



SeaDataNet

Further developing the SeaDataNet
pan-European infrastructure for
marine and ocean data management

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SeaDataCloud 2nd User workshop, 17 September 2020

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What is SeaDataNet?



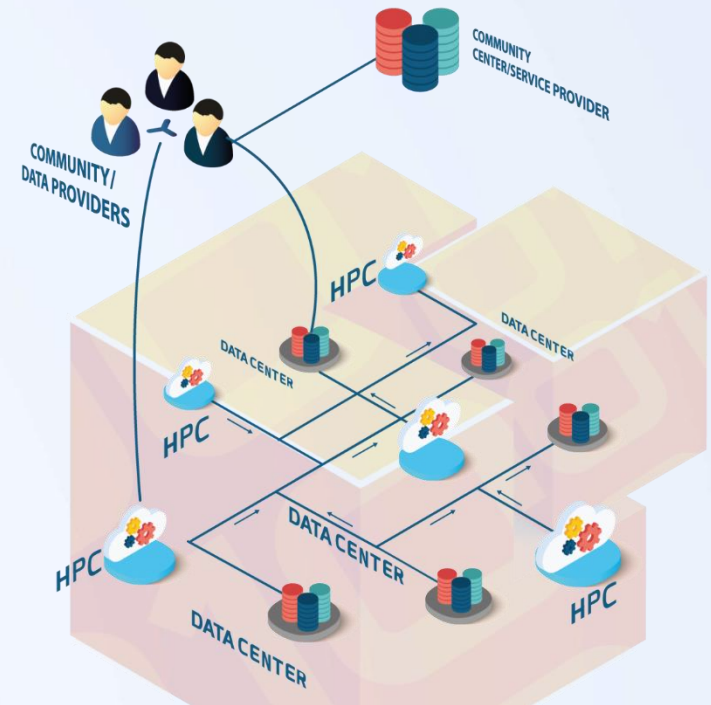
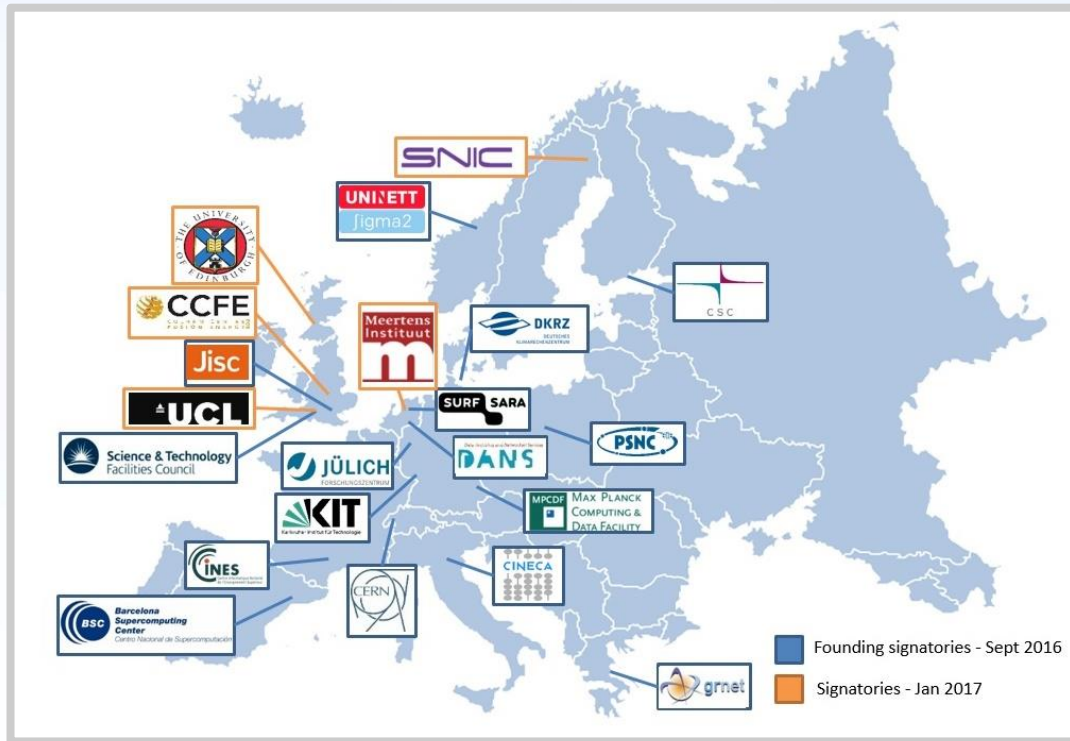
A pan-European infrastructure set up and operated for managing marine and ocean data in cooperation with the NODCs and data focal points of 34 countries bordering the European seas

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



A legal entity : SeaDataNet
AISBL for sustainability of the
Consortium (same structure
than EuroGoos)

SeaDataCloud - Cooperation with EUDAT



A consortium of 20 High Performance Computing (HPC) centres offering also storage resources

5 EUDAT members are partners of SeaDataCloud

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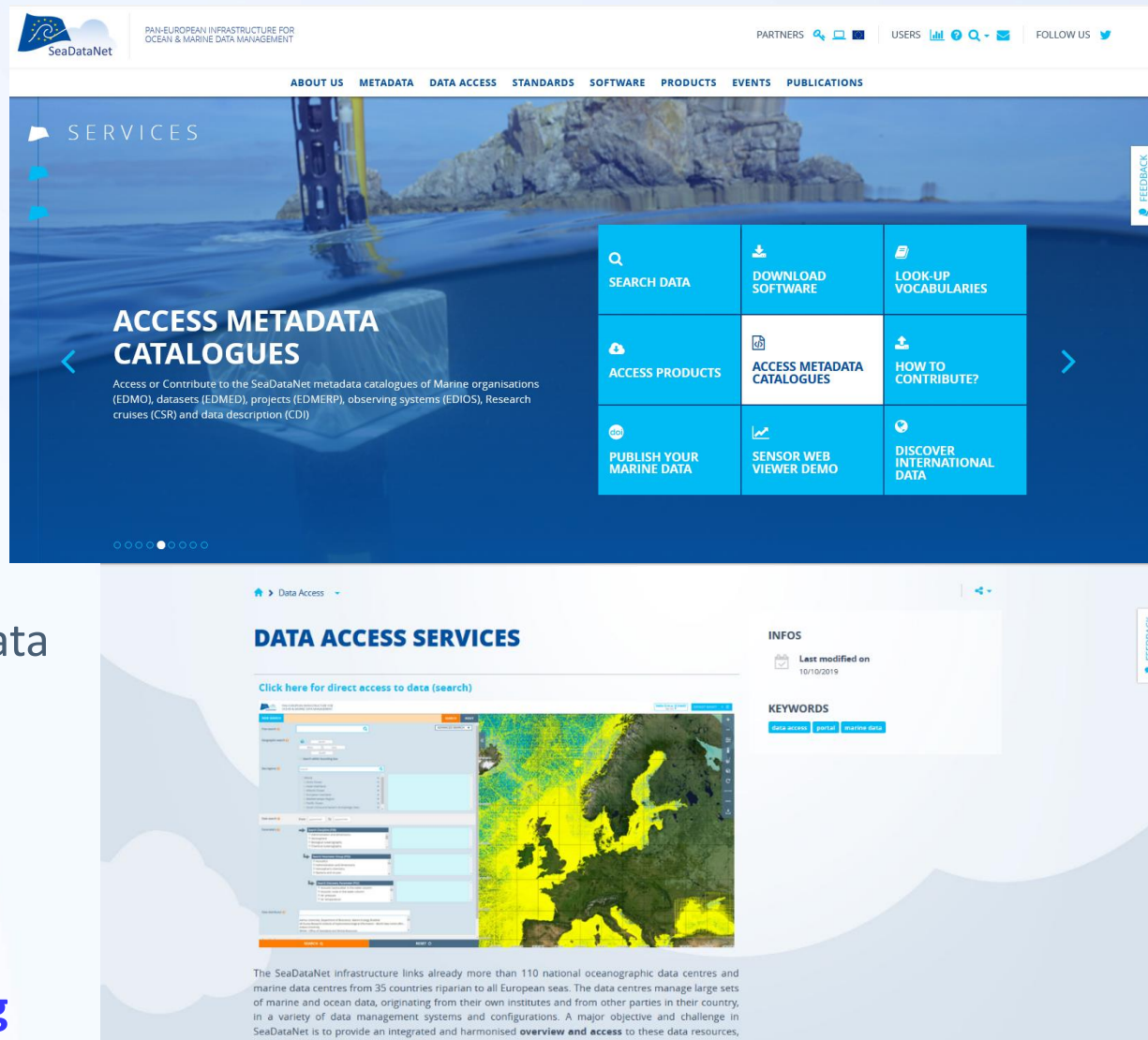
SeaDataNet portal

With access to services

- Standards & common vocabularies
- Software tools both for data centres and users
- Data and metadata catalogues
- Data products

<http://www.seadatanet.org>

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The screenshot displays the SeaDataNet portal interface. The top navigation bar includes links for PARTNERS, USERS, and FOLLOW US. The main header features the SeaDataNet logo and the tagline "PAN-EUROPEAN INFRASTRUCTURE FOR OCEAN & MARINE DATA MANAGEMENT". The primary navigation menu lists: ABOUT US, METADATA, DATA ACCESS, STANDARDS, SOFTWARE, PRODUCTS, EVENTS, and PUBLICATIONS.

The main content area is titled "SERVICES" and features a large banner for "ACCESS METADATA CATALOGUES" with the subtext: "Access or Contribute to the SeaDataNet metadata catalogues of Marine organisations (EDMO), datasets (EDMED), projects (EDMERP), observing systems (EDIOS), Research cruises (CSR) and data description (CDI)".

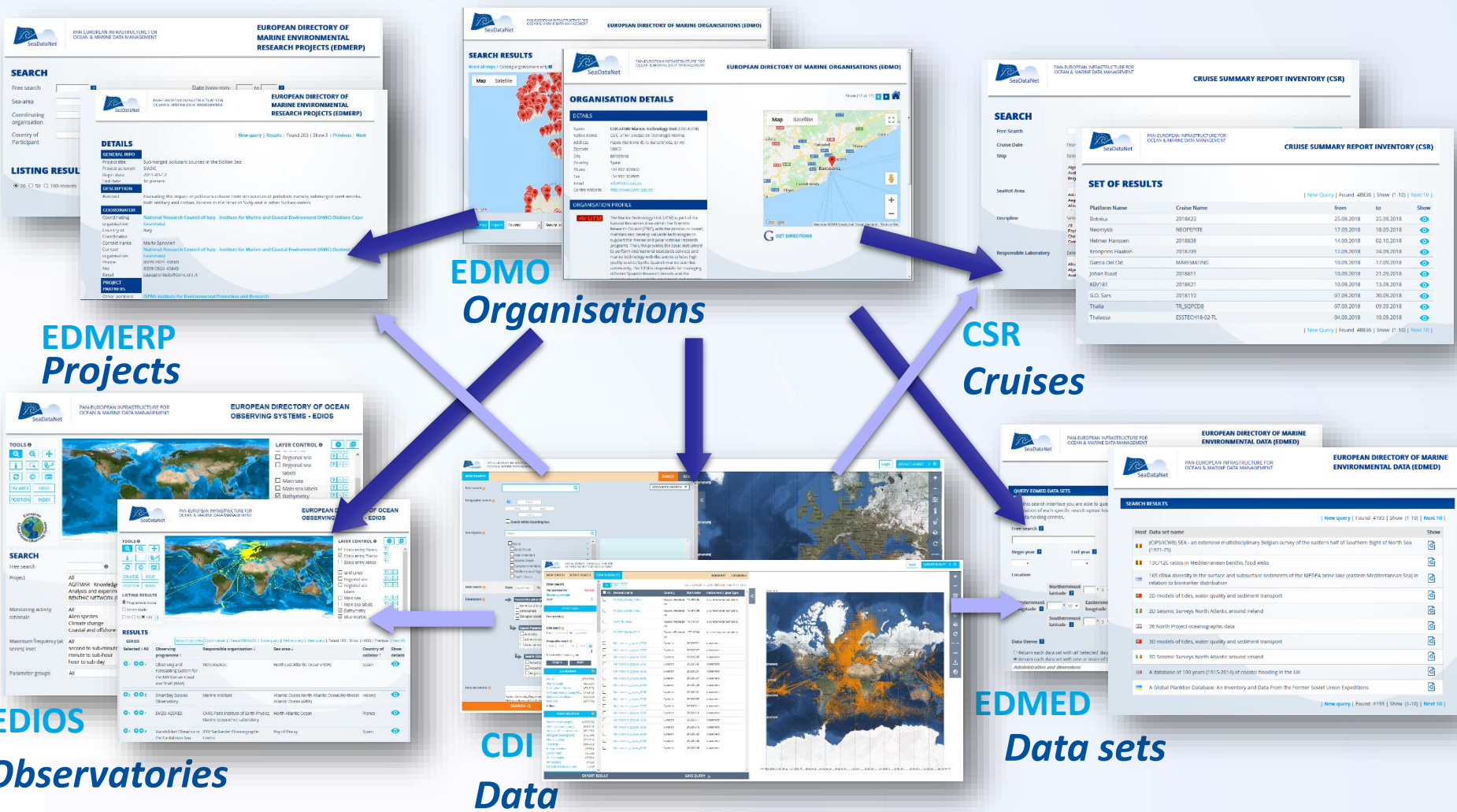
To the right of the banner is a grid of service tiles:

- SEARCH DATA
- DOWNLOAD SOFTWARE
- LOOK-UP VOCABULARIES
- ACCESS PRODUCTS
- ACCESS METADATA CATALOGUES (highlighted)
- HOW TO CONTRIBUTE?
- PUBLISH YOUR MARINE DATA
- SENSOR WEB VIEWER DEMO
- DISCOVER INTERNATIONAL DATA

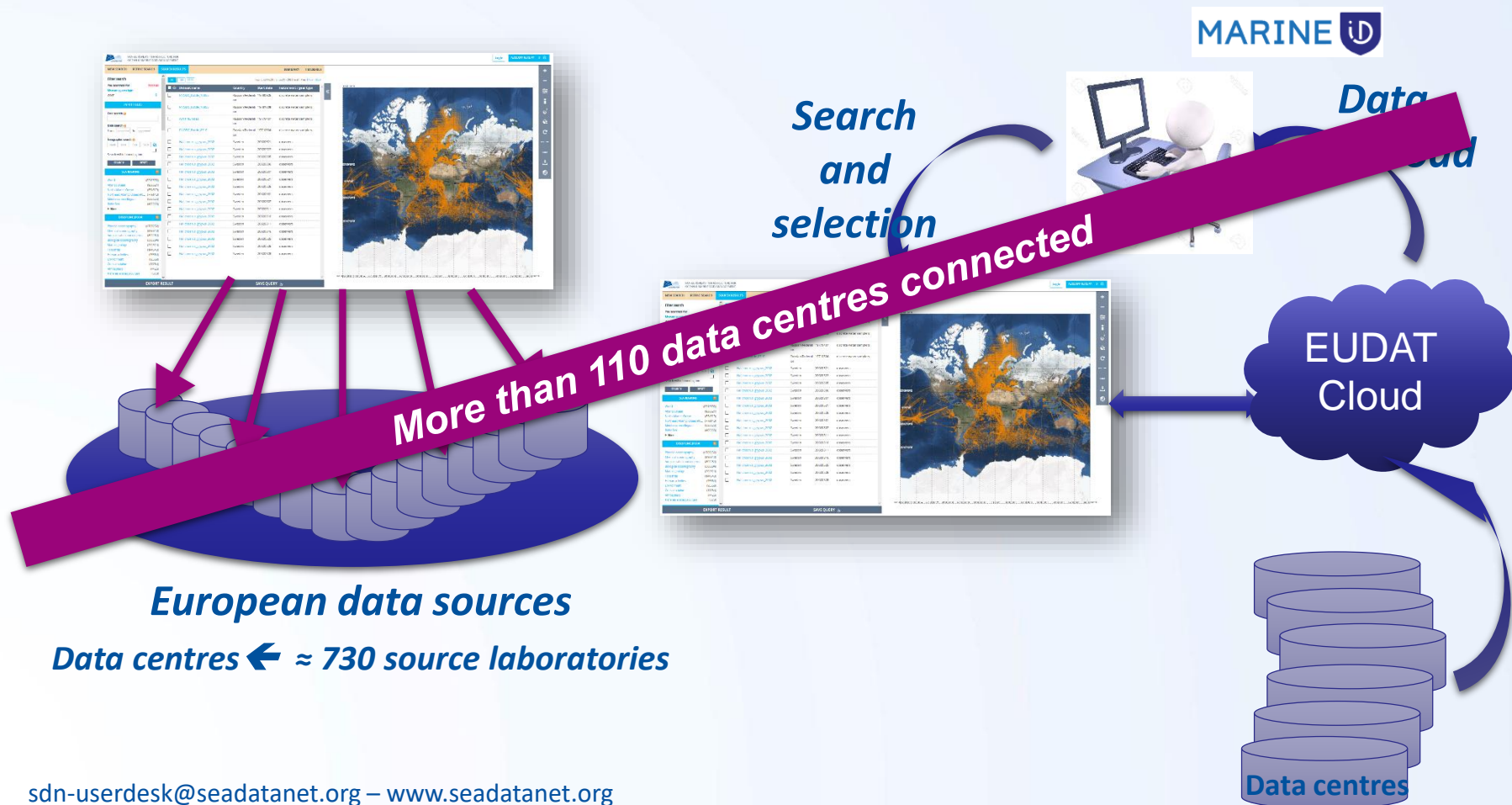
Below the main banner is a section titled "DATA ACCESS SERVICES" with a link "Click here for direct access to data (search)". This section includes a search interface with a map of Europe and a sidebar with filters. To the right of the search interface is an "INFOS" section showing "Last modified on 18/10/2019" and a "KEYWORDS" section with tags for "data access", "portal", and "marine data".

At the bottom of the page, a paragraph states: "The SeaDataNet infrastructure links already more than 110 national oceanographic data centres and marine data centres from 35 countries riparian to all European seas. The data centres manage large sets of marine and ocean data, originating from their own institutes and from other parties in their country, in a variety of data management systems and configurations. A major objective and challenge in SeaDataNet is to provide an integrated and harmonised overview and access to these data resources, which is distributed across the network."

SeaDataNet metadata directories



CDI catalogue: discovery and access to data



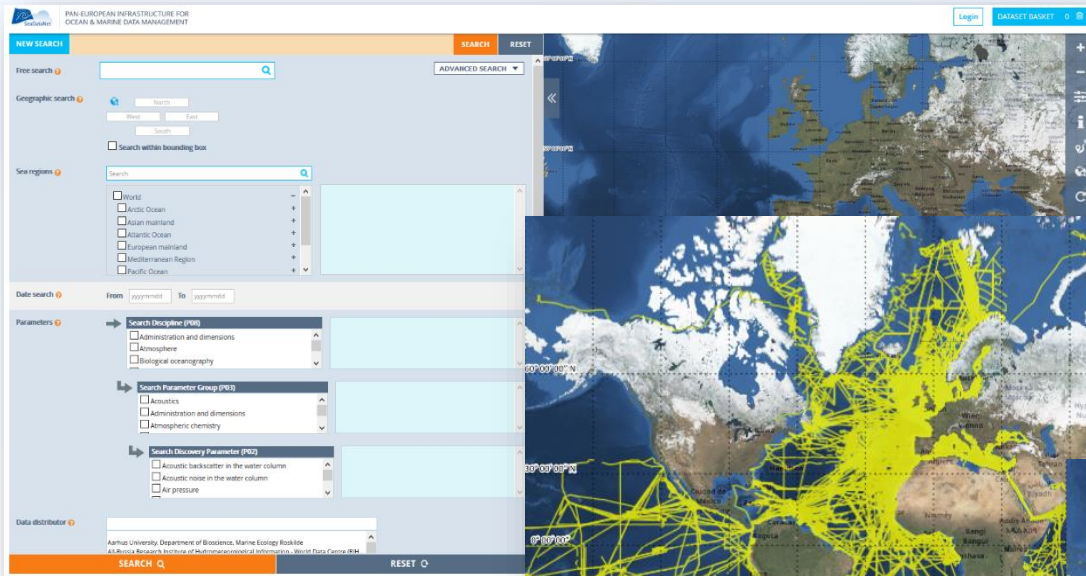
Service for discovery and
unified data access

cdi.seadatanet.org/search

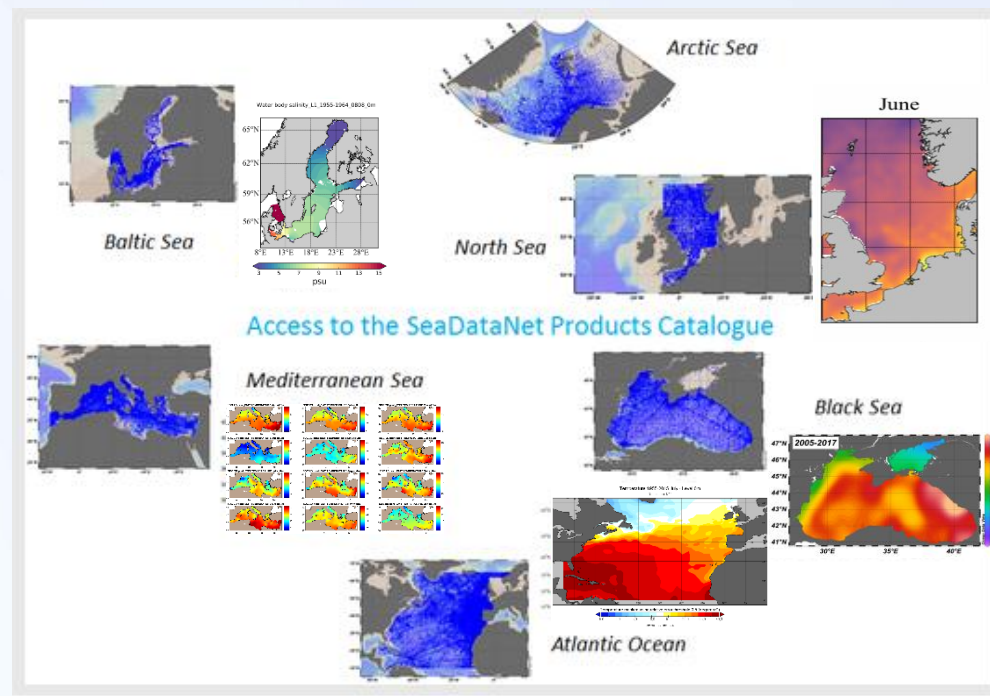
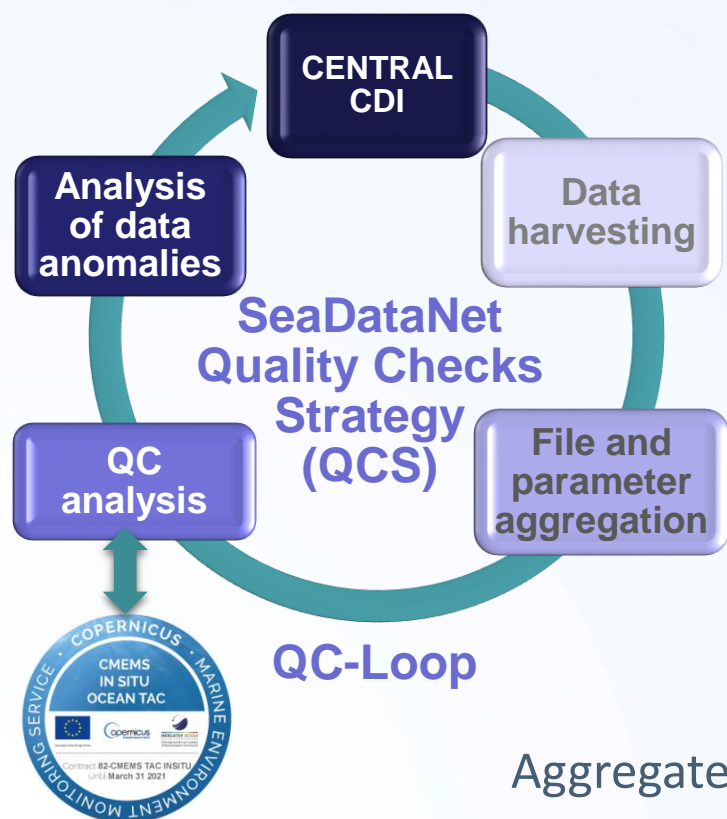
Trajectories

Vertical profiles or time series

- since 1800 → 2020
- 2.5 M of CDIs for physical, chemical, biological, bathymetry, geosciences data
- 89 % of unrestricted or SDN license data



SeaDataNet products



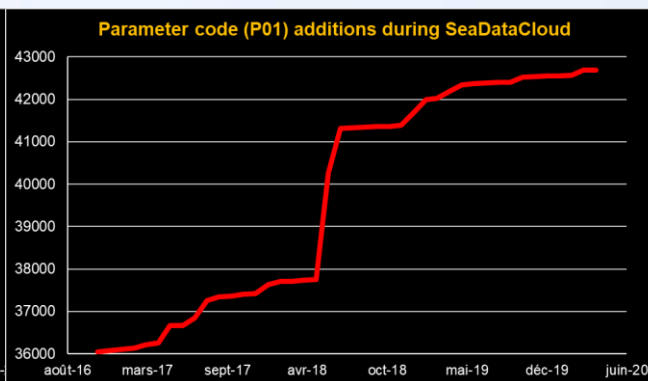
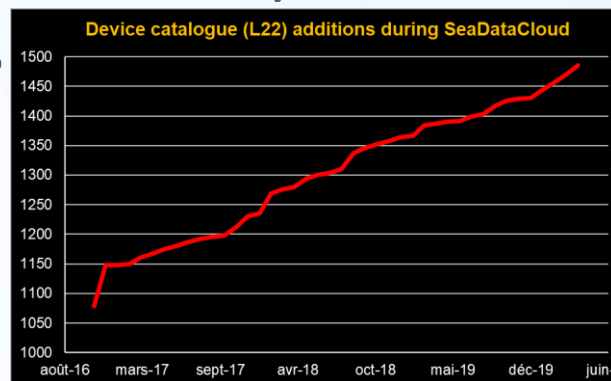
Aggregated datasets and climatologies
Improvement of the data quality

SeaDataNet standards

- Metadata formats for all catalogues
 - ISO19115 and ISO19139
- SeaDataNet data transport formats
 - ASCII (Ocean Data View, and MedAtlas)
 - NetCDF (CF compliant)



➔ Relying on controlled vocabularies governed by NOC-BODC (UK) and used in many other international or national initiatives



SeaDataNet software Tools (1)

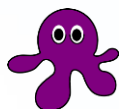
- Tools for the data centres – data managers
 - To be connected to the infrastructure and to be able to duplicate data in the cloud (Replication manager)
 - To follow the data downloading by users : MySeaDataCloud



To generate the metadata at the SDN standards : MIKADO



To generate the data files at the SeaDataNet standards :
NEMO



To check the compliance of the data files : OCTOPUS



To quality check the data: ODV

SeaDataNet software Tools (2)

- Tools for the users and data scientist

- All catalogue search interfaces



To visualise data, plot, analyse : ODV

DIVA To interpolate data : DIVA

- to publish your data using Sensor Web standards



To publish marine data (and get a DOI) : SEANOE

- To work on datasets in the cloud environment :

SDN Virtual Research Environment (VRE)

- prototype available and used by the regional product leaders of the SDC project