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EMODNET Atlantic Checkpoint - Using ISO quality elements standards to assess existing monitoring systems in the North Atlantic Ocean

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The EMODNET Atlantic checkpoint was designed to support sustainable Blue Growth at the scale of the North Atlantic Ocean by clarifying the observation landscape, evaluating the fitness-for-use of current observations and data assembly programs towards specific marine applications and prioritizing the needs to optimize monitoring systems.
This project aims to document the fitness for use of the existing data and monitoring systems, by providing indicators of adequacy of marine data contributing to products in eleven specific application areas called Challenges.
The assessment methodology initially established by the Medsea Checkpoint has been extended to cover cases not taken into account previously and to provide results as graphical outputs. It consists of the following steps:
- establish a framework and metadatabase for information collection related to both input data and product requirements (specifications) stated by each Challenge including quality assessment criteria;
- access data sets, create products and elaborate metadata in corresponding catalogues
- apply quality measures to products and input datasets, compute differences with expected values (specifications) and resulting indicators from the above metadata ;
- analyze the fitness for use and gaps of the existing input data collections with respect to the stated end user needs.
The assessment criteria and the development of checkpoint information and indicators are derived from the ISO standards for geographical information (ISO 19131 Data product Specification, ISO19157 Data Quality and ISO 19115 Metadata). The analysis of the fitness for use of input datasets is divided into two adequacy areas: (i) Data appropriateness, and (ii) Availability conditions.
A sustainable infrastructure was set up and shared by three of the Emodnet checkpoints. It is mainly based on the standardization of the metadata catalogues exploited to provide feedback and recommendations to their commissioners. It is also a tool allowing graphical outputs for providers to make simple queries without having to delve into reports. These tools, maintained by Ifremer, the French National Data Centre, are destined to outlive the checkpoints. They are compatible with other initiatives and their schema can be replicated for any other project performing assessments, whether from the provider or user side. This setup will be presented for validation by a panel meeting next June. Further to EMODnet it is expected to be a building block in the upcoming EOOS.
After a quick reminder of the checkpoint concept, the presentation will introduce the project methodology and highlight its key achievements by presenting the checkpoint services (Metadatabase, ISO quality elements, Dashboard, etc) attached to the Atlantic Checkpoint.
The Dashboard presents the indicators automatically produced from the metadatabase. It aggregates values and allows interactive filtering on challenges. Colors illustrate the degree of satisfaction determined by comparing actual conditions of availability to the expected ones (user requirements) with the following general meaning:
- Red: actions are required to provide fit for use datasets and services;
- Green: actions and services are fit for use and must be maintained.