EMODnet

SEABED HABITATS

Unlocking seabed habitat data in Europe

EMODnet Seabed Habitats

DELIVERING A HABITAT MAP FOR THE CASPIAN BASIN

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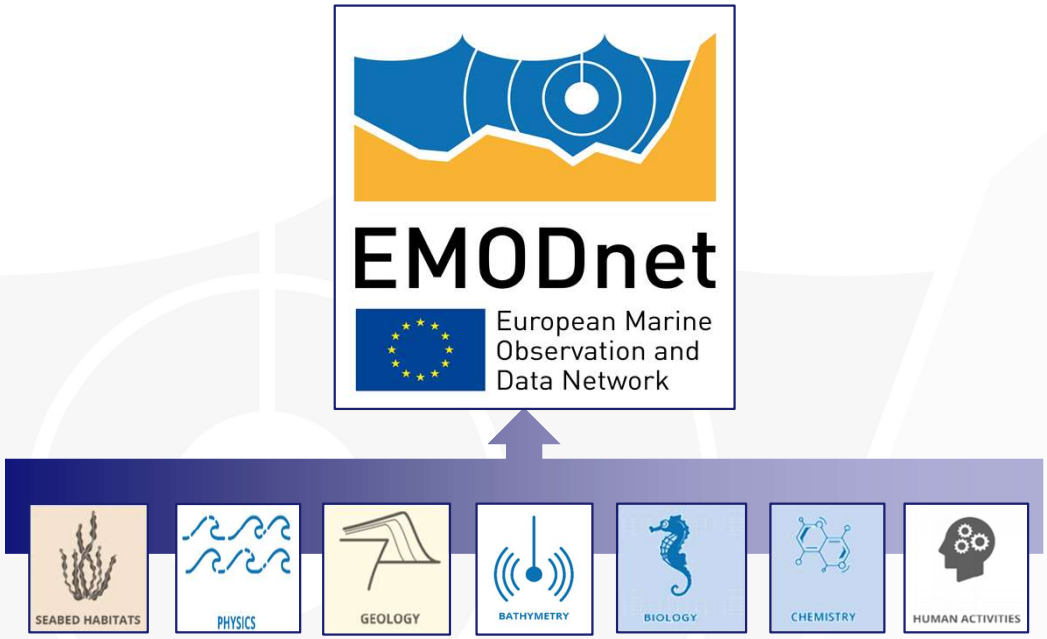
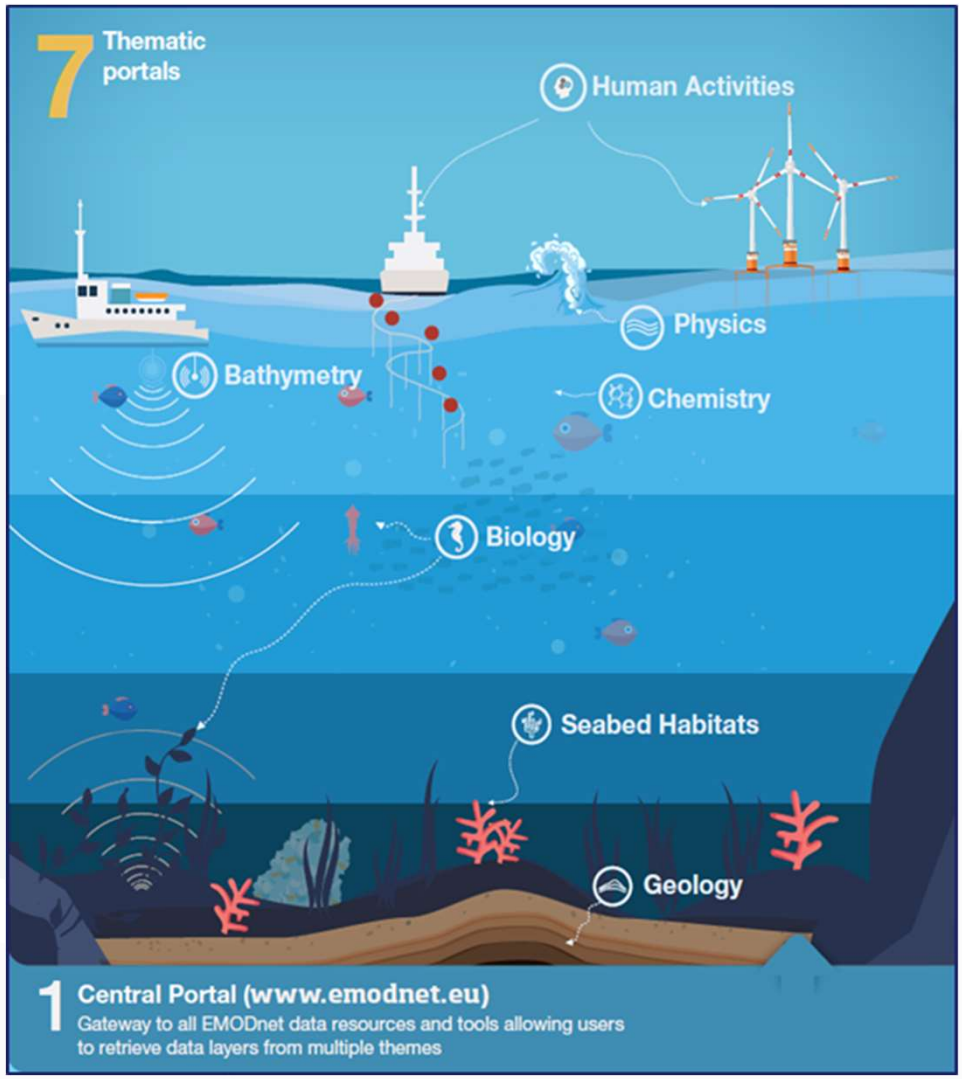
Overview

- What Is EMODnet / Seabed Habitats
- EMODNET Seabed Habitats – Outputs
- EUSeaMap
- EUSeaMap In The Caspian Basin
- Data Needs - CONTACT US



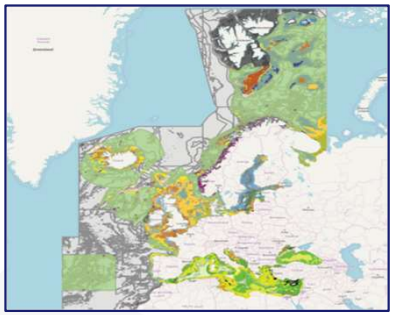
What is EMODnet?

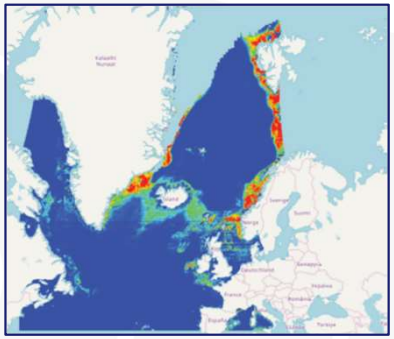
- MARINE DATA INITIATIVE
- 7 THEMES
- GOVT. AGENCIES
- RESEARCH INSTITUTIONS
- ACCESS Via Web services / Available to download

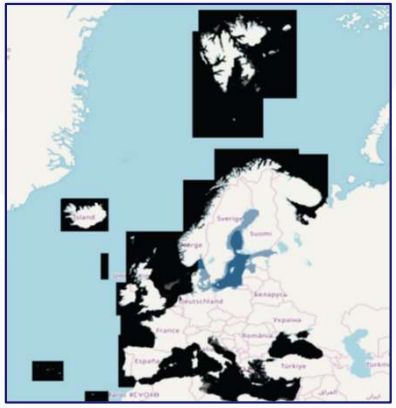


Seabed Habitats - Outputs

- **EUSeaMap** Broad-Scale Predictive Habitat Map
- **Environmental Variables**
- **Composite Data Products**
- **Collection of Individual Habitat Maps from Surveys**
- **Collection of Modelled Maps of Specific Habitats**
- **Marine/Coastal Wetlands Extent (Phase IV)**



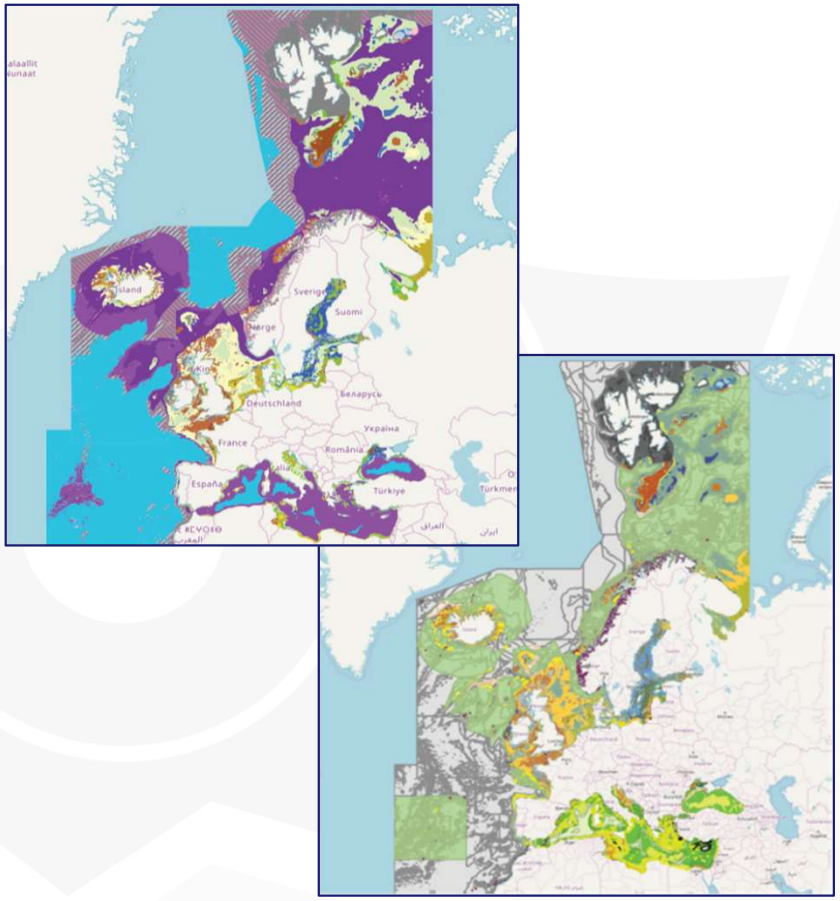




Confidence layers / Spatial resolution: Variable

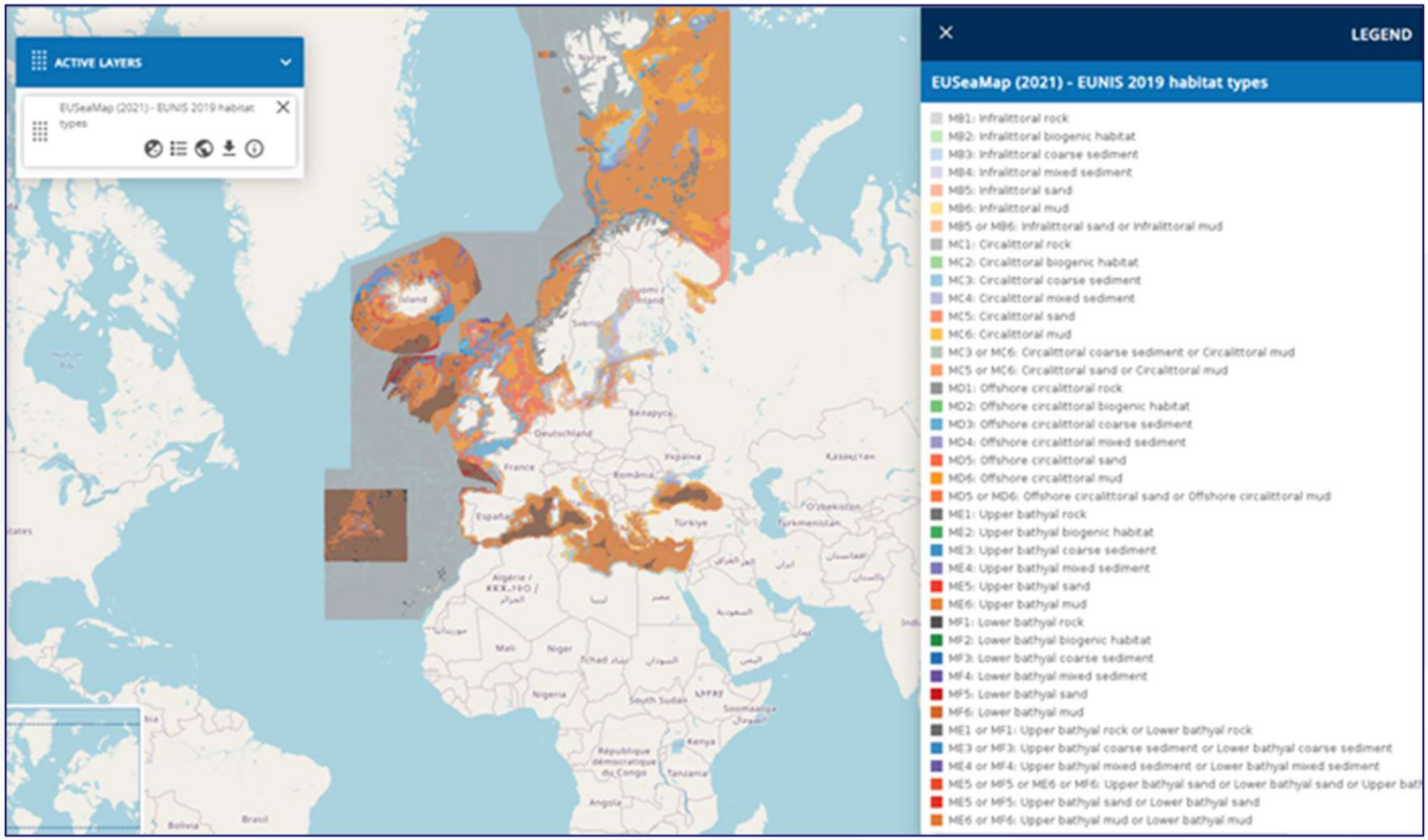
Seabed Habitats - EUSeaMap

- **Broad-Scale Predictive Habitat Map**
- **EUNIS** / full-detail habitat classification
- **MSFD** Benthic Broad Habitats Map



- Associated confidence layer.
- Spatial Res.: ~100 m, /16 *1/16 arc min.
- Download as: ESRI shapefile.
- View Web services.

EUSeaMap – Current Coverage

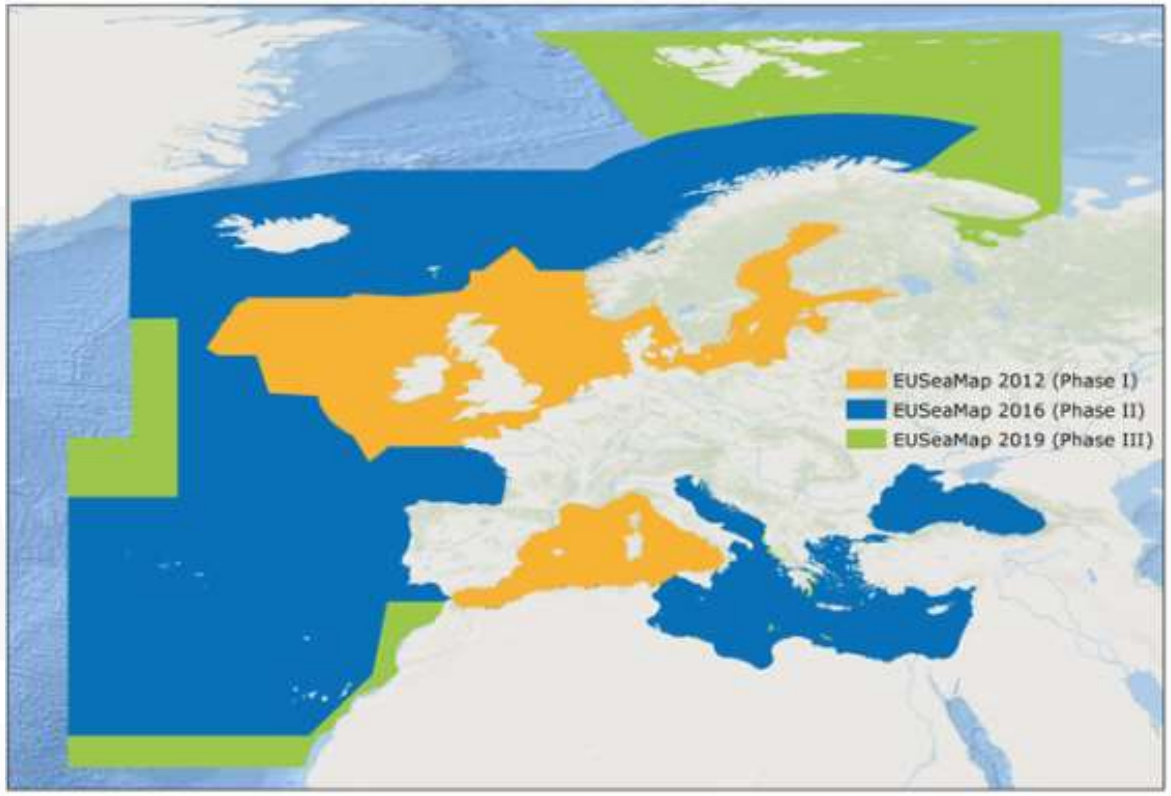


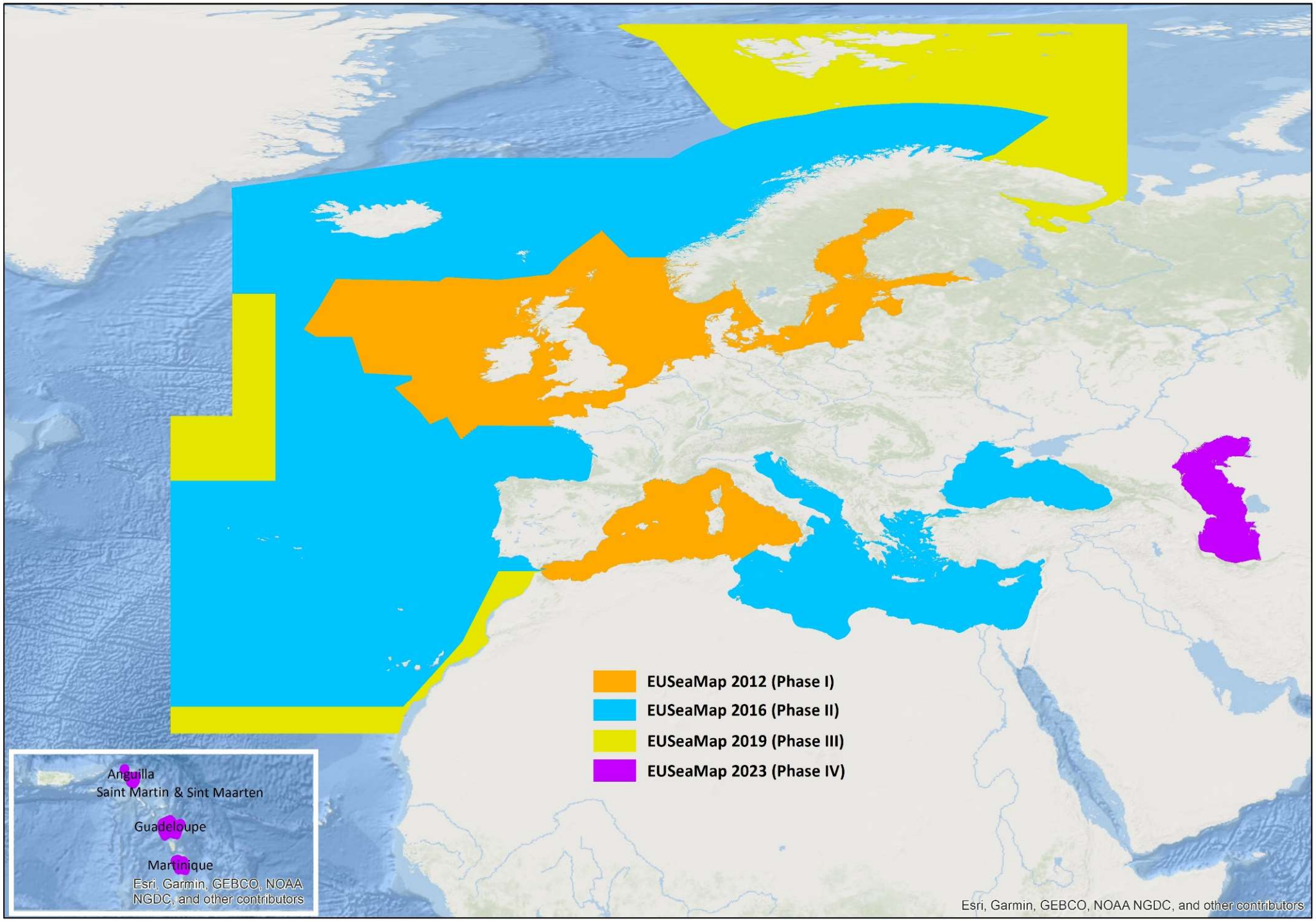
Coverage Phase I, II & III

- **EUSeaMap 2012**
- Celtic Sea / N. Sea / Baltic Sea / W. Mediterranean

- **EUSeaMap 2016**
- NE. Atlantic / E. Mediterranean / Black Sea

- **EUSeaMap 2019**
- NE. Atlantic / Barents Sea




EUSeaMap 2012 (Phase I)
EUSeaMap 2016 (Phase II)
EUSeaMap 2019 (Phase III)
EUSeaMap 2023 (Phase IV)
Anguilla
Saint Martin & Sint Maarten
Guadeloupe
Martinique
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors
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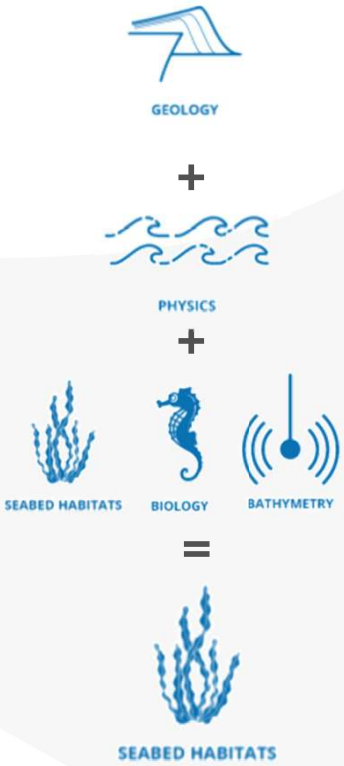
Making EUSeaMap



Substrate

E.g. Sand, Mud, Rock

Hydrodynamic Energy

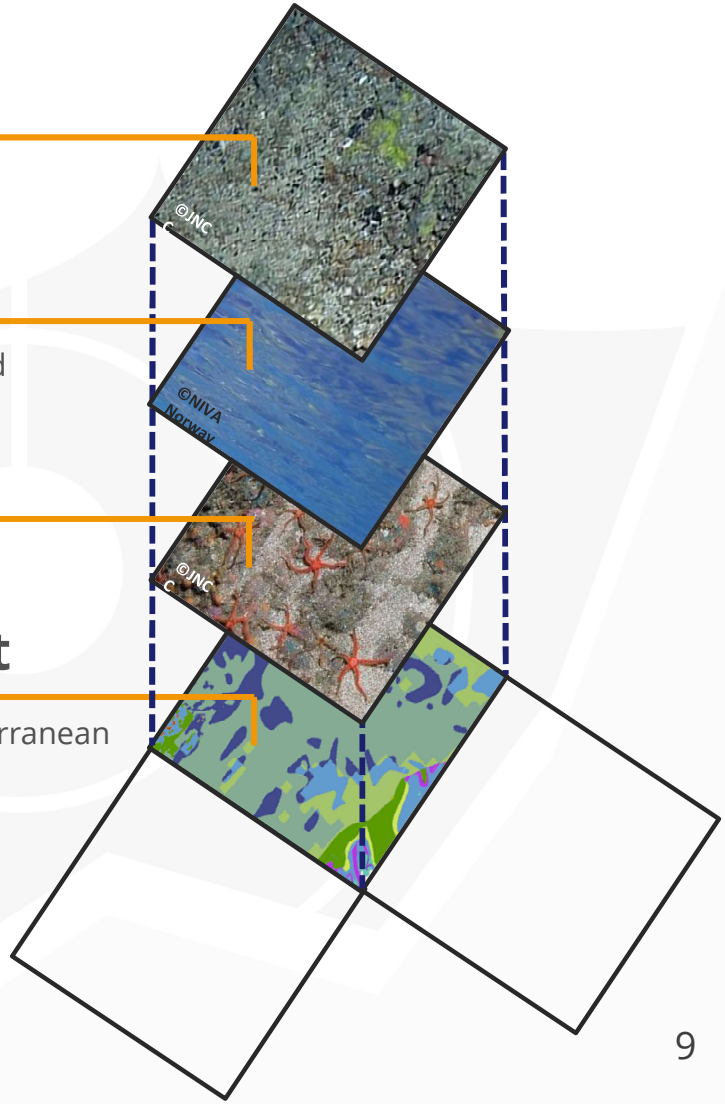
Wave and currents climate at the seabed

Biological Zone

Infralittoral, circalittoral etc

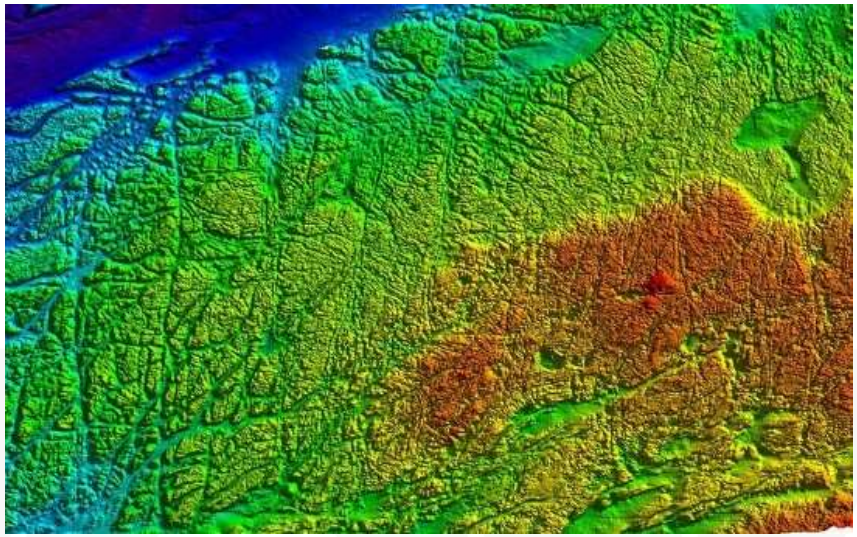
Predictive Habitat Maps

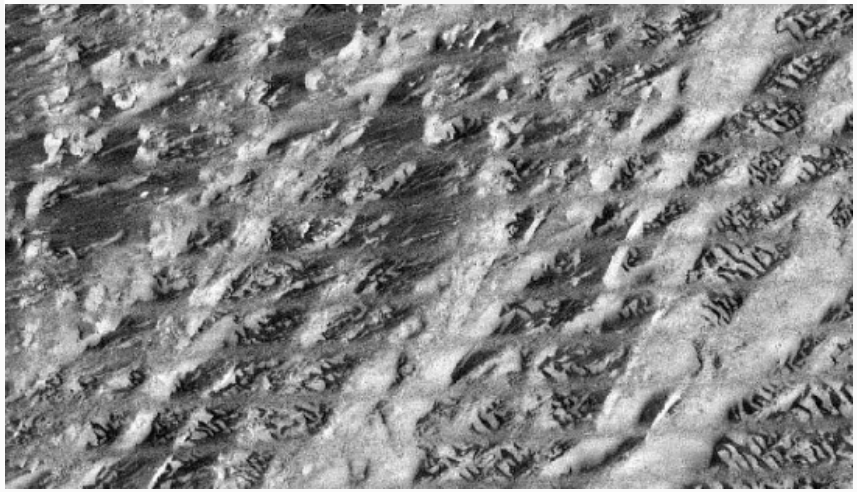
EUNIS A3.1: Atlantic and Mediterranean High Energy Infralittoral Rock



Data Required - SUBSTRATE

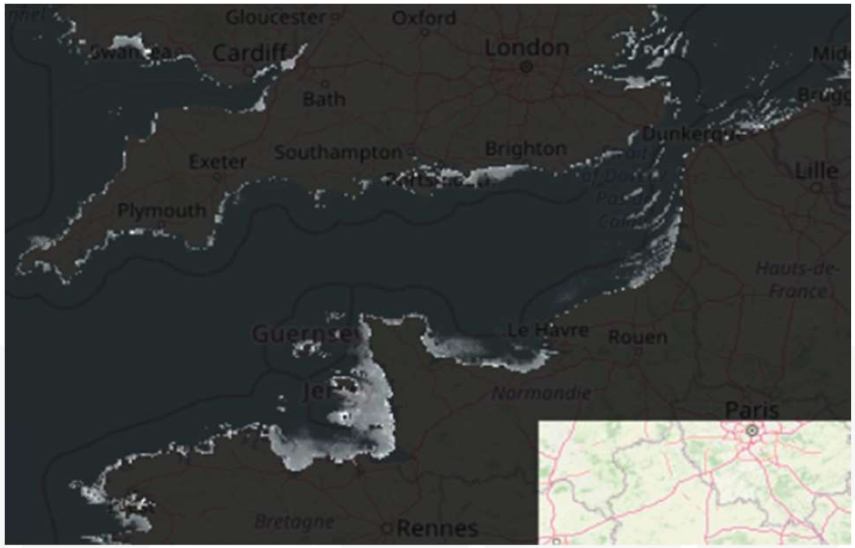
- **SUBSTRATE**
  - Rock
  - Sediment
- MBES
  - Bathymetry
  - Backscatter
- Sampling
- Geomorphology
  - Rugosity
  - Slope

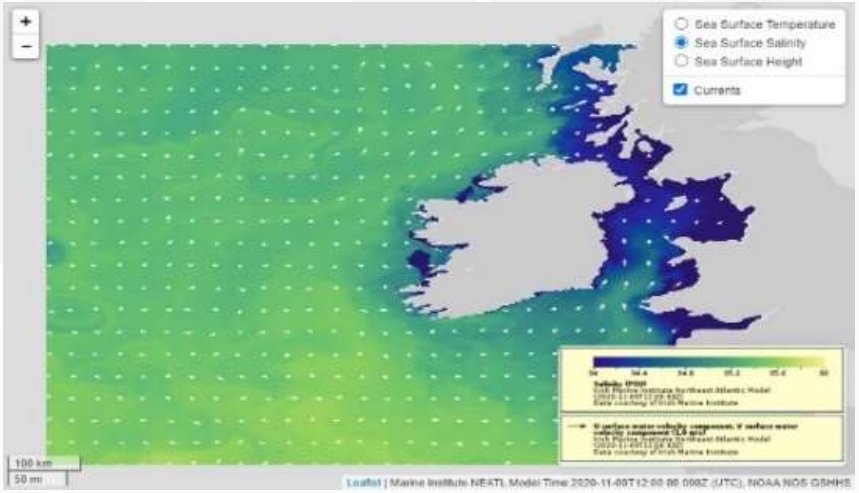




Data Required - ENVIRONMENT

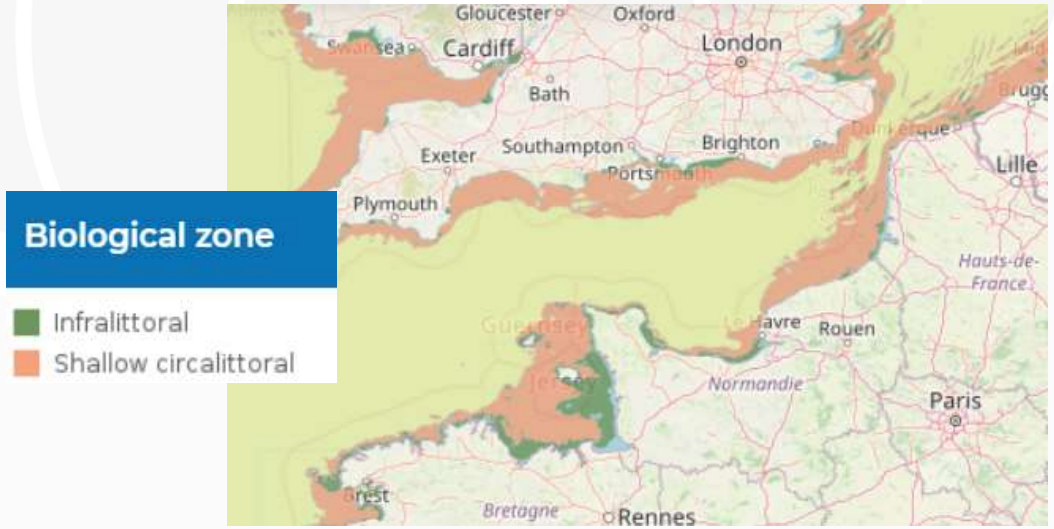
- **ENVIRONMENT**
  - Light
  - Wave Energy
  - Temperature
  - Salinity
- Oceanographic Modelling
  - ROMS
- Copernicus
- EMODnet



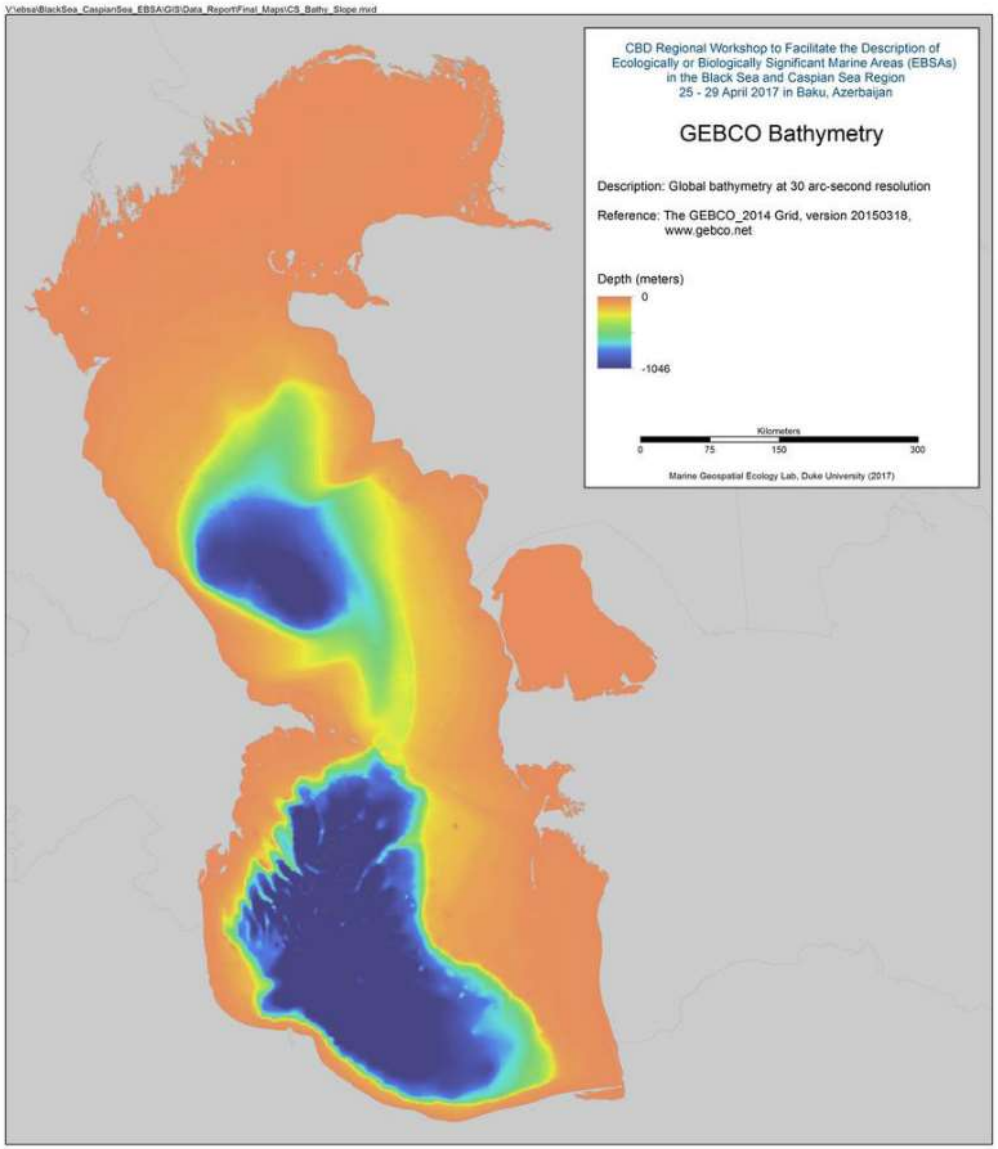


Data Required - BIOLOGY

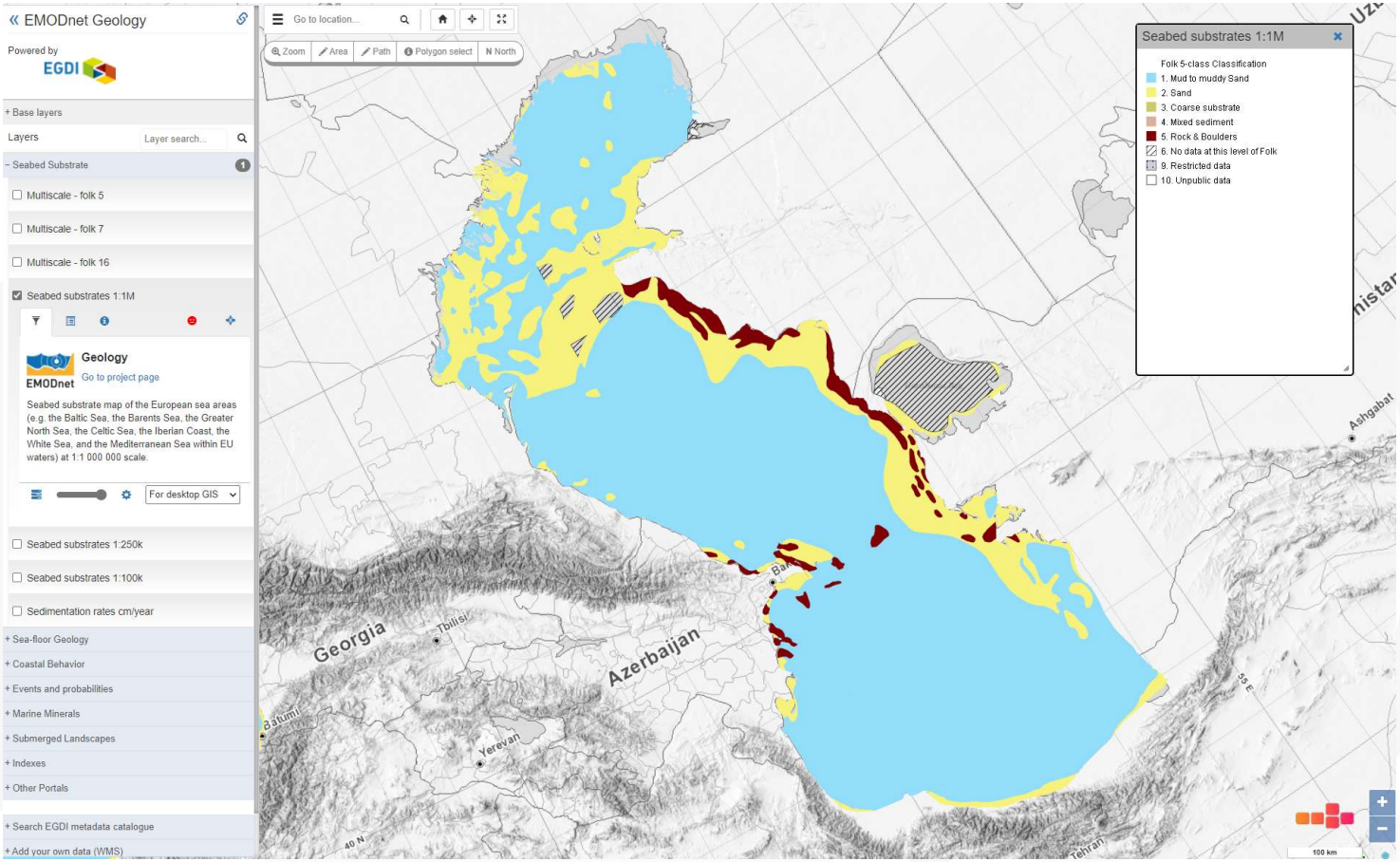
- **BIOLOGY**
  - Epifaunal
  - Infaunal
- ROV / Video Tows / Camera
- Sampling
- **THRESHOLDS**
  - Rugosity
  - Slope



Caspian – Bathymetry (GEBCO)



Caspian – Seabed Substrate

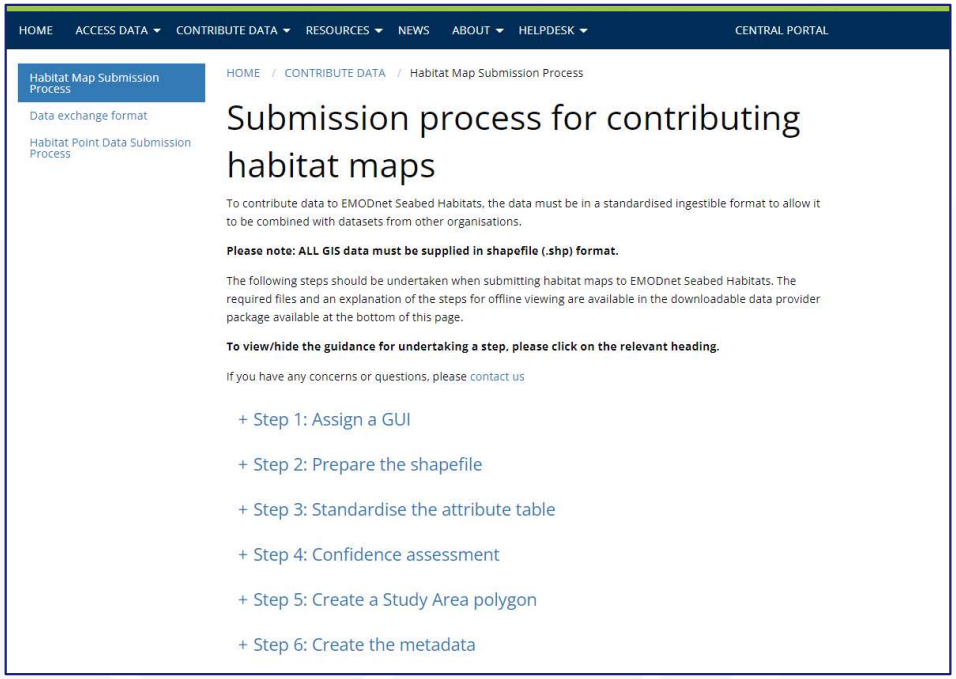


DATA NEEDS Caspian Basin

https://www.emodnet-seabedhabitats.eu/

- SUBSTRATE DATA
- ENVIRONMENTAL
- BIOLOGICAL DATA

- EXISTING HABITAT MAPS
- BENTHIC SURVEYS
- SAMPLING SURVEYS
- HYDROGRAPHIC SURVEYS
- WETLANDS EXTENT



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