

Building an information system for managing multidisciplinary open access data on seamounts within Portuguese waters

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The deep-sea is Earth's final frontier for exploration, hence the conservation, management, and sustainable use of its resources are among the most critical and pressing ocean issues today [1]. Seamounts are areas with special characteristics where industrial fisheries are targeting resident fish aggregations.

SeaBioData ^(a)
Portuguese Seamounts Biodiversity Data Management

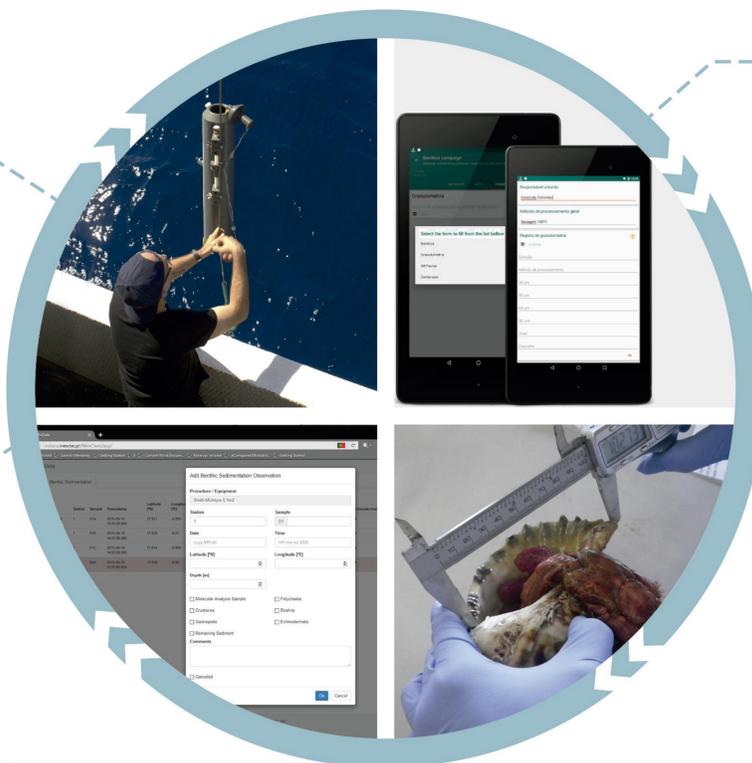
Information system for organising and storing marine information

FIELD

Data acquisition
Recording on digital support

OPEN ACCESS

Dissemination
Availability for further analysis and validation
Starting point for new investigations

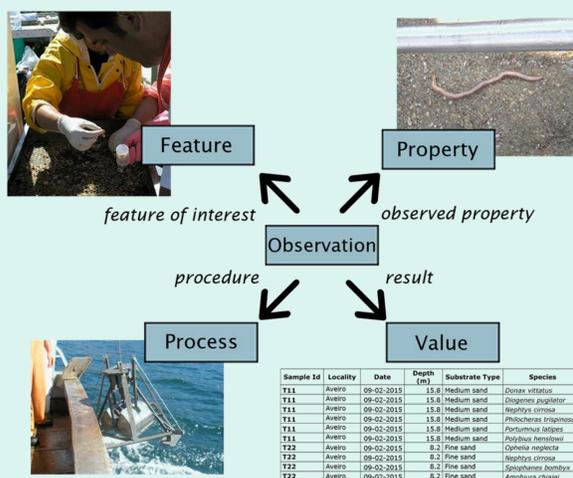


LABORATORY

Data acquisition
Data analysis and validation
Recording on digital support

DATABASE

Data long-term storage
Data management



System characteristics

- Data collected during *BIOMETORE's* surveys ^(b).
- Data sets are georeferenced and time stamped.
- Data can be uploaded directly from the mobile application *LabTablet*.
- Design follows *MoReq2010*® [2].
- Metadata models follow the *INSPIRE* directive [3].
- Conceptual domain model follows *Observations and Measurements (O&M)* specification [4, 5]: *Observation* is the act of measuring the *value* of a *property* that is attributed to a *feature*, using a *process*.

SeaBioData's avail

- To provide innovative and imperative tools for marine research.
- To promote links between the scientific community and other stakeholders related to the marine environment.
- To ensure the data management, long-term preservation, and open access to high quality marine data.
- Ultimately, to improve the ability to assess and predict the environmental status in Portuguese marine waters.

Footnotes: (a) Portuguese Seamounts Biodiversity Data Management, EEAGrants, PT02_Aviso5_0002; (b) Biodiversity in Seamounts: the Madeira-Tore and Great Meteor, EEAGrants, PT02_Aviso2_0001

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References: [1] Clark, M.R., et al. (2006). Seamounts, deep-sea corals and fisheries: vulnerability of deep-sea corals to fishing on seamounts beyond areas of national jurisdiction. UNEPWCWC, Cambridge, UK, 80 pp. [2] EC (2011). MoReq2010, Modular Requirements for Records Systems – Core services & plug-in modules (version 1.1), DLM Forum Foundation. 524 pp. [3] EC (2007). Council Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE). OJ L108/1. [4] Cox, S. (2013). Geographic Information – Observations & Measurements. Tech. Rep. OGC and ISO 19156:2011(E), Open Geospatial Consortium. 46 pp. [5] Schleidt, K., et al. (2014). Guidelines for the use of Observations Measurements and Sensor Web Enablement related standards in INSPIRE: Annex II and III data specification development. Tech. Rep. D2.9.v2.0, INSPIRE Cross Thematic Working Group on Observations & Measurements. 93 pp.