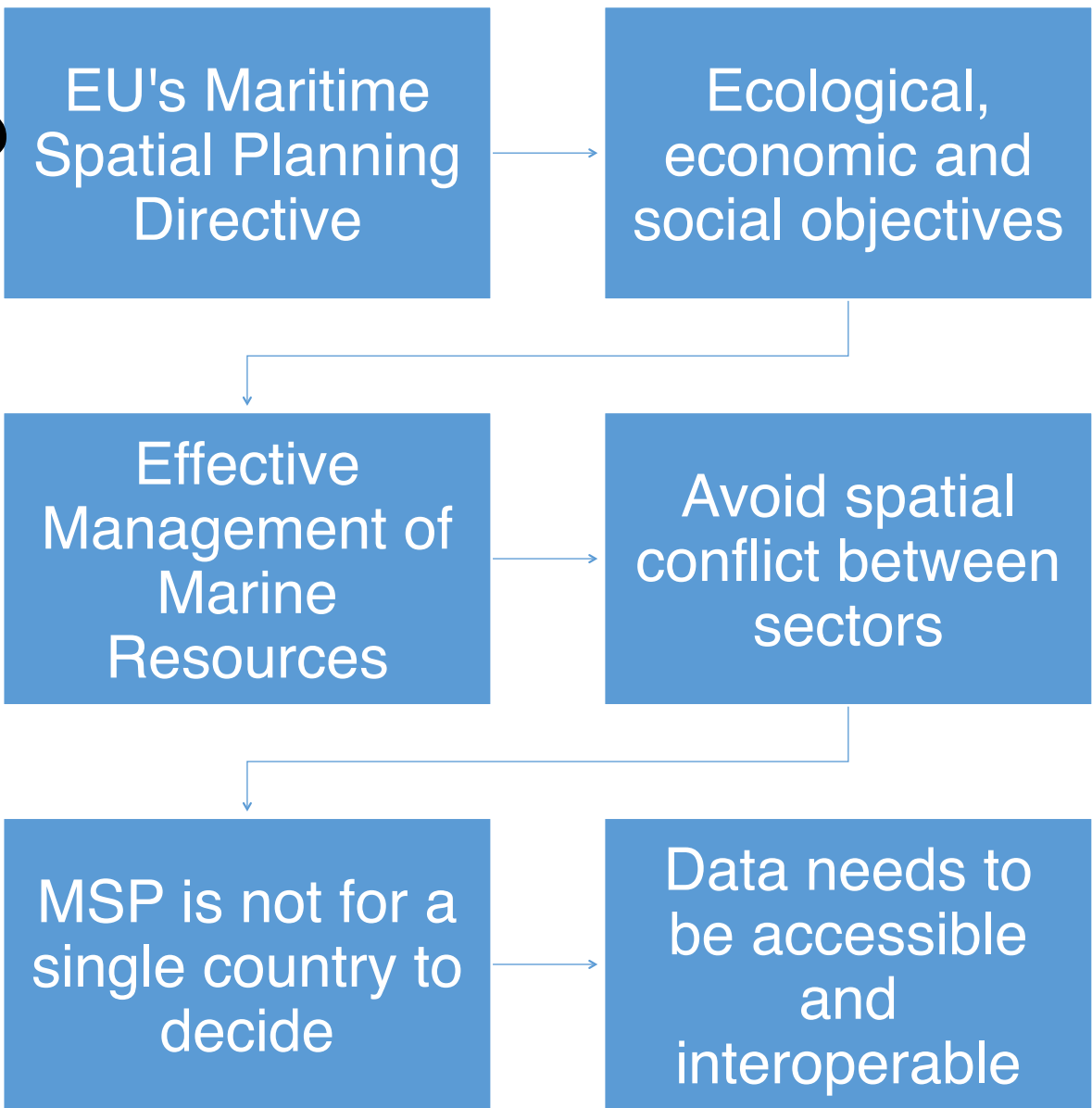
Metadata



What is Metadata?



Why?



HOW STANDARDS PROLIFERATE:

(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)

SITUATION:
THERE ARE
14 COMPETING
STANDARDS.

14?! RIDICULOUS!
WE NEED TO DEVELOP
ONE UNIVERSAL STANDARD
THAT COVERS EVERYONE'S
USE CASES.



SOON:

SITUATION:
THERE ARE
15 COMPETING
STANDARDS.

Design Approach

FAIR Data Principles

EU Directives

International Best Practice

Use Cases

As an offshore energy developer, I wish to discover the roles of organisations connected with a maritime spatial plan (plan creator, plan enforcer, metadata creator, etc.) so that I can submit my plans to the relevant organisation.

As a researcher I want to discover the planning areas or planning units related to a maritime spatial plan.

As a member of the MSP Platform for Europe, I wish to discover the country or region a maritime spatial plan relates to, and its official title plus English title so that I can collate the available Marine Spatial Plans across the continent.

As a Non-Governmental Organisation, I wish to discover the geographic coverage of a maritime spatial plan so that I can develop policy briefs based on an appropriate geographic area.

As a port developer, I wish to discover the organisations responsible for maintaining the data related to the maritime spatial plan so that I can obtain the best available data from them.

As an expert developing a Marine Spatial Planning monitoring programme, I wish to discover the scale of the enforcement area for the maritime spatial plan (is there a buffer zone etc., around the enforcement area) so that I can assign appropriate resources to the monitoring programme.

I want to discover the laws underpinning or relating to the Marine Spatial Planning process in the area or country the maritime spatial plan relates to.

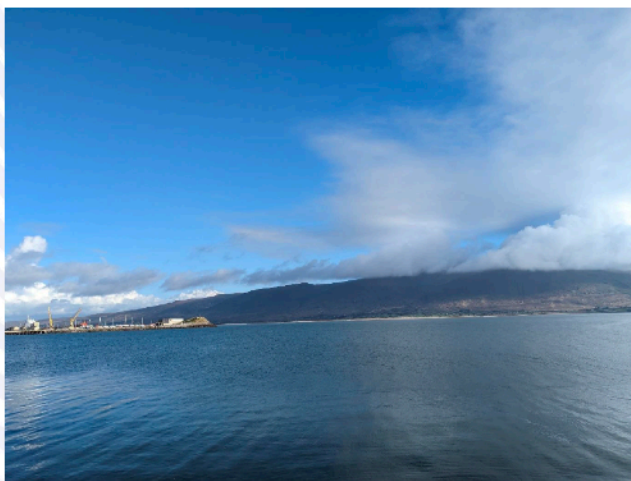
As a conservation NGO, I wish to discover "input" data related to the maritime spatial plan, perhaps used in deriving or defining the plan so that I can analyse the input data, e.g. for assessing implementing Ecosystem Based Approach in the maritime spatial plan.

As a member of the national oceanographic data centre, I wish to make metadata concerning a maritime spatial plan available in the EMODnet Human Activities portal so that I can make my data better comply with the FAIR principles.



Metadata Standard for Maritime Spatial Plans

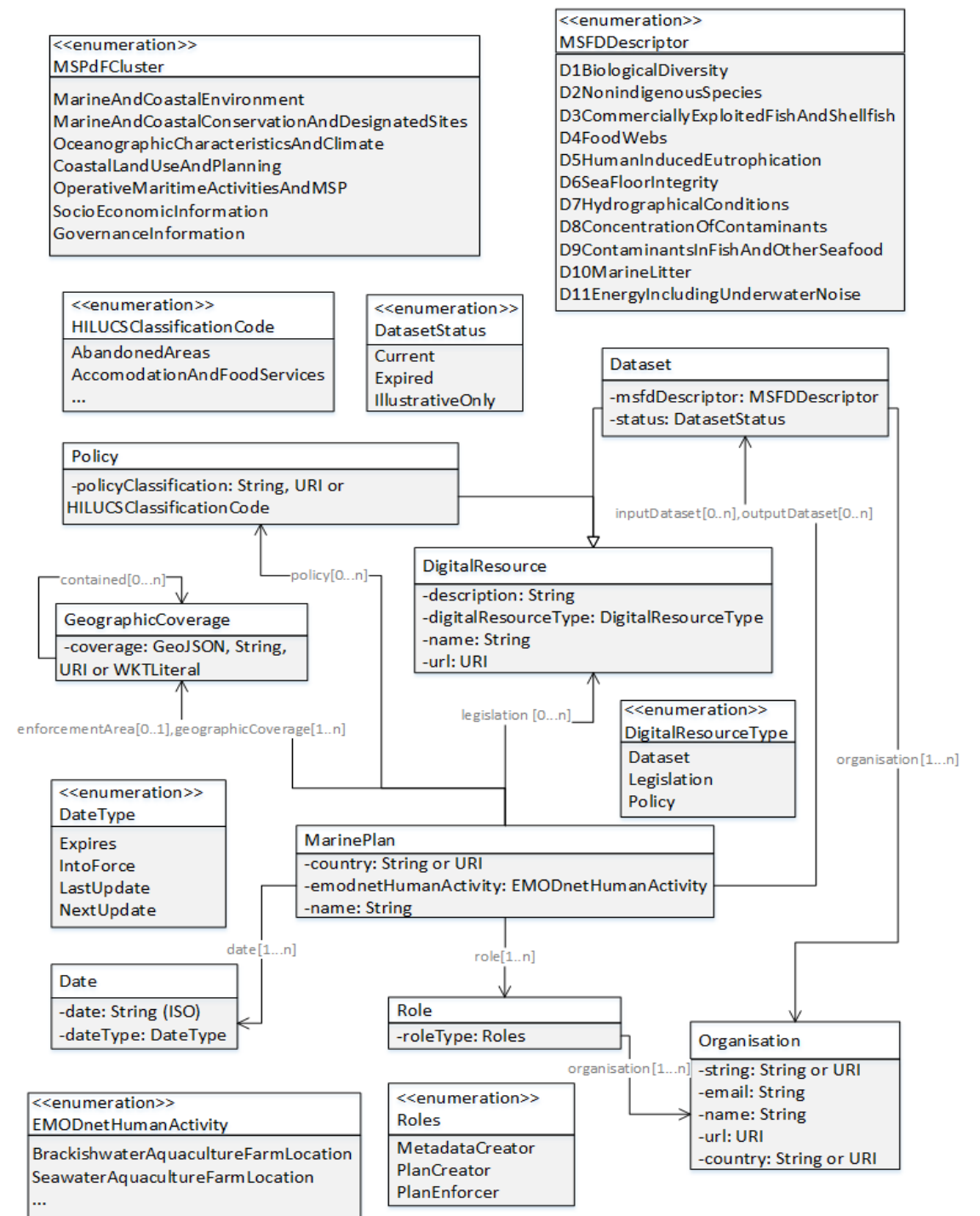
A common structure to describe data associated with maritime spatial plans.



Produced by Technical Expert Group (TEG) on Data for MSP.
October 2023



Metadata Profile



Classes: Mandatory Fields



Marine Plan: *name, country, date, geographic coverage, role*



Dataset: *organisation*



Date: *date, date type*



Policy: -

Classes: Mandatory Fields



Digital Resource: *name, URL, digital resource type*



Geographic Coverage: *coverage*



Organisation: *name*



Role: *role type, organisation*

Examples of the Metadata Standard



Use Case 3: Organisational roles

“As an offshore energy developer, I wish to discover the roles of organisations connected with a maritime spatial plan (plan creator, plan enforcer, metadata creator, etc.) so that I can submit my plans to the relevant organisation.”

Use Case 4: Contact points

“As an expert on a neighbouring Marine Spatial Plan area, I wish to discover the contact points for the organisations responsible for a maritime spatial plan so that I can make contact regarding cross-border Marine Spatial Planning.”

Use Case 7: Validity of a spatial plan

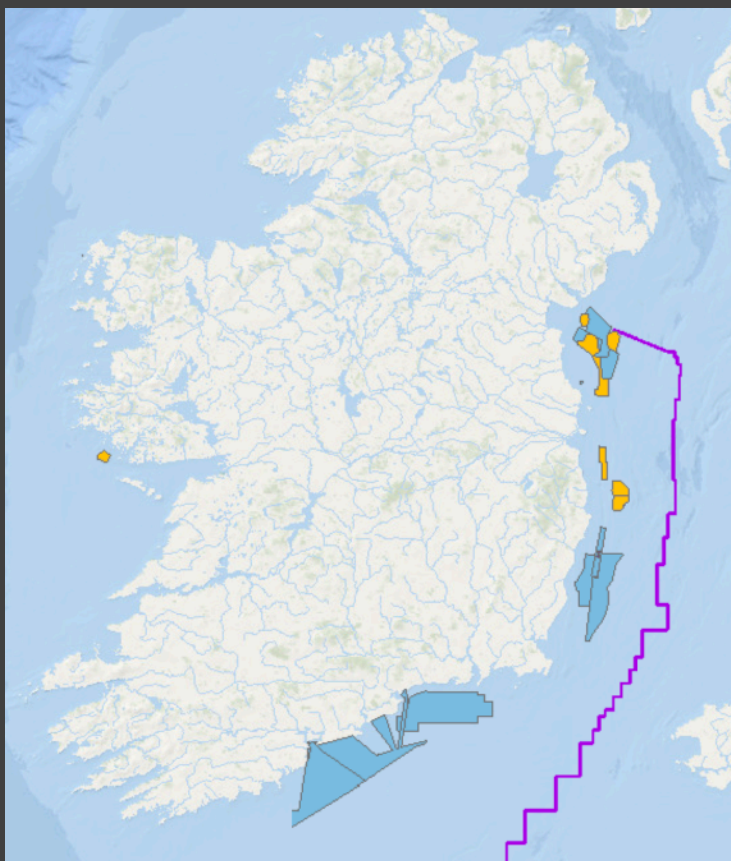
“As an aquaculture developer, I wish to discover the validity of a maritime spatial plan: when did it come into force, when does it expire, how frequently is the plan updated so that I can understand when the plan applies to my activities.”

Implementation Example: NMPF

MarinePlan	National Marine Planning Framework (NMPF)
Country	Ireland
DateType	IntoForce
Date	30/06/2021
DateType	Expires
Date	2027
GeographicCoverage	http://atlas.marine.ie/arcgis/services/01_Maritime_Boundaries/MapServer/WMSServer?request=GetCapabilities&service=WMS
Legislation	Marine Area Planning Act
Legislation	Planning and Development Act 2018
Legislation	Directive 2014/89/EU - Maritime Spatial Planning
Role	PlanCreator
Organisation	
name	Department of Housing, Local Government and Heritage
country	IE
url	https://www.gov.ie/en/organisation/department-of-housing-local-government-and-heritage/
email	qcsofficer@housing.gov.ie
inputDataset	
name	Seabed Sediment Classification
url	https://data.marine.ie/geonetwork/srv/eng/catalog.search#/metadata/ie.marine.data.dataset.4005
datasetStatus	Current
Organisation	Marine Institute @en

Role	MetadataCreator
Organisation	
name	Marine Institute @en
name	Foras na Mara @gle
Country	IE
url	https://www.marine.ie/Home/home
email	institute.mail@marine.ie
Organisation	
name	Maritime Area Regulatory Authority
country	IE
url	https://www.maritimeregulator.ie/
email	info@mara.gov.ie
Policy	
name	Aquaculture
classification	Aquaculture
url	https://marineplan.ie/?page=page_28&views=view_112
DigitalResource	
name	Irish National Marine Planning Framework (NMPF) Area
url	http://atlas.marine.ie/arcgis/services/01_Maritime_Boundaries/MapServer/WMSServer?request=GetCapabilities&service=WMS

Implementation Example: ORE



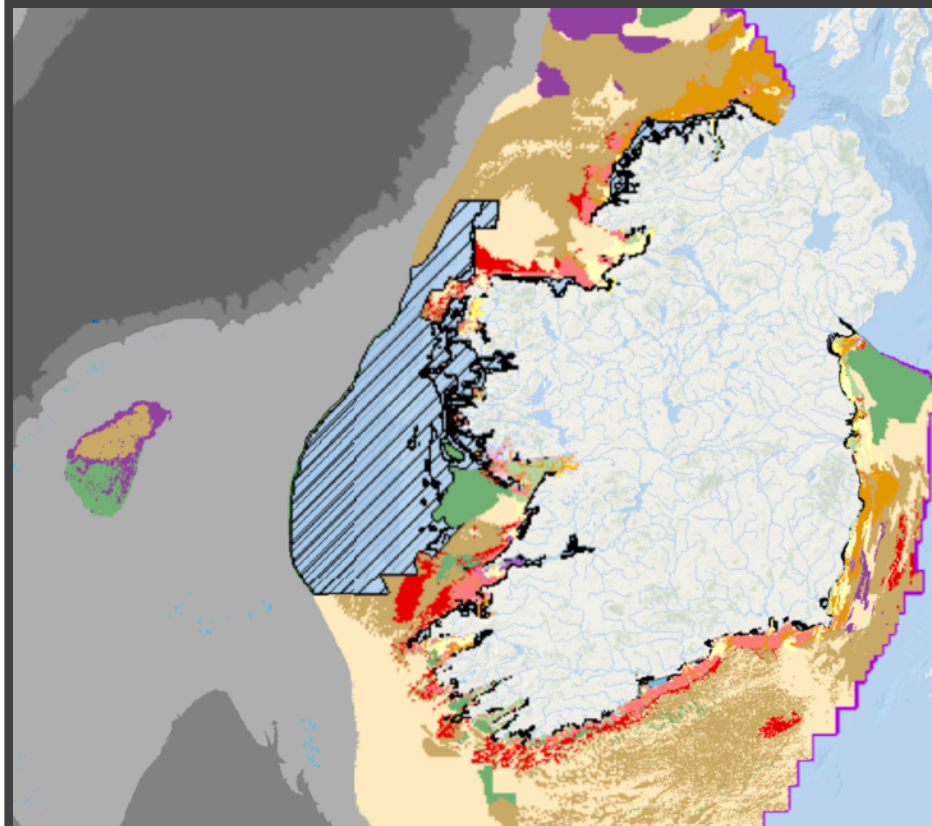
Dataset	DHLGH Foreshore Offshore Renewable Energy Data
MarinePlan	National Marine Planning Framework
country	Ireland
dateIntoForce	2021-06-30
dateExpires	2027
geographicCoverage	(-189451.4235873795, 5597927.494930329, 1339843.3016687378, 6385064.485870978)
inputDataset	DHLGH Foreshore Offshore Renewable Energy Data
legislation	Marine Area Planning Act
role	Plan Creator, Metadata Creator
EMODnetHumanActivity	SDN:HA2::HA20024
inputDataset	DHLGH Foreshore Offshore Renewable Energy Data
legislation	Marine Area Planning Act
policy	ORE Policy 3
DataSet	
Organisation	Department of Housing Local Government & Heritage
mspdfCluster	Operative Maritime Activities and MSP
status	Current
date	2023-02-16
dateType	Created Date
DigitalResource	
description	ArcGIS GeoService
digitalResourceType	Dataset
name	Foreshore AIE ORE Testing
url	https://services.arcgis.com/NzIPQPKn5QF9v2US/arcgis/rest/services/Foreshore_AIE_ORE_Testing/FeatureSer
Organisation	
country	Ireland
email	opendata@housing.gov.ie
name	Department of Housing Local Government & Heritage
url	https://www.gov.ie/en/organisation/departement-of-housing-local-government-and-heritage/

Implementation Example: Spawning Grounds



Dataset	Herring Spawning Areas
MarinePlan	National Marine Planning Framework
country	Ireland
dateIntoForce	2021-06-30
dateExpires	2027
geographicCoverage	(-189451.4235873795, 5597927.494930329, 1339843.3016687378, 6385064.485870978)
inputDataset	Herring Spawning Areas
legislation	Marine Area Planning Act
role	Metadata Creator
EMODnetHumanActivity	
inputDataset	Herring Spawning Areas
legislation	Marine Area Planning Act
policy	Fisheries Policy
DataSet	
Organisation	Marine Institute
mshdfCluster	Marine & Coastal Environment
mshdfDescriptor	Commercial fish and shellfish
status	Current
date	01-01-2013
dateType	Created Date
DigitalResource	
description	Shapefile
digitalResourceType	Dataset
name	Herring_Spawning_Grounds
url	https://atlas.marine.ie/midata/SpeciesDistribution/Herring_Spawning_Grounds.shp.zip
Organisation	
country	Ireland
email	datarequests@marine.ie
name	Marine Institute
url	https://www.marine.ie/

Implementation Example: Benthic Broad Habitat Types



Dataset	Benthic Broad Habitat Type
MarinePlan	National Marine Planning Framework
country	Ireland
dateIntoForce	2021-06-30
dateExpires	2027
geographicCoverage	(-189451.4235873795, 5597927.494930329, 1339843.3016687378, 6385064.485870978)
inputDataset	Benthic Broad Habitat Type
legislation	Marine Area Planning Act
role	Metadata Creator
EMODnetHumanActivity	SDN:HA2::HA20010
inputDataset	Benthic Broad Habitat Type
legislation	Marine Area Planning Act
policy	Sea-floor Integrity Policy
DataSet	
Organisation	Marine Institute
mshCluster	Marine & Coastal Environment
mshDescriptor	Seabed Integrity
status	Current
date	01-01-2006
dateType	Created Date
DigitalResource	
description	Web Map Service
digitalResourceType	Dataset
name	INFOMAR_BroadBenthicHabitats
url	https://maps.marine.ie/arcgis/rest/services/Infomar/INFOMAR_BroadBenthicHabitats/MapServer
Organisation	
country	Ireland
email	datarequests@marine.ie
name	Marine Institute
url	https://www.marine.ie/

Future Applications

```
@base <https://www.gov.ie/en/publication/60e57-national-marine-planning-framework/>.
@prefix msp: <https://purl.org/voc/marineplans#>.
@prefix dcat: <http://www.w3.org/ns/dcat#> .
@prefix dcterms: <http://purl.org/dc/terms/>.
@prefix sdo: <http://schema.org/>.
@prefix skos: <http://www.w3.org/2004/02/skos/core#>.
@prefix xsd: <http://www.w3.org/2001/XMLSchema#>.

<https://purl.org/voc/marineplans# a msp:MarinePlan ;
  msp:name "National Marine Planning Framework" ;
  msp:country "ie" ;
  msp:date :into_force, :expires ;
  msp:geographicCoverage
<http://atlas.marine.ie/arcgis/services/01_Maritime_Boundaries/MapServer/WMServer?request=GetCapabilities&service=WMS> ;
  msp:legislation :marine_area_planning_act ;
  msp:legislation :planning_and_development_ammendment_act_2018 ;
  msp:role :metadata_creator, :plan_creator, :plan_enforcer ;
  msp:emodnetHumanActivity :MaritimeBoundaries ;
  msp:dataset :input_dataset ;
  msp:policy :aquaculture .

:into_force a msp:Date ;
  msp:dateLiteral "2021-06-30"^^xsd:Date ;
  msp:dateType :IntoForce .

:expires a msp:Date ;
  msp:dateLiteral "2027"^^xsd:gYear ;
  msp:dateType :Expires .

:input_dataset a msp:Dataset ;
  msp:name "Seabed Sediment Classification";
  msp:url
<https://data.marine.ie/geonetwork/srv/eng/catalog.search#/metadata/ie.marine.data:dataset.4005>;
  msp:organisation :marine_institute ;
  msp:msfdDescriptor :SeaFloorIntegritySupportsEcosystem ;
  msp:datasetStatus msp:Current .
```

Data Catalogue Search Map Sigi

Back to search Download Display mode

Benthic Broad Habitat Type

Temporal extent 01-01-2006 →

Multibeam echosounder data and seabed sampling data acquired during the INFOMAR and INSS national seabed mapping programmes are the primary sources of data used in the generation of this collated seabed classification/marine habitats layer. Areas where there is no multibeam data have either been filled by EUSeaMap (predictive broadscale habitat map) or have been left as unclassified. The original classes assigned to the data were translated to a modified Folk class to facilitate reclassification of the data to both EUNIS and MSFD Benthic Broad Habitat Type classification systems. Additional information on biological zones from the EMODnet Seabed Habitats project were used to translate the data to EUNIS. Quantifying MSFD Habitats types in Irish Waters specifically for MSFD Descriptor 6 Assessments of seafloor integrity. High quality seabed classification data for the Irish waters is required to fulfil reporting obligations under the Marine Strategy Framework Directive (MSFD). The Marine Strategy Framework Directive is a regulatory framework that requires each Member State to achieve Good Environmental Status in their territorial waters. Descriptor 6 considers Seafloor Integrity and requires quantitative reporting on the impacts of anthropogenic activities on benthic habitats. This map is the most up-to-date representation of the benthic broad habitat types and has been produced specifically for use in this assessment.

Discover data



Summary

- Profile based on best practice.
- Promotes cross border cooperation.
- Interoperable.
- Adaptable.
- Potential for future applications.

Questions?

andrew.conway@marine.ie



Consiglio Nazionale delle Ricerche



PLANNING AUTHORITY

