



Ocean Data Interoperability Platform (ODIP): developing a common framework for marine data management on a global scale

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As marine research becomes increasingly multidisciplinary in its approach there has been a corresponding rise in the demand for large quantities of high quality interoperable data. A number of regional initiatives are already addressing this requirement through the establishment of e-infrastructures to improve the discovery and access of marine data. Projects such as SeaDataNet in Europe, Rolling Deck to Repository (R2R) in the USA and the Integrated Marine Observing System (IMOS) in Australia have implemented local infrastructures to facilitate the exchange of standardised marine datasets. However, each of these systems has been developed to address local requirements and created in isolation from those in other regions. To establish a common framework for marine data management on a global scale there is a need to develop interoperability solutions that can be implemented across these initiatives.

Through a series of workshops attended by the relevant domain specialists, the Ocean Data Interoperability Platform (ODIP) project has identified areas of commonality between the regional infrastructures and used these as the foundation for the development of three prototype interoperability solutions addressing:

1. the use of brokering services for the purposes of providing access to the data available in the regional data discovery and access services including via the GEOSS portal
2. the development of interoperability between cruise summary reporting systems in Europe, the USA and Australia for routine harvesting of cruise data for delivery via the Partnership for Observation of Global Oceans (POGO) portal
3. the establishment of a Sensor Observation Service (SOS) for selected sensors installed on vessels and in real-time monitoring systems using sensor web enablement (SWE)

These prototypes will be used to underpin the development of a common global approach to the management of marine data which can be promoted to the wider marine research community. ODIP is a community lead project that is currently focussed on regional initiatives in Europe, the USA and Australia but which is seeking to expand this framework to include other regional marine data infrastructures.