

Hidrográfico +

Portuguese Hydrographic Institute Marine Spatial Data Infrastructure

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On this year we are beginning a new decade with a great number of challenges for geospatial data producers. At global scale UN identify the needs for “Adaptation strategies and science-informed policy responses to global change” and elected the ocean knowledge a priority for next years.

Geospatial Data is extremely important to understand the reality, for decision-making and to measure policy implementation. The European Union still strongly commit to build a common Strategy for Data to thrust the data economy. This strategy will define the ways and means to build a digital single market and a data-driven society.

The recently approved Open Data Directive (DIRECTIVE (EU) 2019/1024) is a legal instrument to foster the re-use of public sector data by sharing the information free and openly in machine-readable format through standardized Application Programming Interfaces (APIs). INSPIRE directive design to support environment sustainability and management at regional level. Those regulation and geospatial standards are the main guidelines for Public Sector Spatial Data Infrastructures (SDI) Implementation.

The Portuguese Hydrographic Institute (IH) is a public organization with the following roles: national hydrographic office, marine observation and marine technology national laboratory and a Portuguese Navy unity.

As data producer his internal data management processes are kept in line with national and European data policies and information sharing legal orientations. IH is involved in several data sharing projects to build and keep European data infrastructures. Is the Hydrographic Charting Authority, runs an in-situ observation sensors network and maintain long data time series. This multiple sources of data needs to be stored, manage, harmonized and shared with multiple partners - IH is in all aspects a data driven organization.

The stakeholders needs and the external geospatial data governance/regulation trends forced an internal data management chain status analysis. This thinking process help us to answer if the organization is fit for a future in a data sharing environment and the geospatial data management weaknesses identification.

To address the geospatial data misalignments IH starts to build a Marine Spatial Data Infrastructure (MSDI) and plan the project Hidrográfico + who granted funding from SAMA2020 program (POCI-02-0550-FEDER-035422). This project is a software development project with a single overall goal - build an integrated MSDI. SW development team combine multiple commercial and open source applications (e.g. oracle, postgis, arcgis, geoserver, ncWMS server and geonetwork) to connect multiple data users to IH geospatial data through a controlled, centralized and integrated environment. The MSDI has a central geoportal where users can search, visualized and access the geospatial datasets. However, if they need, humans and machines users, could access directly to data services by linking their applications to the OGC webservice endpoints. IH wants to provide a good level of service to their MSDI users, for this reason the system has a built in access analytics and metrics system for monitoring and malfunction alerts.

This paper intends to present the Hidrografico + MSDI building process, this is a big step forward and will be an important tool for the next marine data decade.

PALAVRAS-CHAVE

Geographic Information Systems, Geomatics, Geospatial Webservices, MSDI, INSPIRE, SAMA.

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