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# MaNIDA: Insight into the German Marine Network for Integrated Data Access

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The Marine Network for Integrated Data Access (MaNIDA) builds a sustainable e-Infrastructure to support discovery and re-use of data from distinct marine and earth science data providers in Germany (see ESSI1.2 and ESSI2.2). Thereby we implement the "Data Portal of German Marine Research" for coherent discovery, view, download and dissemination of aggregated content.

MaNIDA receives a unique momentum from the cooperation and financial partnership between main German marine research institutes (AWI, MARUM, HZG, GEOMAR, Uni Hamburg, Uni Kiel, Uni Bremen) and the Federal Maritime and Hydrographic Agency as well as active participation in international and major EU-initiatives (ICSU, GEOSS, SeaDataNet, EMODNET, ODIP). Together with a coherent management strategy coordinated by the Alfred Wegener Institute, Helmholtz Center for Polar and Marine Research, sustainability will be achieved via the long-term commitment of framework funding by the Helmholtz Association, Germany's largest scientific research organization for large-scale facilities and scientific infrastructure.

Strategic Aims

The installation of the "Data Portal of German Marine Research" will address the urgent demands of the German research community for reliable and easy access to marine research data at one single point of access and truth. Primary focus will be given to data derived from nationally operated research and monitoring facilities (vessels, observatories, alert systems, etc), whereby related contextual content and publications will become an integral part of the aggregation effort. For the scientific community we define responsibilities and commitments across partners while complementing existing data repositories and the new portal with well-articulated workflows from the instrument to the data product. Necessary level of quality assurance and user support will be implemented to achieve substantial enhancements in the whole lifecycle management of marine scientific data. The creation of a data curation and customer support centre holds a significant role in that course as well as the intense exchange of ideas/wishes with stakeholders and scientists.

Research & Development
• In terms of integration, harmonization and aggregation – data from three national large-scale data repositories and national publication e-infrastructures will be aggregated into a central metadata catalogue.

• Dynamic procedures for harmonization and integration of content are under development using common vocabulary, terms (ontology) according to international initiatives (SDN, GEOSS, ICSU).

• Concerning automation we will improve the standardization of sensor networks (e.g., OGC/SWE standards) and revise and adapt a future version of DSHIP (ship information system), a de-facto standard for research vessels, to repository and portal solutions.

• We are developing a series of content-specific discovery, view, download and dissemination services to enable coherent discovery and visualization (search/browse and mapping services) as well as provider based dissemination of content at European and International levels.

Finally the "Data Portal of German Marine Research" will enhance data mining in various disciplines as well as improve planning of future expeditions. It will also provide means for combining various data types (e.g. underway data, post cruise data, satellite data, oceanographic and interdisciplinary marine data) into enhanced data products to comply with our data-intensive marine science.