
Marmara Sea key site inclusion in EMSO Research Infrastructure – contribution to the design of a potential roadmap

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Abstract

Laura Beranzoli on behalf of EMSO ERIC

Marmara Sea is acknowledged as a key site for the multidisciplinary observations of the European Seas since the time of *ESONET Coordination Action* and *ESONET Network of Excellence* EC projects, and since the early phases of EMSO construction.

In fact, the area has constantly aroused great interest across different disciplines such as oceanography (inflow and outflow of seawater mass from and to the Black and the Aegean Seas), seismology (high stress accumulation of the Marmara segment of the North Anatolia Fault system) including seismic and tsunami risk assessment. Various experiments developed by international partnerships in the Marmara Sea have witnessed the ceaseless interest of the scientific community in unravelling the complexity of the area.

A stable and structured participation of the Turkish research institutions within the EMSO community framework can profitably exploit these valuable scientific experiences and the related achievements. The development and enhancement of EMSO services supporting the marine research can receive a significant benefit from this participation and broaden the portfolio of services importantly. As an example, the common practices on the joint analysis of seismological, physical oceanography and geochemical Marmara Sea time series, and the operation, management and maintenance of the equipment's and data infrastructures, can be the subject of scientific and technological periodical training courses and best practice workshops addressed to both experienced and young marine scientists, data scientists and engineers.

In turn, the inclusion of Marmara Site among the EMSO Regional Facilities would align local practices and data management to the practices and principles (e.g., FAIRness) followed by the broad EMSO community and offer greater visibility to the Turkish marine research community. In addition, the scientific and technical staff of Turkish research institutions can take advantage from EMSO involvement in the *EOSC-European Open Science Cloud* by accessing training events on data management, interoperability and stewardship, and by exploiting the connection to data management services (e.g., EOSC DIH) through EMSO.

And more, EMSO has recently started developing collaborations with quite wide number

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of SMEs and large industries. Through EMSO the Turkish research community can come into contact with the broad European Innovation Ecosystem which is progressively gaining ground.

This communication wishes to give food for thoughts to the discussion on a potential roadmap for Turkey to join EMSO ERIC formally, and to highlight the mutual benefits, without disregarding difficulties and challenges in operating equipment's on a long-term basis in a site with such a strategic implications not limited to the marine sciences.