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Leibniz Institute for Baltic Sea Research Warnemünde

# IOWMETA - A modular metadata information system enabling the extraction of ISO-compliant metadata from heterogeneous sources

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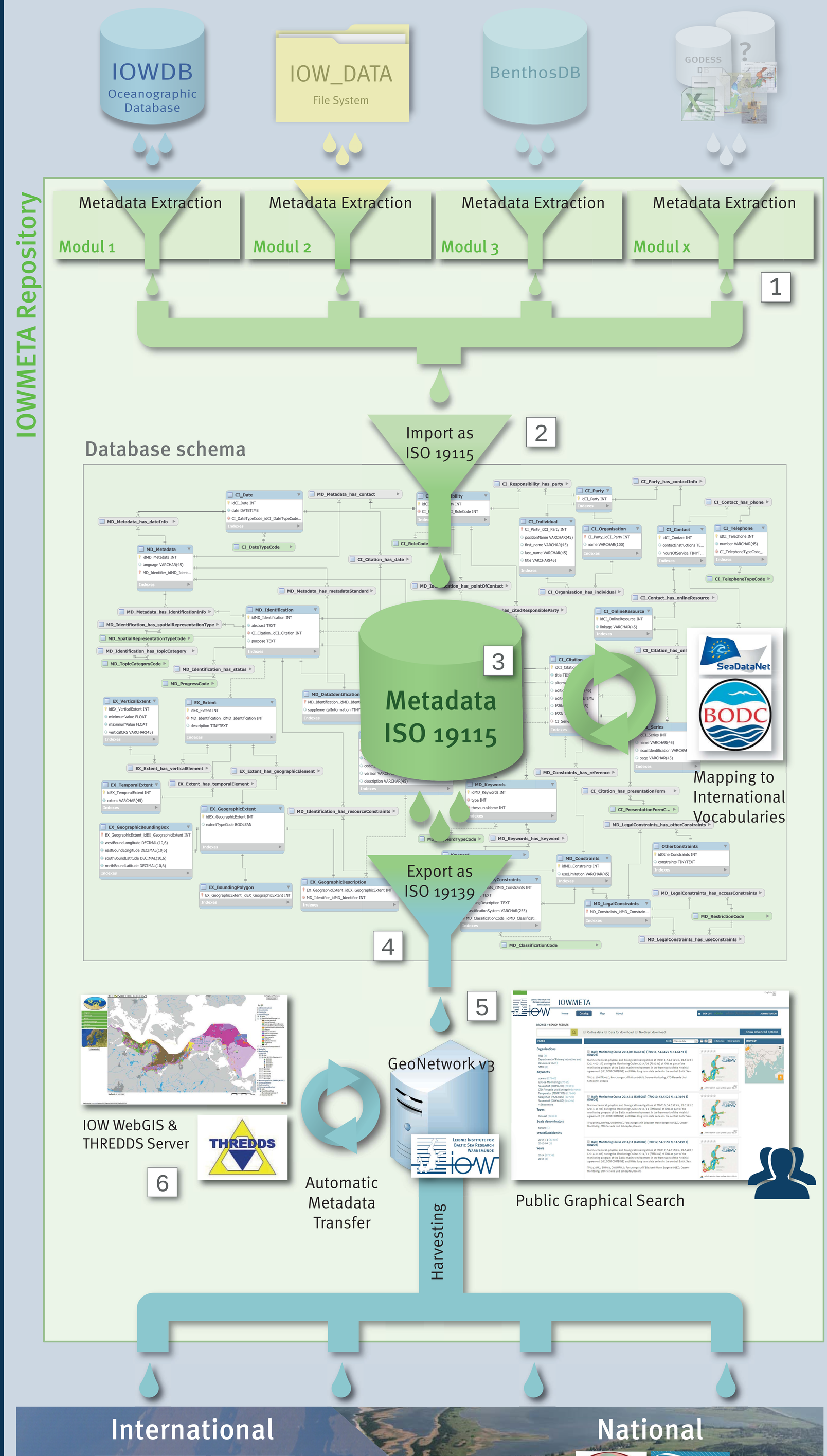


## Objective

The purpose of the metadata information system IOWMETA is to provide a comprehensive catalogue of research data stored at the Leibniz Institute for Baltic Sea Research Warnemünde (IOW). By means of standardized and detailed metadata IOWMETA not only ensures long-term availability of IOW's marine research data but also enables international exchange.

## 1 Metadata Extraction

The system architecture supports straight-forward extensibility. In order to complete the data stock in IOWMETA new modules are continuously developed extracting metadata from heterogeneous data sources.

## 2 Metadata Import

IOWMETA is based on the metadata standards of ISO 191xx. The extracted metadata are mapped to ISO 19115 in order to become storable in the metadata database.

## 3 Metadata Storage

A set of more than 40 ISO-elements (incl. the 19115 core) were put into practice as relational database consisting of currently 100 tables. In addition, a tool for resolving IOC GF3-Codes to other international vocabularies was developed. The resulting keyword mapping makes the metadata comparable to repositories based on international vocabularies.

## 4 Metadata Export

The metadata are converted to ISO 19139 compliant XML data structures. The resulting XML data constitute the basis for international retrieval and exchange.

## 5 GeoNetwork Server

A GeoNetwork Server is used to implement a web service infrastructure supporting standardized access and transfer of metadata and to provide a web-based graphical user interface with various search capabilities.

## 6 Automatic Transfer

Metadata can be automatically exchanged with distributed IOW applications, i.e. WebGIS or a THREDDS-Server.

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