

How following the FAIR principles has allowed EMODnet Seabed Habitats to aggregate and combine disparate data into new products for the benefit of many

Helen Lillis

JNCC,
helen.lillis@jncc.gov.uk





EMODnet



European Marine
Observation and
Data Network

What is EMODnet Seabed Habitats

www.emodnet-seabedhabitats.eu



SEABED HABITATS

HOME MAP VIEWER HELP SEARCH METADATA METADATA CATALOGUE DOWNLOAD DATA WEB SERVICES TERMS OF USE

ALL LAYERS

Find layer ...

EMODnet broad-scale seabed habitat map for Europe (EUSeaMap) 0

Environmental variables that influence habitat type 0

Individual habitat maps from surveys 0

Modelled maps of specific habitats 0

Survey sample points 0

Composite data products 8

> Habitats directive - official 2018 reported distribution grids 0

> Habitats directive - official 2013 reported distribution grids 0

> Habitats directive - HELCOM datasets 0

> Habitats directive - UK official composite Annex I datasets 0

> Important marine habitats in Norway 0

> OSPAR habitats - official 2020 public reference dataset 0

> Essential Ocean Variables in Europe (draft) 6

> Geomorphology 0

> Vulnerable marine ecosystems 0

> Biogenic substrate in Europe (draft) 1

ACTIVE LAYERS

Coralligenous and other calcareous bioconcretions (polygons) X



Biogenic substrate (polygons) X



Seagrass cover (polygons, v2019) X



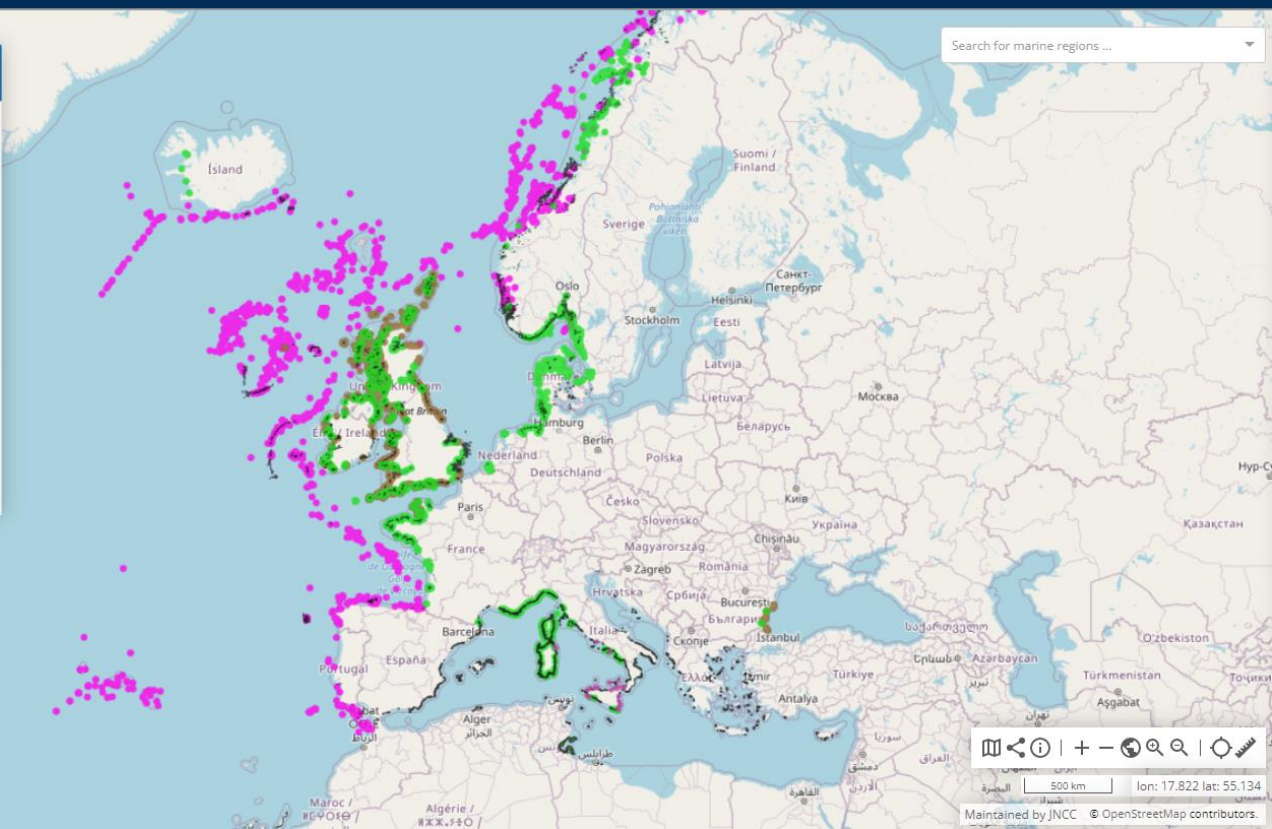
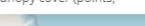
Seagrass cover (points, v2021) X



Macroalgal canopy cover (polygons, v2019) X



Macroalgal canopy cover (points, v2021) X



Search for marine regions ...

500 km lon: 17.822 lat: 55.134

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EMODnet



European Marine
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Who is EMODnet Seabed Habitats



Centre of Marine Sciences



ISPRA

Istituto Superiore per la Protezione
e la Ricerca Ambientale

*Italian National Institute for Environmental Protection
and Research*



*National Research and Development Institute for
Marine Geology and Geoecology*



GEUS

Geological Survey of Denmark and Greenland



Marine Institute
Foras na Mara



Hellenic Centre for Marine Research



French Research Institute for Exploitation of the Sea



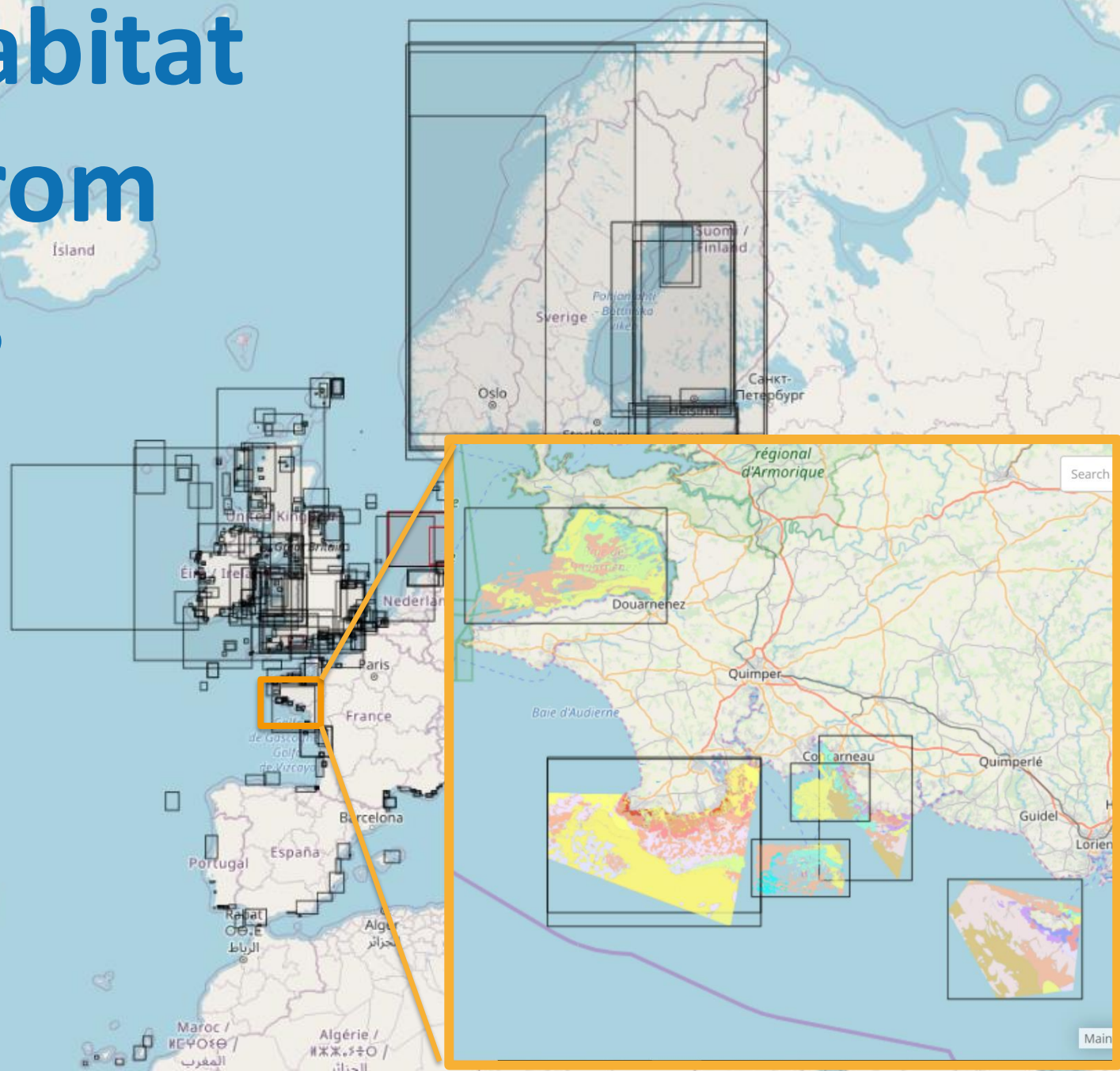
SYKE

Finnish Environment Institute



*Institute of Oceanography – Bulgarian Academy of
Sciences*

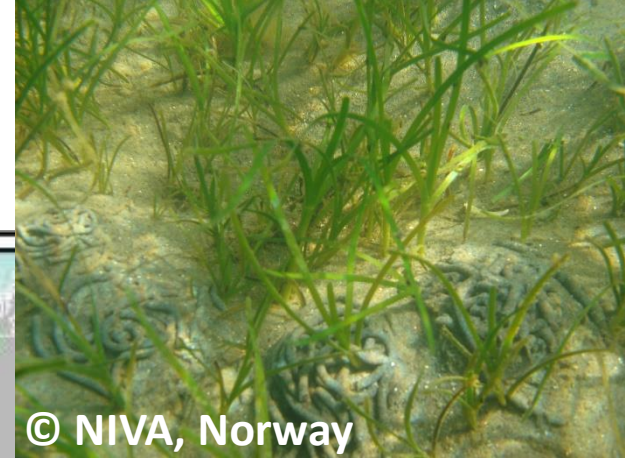
>900 habitat
maps from
surveys



Nearly 500k point
observations of
habitats



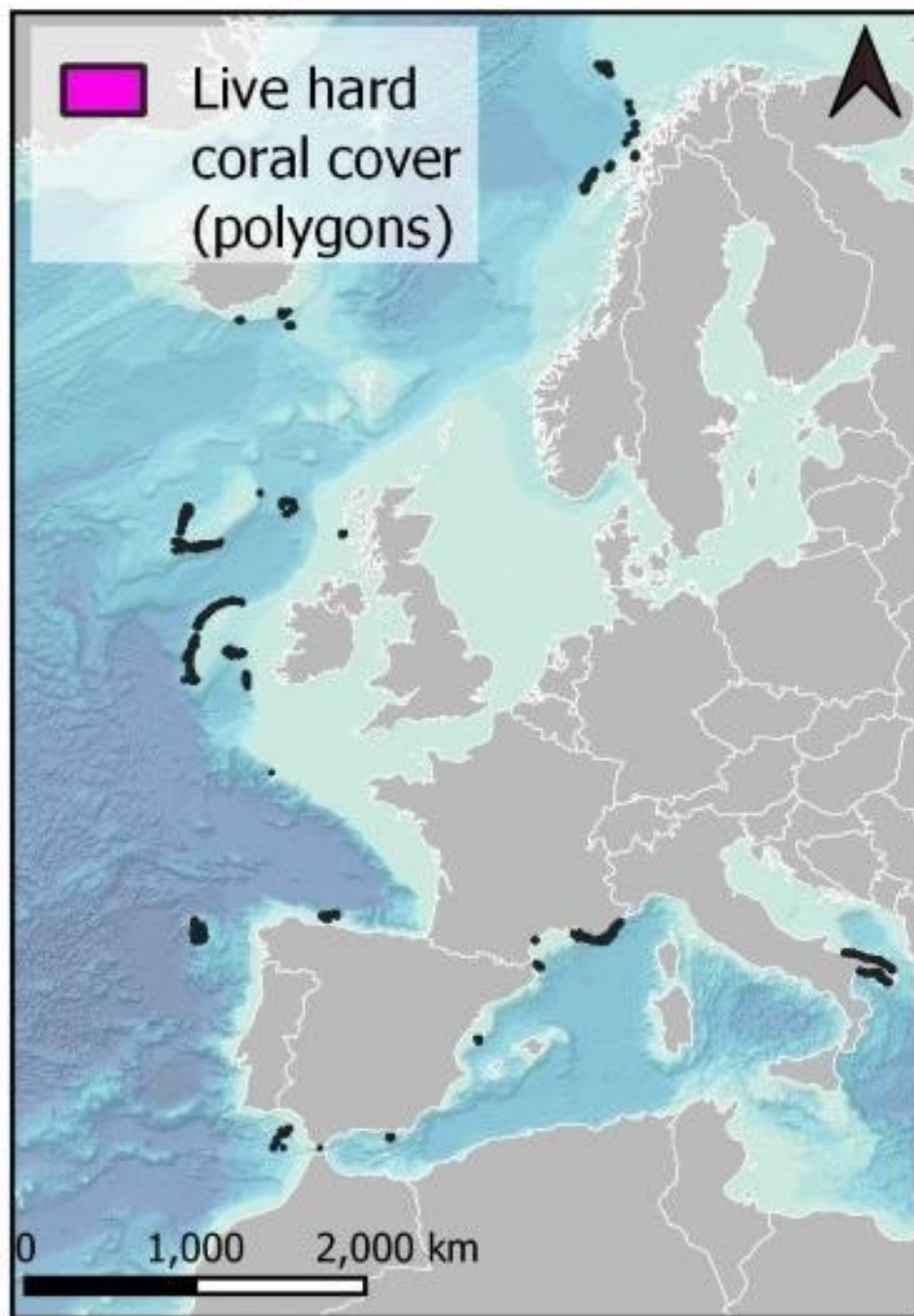




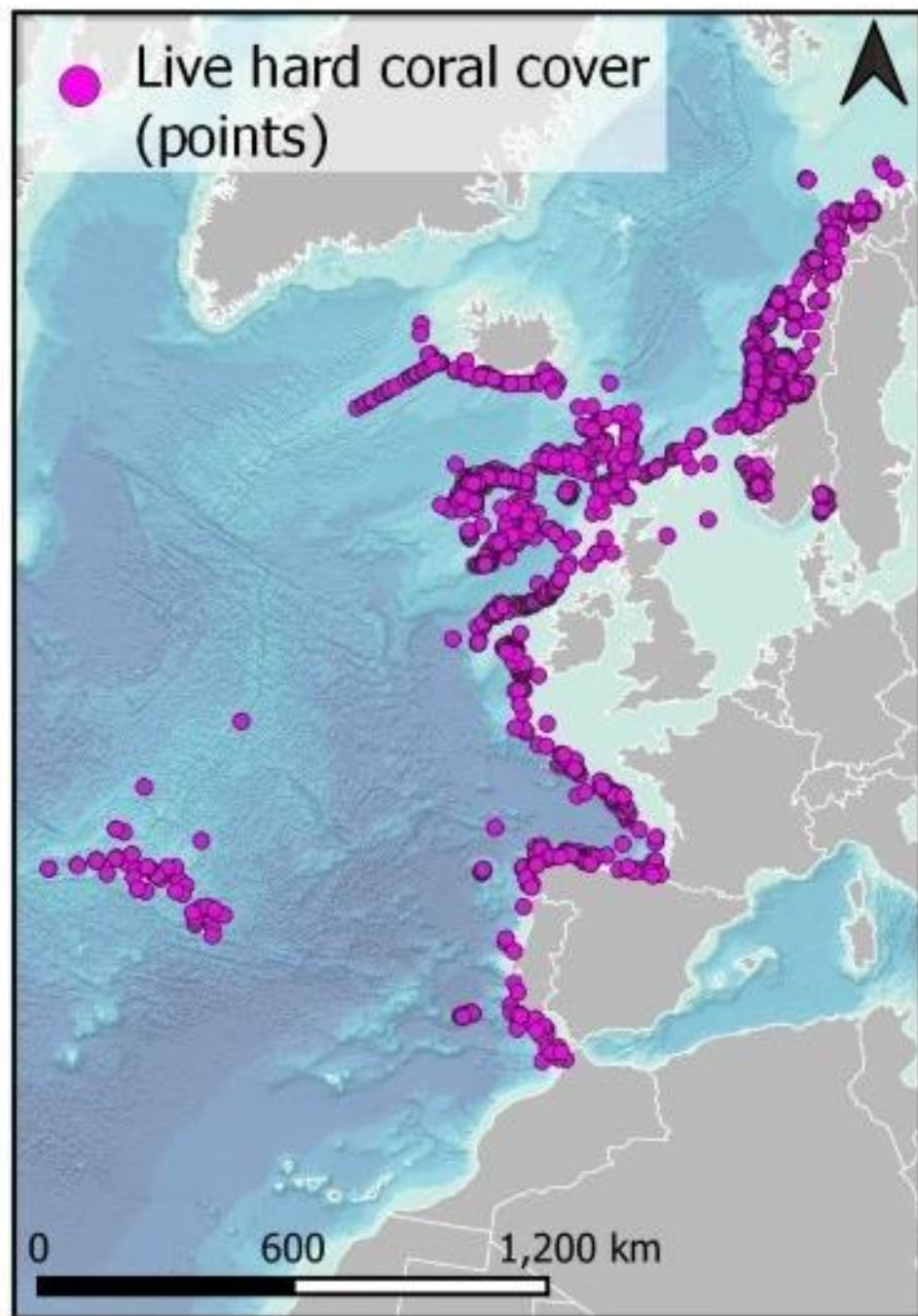
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Live hard
coral cover
(polygons)



Live hard coral cover
(points)



A



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B



Biogenic Substrates

- Facies with *F. enigmaticus* of the euryhaline &/or eurythermal lagoon biocenosis
- bivalve reefs
- cold water coral reefs
- seagrass beds
- worm reefs
- biogenic substrate
- coralligenous platforms



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F indable

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A ccessible

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I nteroperable

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R eusable

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F indable

*F4 Metadata in a
searchable resource:*

GeoNetwork

→ ↺ 🏠 gis.ices.dk/geonetwork/emodnet-seabedhabitats/eng/catalog.search#/home 🔒

🌊 EMODnet Seabed Habitats 🔍 Search 🗺 Map 🔑 Sign in

Morecambe

Morecambe Bay map of Zostera beds
Broadscale biological mapping of **Morecambe** Bay. Lifeforms

Browse by **Topics**

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- 🌳 Environment 566
- 🌿 Biota 477
- 🎯 Geoscientific information 150
- 🌐 Imagery base maps eart... 3
- ⋮ Boundaries 2

Browse resources

- 🗄 Dataset 1156
- ☁ Service 8

F indable

F1 Unique and persistent identifiers:

controlled vocabularies

⚠ Not secure | vocab.nerc.ac.uk/collection/M22/current/



Natural
Environment
Research Council



National Oceanography Centre
British Oceanographic Data
Centre BODC

The NERC Vocabulary Server (NVS)

Service Status

[NVS Home](#) | [Vocabularies](#) | [Thesauri](#) | [Search NVS](#) | [SPARQL](#) | [Other Tools](#) | [About NVS](#)

Vocabulary

OSPAR List of Threatened and/or Declining Species and Habitats

URI <http://vocab.nerc.ac.uk/collection/M22/current/>

Alternate Formats

Other formats for this page:

[RDF/XML](#) [Turtle](#) [JSON-LD](#)

Alternate Profiles

***A1 (Meta)data are
retrievable by their identifier
using a standardised
communication protocol:***

**Open Geospatial Consortium
(OGC) web services**

Accessible

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SEABED HABITATS

Unlocking seabed habitat data in Europe

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EMODnet Seabed Habitats Web Services

The layers that are viewable on our [map viewer](#) are also viewable in your desktop GIS application or on other mapping portals via our [Web Map Service \(WMS\)](#) and [Web Feature Service \(WFS\)](#) (copy and paste the address into your application):

- For **EUSEaMap**, **Environmental variables that influence habitat type**, **Survey sample points** and **Composite data products**:
 - WMS: https://ows.emodnet-seabedhabitats.eu/geoserver/emodnet_view/wms

***A1 (Meta)data are
retrievable by their identifier
using a standardised
communication protocol:***

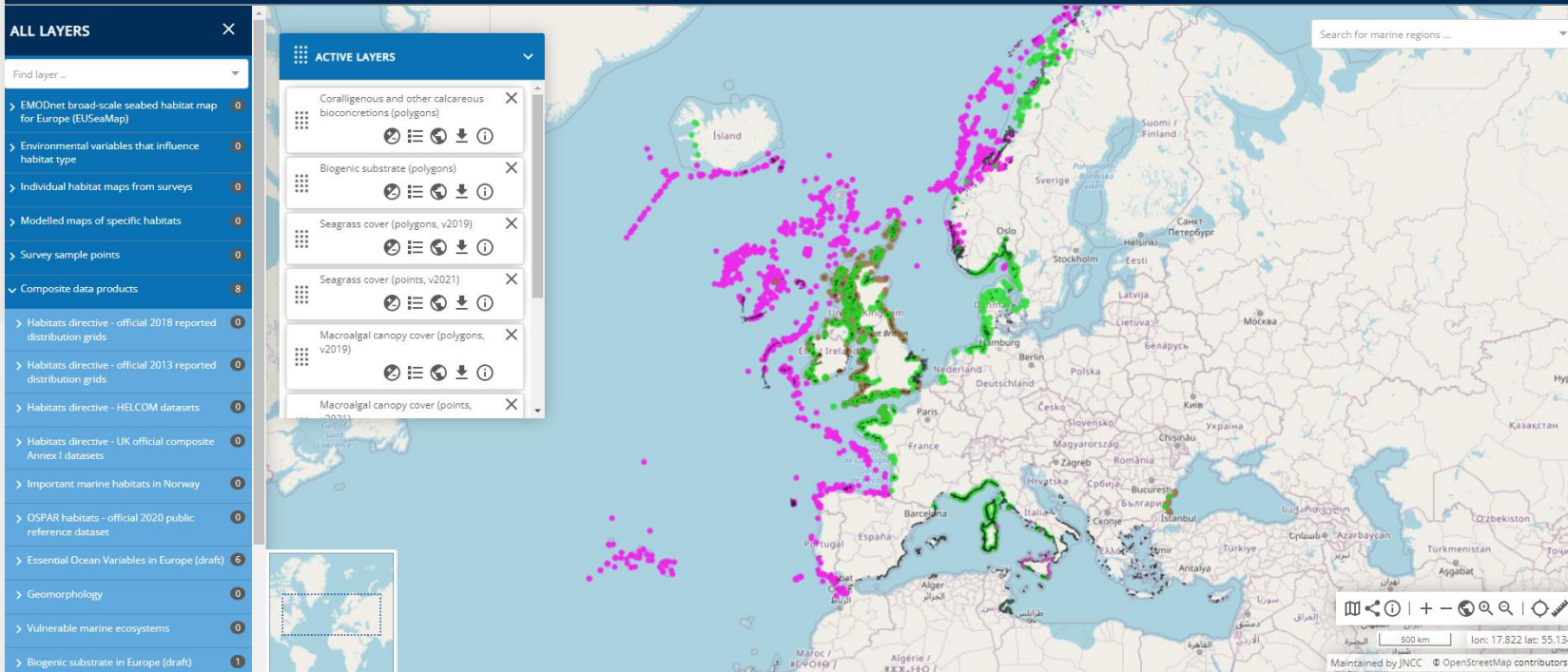
Free, web-based map viewer

Accessible



SEABED HABITATS

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[Habitat Point Data Submission Process](#)

[Habitat Map Submission Process](#)

[Data exchange format](#)

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Data exchange format

A standardised attribute table format simplifies the process of combining multiple habitat maps and makes the information easier to understand for end users. We call this the Data Exchange Format (DEF). A [PDF version of this page](#) is also available.

For submission to EMODnet Seabed Habitats, a habitat map must be created according to one of the EMODnet Seabed Habitat Data Exchange Formats published in 2005 as part of the EU-funded [MESH](#) project.

For habitat maps, the type of DEF depends on the type of habitat map.

All (Meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation:

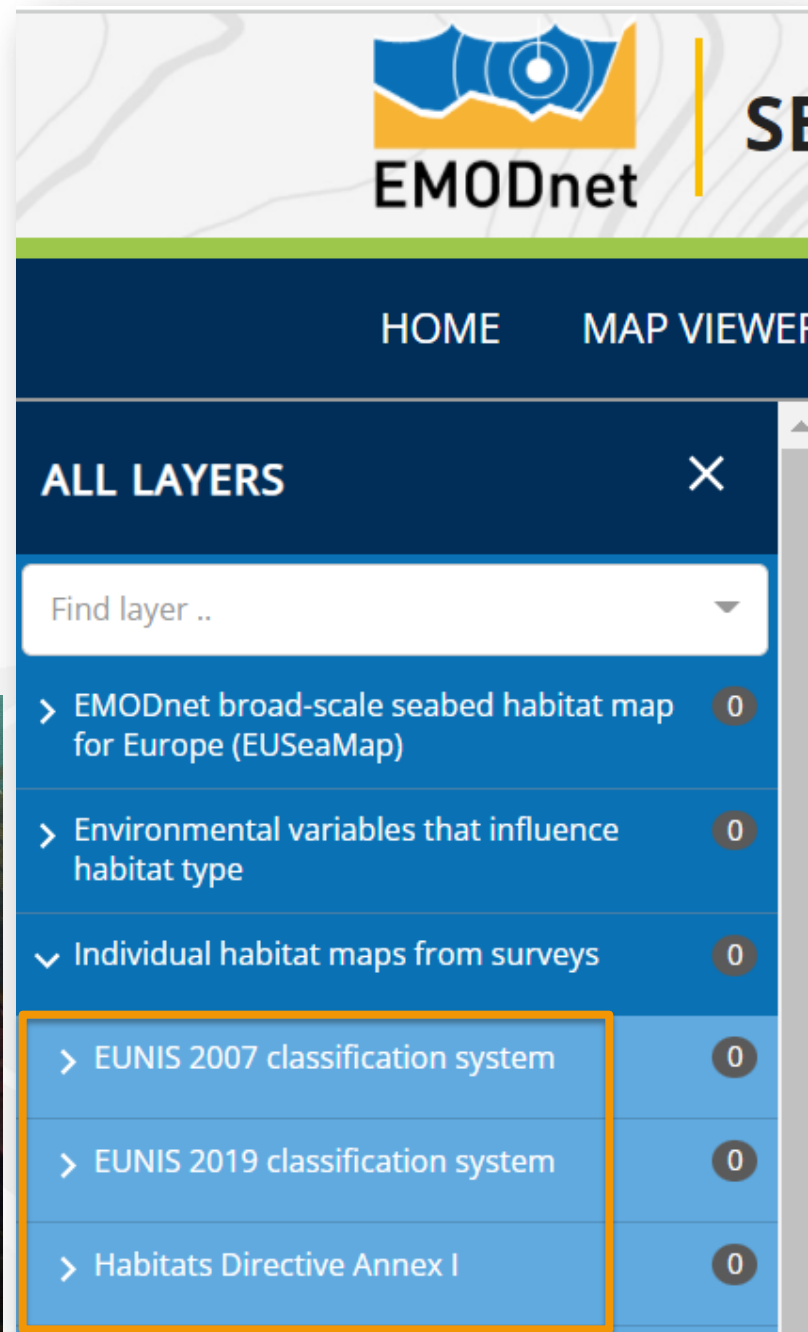
Data schema for habitat maps

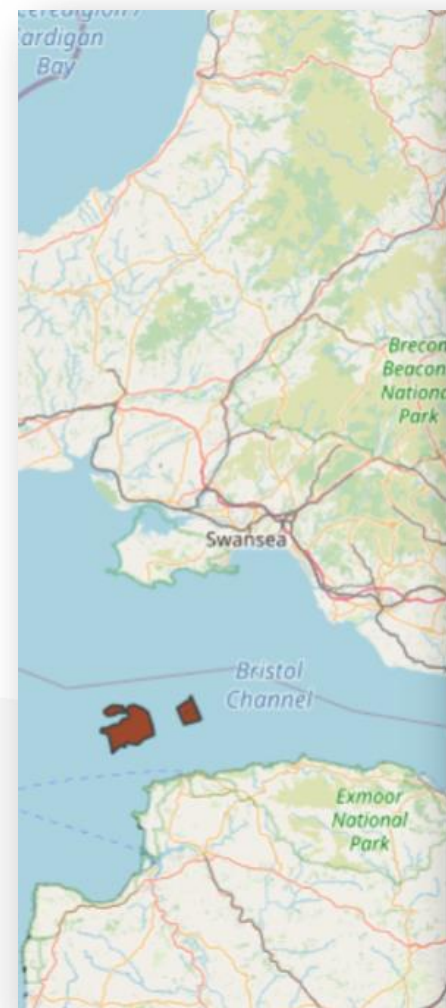


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12 (Meta)data use vocabularies that follow FAIR principles:

Standard vocabularies for habitat types





Biogenic substrate in Europe (View layer metadata)

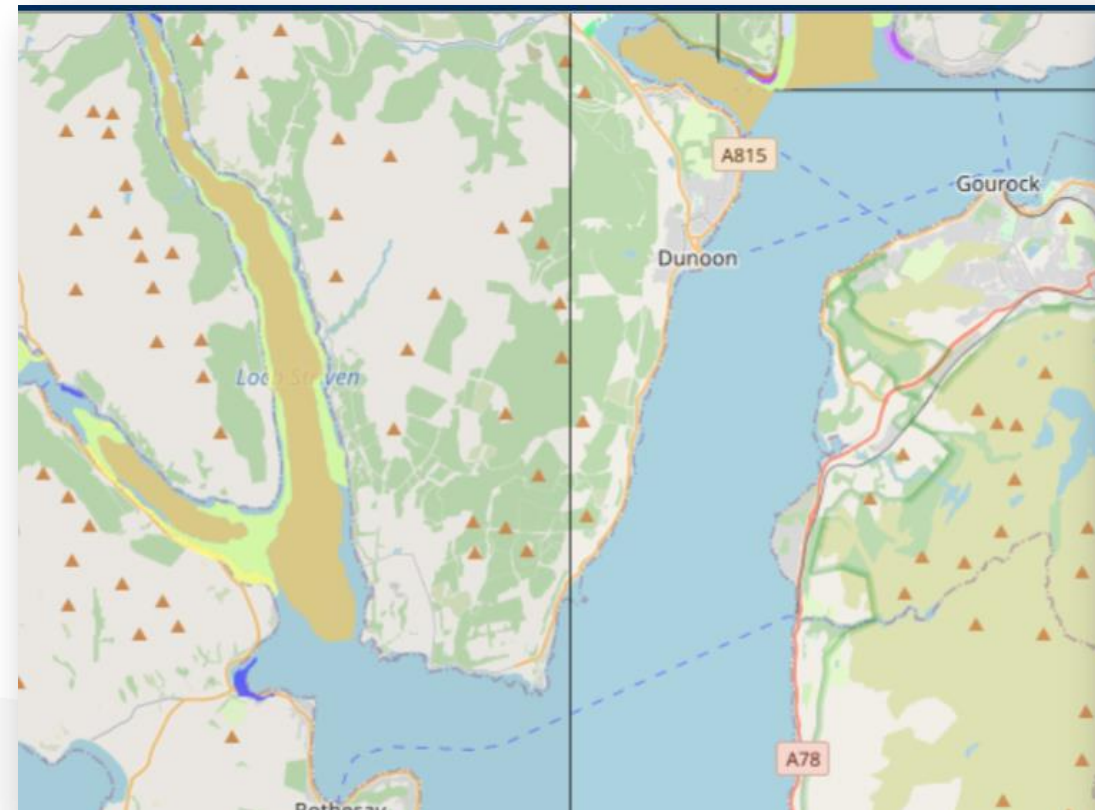
Biogenic substrate type - most detailed level	Sabellaria spinulosa reefs
Biogenic substrate type - level 1	biogenic substrate
Biogenic substrate type - level 2	worm reefs
Biogenic substrate type - level 3	Sabellaria spinulosa reefs
Biogenic substrate type - level 4	not applicable
Source data product name	OSPAR habitats - official 2020 public reference dataset
Source data product type	Composite data product - international
Source habitat type	Sabellaria spinulosa reefs
Source classification system	OSPAR threatened and/or declining habitats
Original map ID	GB_D_00001
Original habitat type	Ross worm (Sabellaria spinulosa) reefs + A4.2
Original classification system	unknown
Original map date	2013-12-31
Area of source polygon	67473587.6214

***R1.2 (Meta)data
are associated
with detailed
provenance***

**Provenance of each polygon
is described in composite
data products**



Reusable



FEATURE INFO			
Habitat maps dataset-level information			
Dataset GUI (identifier)	Availability	MESH confidence score	Habitat classification system
GB000287 (View metadata)	View/Download (Download this dataset)	42	Eunis
GB000288 (View metadata)	View/Download (Download this dataset)	42	Eunis

Medium-scale EUNIS habitat maps (View layer metadata)

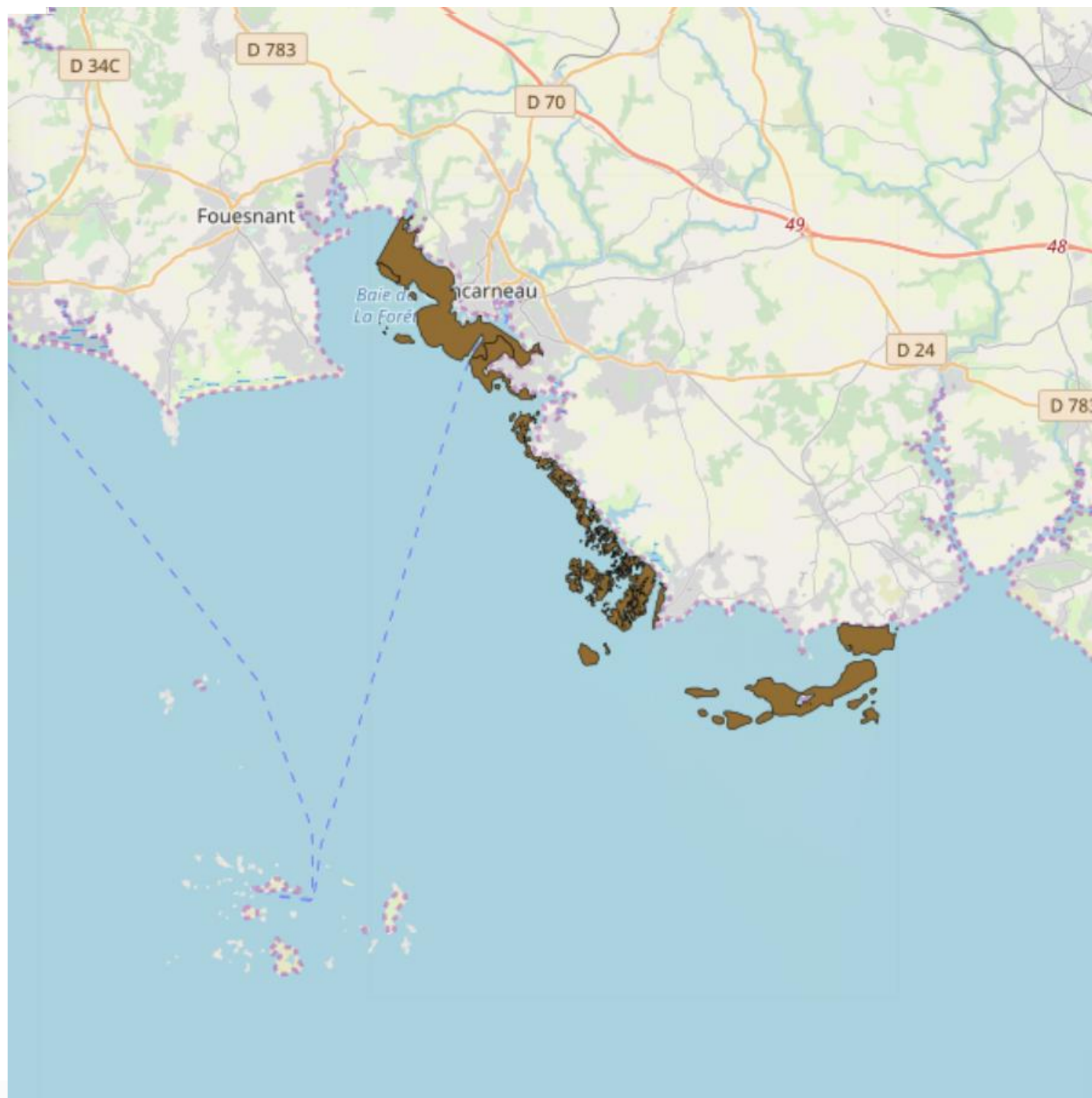
GUI	GB000287
Habitat	A1.3
EUNIS version	EUNIS version 2007-11
Original habitat	Sheltered, littoral stone, gravel and sediment flats with Mytilus beds, fucoids and infauna of bivalves and polychaetes

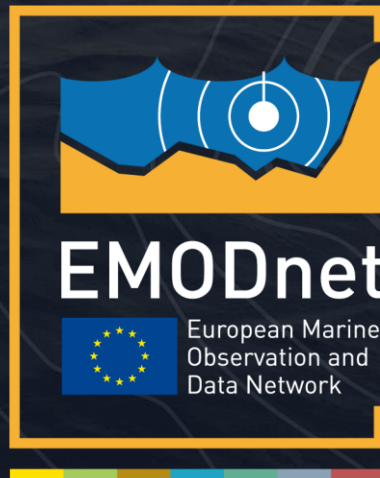
R1.1 (Meta)data are released with a clear and accessible data usage license

Reusable



Classify all
matching
habitats as
'Macroalgal
canopy' for
new data
product





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Your gateway to marine data in Europe