Geo-Seas

a pan-European network for marine geoscientific data linking 26 marine geoscience data centres from 17 coastal countries

Geo-Seas is an Integrated Infrastructure Initiative (I3) project in the Research Infrastructures programme within the EU Framework 7 (FP7). The project has a duration of 4 years commencing in May 2009 and continuing until 2013.

The overall objective of the Geo-Seas project is to build and deploy a unified marine geoscientific data infrastructure within Europe for the sharing of marine geological and geophysical data. This will result in a major improvement in the locating, accessing and delivery of federated marine geological and geophysical data and data products from national geological surveys and research institutes across Europe.

The aims of Geo-Seas are aligned with European directives and recent large-scale framework programmes on global and European scales, such as Global Earth Observation System of Systems (GEOSS) and Global Monitoring for Environment and Security (GMES), European Marine Observation and Data Network (EMODNET) and INSPIRE.

Geo-Seas will expand the existing SeaDataNet marine and ocean data management infrastructure to handle marine geological and geophysical data, data products and services, creating a joint infrastructure covering both oceanographic and marine geoscientific data.

Common data standards and exchange formats will be agreed and implemented across the data centres. Geo-Seas will adopt and adapt SeaDataNet standards and tools. Geo-Seas will also take into account the experience and developments arising from international geological projects, such as, OneGeology and GeoSciML. Many of the Geo-Seas partners are also partners in these international projects. Moreover existing international standards, such as OGC, will be included in the formulation of common standards.

Catalogues of data, data products and services managed and operated by the Geo-Seas data centres will be maintained and published to allow access by the end users. Current data exchange and delivery formats will be harmonsied across the participating data centres allowing users access to federated marine geological and geophysical datasets via an internet based portal. Metadata for the Geo-Seas data portal will be produced by the local data centres and will then be harvested automatically by the centralised Geo-Seas metadatabase system. This methodology will allow the metadata bases to be kept up to date with regular updates being done effectively and efficiently. The existing SeaDataNet discovery metadata standard profile (Common Data Index or CDI), which is based upon the ISO19115 standard, will be upgraded to accommodate the requirements of the Geo-Seas project and its end users.

Geo-Seas will also use the pre-existing SeaDataNet methodologies including the architecture and middleware components, where appropriate, to interconnect the geological and geophysical data centres. This will facilitate the integration of geological and geophysical datasets with other oceanographic data which is managed by the SeaDataNet data centres. This will not only avoid unnecessary duplication of effort within the project where there are pre-existing technologies but it will also facilitate multidisciplinary use of oceanographic and marine data.

Geo-Seas partners:

NERC-BGS (United Kingdom), NERC-BODC (United Kingdom), NERC-NOCS (United Kingdom), MARIS (Netherlands), IFREMER (France), BRGM (France), TNO (Netherlands), BSH (Germany), IGME (Spain), LNEG (Portugal), IGME (Greece), GSI (Ireland), BGR (Germany), OGS (Italy), GEUS (Denmark), NGU (Norway), PGI (Poland), EGK (Estonia), LIGG (Lithuania), IO-BAS (Bulgaria), NOA (Greece), CIRIA (United Kingdom), MUMM (Belgium), UB (Spain), UCC (Ireland), EU-Consult (Netherlands), CNRS (France), SHOM (France), CEFAS (United Kingdom), and LU (Latvia).

SEVENTH FRAMEWORK PROGRAMME

Further information is available at: www.geo-seas.eu