



EMSO: European Multidisciplinary Seafloor Observatory

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EMSO, a Research Infrastructure listed within ESFRI (European Strategy Forum on Research Infrastructures) Roadmap, is the European-scale network of multidisciplinary seafloor observatories from the Arctic to the Black Sea with the scientific objective of long-term real-time monitoring of processes related to geosphere/biosphere/hydrosphere interactions. EMSO will enhance our understanding of processes through long time series appropriate to the scale of the phenomena, constituting the new frontier of studying Earth interior, deep-sea biology and chemistry and ocean processes. EMSO will reply also to the need expressed in the frame of GMES (Global Monitoring for Environment and Security) to develop a marine segment integrated in the in situ and satellite global monitoring system. The EMSO development relays upon the synergy between the scientific community and the industry to improve the European competitiveness with respect to countries like USA/Canada, NEPTUNE, VENUS and MARS projects, Taiwan, MACHO project, and Japan, DONET project. In Europe the development of an underwater network is based on previous EU-funded projects since early '90, and presently supported by EU initiatives.

The EMSO infrastructure will constitute the extension to the sea of the land-based networks. Examples of data recorded by seafloor observatories will be presented. EMSO is presently at the stage of Preparatory Phase (PP), funded in the EC FP7 Capacities Programme. The project has started in April 2008 and will last 4 years with the participation of 12 Institutions representing 12 countries. EMSO potential will be significantly increased also with the interaction with other Research Infrastructures addressed to Earth Science.

2. IFREMER-Institut Français de Recherche pour l'exploitation de la mer (France, ref. Roland Person); KDM-Konsortium Deutsche Meeresforschung e.V. (Germany, ref. Christoph Waldmann); IMI-Irish Marine Institute (Ireland, ref. Michael Gillooly); UTM-CSIC-Unidad de Tecnología Marina - Consejo Superior de Investigaciones Científicas (Spain, ref. Juan Jose Danobeitia); UGOT-Goteborgs Universitet (Sweden, ref. Per Hall); HCMR-Hellenic Centre for Marine Research (Greece, ref. Vasilios Likousis); NOCS-National Oceanography Centre Southampton (United Kingdom, ref. Henry A. Ruhl); UiT-University of Tromsø (Norway, ref. Jürgen Mienert); FCT-Fundação para a Ciência e a Tecnologia (Portugal, ref. Jorge Miguel Alberto de Miranda); ITU-Istanbul Teknik Üniversitesi (Turkey, ref. Namik Çagatay); NIOZ-Stichting Koninklijk Nederlands Instituut voor Zeeonderzoek (The Netherlands, ref. Tjeerd C.E. van Weering).