



EMODnet MedSea Checkpoint for sustainable Blue Growth

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The EMODNET checkpoint is a wide monitoring system assessment activity aiming to support the sustainable Blue Growth at the scale of the European Sea Basins by:

- 1) Clarifying the observation landscape of all compartments of the marine environment including Air, Water, Seabed, Biota and Human activities, pointing out to the existing programs, national, European and international
- 2) Evaluating fitness for use indicators that will show the accessibility and usability of observation and modeling data sets and their roles and synergies based upon selected applications by the European Marine Environment Strategy
- 3) Prioritizing the needs to optimize the overall monitoring Infrastructure (in situ and satellite data collection and assembling, data management and networking, modeling and forecasting, geo-infrastructure) and release recommendations for evolutions to better meet the application requirements in view of sustainable Blue Growth

The assessment is designed for :

- Institutional stakeholders for decision making on observation and monitoring systems
- Data providers and producers to know how their data collected once for a given purpose could fit other user needs
- End-users interested in a regional status and possible uses of existing monitoring data

Selected end-user applications are of paramount importance for: (i) the blue economy sector (offshore industries, fisheries); (ii) marine environment variability and change (eutrophication, river inputs and ocean climate change impacts); (iii) emergency management (oil spills); and (iv) preservation of natural resources and biodiversity (Marine Protected Areas).

End-user applications generate innovative products based on the existing observation landscape. The fitness for use assessment is made thanks to the comparison of the expected product specifications with the quality of the product derived from the selected data.

This involves the development of checkpoint information and indicators based on Data quality and Metadata standards for geographic information (ISO 19157 and ISO 19115 respectively). The fitness for use of the input datasets are assessed using 2 categories of criteria to determine how these datasets fits the user requirements which drive them to select a data source rather than another one and to show performance and gaps of the present monitoring systems :

- Data appropriateness : what is made available to the user ?.
- Data availability : how it is made available to the user?

All information are stored in a GIS platform and made available with two types of interfaces:

- Front-end interfaces with users, to present the input data used by all challenges, the innovative products generated by challenges and the assessment indicators.
 - Back-end interfaces to partners, to store the checkpoint descriptors of input data, specification to generate targeted products, catalogue information of products with associated checkpoint indicators linked to the input data
- The validation of the records is done at three levels, at technical level (GIS), at challenge level (use), and at sea basin level (synthesis of monitoring data adequacy including expert comments) to end with the production of a yearly Data Adequacy Report.