



Environmental Marine Information System – A geo-portal to assist in the management of European Seas and global ocean

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Understanding the inner workings of European and global seas and coasts is essential to support political requirements underlined by marine and maritime policies, as well as to achieve commitments with regard to international conventions addressing biodiversity targets, climate change and efficient use of natural resources. As an example, the ‘Marine Strategy Framework Directive’ (MSFD) is a legal instrument in Europe aiming at a good environmental status of European seas by 2020. The conception, development, implementation and monitoring of this directive require the provision of timely, quality assured and easy-to-use data and information. The Joint Research Centre (JRC) of the European Commission in its role as a Competence Centre for the Marine Strategy Framework Directive (MSFD) has developed the Environmental Marine Information System (EMIS) to assist Member States with the monitoring and assessment of their marine and coastal waters in Europe and globally.

EMIS provides the user community with a set of bio-physical information that is relying on Earth Observation data from satellite and model outputs, and the generation of indicators for the diagnostic of the coastal state and analyses of changes in marine ecosystems. In addition, basic navigation and interrogation tools are integrated in the system to perform automatically time-series and statistical analyses on any region of interest for reporting purposes.

EMIS is a geo-portal implemented with services compliant with the Open Geospatial Consortium (OGC) specifications and INSPIRE standards to ensure full interoperability. These services are connected to R-written functions, enabling the processing of EMIS data, their analysis and reporting to be integrated in a unique development environment. In this paper, an example of such analysis is provided for a marine protected area in the Mediterranean Sea.

Key words: Geo-portal, European Seas, satellite, indicators, ecosystems, marine protected areas