SeaDataNet CDI Catalogue Service

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OpenScience Fair 2017 Conference
How FAIR friendly is your data catalogue? Workshop, 8/9/17, Athens

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What is SeaDataNet?

A pan-European infrastructure set up and operated for managing marine and ocean data in cooperation with the NODCs and data focal points of 35 countries bordering the European seas

90s	Metadata directories MEDAR/MedAtlas
2002-2005	Sea-Search (FP5)
2006-2011	SeaDataNet (FP6)
2011-2015	SeaDataNet II (FP7)
2016-2020	SeaDataCloud (H2020)

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CDI service for discovery and unified data access

SeaDataNet portal

Search and Shop
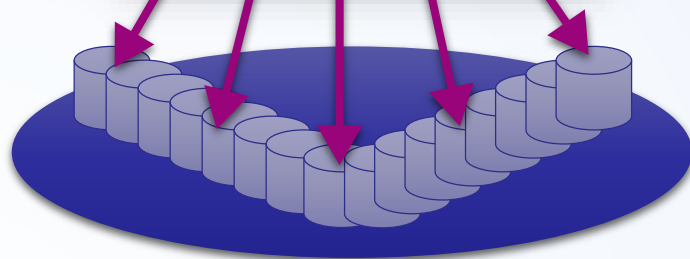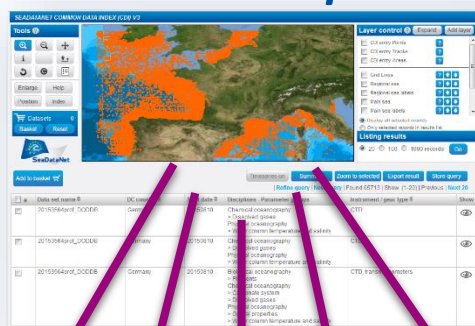
Data download

European data sources

data centres > 600 originators
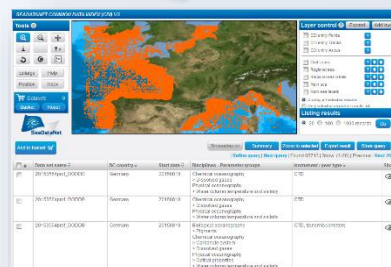
Metadata

+ transaction data
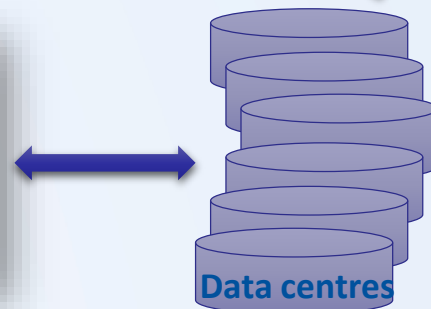
Data centres
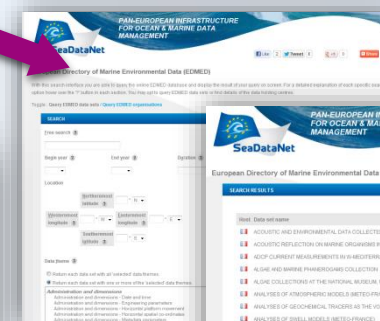
Linked Metadata directories with user interfaces (incl. map services) for search and display

EDMO *Organisations*
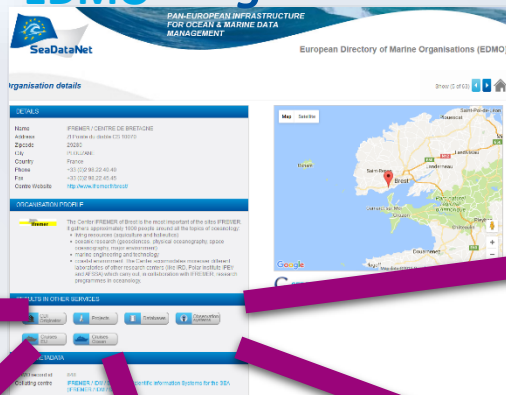
CSR *Research cruises*

EDMERP *Projects*

EDIOS *Observing programmes*

CDI *Data index*

EDMED *Data sets*

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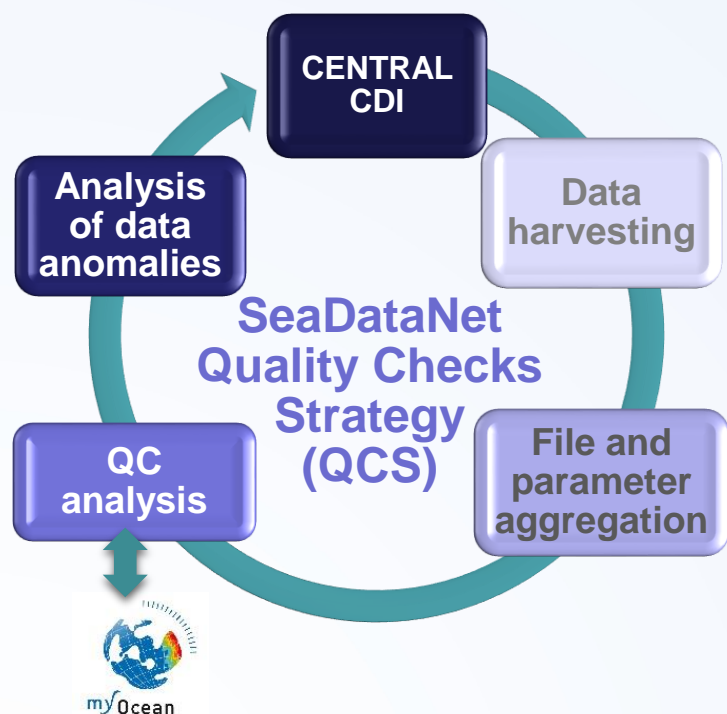SeaDataNet
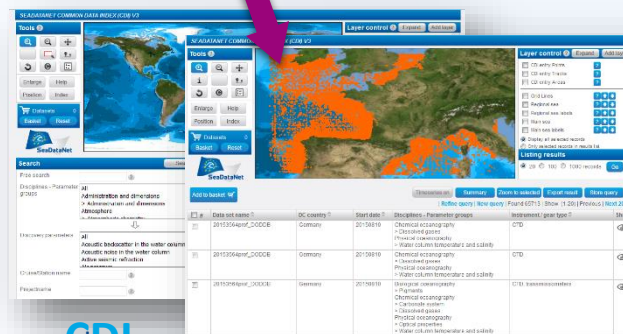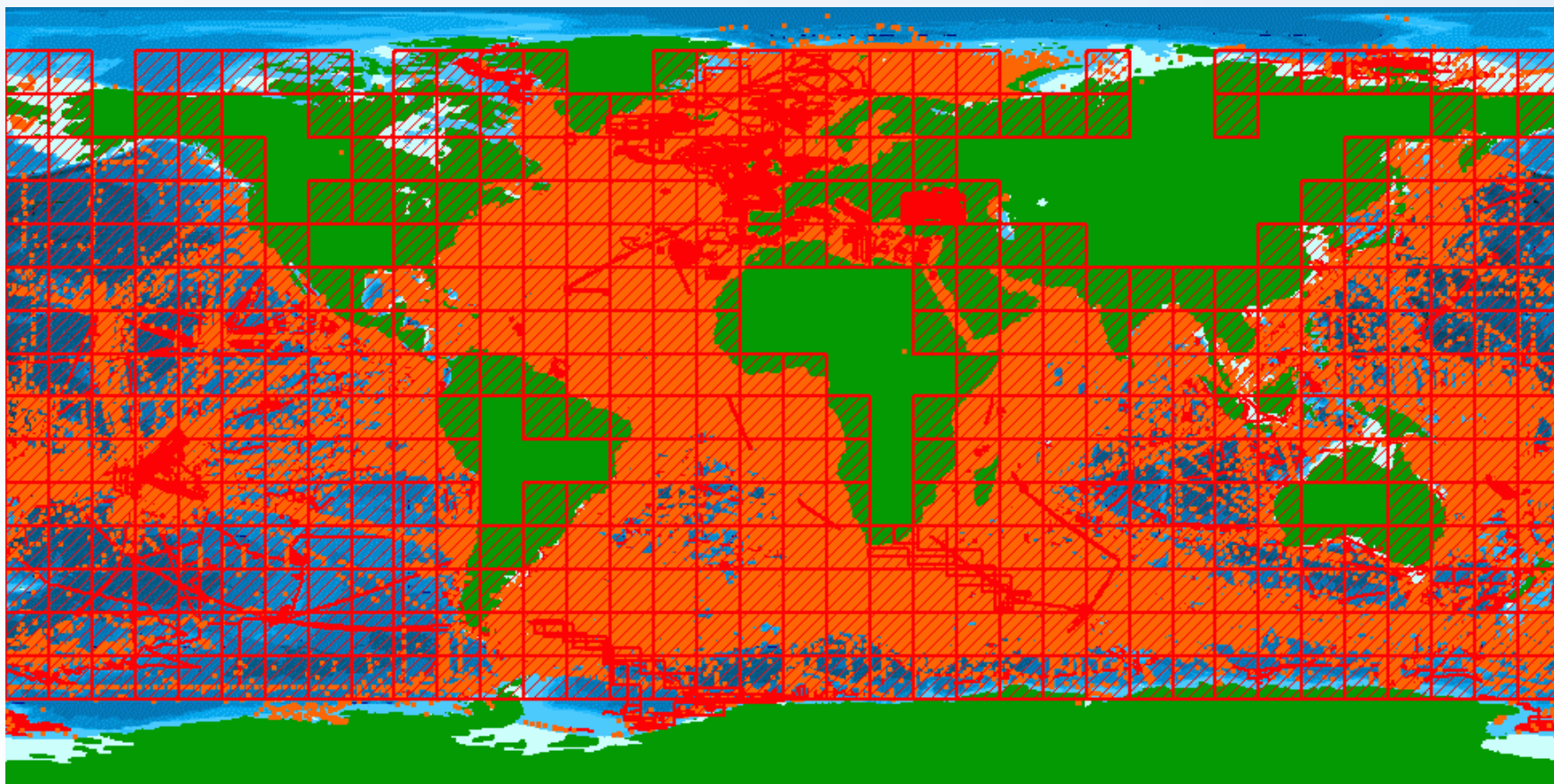
1.95 million CDI entries from 34 countries, 102 data centres and 612 originators for physics, chemistry, geology, geophysics, bathymetry and biology, from 1805 to 2017; 87.6% unrestricted or under SDN License

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Access to Products

SeaDataNet

CENTRAL CDI

Analysis of data anomalies

Data harvesting

SeaDataNet Quality Checks Strategy (QCS)

QC analysis

File and parameter aggregation

myOcean
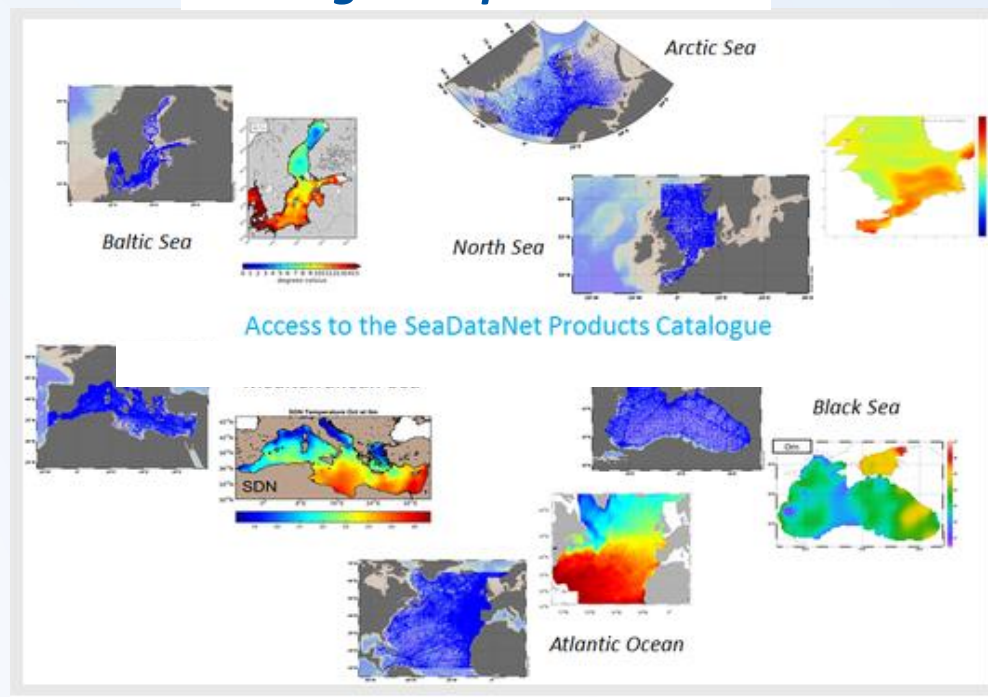
Aggregated datasets and climatologies

Improvement of the data quality

Regional products

Arctic Sea

Baltic Sea

North Sea

Access to the SeaDataNet Products Catalogue

SDN

Black Sea

Atlantic Ocean

- ***Products catalogue service***
- ***Products viewing services***

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Interoperability with global portals

- CDI is available as OGC CSW, WMS and WFS service for exchange of CDI metadata

- CDI is connected with GEOSS by CSW and IODE

  – Aggregation of SeaDataNet metadata CDI granules to CDI collections (ISO 19115 – 19139) (1.9 million => 500 collections), conversion to Common Brokerage Model, and harvesting via CS-W and OAI-PMH services

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SeaDataNet

GEOSS portal

IODE ODP portal

Aggregated collection

Black Sea portal

Caspian portal

Geo-Seas portal

Regional subsets

Data discovery and access

> 100 data centres

Thematic portals

EMODnet
European Marine
Observation and
Data Network

Bathymetry

Physics

Chemistry

Geology

Biology

NODCs; HOs; GEOs; BIOs; ICES; PANGAEA

≈ 600 European data originators

*CDI Data Discovery and Access service*

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Upgrading the CDI service using the cloud

- Collaboration with EUDAT (engaged in European OpenScience Cloud) to establish a **common cloud and computing environment** that will be integrated with the SeaDataNet data management infrastructure to provide central caching and cloud computing facilities.

Present SeaDataNet architecture

Proposed upgraded architecture with data replication, advance services and VRE in the cloud

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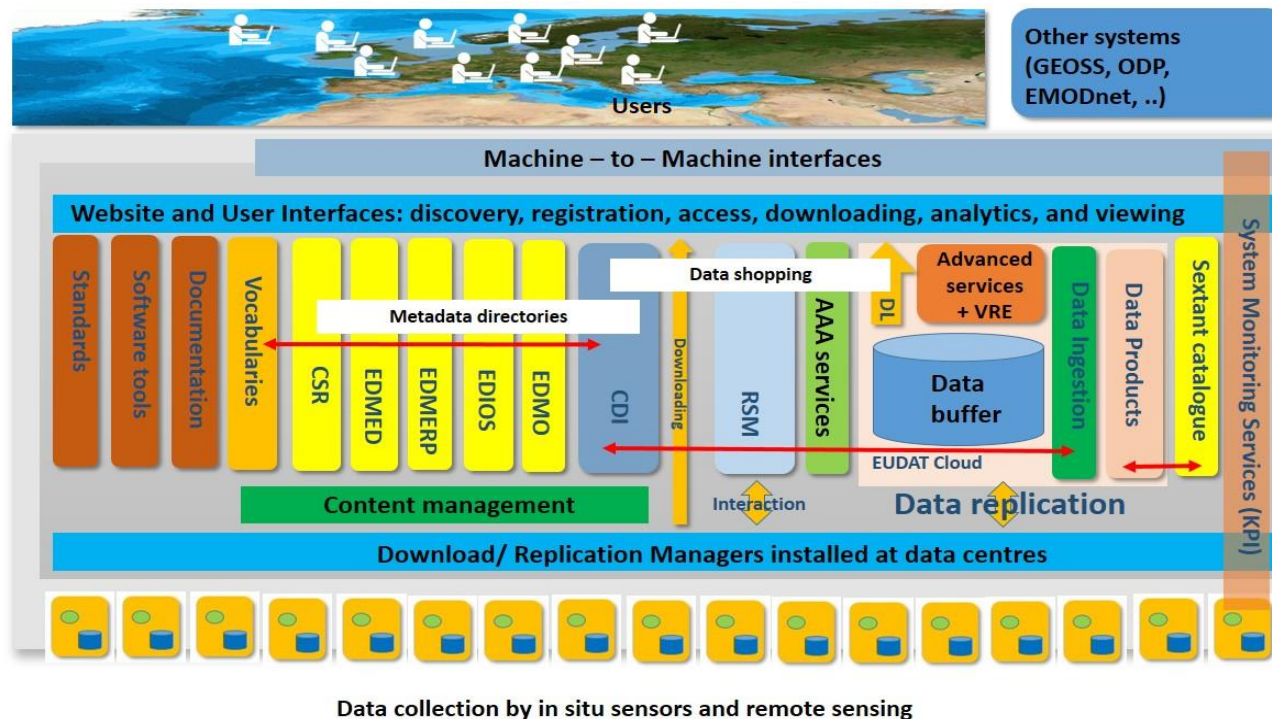
SeaDataNet/CDI Catalogue Service and FAIR principles

- Provides **highly detailed insight in geographical coverage and other metadata features** of data across different data centres.

- **Visualization, transparent access** to the discovered data via download services together with **software tools** for data/metadata process.

- Use of **common vocabularies**, adoption of ISO19115-19139 **metadata standards** in metadata directories ensures interoperability.

- Delivery of data using **common data transport formats**.