EMODNET Geology delivers marine geological data products from Europe's seas and beyond

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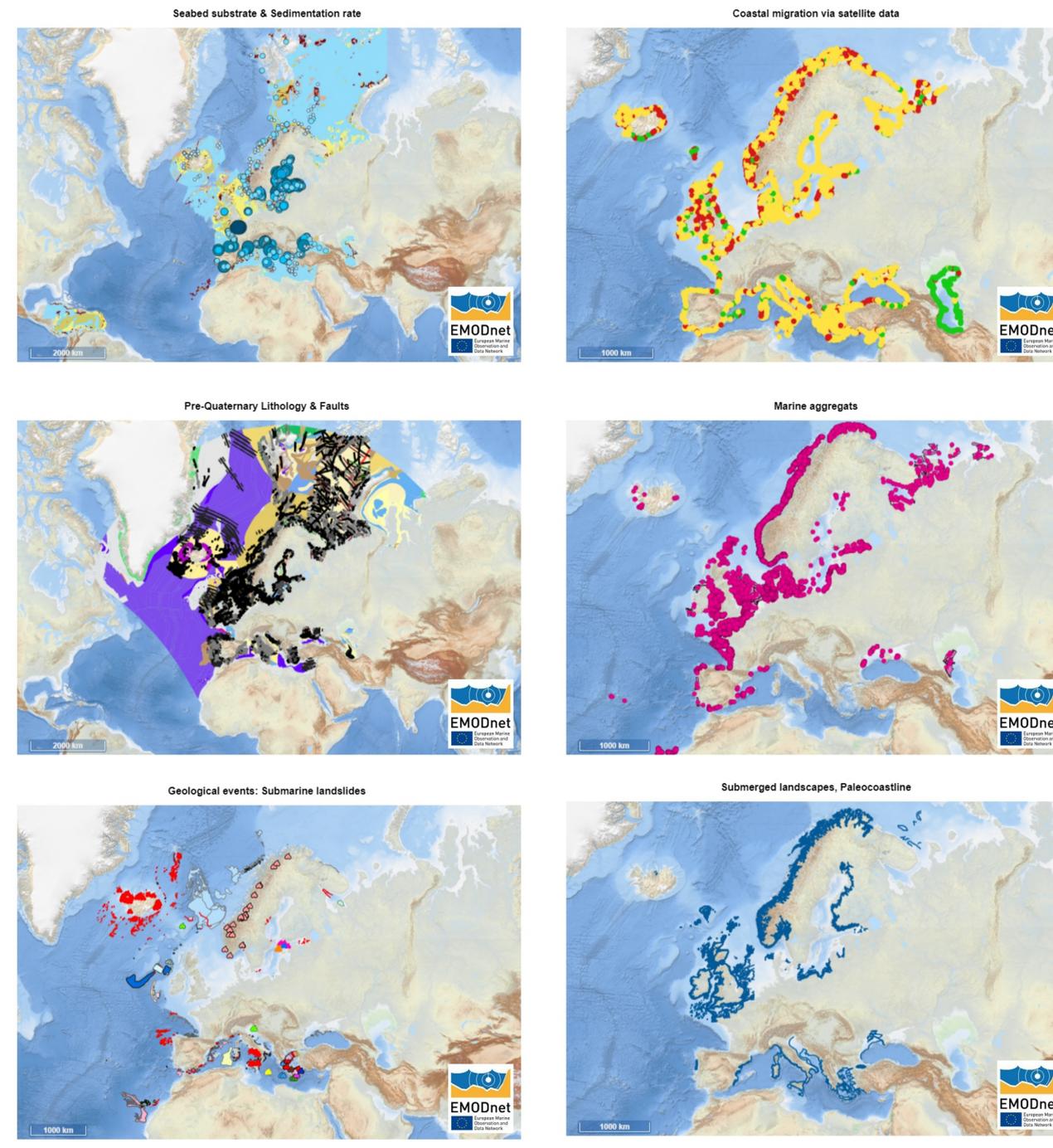
EMODnet - Geology

The **European Marine Observation and Data Network** (EMODnet) is a longterm marine data initiative funded by the European Maritime, Fisheries and Aquaculture Fund (EMFAF). It consists of more than 120 organisations assembling marine data, products and metadata to make these fragmented resources more accessible to public and private users, relying on quality-assured, standardised and harmonised marine data which are interoperable and free of restrictions on use. All data products are openly available at the EMODnet Central Portal. EMODnet provides easy and free access to marine data, metadata and data products and services spanning seven broad disciplinary themes (lots): bathymetry, geology, physics, chemistry, biology, seabed habitats and human activities.

The **EMODnet Geology** thematic lot is delivering integrated and harmonized geological data products that include seabed substrates, sediment accumulation rates and seabed erosion index database, seafloor geology including lithology and stratigraphy, Quaternary geology and geomorphology, coastal behaviour, geological events such as submarine landslides and earthquakes, marine mineral resources, as well as submerged landscapes of the European continental shelf at various timeframes. All data products are presented at a scale of 1:100,000 or finer but also coarser scales to ensure maximum areal coverage. The current EMODnet Geology project phase is executed by a consortium of 40 partners and subcontractors which core is made up by members of European geological surveys (EuroGeoSurveys) backed up by other partner organizations with valuable expertise and data.

The EMODnet concept is expanding beyond European Seas, as also the Caspian and the Caribbean Seas are included in the geographical scope of the EMODnet Geology project. Previously selected methods have been shared with the EMODnet PArtnership for China and Europe (EMOD-PACE) project (2019-2022).

EMODnet Geology, Representative data products
For complete maps and legends visit the **EMODnet Central Portal**: https://emodnet.ec.europa.eu/en.

Seabed substrate & Sedimentation rate

Coastal migration via satellite data

Pre-Quaternary Lithology & Faults

Marine aggregats

Geological events: Submarine landslides

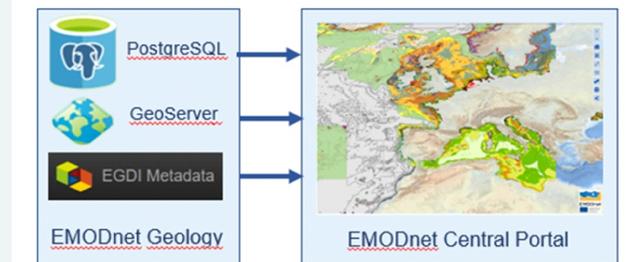Submerged landscapes, Paleocoastline

Data services

EMODnet Geology is an ongoing dynamic project, where existing datasets are continuously updated and completed with new data.

EMODnet focuses on providing harmonised interpreted map information rather than the underlying data. To access the raw data, you can contact the institutions described in the metadata.

The services for viewing and downloading EMODnet data are available from the EMODnet Central Portal.

In addition, the EMODnet Data Ingestion initiative (www.emodnet-ingestion.eu) has been developed, reaching out to potential data providers from the public and private sector.

Project Partners

1. Geologian Tutkimuskeskus (GTK) - Geological Survey of Finland - Lead
2. Geological Survey of Sweden (SGU)
3. Geological Survey of Norway (NGU)
4. Geological Survey of Denmark and Greenland (GEUS)
5. Iceland GeoSurvey (ISOR)
6. Geological Survey of Estonia (EGT)
7. Latvian Environment, Geology and Meteorology Centre (LEGMC)
8. Lithuanian Geological Survey (LGT)
9. Polish Geological Survey - National Research Institute (PGI-NRI)
10. Geological Survey of the Netherlands (TNO)
11. Royal Belgian Institute of Natural Sciences (RBINS)
12. Bureau de Recherces Géologiques et Minieres (BRGM, France)
13. French Research Institute for Exploration of the Sea (IFREMER)
14. Geological Survey of Ireland (GSI)
15. Instituto Geológico y Minero de España (IGME)
16. Instituto Português do Mer e da Atmosfera (IPMA)
17. Servizio Geologico d'Italia - Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA)
18. Geological Survey of Slovenia (GeoZS)
19. Croatian Geological Survey (HGI)
20. Geological Survey of Montenegro (GSM)
21. Geological Survey of Albania - Sherbimi Gjeologjik Shqiptar (GSA)
22. Hellenic Survey of Geology and Mineral Exploration (HSGME, Greece)
23. Hellenic Centre for Marine Research (HCMR, Greece)
24. Institute of Oceanology - Bulgarian Academy of Sciences (IO-BAS)
25. National Research and Development Institute for Marine Geology and Geoecology (GeoEcoMar, Romania)
26. Geological Survey of Cyprus (GSC)
27. The Malta Geological Survey through the Continental Shelf Department (Malta)
28. Dipartimento Scienze Della Terra Università La Sapienza (UNIROMA, Italy)
29. Department of Geology, University of Tartu (UNITARTU, Estonia)
30. Foundation for Research and Technology Hellas - Institute of Computer Science (FORTH-ICS, Greece)
31. Stichting Deltares (The Netherlands)

Subcontractors

32. United Kingdom Research and Innovation - British Geological Survey (UKRI-BGS, UK)
33. Jardfeingi - Faroese Geological Survey
34. DEFRA - Centre for Environment, Fisheries and Aquaculture Science (DEFRA-CEFAS, UK)
35. Edge Hill University (UK)
36. Institute of Geological Sciences of National Academy of Sciences of Ukraine (IGS-NAS)
37. Dokuz Eylul University - Institute of Marine Science and Technology (IMST, Turkey)
38. Federal Institute for Geosciences and Natural Resources (BGR, Germany)
39. EMCOL Research Centre, Istanbul Technical University (ITU, EMCOL, Turkey)
40. Caspian Locus Limited Liability Company (CLLLC, Azerbaijan)

EMODnet Geology Geographical scope

Discover Europe's seabed geology!