



## **EMSO ERIC strategy towards integration of seafloor and water column observatories**

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The European Multidisciplinary Seafloor and water column Observatory European Research Infrastructure Consortium (EMSO ERIC) implementation phase is supported by eight Member States and the EMSODEV and the EMSO-Link funded H2020 projects, to catalyze the observation of physical, biogeochemical and ecological parameters through the development and deployment of the EMSO Generic Instrument Module (EGIM). These initiatives are adding value to the EMSO Regional Facilities through the introduction of a new integrated observing system delivering standardised services, data, process, and scientific results. The approach has started with examining the existing capabilities of the Regional Facilities and identifying effective actions to achieve key objectives at both Regional and EMSO levels. It has been shown that the unique capabilities found in each of the distributed and multidisciplinary Regional Facilities can add value in various ways. Going forward the idea is to enhance each Regional Facility from the existing capabilities to the achievement of their main goals efficiently while also integrating and harmonizing EMSO efforts across facilities. For example, more consistent observation across the water column and seafloor domains will allow for a better understanding of how multiple stressors like climate change, natural resource use and Earth system variations can impact various regions in European seas.

The way to achieve full operation and create added value is based on a 3-phase approach:

1. In order to understand the present status we have collected and collated information on the existing observing capabilities, resources, policies and goals of each Regional Facilities and their key stakeholders, including both existing efforts and those in the process of being implemented.
2. We will then synthesize inputs, to identify the value of the regional teams and the gaps to be addressed, including a strengths, weakness, opportunities and threats (SWOT) analysis and reference to the Framework for Ocean Observing developed by the Global Ocean Observing System (GOOS).
3. We will then generate the EMSO ERIC Action Plan to fill gaps and develop its strategic goals.

An important goal in this effort is to maintain the unique identity of the Regional Facilities while also adding value on top of their existing capacity and services: we are focusing on excellence; i.e. a strong research base is a crucial asset for innovation. We are promoting collaborative research and links between excellent research with innovation and industry: the integrated services generated will serve the science, the industry, the policy and the society. We are working to increase the use of digital access in science: open data and the reuse of data are the main way to raise the culture, promote innovation and strengthen collaboration at different scales. We are shaping our planned actions towards our key principles, and we hope to contribute to the framework program that Europe requires.