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Marine Network for Integrated Data Access
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Data Portal German Marine Research

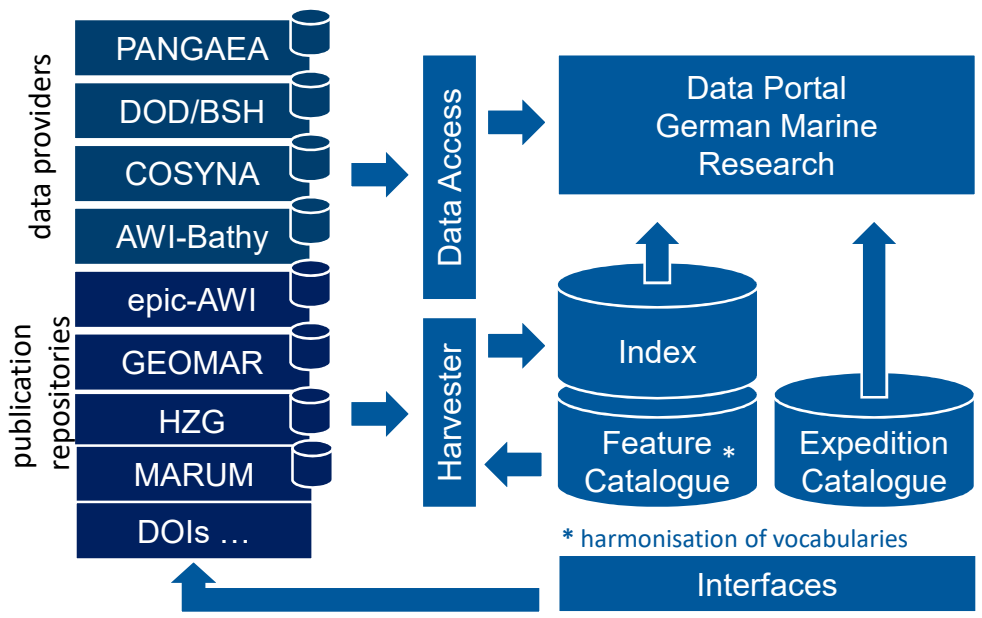
Coastal research needs common data infrastructures

Marine and coastal research has developed from local and sporadic limited measurements to long-term surveys and monitoring campaigns - consequently to the **data-intensive and integrative science** of today. The linkage of data and access to data beyond disciplinary boundaries became essential for marine research and coastal management. Therefore sufficient national and international data infrastructures are fundamental for central and easy access to the variety of existing, but distributed datasets in marine and coastal research.

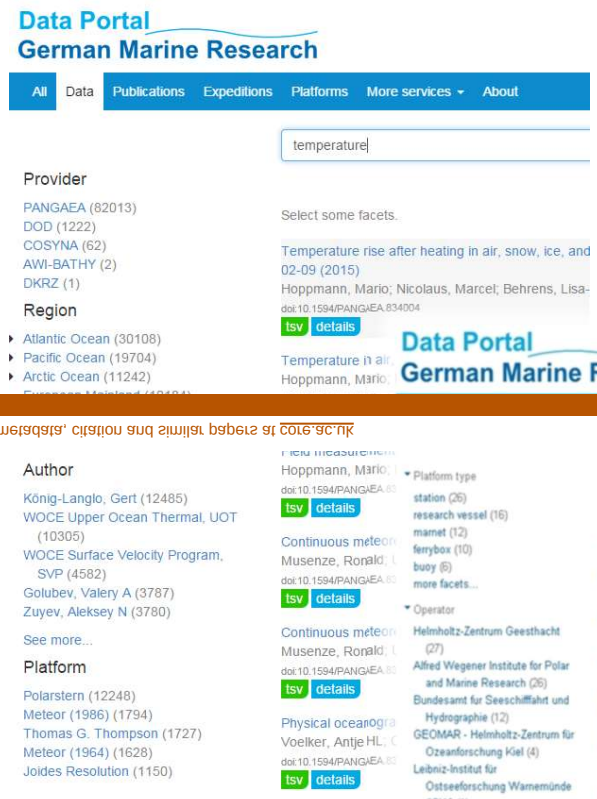
The **Marine Network for Integrated Data Access - MaNIDA** provides a national networked approach in accessing and mining of federated marine research data infrastructures together with data management strategies and data workflows. In that course the consortium conceptualized and developed the a data portal for coherent discovery, view, download and dissemination of scientific data and publications.

The **Data Portal German Marine Research** is based on a central harvesting and interfacing approach by connecting **distributed data** sources. Since the German network of content providers have distinct objectives and mandates for storing data and information (e.g. long-term data preservation, near real time data, publication repositories), we have to cope with **heterogeneous metadata** in terms of syntax and semantic, data types and formats as well as access solutions. Therefore we defined a set of core metadata elements which are common to our content providers and useful for discovery and building relationships. Existing **catalogues** for various types of **vocabularies** are being used to assure the mapping to community-wide used terms. The **web application** allows browsing by e.g. monitoring platforms, vessels and date for exploring data and research gaps. Data-related information is homogenously presented to the user and adaptable to specific disciplines. **Data access** and dissemination information is available as direct access or web services or **data download** link.

The data portal provides an integrated framework for coherent discovery, visualisation, download, and dissemination of scientific data originating from nationally operated research platforms and monitoring facilities (vessels, observatories, campaigns, web services). Our data providers cooperate in the Marine Network for Integrated Data Access (MaNIDA)



The portals architecture integrates and enables the search of distributed content from our data providers. Procedures for harvesting and indexing of metadata are based on ‚elasticsearch' Cluster of Apache Lucene.



http://manida.awi.de/

Data workflow

Preparation → Expedition → Validation → Archiving → Publication

…nagement plans

Expedition: consistent meta data (platform, harbour, stations, devices, …), one central master catalogue, international meta data and cruise reports

Validation: from near real time data and raw data to primary data and published data product, community specific, defined quality flags and data levels

Archiving: COSYNA - near real time data, PANGAEA – data publications and long-term archival, DOD/BSH – national data base (NODC), internal institutional data bases (e.g. bathymetry, ...)

Publication: PANGAEA – DOI-citable and cross-referenced with scientific publications, institutional publication repositories of partners

Consortium:
Marine Network for Integrated Data Access
www.manida.org

BSH Bundesamt für Seeschifffahrt und Hydrographie · marum · CAU Christian-Albrechts-Universität zu Kiel · Universität Hamburg Der Forschung | Der Lehre | Der Bildung · GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel · ICBM · Helmholtz-Zentrum Geesthacht Zentrum für Material- und Küstenforschung · AWI Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung Bremerhaven · Helmholtz Gemeinschaft

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