

## **EU-SEASED : a searchable internet database of seabed samples held at european institutions**

EUMARSIN \* & EUROCORE \*\* groups  
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### Abstract

Through the Marine Science and Technology Programme (MAST-III) the European Commission has conducted marine data management activities:

- To improve coordination, cooperation and exchange of information amongst European scientists;
- To help the effectiveness of national and international Programmes through better use of research facilities and transfer of expertise and knowledge.

These objectives are fully supported by all countries within the European Union through the framework programme of Community Research.

To improve coordination, cooperation and the exchange as well as accessibility of information amongst European scientists on the field of the Sedimentology, within the framework of MAST-III Supporting Initiatives (Concerted Actions), two proposals, EUMARSIN and EUROCORE, have been awarded and launched by the end of 1998 :

**EUROCORE**     A searchable Internet (meta) database of seabed samples from the ocean basins held at European Institutions, Universities and Marine Stations

**EUMARSIN**     European Marine Sediment Information Network on the Internet, concerning marine sediment meta-databases of the Geological Surveys of the EU-countries and Norway.

Between these 2 projects coordination and tuning has been set on and they are operating under the Unified Name «EU-SEASED» (European Sea Sediments). The progress as well as results of both projects (meta-databases) are accessible by means of the Internet, using the following unified address: [www.eu-seased.net](http://www.eu-seased.net)

From there, the EUROCORE as well as the EUMARSIN website can be accessed.

The differences as well as the relationship between EUROCORE and EUMARSIN are shown in table 1 and figure 1 and participating partners of both projects are indicated in table 2.

All organization/institute which are data-source holder of marine sediment data may contribute to these collection of metadata which are of great importance for Marine Science and Technology. In order to strengthen and extent the information networks on marine sediments, organization/institute are kindly invited to join the EUMARSIN/EUROCORE information network and to add their own meta-data on sediments to the EUMARSIN/EUROCORE meta-database on the Internet.

Only meta-data information (location, nature, etc..) have to be provided in the frame of these projects. The data itself remains at the institution's place. And the release of these data continues to be subjected to the owner's approval. Moreover, these actions offer the possibility to promote the various organizations on the eu-seased website, by means of a homepage or linking the eu-seased website with possible existing websites.

By joining the EUROCORE/EUMARSIN Information Network, European (and worldwide) organizations, institutes, universities and marine industries will be focussed on the marine sediment data held by the different organization.

The two projects have been launched by the end of 1998. During the two first phases, several separate and conjugate meetings have been held by the participating partners in order to define the characteristics of the metadata to be introduced (Table 3). Partners have also contacted other organizations holding databases and/or data in order to extend the collection. In the third phase of the project that started in the second half of 1999, the data owned by the participating partners have been prepared and are being progressively transferred. In the same time other national data are also being prepared. At the end of the two projects, in late 2000 and 2001, several hundreds of thousands of metadata will then be gathered and easily accessible through the EU-SEASED site.

Figure 1 : Schematic diagram showing the working domains of EUROCORE and EUMARSIN

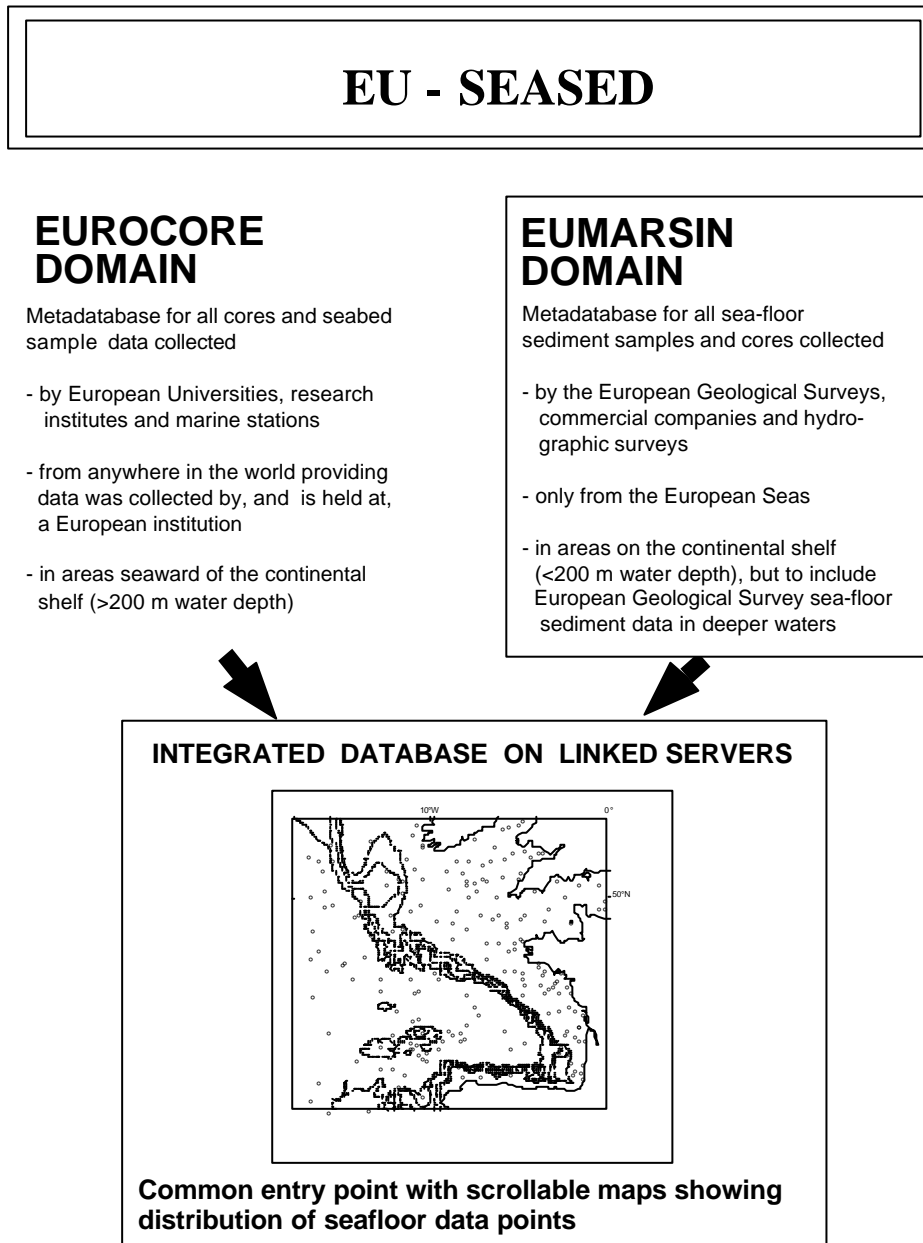


Table 1 : Objectives of EUROCORE and EUMARSIN

<b>EUROCORE</b>	<b>EUMARSIN</b>
<ul style="list-style-type: none"> <li>• To establish, and contribute meta-data to a searchable central database of seabed data from European Seas and Ocean Basins held at European Institutions accessible through the World Wide Web (WWW).</li> </ul> <p>This work will consists of two elements :</p> <ol style="list-style-type: none"> <li>1. Developing, in association with EUMARSIN, a project organisation for defining formats, gathering, digitising, collating, quality controlling and entering of the meta-data descriptions for the cores and samples available.</li> <li>2. Design, development, implementation and management of a data and information structure to exchange meta-data contributions from partners and to make these available on-line by the World Wide Web as a unified database, in association with EUMARSIN using a common data management partner.</li> </ol> <ul style="list-style-type: none"> <li>• To provide a demonstration case for direct access to data sets from the meta-directory level.</li> <li>• To establish the nucleus of a Europe-based Core Curators Group to update the Database, both in content and design, Solicit end-user needs in accessing seabed data, discuss common issues in core curation and foster wider collaboration both within Europe and internationally.</li> </ul>	<ul style="list-style-type: none"> <li>• To formulate and put into use an acceptable set of terms of reference for the marine sediments held by organisations and institutions in the EU countries;</li> <li>• To develop the marine sediment data and their geochemical, sedimentological and bathymetric analyses into met-data banks and to organise a system for disseminating these data products to potential users;</li> <li>• To make available to users, international seabed surface maps of the European Seas which will include a classification of sea-bed surface material, bathymetric isolines and locations of available original datasets, related to the meta-database;</li> <li>• To concert the meta-databanks with other data management procedures that have been applied to European and international projects carried out in the European Seas;</li> <li>• To develop and apply with the aid of the latest software technology and a promotion and marketing campaign an information infrastructure that will:             <ol style="list-style-type: none"> <li>1. Establish an electronic information exchange between the proposers, in order to manage and maintain the EUMARSIN operation and services;</li> <li>2. Develop and distribute the meta-data through a CD-ROM, and on the Internet through a World Wide Web site, to EU institutions, decision makers, the public sector, scientists and technologists and private sector business, enterprise and industrial operators.</li> </ol> </li> </ul>

TABLE 2 : Coordinators and participating partners within EUROCORE and EUMARSIN

EUROCORE Coordinator	EUMARSIN Coordinator
<p>Guy Rothwell                      Southampton Oceanography Centre                      European Way, Empress Dock                      SO14 3ZH Southampton                      United Kingdom                      Tel: +44 1703 596 567                      Fax: +44 1703 596 554                      e-mail: R.G.Rothwell@soc.soton.ac.uk</p>	<p>Costa Perissoratis                      Institute of Geology and Mineral Exploration                      70 Messoghion Street                      Athens GR-11527                      Greece                      Tel: +30 1 779 5093                      Fax: +30 1 775 2211                      e-mail: <a href="mailto:cprs@mail.ariadne-t.gr">cprs@mail.ariadne-t.gr</a></p>

**Participating organizations**

<p>D Forschungszentrum für Marine Geowissenschaften der Christian Albrechts Universität zu Kiel (GEOMAR)</p> <p>ES Consejo Superior de Investigaciones Científicas – Instituto de Científicas del Mar (CSIC/ICM)</p> <p>NL Netherlands Institute of Applied Geosciences (NITG-TNO)</p> <p>PT Geologico e Mineiro Departamento de Geologia Marinha (IGM/DGM)</p> <p>I Instituto Geologia Marina (IGM/CNR)</p> <p>FR Bureau de Recherche Géologique et Minière (BRGM)</p> <p>NL Marine Information Service MARIS (data-management)</p> <p>Sub-contractors:</p> <p>NO University of Tromsø</p> <p>D Alfred Wegener Institute for Polar and Marine Research</p>	<p>GB British Geological Survey (BGS)</p> <p>FR Bureau de Recherches Géologiques et Minières (BRGM)</p> <p>NO Norwegian Geological Survey NGU</p> <p>BE The Association of the Geological Surveys of the European Union EUROGEOSURVEYS</p> <p>NL Marine Information Service MARIS (data-management)</p> <p>FI Geological Survey of Finland (GSF)</p> <p>SE Geological Survey of Sweden (SGU)</p> <p>DK Danmarks og Groenlands Geoliske Undersoegelse (GEUS)</p> <p>NL Netherlands Institute of Applied Geosciences (NITG-TNO)</p> <p>BE Geological Survey of Belgium (GSB)</p> <p>ES Instituto Tecnológico Geominero De Espana (ITGE)</p> <p>PT Instituto Geologico e Mineiro Departamento De Geologia Marinha (IGM)</p> <p>D Bundesanstalt für Geowissenschaften und Rohstoffe (BGR/NLFB)</p> <p>IRL Geological Survey of Ireland (GSI)</p> <p>I Dipartimento per I Servizi Tecnici Nazionali Servizio Geologico (SGN-DSTN)</p>
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National partners that participate in the EUMARSIN/EUROCORE programme or the coordinators can be contacted for any question..

Table 3 : EUMARSIN & EUROCORE metadata format

<b>MANDATORY META-DATA FIELDS</b>	<b>OPTIONAL META-DATA FIELDS</b>
<ul style="list-style-type: none"> <li>• RECORD NUMBER</li> <li>• MEASURING ID</li> <li>• MEASURING AREA TYPE</li> <li>• COORDINATES</li> <li>• SAMPLING DEVICE</li> <li>• DATA SOURCE HOLDER</li> </ul>	<ul style="list-style-type: none"> <li>• SAMPLE STATE</li> <li>• SAMPLE STORAGE CONDITION</li> <li>• INTERNAL REFERENCE NUMBER</li> <li>• OBJECTIVE MEASUREMENT</li> <li>• TREATMENT</li> <li>• MEASURED PARAMETERS</li> <li>• SURFACE/SUB-SURFACE SAMPLE</li> <li>• GEOGRAPHICAL AREA</li> <li>• MONITORING SITE</li> <li>• PHYSIOGRAPHIC PROVINCE</li> <li>• NAVIGATION SYSTEM</li> <li>• CORE/SAMPLE LENGTH</li> <li>• WATER DEPTH</li> <li>• CORE/SAMPLE PENETRATION</li> <li>• CORER SAMPLING PENETRATION</li> <li>• CORE/SAMPLE DIAMETER</li> <li>• DATE OF COLLECTION</li> <li>• PROJECT/CRUISE NAME</li> <li>• RESEARCH/SURVEY VESSEL</li> <li>• PROJECT/CRUISE REPORT</li> <li>• BASAL AGE OR PERIOD</li> <li>• PREDOMINANT SEDIMENT TYPE</li> <li>• SAMPLE RECOVERY</li> <li>• LIST OF MAPS</li> <li>• REFERENCE</li> <li>• COMMENTS</li> </ul>