



The GEO–SEAS Project—a European network for marine and ocean geological and geophysical data

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Abstract The Geo–Seas project will create a network of 26 European marine geoscience data centres from seventeen coastal countries including six from the Baltic Sea area. Researchers will be able to locate and access pan-European, harmonised and federated marine geological and geophysical datasets and data products held by the data centres through the Geo–Seas data portal, using a common data catalogue. The new infrastructure will be promoted to research communities, and new data products and services will be developed following consultations on research requirements.

Keywords *Geo–Seas, SeaDataNet, marine, geoscience, geology, geophysical, data, portal.*

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NEW PAN-EUROPEAN PROJECT

Geo–Seas is a new European Commission (EC), Seventh Framework (FP7) e-Infrastructure project. It is scheduled to start in May 2009, and last for 42 months. The full title of the project is *Pan–European infrastructure for marine and ocean geological and geophysical data*. The aims of Geo–Seas are aligned with European directives and recent large–scale framework programmes on global and European scales (GEOSS and GMES, EDMODNet and INSPIRE).

The project will create a research infrastructure linking 26 marine geological and geophysical data centres, located in seventeen European coastal countries. For the Baltic Sea area, there are project partners from Denmark, Estonia, Germany, Latvia, Lithuania and Poland. Researchers will be able to use the Geo–Seas network to locate and access pan–European, harmonised and federated marine geological and geophysical datasets and data products, held by the data centres, through a single data portal. The outputs of the project will benefit all—public and private—sector users of marine geoscientific data. The new infrastructure will be promoted to user communities, and new data products and services will be developed following consultations on their requirements.

The EuroGeoSurveys network of organisations (www.eurogeosurveys.org) will be used to reach out to user communities and to other marine organisations throughout Europe and the rest of the world. The project will also take into account the experience and developments arising from international geological projects, such as, OneGeology (www.onegeology.org) and GeoSciML (www.geosciml.org). Many of the Geo–Seas partners are also partners in these international projects.

The existing architecture and middleware components developed for the SeaDataNet infrastructure (www.seadatanet.org) will provide the basis for GEO–SEAS. These will be adapted for marine geological and geophysical data, data products and services. This will create a common infrastructure covering both oceanographic and marine geoscientific data. Common data standards and exchange formats will be agreed and implemented across the Geo–Seas data centres, and a common catalogue of data and data products will be published on the Geo–Seas data portal. The catalogue will be compiled and updated regularly by automatically harvesting metadata from each of the data centres using web services. Other geological and geophysical organisations will be encouraged to adopt the Geo–Seas protocols, standards and tools.