

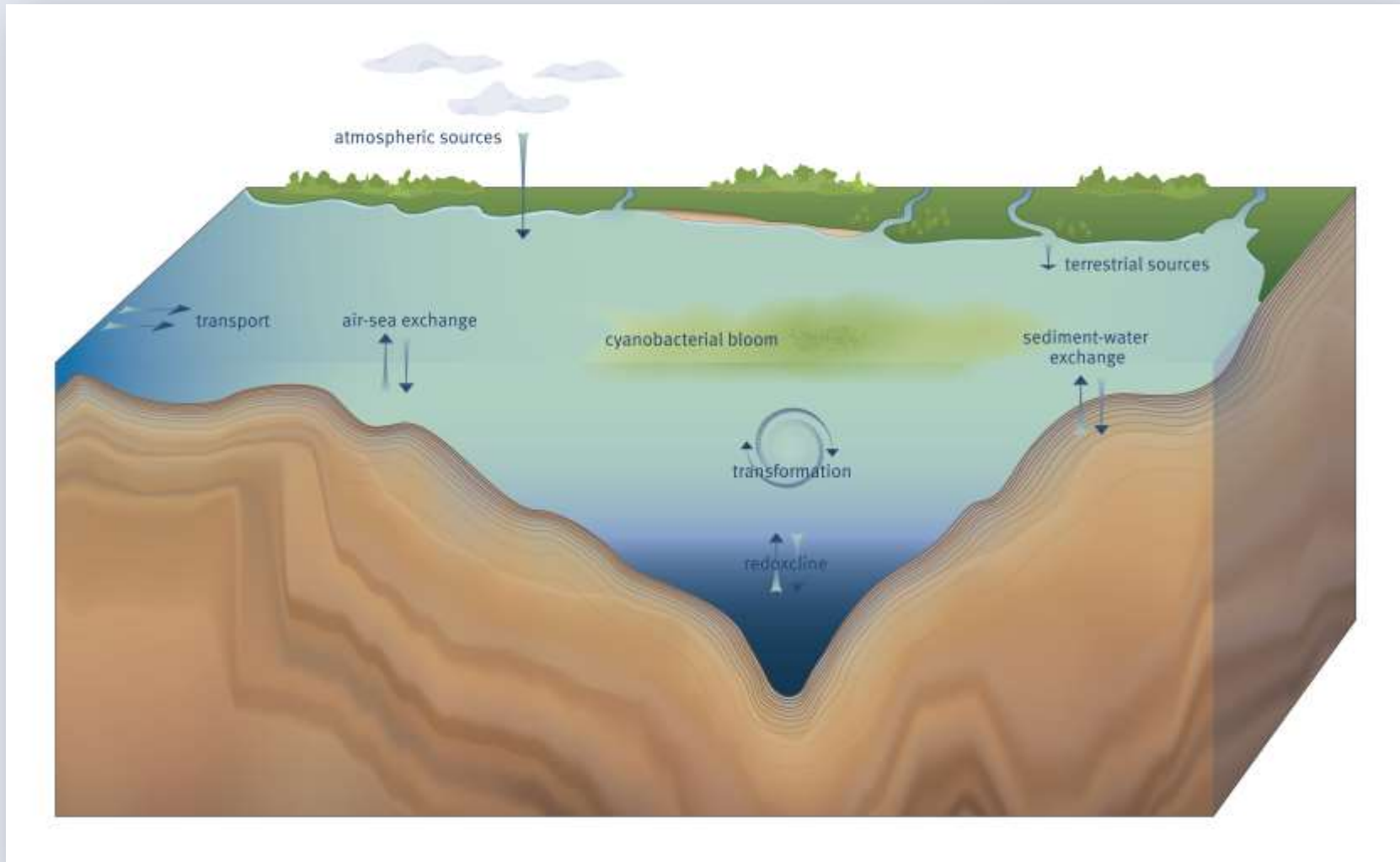
Das marine Metadateninformationssystem „IOWMETA“

Konzeption und Implementierung

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- Aufgabenstellung: den Bestand der Umweltmessdaten des IOW öffentlich auffindbar und durchsuchbar machen
- Lösung: ISO 191xx für Umweltmessdaten
ISO 19115 für Metadaten
Web Services
- Konzeption & Implementierung



Art der Daten

- Ozeanographisch: Salzgehalt, Temperatur, Sauerstoff, Nährstoffe, Pegel, Strömung
- Biologisch: Vorkommen & Verbreitung von Arten in Wassersäule und Sediment, DNA
- Sediment: Korngrößen & Verteilungskarten
- Satelliten- & Modelldaten
- Historische Daten (seit 1877)
- Langzeitreihen (ab ~1930)
- Experimentdurchläufe,...

Speichersysteme

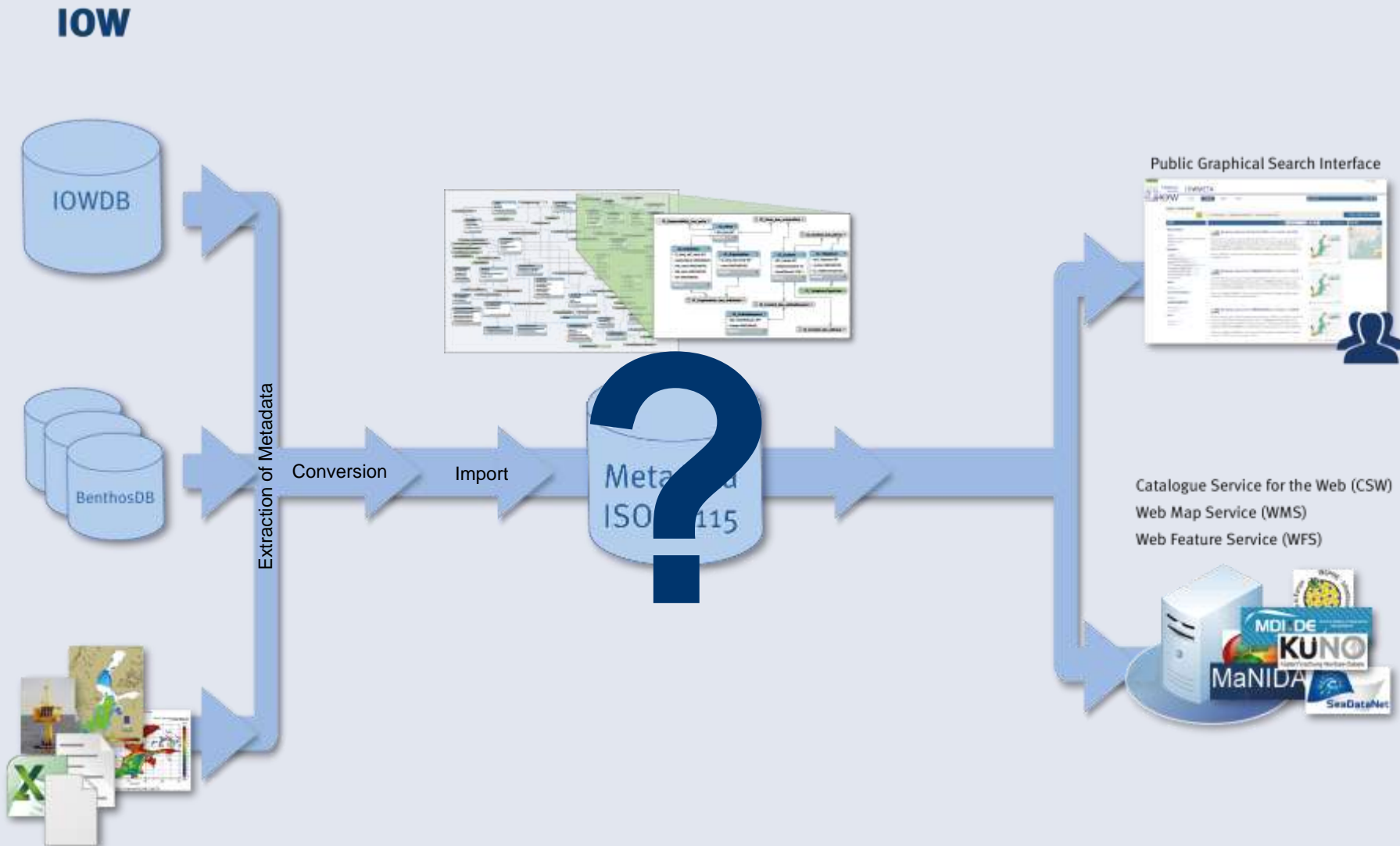
- Ozeanographische Datenbank des IOW (IOWDB): strukturiert, qualitätsgeprüft, zentraler Zugriff (>65 Mio Messpunkte)
- Lokale Datenbanken in Arbeitsgruppen: strukturiert, kein allgemeiner Zugriff
- Zentrale oder lokale Dateisysteme: unstrukturiert, unsicher, unbekannter Zugriff

Kein öffentlicher Zugriff!

IOWDB Timeline: data per year - new parameters - events and innovations



Messdaten und Metadaten kombiniert und vermischt!



IOWDB

IOWMETA (ISO 19115)

stations

- stid INT(11)
- proid SMALLINT(6)
- sttypeid SMALLINT(6)
- stnr SMALLINT(6)
- stname VARCHAR(20)
- lon_start INT(11)
- lat_start INT(11)
- depth_start INT(11)
- time_start DATETIME
- lon_end INT(11)
- lat_end INT(11)
- depth_end INT(11)
- time_end DATETIME
- pos_meth SMALLINT(6)
- depth_meth SMALLINT(6)
- wind_dir SMALLINT(6)
- wind_vel SMALLINT(6)
- visual_range SMALLINT(6)
- air_pressure SMALLINT(6)
- air_temp SMALLINT(6)
- humid_temp SMALLINT(6)
- humidity INT(11)
- vapour_pressure SMALLINT(6)
- dew_point SMALLINT(6)
- water_temp SMALLINT(6)
- radiation SMALLINT(6)

4 more...

Indexes

EX_GeographicBoundingBox

- EX_GeographicExtent_idEX_GeographicExtent INT
- westBoundLongitude DECIMAL(10,6)
- eastBoundLongitude DECIMAL(10,6)
- southBoundLatitude DECIMAL(10,6)
- northBoundLatitude DECIMAL(10,6)

Indexes

EX_TemporalExtent

- idEX_TemporalExtent INT
- extent VARCHAR(45)

Indexes

EX_VerticalExtent

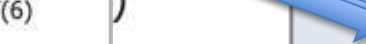
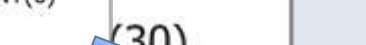
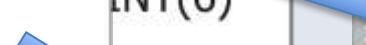
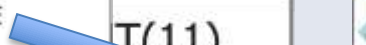
- idEX_VerticalExtent INT
- minimumValue FLOAT
- maximumValue FLOAT
- verticalCRS VARCHAR(45)

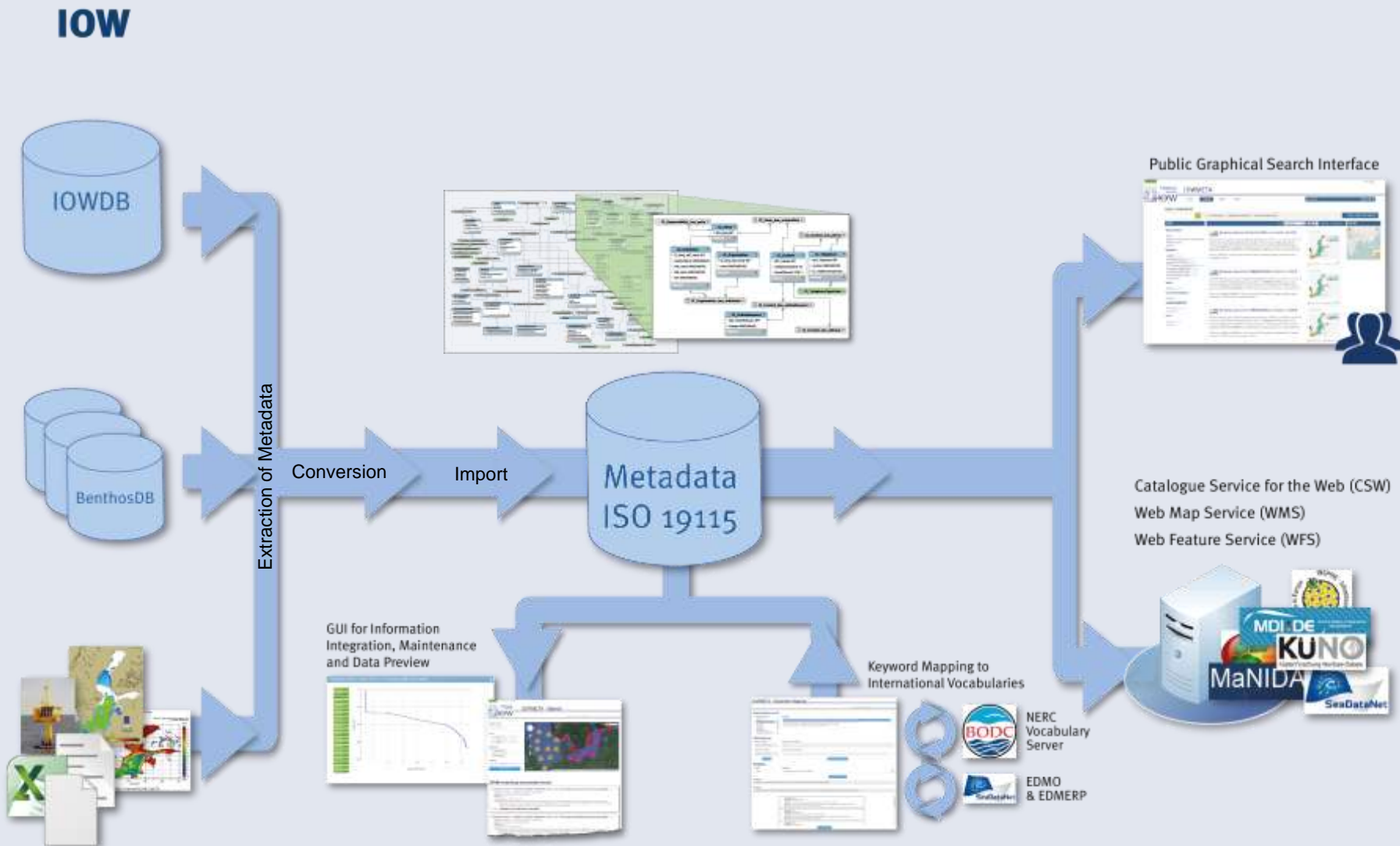
Indexes

MD_Keywords

- idMD_Keywords INT
- type INT
- thesaurusName INT

Indexes

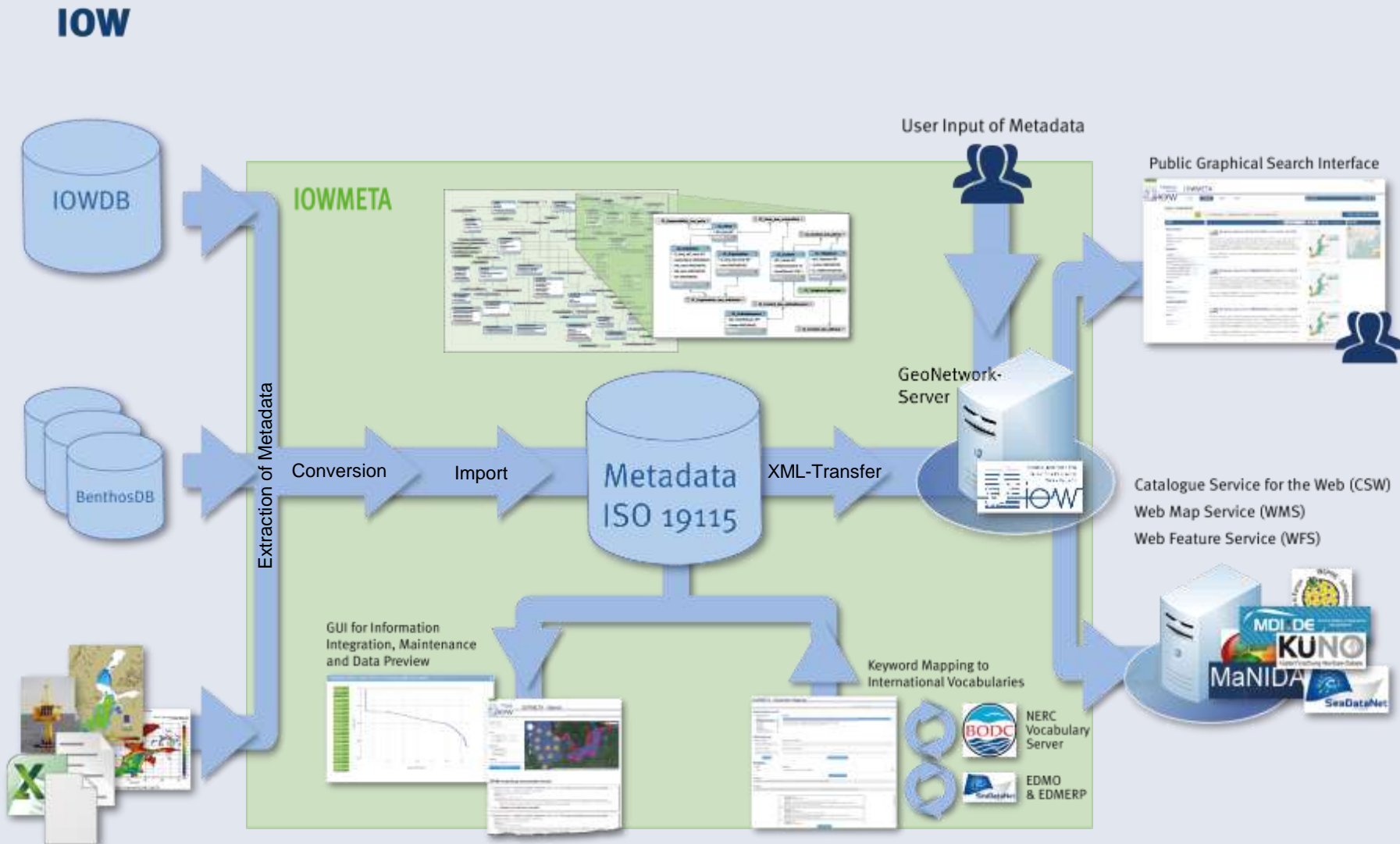


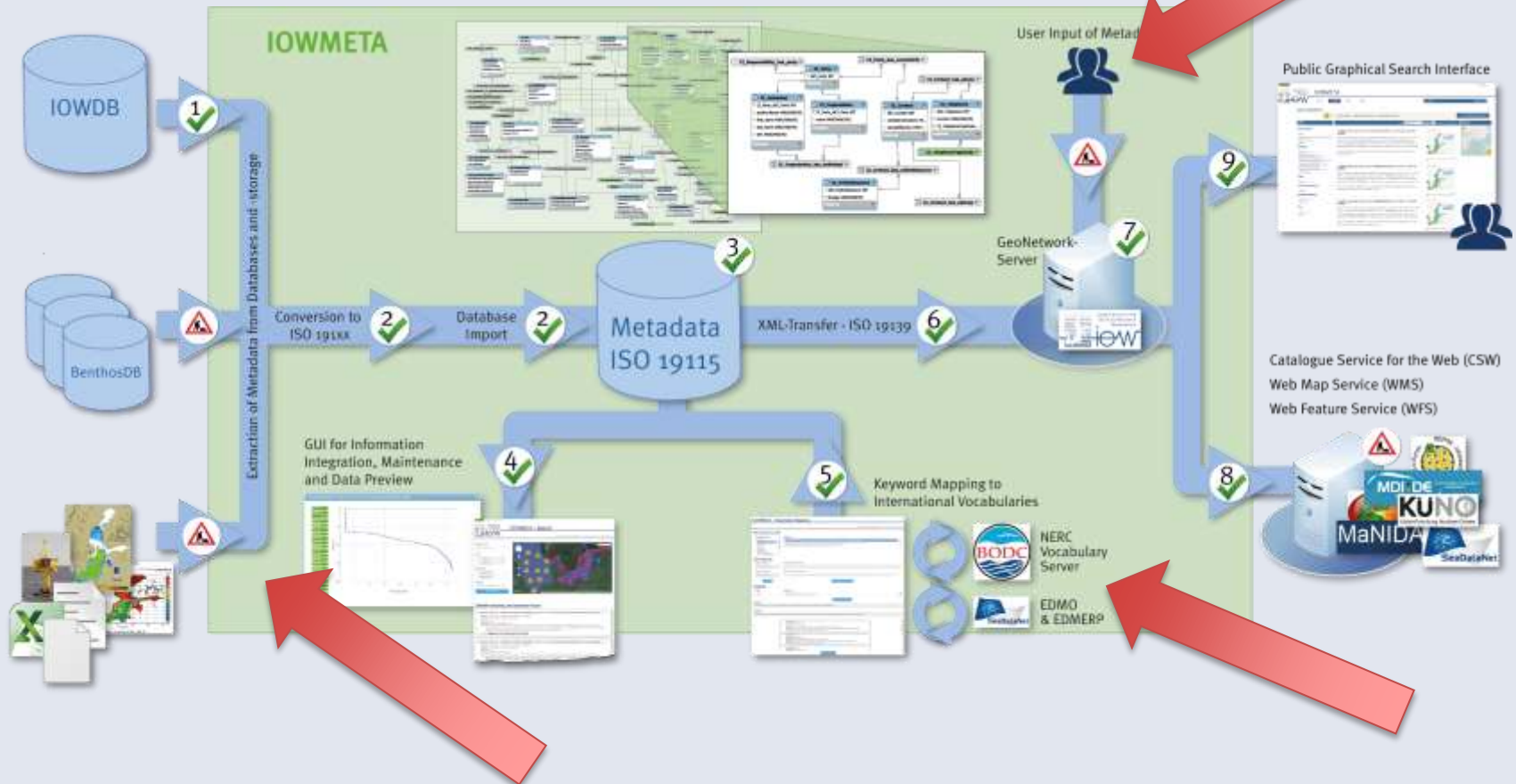


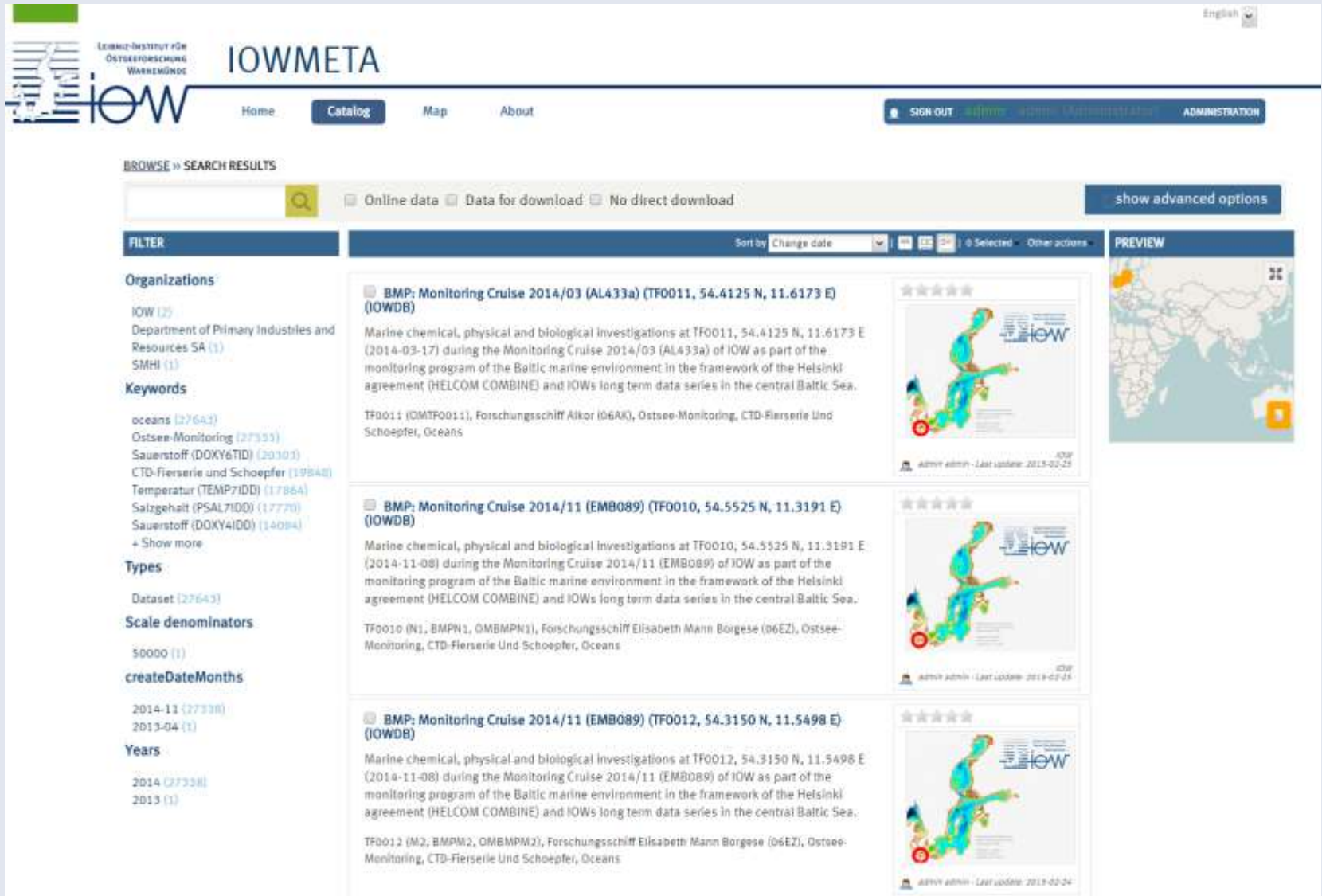
Keyword Mapping - Beispiel

IOWDB	IOWMETA	Internationales Vokabular
Sauerstoff (DOXY6TID)	Oxygen	Unique Identifier: „SDN:P01::DOXYWITX“
gelöster Sauerstoff durch Titration (nach Winkler) bestimmt	Dissolved oxygen (O ₂) measured in millimole/m ³ in the hydrosphere with the method Titration, Winkler (1888). P&M standard, U non standard.	Concentration of oxygen {O ₂ } per unit volume of the water body [dissolved plus reactive particulate phase] by Winkler titration

- 350+ Parameter und Messmethoden
- 100+ Projekte & Organisationen
- ~400 Plattformen & Schiffe
- ~30 Seegebiete (Ostsee)








The screenshot displays the IOWMETA web application interface. At the top, there is a navigation bar with links for Home, Catalog, Map, and About. A search bar is present with a magnifying glass icon and a search button. Below the search bar, there are filter options: "Online data", "Data for download", and "No direct download". A "show advanced options" button is also visible.

The main content area is divided into three columns:

- FILTER:** Contains sections for "Organizations" (listing IOW, Department of Primary Industries and Resources SA, and SMHI), "Keywords" (listing various oceanographic parameters like salinity, temperature, and oxygen), "Types" (listing Dataset), "Scale denominators" (listing 50000), "createDateMonths" (listing 2014-11 and 2013-04), and "Years" (listing 2014 and 2013).
- Search Results:** Displays three entries for monitoring cruises:
 - BMP: Monitoring Cruise 2014/03 (AL433a) (TF0011, 54.4125 N, 11.6173 E) (IOWDB)**: Marine chemical, physical and biological investigations at TF0011, 54.4125 N, 11.6173 E (2014-03-17) during the Monitoring Cruise 2014/03 (AL433a) of IOW as part of the monitoring program of the Baltic marine environment in the framework of the Helsinki agreement (HELCOM COMBINE) and IOWs long term data series in the central Baltic Sea. TF0011 (DMTF0011), Forschungsschiff Aikor (06AK), Ostsee-Monitoring, CTD-Fierserie Und Schoepfer, Oceans.
 - BMP: Monitoring Cruise 2014/11 (EMB089) (TF0010, 54.5525 N, 11.3191 E) (IOWDB)**: Marine chemical, physical and biological investigations at TF0010; 54.5525 N, 11.3191 E (2014-11-08) during the Monitoring Cruise 2014/11 (EMB089) of IOW as part of the monitoring program of the Baltic marine environment in the framework of the Helsinki agreement (HELCOM COMBINE) and IOWs long term data series in the central Baltic Sea. TF0010 (N1, BMPN1, OMBMPN1), Forschungsschiff Elisabeth Mann Borgese (06EZ), Ostsee-Monitoring, CTD-Fierserie Und Schoepfer, Oceans.
 - BMP: Monitoring Cruise 2014/11 (EMB089) (TF0012, 54.3150 N, 11.5498 E) (IOWDB)**: Marine chemical, physical and biological investigations at TF0012, 54.3150 N, 11.5498 E (2014-11-08) during the Monitoring Cruise 2014/11 (EMB089) of IOW as part of the monitoring program of the Baltic marine environment in the framework of the Helsinki agreement (HELCOM COMBINE) and IOWs long term data series in the central Baltic Sea. TF0012 (M2, BMPM2, OMBMPM2), Forschungsschiff Elisabeth Mann Borgese (06EZ), Ostsee-Monitoring, CTD-Fierserie Und Schoepfer, Oceans.
- PREVIEW:** Shows a map of the Baltic Sea region with a red circle indicating the location of the cruise. Each entry includes a star rating and a "Last update" date.

Vielen Dank für Ihre Aufmerksamkeit!





LEIBNIZ-INSTITUT FÜR
OSTSEEFORSCHUNG
WARNEMÜNDE

IOWMETA - Data Management

Copyright © 2011-2015, IOW, Department IT: [Susanne Feistel](#), [Susanne Jürgensmann](#), [Steffen Bock](#)

[Home](#)

[Search](#)

[Help](#)

Daten aus IOWDB

[Keyword Mapping](#)

[IOWMETA CleanUp \(TEST\)](#)

[Solr Index](#)

Import aus der IOWDB

Topprojekte (1)

- 1 - Ostsee-Monitoring
- 2 - Dauerstation Darsser Schwelle
- 3 - WEKOS
- 4 - OEKEX
- 5 - WEDS
- 6 - MEAK
- 7 - DYNOCs
- 8 - Pommersche Bucht, TRUMP
- 9 - Diverse Ausfahrten

Projekte (n)

- 890 - Terminfahrt 2014/11
- 889 - Terminfahrt 2014/07
- 888 - Terminfahrt 2014/05
- 887 - Terminfahrt 2014/03
- 886 - Terminfahrt 2014/02
- 880 - Terminfahrt 2013/11
- 875 - Terminfahrt 2013/08
- 870 - Terminfahrt 2013/05
- 860 - Terminfahrt 2013/02

Protokoll

Stids

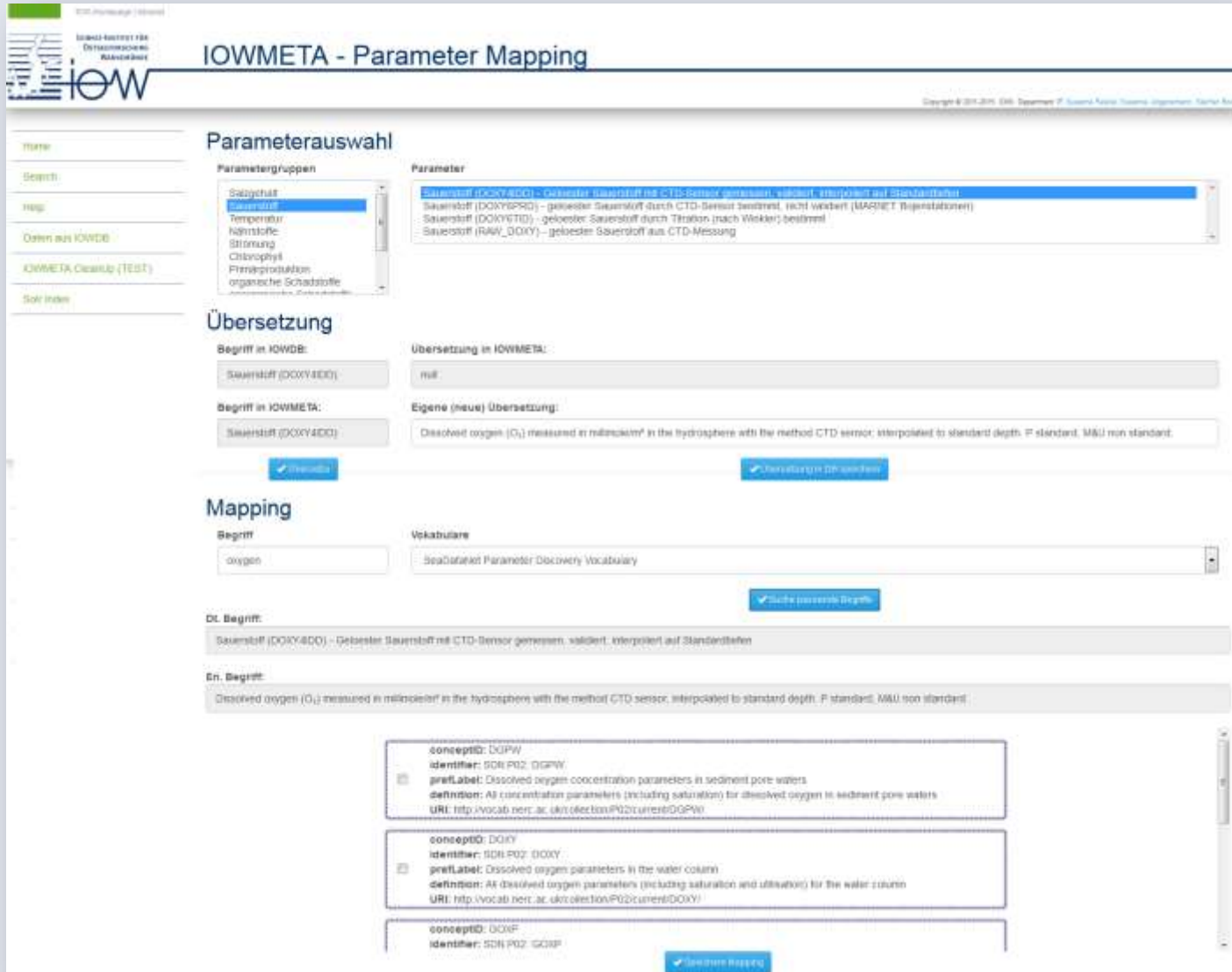
von:

bis:

Metadaten von früheren Imports überschreiben? (noch nicht implementiert)

Fortschritt

0/97 (0%) Dokumente verarbeitet
0 Dokumente übersprungen



The screenshot shows the 'IOWMETA - Parameter Mapping' web application. The interface is divided into several sections:

- Navigation:** Includes 'Home', 'Suchen', 'Help', 'Daten aus IOWDB', 'IOWMETA Cleanup (TEST)', and 'Soft Index'.
- Parametergruppen (Parameter Selection):** A list of parameter groups including Salzgehalt, Temperatur, Nährstoffe, Strömung, Chlorophyll, Primärproduktion, and organische Schadstoffe. 'Sauerstoff' is selected.
- Parameter:** A list of specific parameters: 'Sauerstoff (DOXY4DO) - gelöster Sauerstoff mit CTD-Sensor gemessen, validiert, interpoliert auf Standardtiefen', 'Sauerstoff (DOXY6PD) - gelöster Sauerstoff durch CTD-Sensor bestimmt, nicht validiert (MARINET Rejelektionen)', 'Sauerstoff (DOXY6TD) - gelöster Sauerstoff durch Titration (nach Winkler) bestimmt', and 'Sauerstoff (RAW_DOXY) - gelöster Sauerstoff aus CTD-Messung'.
- Übersetzung (Translation):**
 - Begriff in IOWDB:** Sauerstoff (DOXY4DO)
 - Übersetzung in IOWMETA:** null
 - Begriff in IOWMETA:** Sauerstoff (DOXY4DO)
 - Eigene (neue) Übersetzung:** Dissolved oxygen (O₂) measured in micromole/l in the hydrosphere with the method CTD sensor; interpolated to standard depth. F standard, MAU non standard.
- Mapping:**
 - Begriff:** oxygen
 - Vokabulare:** SeaDataNet Parameter Discovery Vocabulary
 - DL-Begriff:** Sauerstoff (DOXY4DO) - Gelöster Sauerstoff mit CTD-Sensor gemessen, validiert, interpoliert auf Standardtiefen
 - En-Begriff:** Dissolved oxygen (O₂) measured in micromole/l in the hydrosphere with the method CTD sensor; interpolated to standard depth. F standard, MAU non standard
- Concepts:**
 - conceptID: DGPW**
identifier: SDR-P02-DGPW
prefLabel: Dissolved oxygen concentration parameters in sediment pore waters
definition: All concentration parameters (including saturation) for dissolved oxygen in sediment pore waters
URI: http://vocab.ner.ac.uk/olection/P02/cumentDGPW/
 - conceptID: DOXY**
identifier: SDR-P02-DOXY
prefLabel: Dissolved oxygen parameters in the water column
definition: All dissolved oxygen parameters (including saturation and utilization) for the water column
URI: http://vocab.ner.ac.uk/olection/P02/cumentDOXY/
 - conceptID: DOXF**
identifier: SDR-P02-DOXF