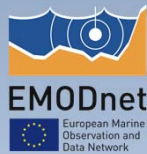


EMODnet-Geology

EMODne Entry Portal Steering Committee, Brussels, 16 December 2013

Alan Stevenson, Jonathan Lowndes (British Geological Survey) and the project team



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Background

- 14 organisations participated in preparatory phase 2009-2012
- 36 organisations taking part in EMODnet-Geology Phase 2
- Most of the partners are members of EuroGeoSurveys Marine Geology Expert Group
- Co-ordinated by NERC/BGS



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UK - British Geological Survey – Natural Environment Research Centre (BGS-NERC); University of Sussex; Centre for Aquaculture, Fisheries and Aquaculture Science, UK (CEFAS)

Finland - Geological Survey of Finland – Geologian tutkimuskeskus (GTK)

Sweden - Geological Survey of Sweden – Sveriges Geologiska Undersökning (SGU)

Norway - Geological Survey of Norway – Norges Geologiske Undersøkelse (NGU)

Denmark & Greenland - Geological Survey of Denmark and Greenland – De Nationale Geologiske Undersøgelser for Danmark og Greenland (GEUS)

Faroe Islands - Járðfeingi (Faroe Islands Geological Survey)

Iceland - Íslenskar orkurannsóknir – Iceland GeoSurvey

Estonia - Geological Survey of Estonia - Eesti Geoloogiakeskus (GSE)

Latvia - Latvijas Vides Geoloģijas un Meteoroloģijas Centrs (LVGMC)

Lithuania - Lithuanian Geological Survey (LGS)

Poland - Polish Geological Institute – National Research Institute (PGI-NRI)

Netherlands - Geological Survey of the Netherlands (TNO)

Belgium - Royal Belgian Institute of Natural Sciences – Geological Survey of Belgium (GSB)

France - Bureau de Recherches Géologiques et Minières (BRGM, France), IFREMER

Ireland - Geological Survey of Ireland (GSI)

Spain - Geological Survey of Spain – Instituto Geológico de España (IGME)

Portugal - Instituto Português do Mar e da Atmosfera (IPMA)

Italy - Istituto Superiore per la Protezione e la Ricerca Ambientale – Servizi Geologico d'Italia (ISPRA)

Slovenia - Geological Survey of Slovenia (GeoZs)

Croatia - Geological Survey of Croatia - Hrvatski Geoloski Institut (HGI)

Montenegro - Geological Survey of Montenegro – Zavod za Geoloska Istrazivanja (GEOZAVOD)

Albania - Geological Survey of Albania (GSA)

Greece - National Center for Sustainable Development, Greece (EKBA); Hellenic Centre for Marine Research (HCMR)

Bulgaria - Institute of Oceanology – Bulgarian Academy of Sciences (IO-BAS)

Romania - National Research and Development Institute for Marine Geology and Geoecology, Romania (GeoEcoMar); Geological Institute of Romania (GIR)

Turkey - Dokuz Eylül University, Turkey

Cyprus - Geological Survey of Cyprus

Malta - Malta Ministry of Transport and Infrastructure, Continental Shelf Division

Russia - AP Karpinsky Russian Geological Research Institute (VSEGEI)

Germany - Federal Institute for Geosciences and Natural Resources – Bundesanstalt Geowissenschaften und Rohstoffe, Germany (BGR)

Ukraine - Prychornomorske State Regional Geological Enterprise, Ukraine



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Main deliverables at 1:250,000 scale

- Sea-bed substrate including rate of accumulation of recent sediments
 - the sea-floor geology (bedrock geology) and all boundaries and faults that can be represented at the 1:250,000 compilation scale with information on the lithology and age of each geological unit
 - geological events and probabilities (landslides, volcanic activity, earthquake epicentres)
 - Minerals (including aggregates, oil and gas)
 - Coastal type and behaviour supplemented by information on coastal erosion or sedimentation and the rate at which it occurs.
 - All interpretative products will be based on primary information owned by the project partners, supplemented with other information in the public domain.
 - Where the most up-to-date geological information is held on third-party websites, arrangements will be made for web-mapping services to provide these data to the EMODnet-Geology portal.
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- All map outputs added to One-Geology Europe



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EMODnet-Geology website

The screenshot shows the EMODnet-Geology website interface. The main content area features the following text:

EMODNET-Geology portal

In response to the EU Green Paper on Future Maritime Policy, the European Commission endorsed the European Marine Observation and Data Network (EMODNET). The overall objective is to create pilot studies that assemble fragmented and inaccessible marine data into interoperable, contiguous and publicly available datasets for whole maritime basins.

The EMODNET-Geology project is one of six preparatory action projects that, in addition to marine geology, bring together information on marine chemistry, marine biology, hydrography, sea-bed habitats and physical properties. Each project defines the processes, technologies and approximate costs of implementing a fully functioning European Marine Observation and Data Network. For the EMODNET-Geology project, the project partners are compiling data layers for the Baltic Sea, Greater North Sea and Celtic Sea.

The delivery of the EMODNET-Geology data layers is being achieved through the adoption and adaptation of technologies developed by the OneGeology Europe (1G-E) project. The maritime map layers are being delivered using the 1G-E portal to allow the delivery of both onshore and offshore geological information via a single portal.

The geology data available includes:

- sea-bed sediments
- sea-floor geology
- boundaries and faults
- rates of coastal erosion or accumulation
- geological events (submarine slides, earthquakes etc.)
- minerals


Although the OneGeology-Europe is fully functional and has a full suite of map layers for onshore data, the offshore layers are added as they become available within the EMODNET-Geology project. The portal currently holds maps of sea-bed sediments, sea-floor geology (lithology and stratigraphy), geological boundaries and major faults and a coastal behaviour layer. The map layers for geological events and minerals will be added as soon as they are complete.


News:

- EMODnet-Geology Draft Final Report submitted on 23rd July
- Report of the 4th yr EMODnet progress meeting, June 2011
- EMODnet-Geology presented at Coastal 2011 Conference, 6-8 May 2011


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<http://www.emodnet-geology.eu>


EMODnet **OneGeology-Europe Portal**



7 <http://portal.onegeology.org/>


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EMODnet-Geology and One-GeologyEurope

- Share methodologies and communications objectives
- Utilises the Geological Metadata Profile (GMP) – based on ISO 19115 (data) and ISO 19119 (services) standards
- Uses GeoSciML (Geoscience Mark-up Language): INSPIRE standard for the exchange of geoscience interpretive (map) data over the internet
- Data standards are non-proprietary and provides WMS viewing and WFS download services compliant with INSPIRE implementation rules
- Delivering EMODNet-Geology maps which are fully integrated with other harmonised geological map layers
- OGE is registered as the European contribution to the geological layer for GEOSS and contributes to GMES.

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EMODnet Search facility

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EMODnet Map layers

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The image shows a stack of browser windows displaying the EMODnet web interface. The interface includes a search bar, navigation tabs (Search, Map Viewer, Download), and a list of map layers on the left. The main map area shows a satellite-style map of Europe with a red outline highlighting a specific region. The text "EMODnet map layers" is overlaid in the top right, and "Mineral resources" is overlaid in a white box at the bottom right. The EMODnet logo and "European Marine Observation and Data Network" are visible in the bottom left.

The image shows the Marine Environmental Mapping Programme website. The header includes the logo and the text "Marine Environmental Mapping Programme". Navigation tabs include Home, Find Maps, About, Partners, Links, Map Help, and Contact Us. The main content area features a "Map Info" sidebar with a "MareMap Layers" section containing checkboxes for "MareMap Map Index", "MareMap SeaBed Sediment (50K)", "BGS Layers" (including "BGS SeaBed Sediment (250K)", "BGS Hard Substrate (250K)", "BGS Geology (variable scale)", "BGS Scanned Map Index", and "BGS 250K Map Sheet Areas"), and "CCO Layers" (including "CCO Wave Buoys", "CCO Tide Gauges", and "CCO Multibeam"). Below the sidebar is a list of map areas with links, such as "Anton Dohrn", "Approaches to the Firth of Forth - HI 1151", "Canna to Point of Sleat (Block 2) - HI 1299", "Dover Strait (Part) - HI 1159", "Fair Isle", "George Bligh", "W Approaches to English Channel (Part) - HI 1059", and "Western Approaches to the Small Isles (Block 5) - HI 1297". The main map area shows a detailed map of the British Isles with a grid overlay and various colored overlays representing different data layers. The "Rockall Rise" is labeled on the map.