

european
multidisciplinary
seafloor and water-column
observatory development



Newsletter

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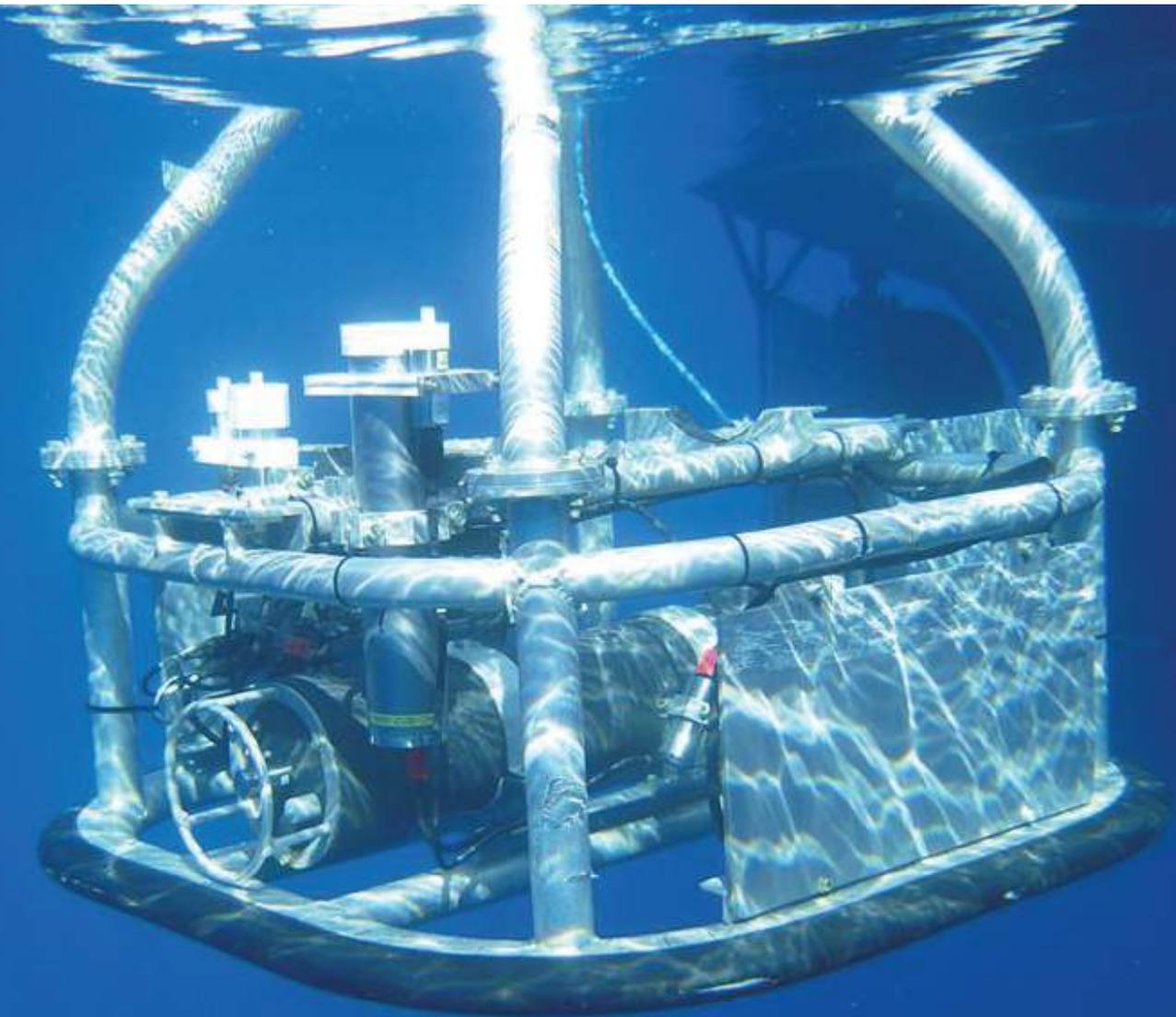
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EMSODEV

Launching the project

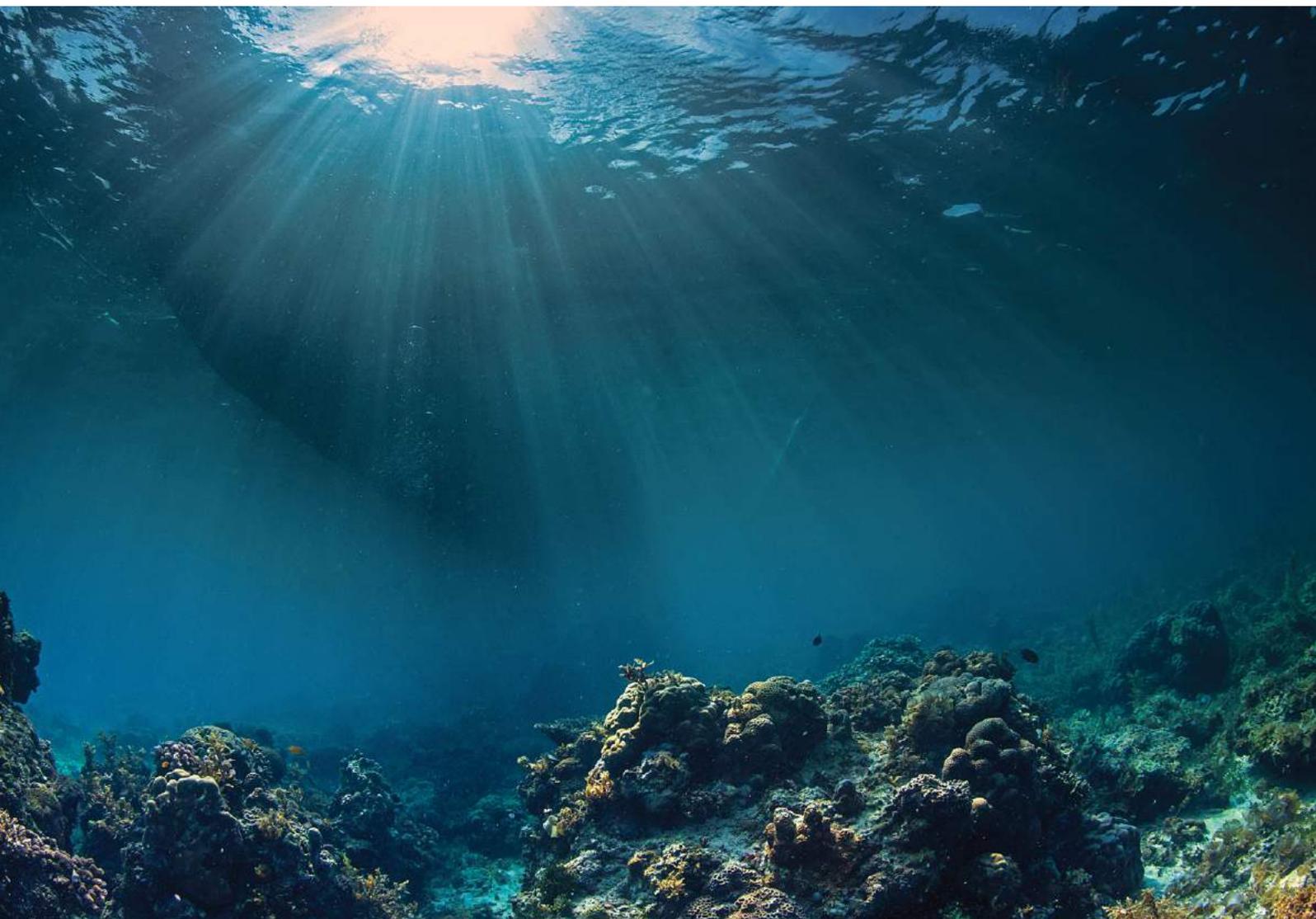
On September 22nd, 2015 at Heraklion, Greece the representatives of the European countries members of the research infrastructure consortium EMSO (European Multidisciplinary Seafloor and watercolumn Observatory) met in Crete to launch a European Union 2020 Horizon three year project, EMSODEV (EMSO DEVelopment), which will enable the full implementation and operation of EMSO.

EMSO members had launched this project which aims to become of the largest and most reliable programs of seawater monitoring in the world.



The countries partners of EMSODEV are: Italy, coordinator of the project, France, Germany, Ireland, Sweden, Greece, United Kingdom, Spain, Portugal, Netherland and Romania.

EMSODEV will coordinate the beacons network along the European sea waters in order to obtain a flux of data based on same scientific algorithms. This will allow the standardization of technical and IT infrastructures, interconnectivity of the partners, a common pool of data, the effort to provide a real-time output, as long as it is possible. These objectives involve a new infrastructure and software for storing and managing the data, a new and generally accepted set of rules for a better efficiency of the research and a standardized scientific analysis. Also, they require an interdisciplinary approach of the geocological systems of running and still waters.



OBJECTIVES

The general objective of EMSODEV is to implement and make fully operational an EMSO Generic Instrument Module (EGIM). This module will ensure accurate, consistent, comparable, long-term measurements of ocean parameters in this region, which are crucial in coping with urgent societal and scientific challenges such as climate change, ocean ecosystem disturbance, and marine hazards. Continuous observation should allow the detection of unpredictable events such as earthquakes, tsunamis, dense water cascades, plankton blooms, water mass movements, and influence of eddies, which cannot be detected by infrequent, short-term ship expeditions.

The EGIM will utilize a comprehensive set of sensors and devices that meet particular technology readiness thresholds to collect observations including temperature, pressure, salinity, dissolved oxygen, turbidity, chlorophyll fluorescence, currents, and passive acoustics. Relatively novel sensors will also be considered including those for pH, pCO₂ and nutrients.

The EMSODEV partners will test, calibrate and validate EGIM module in shallow and deep waters, using the output to standardize the data management. As a collateral consequence, it will establish links with industry for technology transfer and future joint RDI (you should spell out all acronyms the first time) activities, communicating and disseminating the results to targeted audiences: politicians, academics, specific industry general public and possible future partners. As an ultimate goal, this system should share the data with other similar networks in the general effort to synchronize the international marine research, thus reducing or preventing the effects of natural and human disasters on seawater.



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