

Technological tools for optimising data collection and management

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Seamounts are underwater mountains that do not reach the ocean surface, which may assemble biological hotspots. Resident fish aggregations and benthic invertebrate communities are vulnerable to fishing. Conservation, management, and sustainable use of their resources are critical and pressing issues. [1]

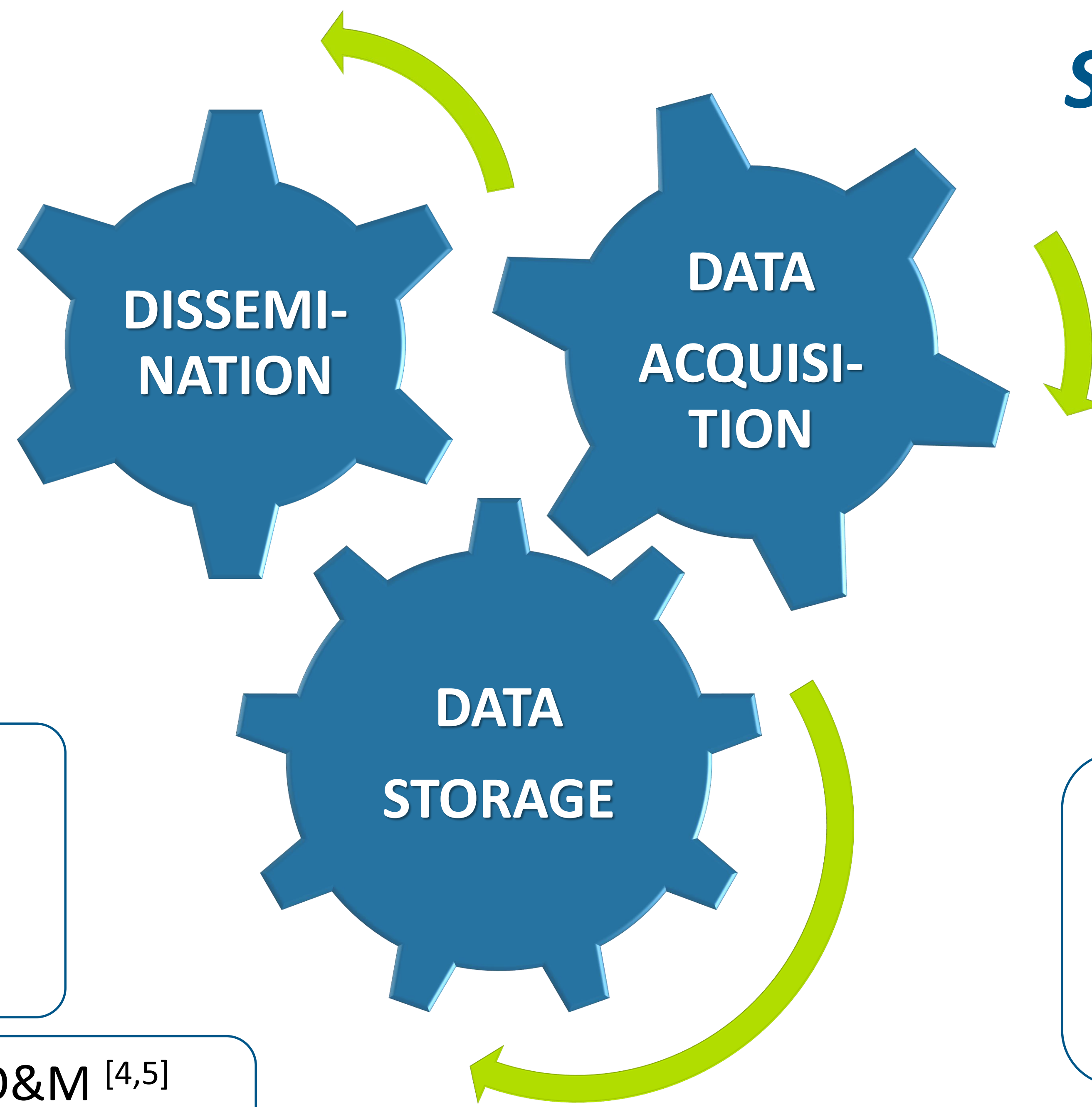
INFORMATION

Quality
Multidisciplinary
Diversity
Complexity

SeaBioData^[a]
Portuguese Seamounts
Biodiversity
Data Management

Information system
for organising and storing
marine information
Software
for in situ semi-automated
data collection

Open access
Videos and photographs
Physical, chemical, and
biological data
Added value services:
(i) identification of
vulnerable ecosystem areas
(ii) establishment of fishing
effort indicators



SeaBioTablet



Tablet application
Data on digital support
Automatic data insertion
Real time update of the database
Easy access to the data

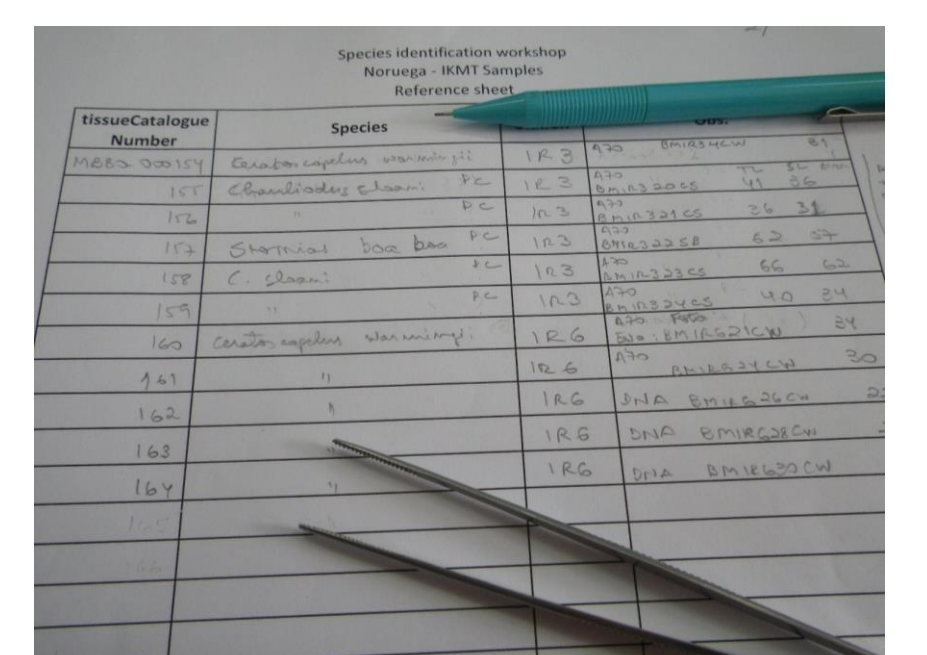
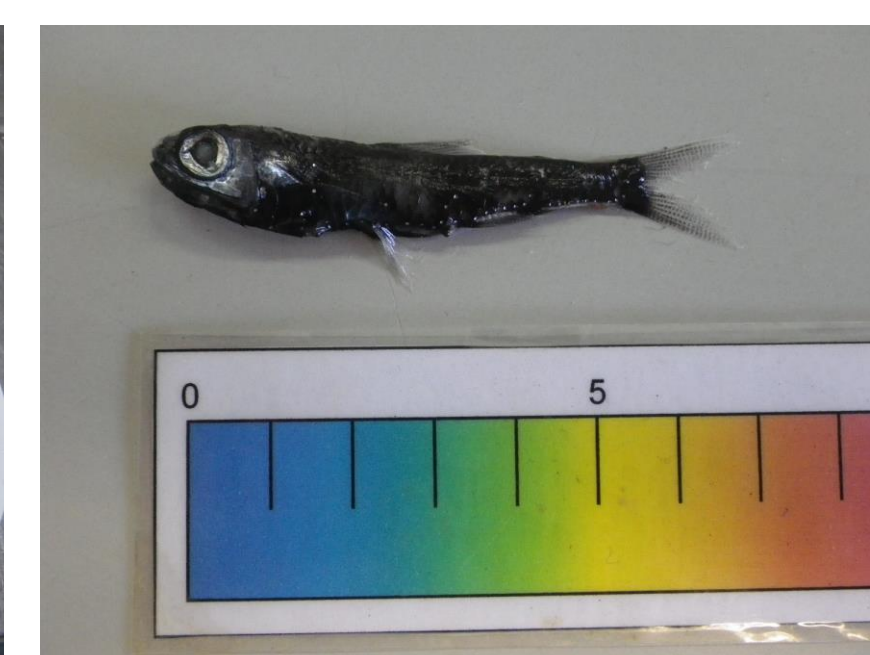
SeaBioData

MoReq2010 [2]
design

INSPIRE [3]
metadata models

O&M [4,5]
model for observation data

Database
Management
System



BIOMETORE^[b] surveys
Satellite
Biological reference
collection
... Future needs...

Process

Feature

Property

Value

OBSERVATION is the act of measuring the value of a property that characterizes a feature through a process.

Project benefits

Provide innovative and imperative tools for marine research.

Improve data collection and storage.

Ensure the management, long-term preservation, and open access to high quality marine data.

Promote links between the scientific community and other stakeholders related to the marine environment.

Strengthen the assessment and prediction of the environmental status in Portuguese marine waters, within the scope of EU's Marine Strategy Framework Directive.

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

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. UNEP/WWF, 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.