

The Blue-Cloud Data Discovery and Access Service

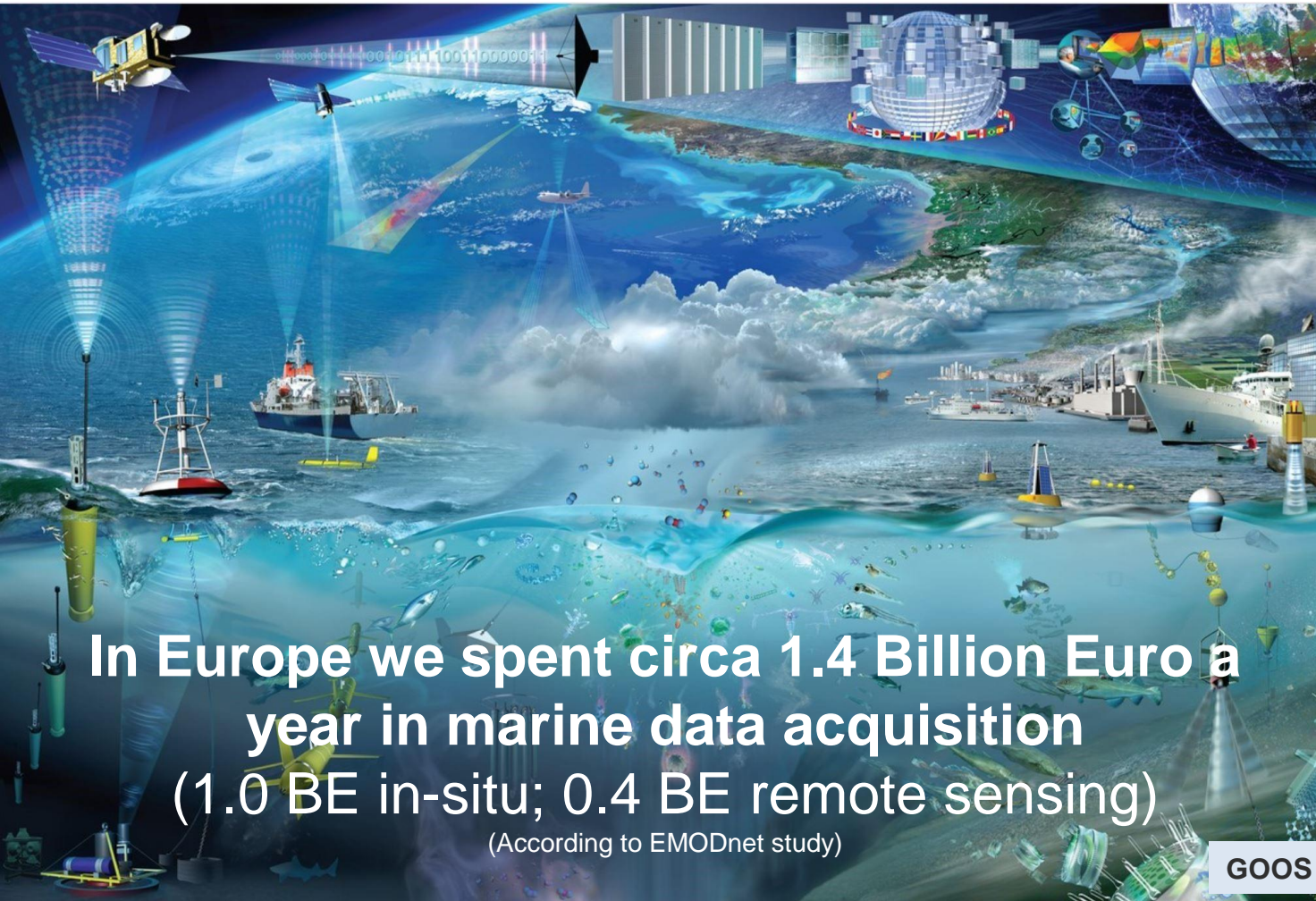
Peter Thijsse, on behalf of MARIS (Blue-Cloud Technical Coordinator) and B-C team

14 December 2021

“Blue-Cloud: An Open Science platform for collaborative marine research across the Atlantic and beyond”



Acquisition of marine and ocean data



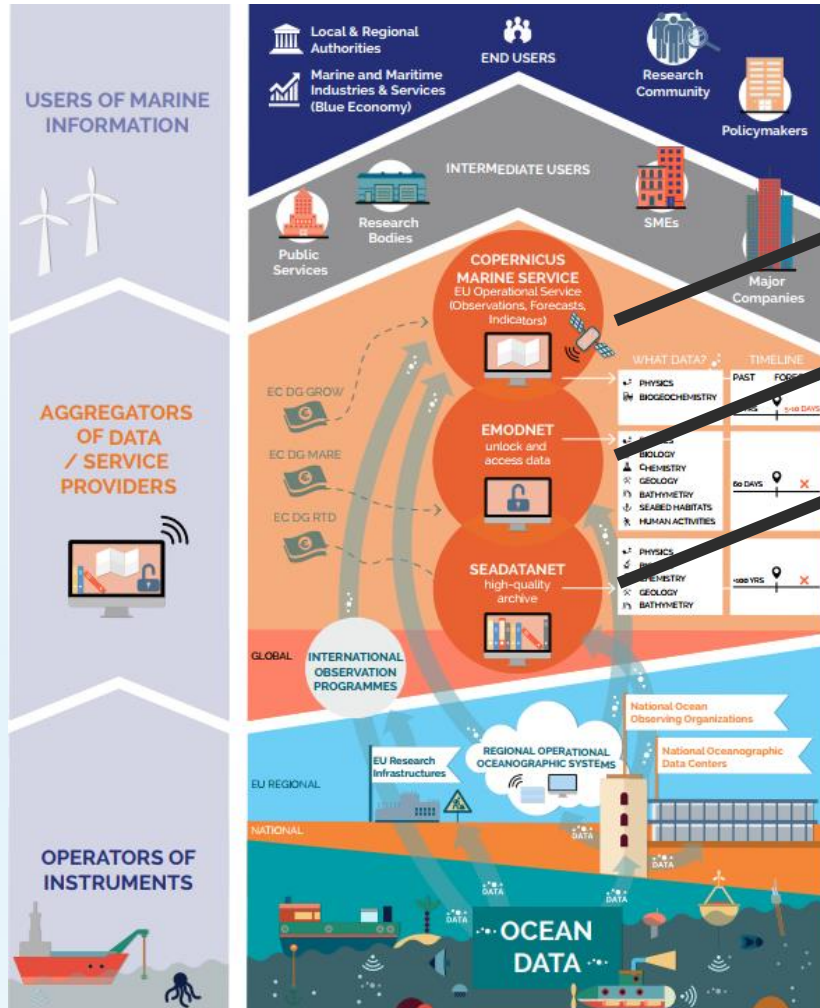
- Scientific Research to gain knowledge and insight
- Modelling (including hindcast, nowcast, forecast)
- Economic activities: shipping, offshore industry, dredging industry, fisheries, tourism, engineering ..
- Environmental Management: monitoring and assessment (water quality, climate status, stock assessment)
- Marine Conventions and Directives, in Europe: Water Framework Directive (WFD), Marine Strategy (MSFD), Marine Spatial Planning (MSP), Coastal Zone Management
- EU Strategies, such as Green Deal, Blue Environment, Blue Economy

Image source: GOOS



Blu loud

European landscape marine data management



Data aggregators and providers of data products and services

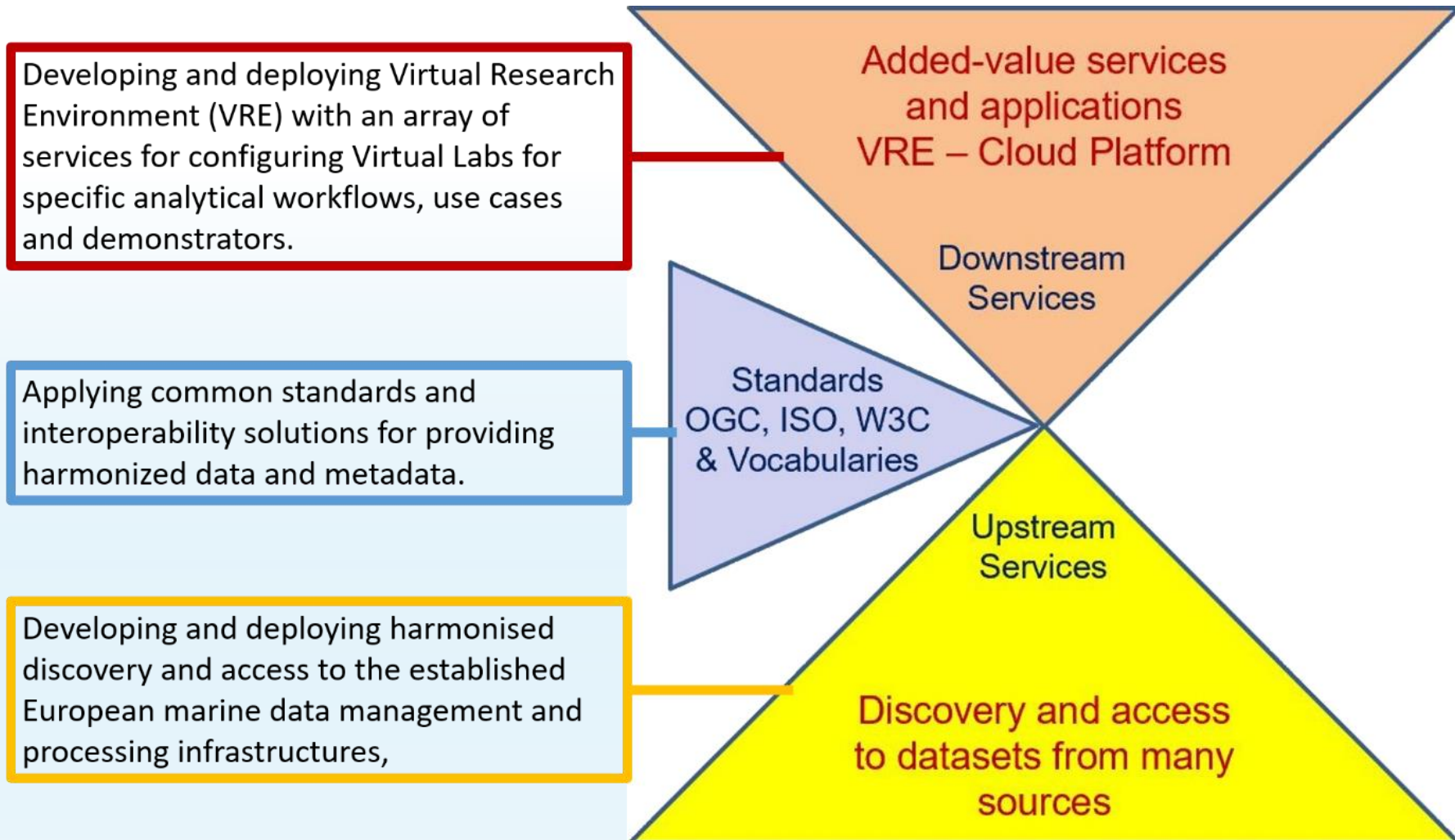
Demonstrating the potential of Open Science in the marine domain

EU H2020 Blue-Cloud project 'Future of Seas and Oceans Flagship Initiative'
October 2019 – September 2022; 20 partners

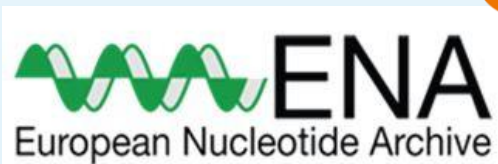
Marine thematic contribution to European Open Science Cloud (EOSC)

Blue-Cloud aims “to promote the sharing of *data, processes and research findings* in the marine domain by delivering a collaborative web-based environment that enables *open science*, underpinned by simplified access to an unprecedented wealth of marine data resources and interoperable added-value services and products” Blue-Cloud Mission 2022

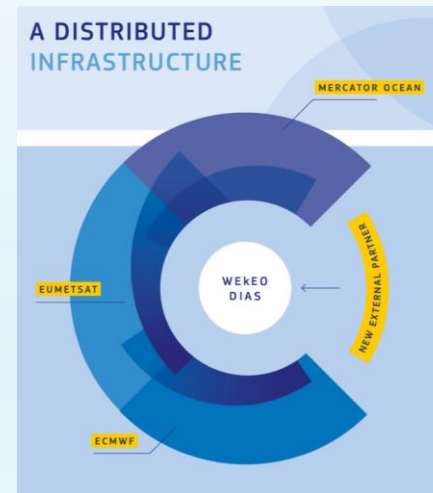
Blue-Cloud overarching concept



Blue-Cloud federation of major infrastructures



Blue Data infrastructures



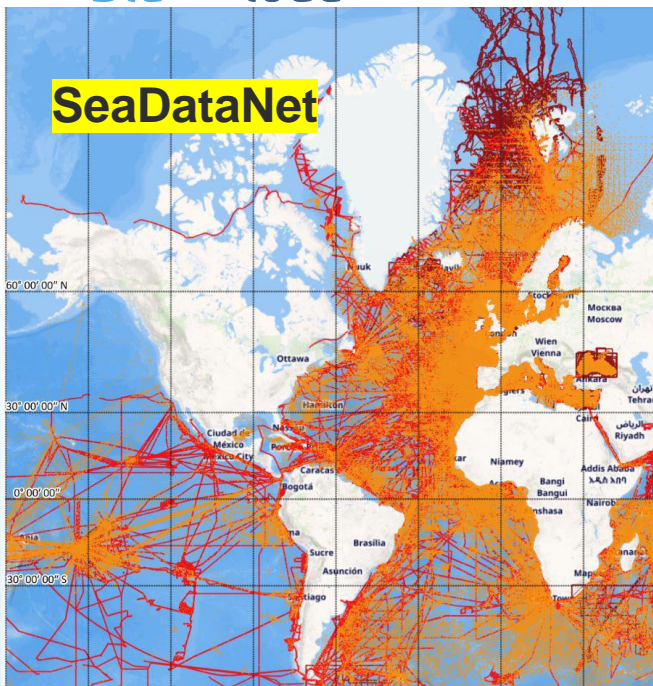
E-infrastructures



Blu loud

Illustrations of data coverage

SeaDataNet



HORIZONTAL SECTION VERTICAL SECTION

SELECT DATA PRODUCTS

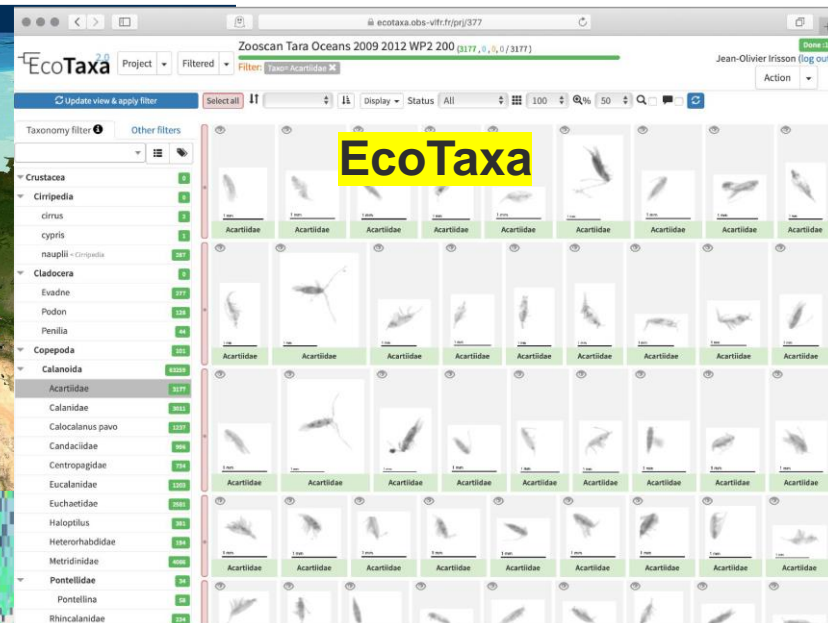
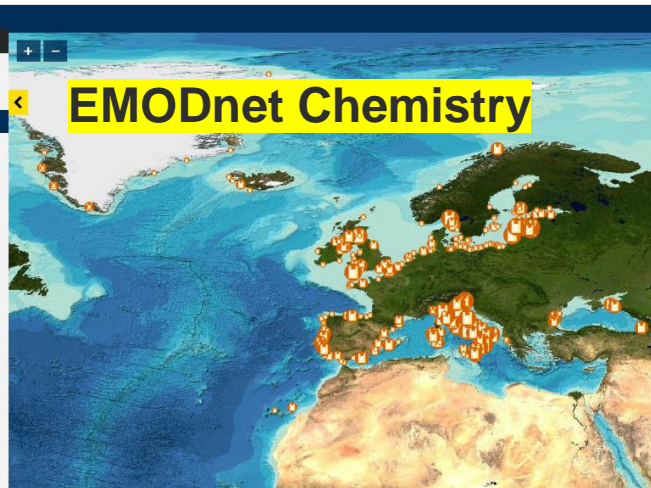
Search

+ Add external layers

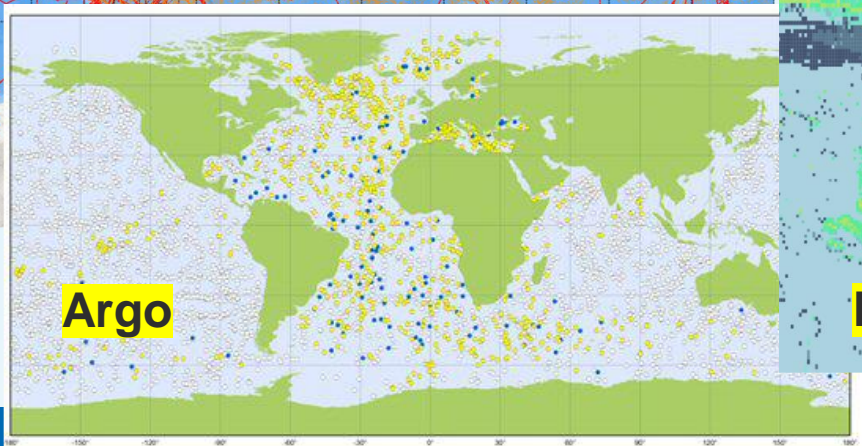
EMODNET CHEMISTRY - LITTER

- Beach litter [2001 - 2018]
 - Beaches locations and litter list used - Official monitoring
 - Number surveys & temporal coverage - Official monitoring
 - Beach Litter - Mean total number of litter items per 100m & to 1 survey - Official monitoring
 - Beach Litter - Composition of litter according to material categories in percent - Official monitoring
 - Beach Litter - Mean number of Cigarette related items per 100m & to 1 survey - without UNEP_MARLIN - Official monitoring
 - Beach Litter - Mean number of Fishing related items per 100m & to 1 survey - Official monitoring
 - Beach Litter - Mean number of Plastic bags related items per 100m & to 1 survey - Official monitoring
- Other sources
 - Beaches locations and litter list used - Other sources
 - Number of surveys & temporal coverage - Other sources
 - Beach Litter - Mean number of Total abundance items per 100m & to 1 survey - Other sources
 - Beach Litter - Material categories percentage per year - Other sources
 - Beach Litter - Mean number of Cigarette related items per 100m & to 1 survey - Other sources
 - Beach Litter - Mean number of Fishing related items per 100m & to 1 survey - Other sources
 - Beach Litter - Mean number of Plastic bags related items per 100m & to 1 survey - Other sources
- Seabed litter [2006 - 2018]

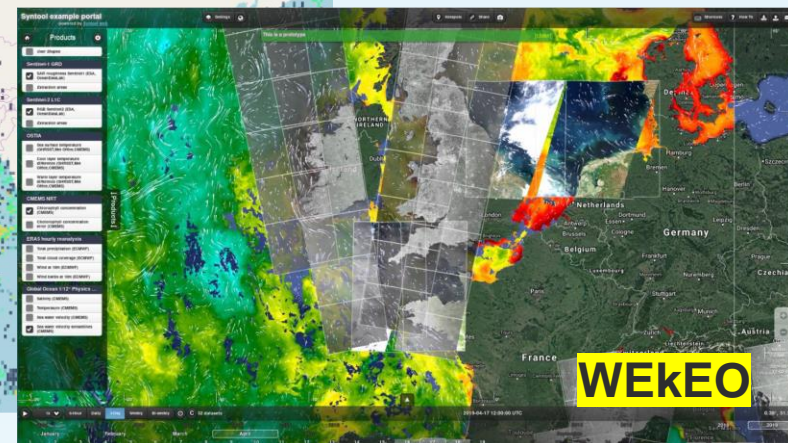
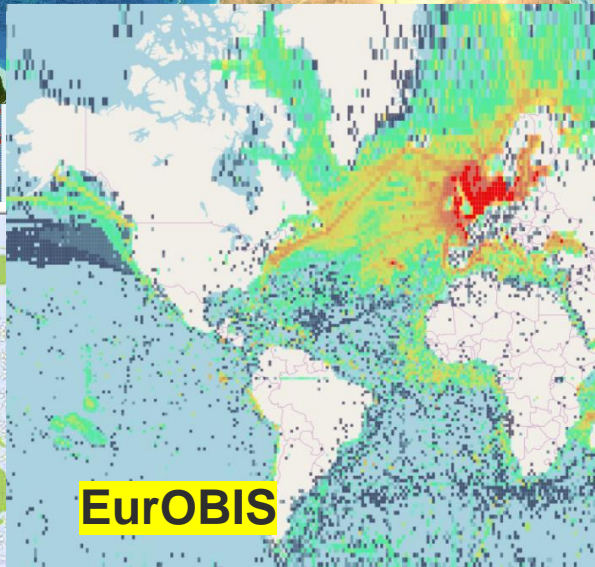
EMODnet Chemistry



Argo

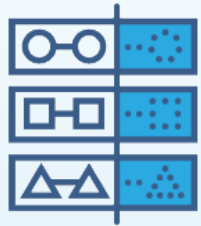


EurOBIS





BlueCloud



Fish a matter of scales



Aquaculture Monitor



Zoo & Phytoplankton EOY products



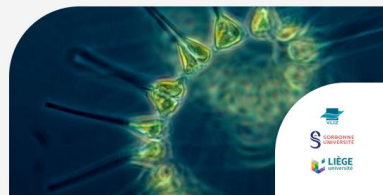
Plankton Genomics



Marine Environmental Indicators

Key products and services

- **Blue-Cloud Data Discovery & Access service**, federating key European data management infrastructures, to facilitate users in finding and retrieving multi-disciplinary datasets from multiple repositories
- **Blue-Cloud Virtual Research Environment infrastructure** to provide a range of services and to facilitate orchestration of computing and analytical services for constructing, hosting and operating Virtual Labs for specific applications
- **Blue-Cloud Virtual Labs**, configured with specific analytical workflows to serve as **Demonstrators**, which can be adopted and adapted for other inputs and analyses



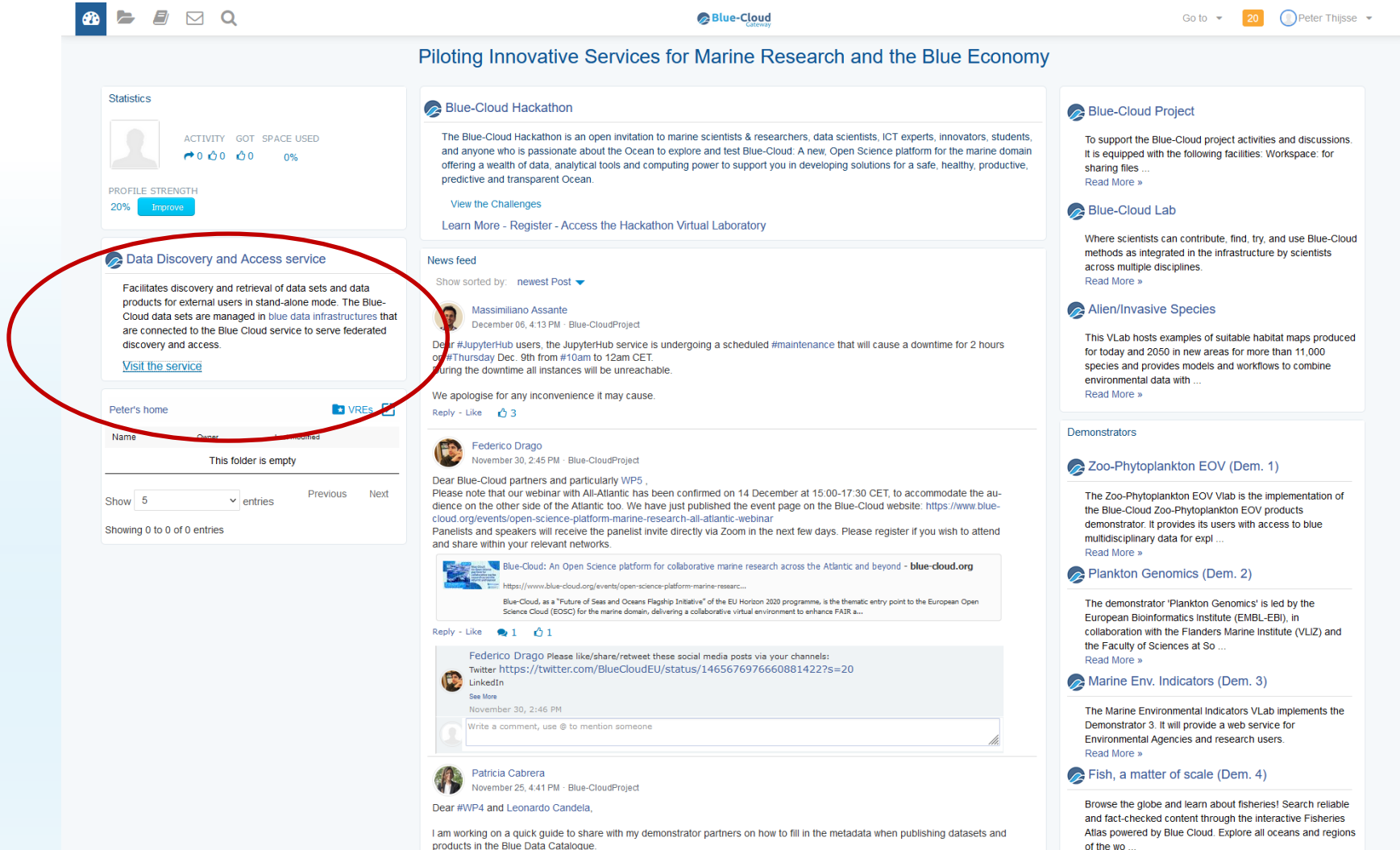


Data Discovery & Access service

LIVE DEMO

(The following are some backup slides)

Start from the VRE



Statistics

ACTIVITY GOT SPACE USED

0 0 0%

PROFILE STRENGTH 20% [Improve](#)

Data Discovery and Access service

Facilitates discovery and retrieval of data sets and data products for external users in stand-alone mode. The Blue-Cloud data sets are managed in blue data infrastructures that are connected to the Blue Cloud service to serve federated discovery and access.

[Visit the service](#)

Peter's home

Name Owner Modified

This folder is empty

Show 5 entries Previous Next

Showing 0 to 0 of 0 entries

Blue-Cloud Hackathon

The Blue-Cloud Hackathon is an open invitation to marine scientists & researchers, data scientists, ICT experts, innovators, students, and anyone who is passionate about the Ocean to explore and test Blue-Cloud: A new, Open Science platform for the marine domain offering a wealth of data, analytical tools and computing power to support you in developing solutions for a safe, healthy, productive, predictive and transparent Ocean.

[View the Challenges](#)

[Learn More - Register - Access the Hackathon Virtual Laboratory](#)

Blue-Cloud Project

To support the Blue-Cloud project activities and discussions. It is equipped with the following facilities: Workspace: for sharing files ...

[Read More](#)

Blue-Cloud Lab

Where scientists can contribute, find, try, and use Blue-Cloud methods as integrated in the infrastructure by scientists across multiple disciplines.

[Read More](#)

Alien/Invasive Species

This VLab hosts examples of suitable habitat maps produced for today and 2050 in new areas for more than 11,000 species and provides models and workflows to combine environmental data with ...

[Read More](#)

Demonstrators

Zoo-Phytoplankton EOVI (Dem. 1)

The Zoo-Phytoplankton EOVI Vlab is the implementation of the Blue-Cloud Zoo-Phytoplankton EOVI products demonstrator. It provides its users with access to blue multidisciplinary data for expl ...

[Read More](#)

Plankton Genomics (Dem. 2)

The demonstrator 'Plankton Genomics' is led by the European Bioinformatics Institute (EMBL-EBI), in collaboration with the Flanders Marine Institute (VLIZ) and the Faculty of Sciences at So ...

[Read More](#)

Marine Env. Indicators (Dem. 3)

The Marine Environmental Indicators VLab implements the Demonstrator 3. It will provide a web service for Environmental Agencies and research users.

[Read More](#)

Fish, a matter of scale (Dem. 4)

Browse the globe and learn about fisheries! Search reliable and fact-checked content through the interactive Fisheries Atlas powered by Blue Cloud. Explore all oceans and regions of the wo ...

News feed

Show sorted by: newest Post

Massimiliano Assante
December 06, 4:13 PM · Blue-CloudProject

Dear #JupyterHub users, the JupyterHub service is undergoing a scheduled #maintenance that will cause a downtime for 2 hours on #Thursday Dec. 9th from #10am to 12am CET. During the downtime all instances will be unreachable.

We apologise for any inconvenience it may cause.

Reply · Like · 3

Federico Drago
November 30, 2:45 PM · Blue-CloudProject

Dear Blue-Cloud partners and particularly WP5, Please note that our webinar with All-Atlantic has been confirmed on 14 December at 15:00-17:30 CET, to accommodate the audience on the other side of the Atlantic too. We have just published the event page on the Blue-Cloud website: <https://www.blue-cloud.org/events/open-science-platform-marine-research-all-atlantic-webinar>

Panelists and speakers will receive the panelist invite directly via Zoom in the next few days. Please register if you wish to attend and share within your relevant networks.

Blue-Cloud: An Open Science platform for collaborative marine research across the Atlantic and beyond - blue-cloud.org

<https://www.blue-cloud.org/events/open-science-platform-marine-research-all-atlantic-webinar>

Blue-Cloud, as a "Future of Seas and Oceans Flagship Initiative" of the EU Horizon 2020 programme, is the thematic entry point to the European Open Science Cloud (EOSC) for the marine domain, delivering a collaborative virtual environment to enhance FAIR & ...

Reply · Like · 1 · 1

Federico Drago Please like/share/retweet these social media posts via your channels:
Twitter <https://twitter.com/BlueCloudEU/status/1465676976660881422?s=20>

See More

November 30, 2:46 PM


Write a comment, use @ to mention someone

Patricia Cabrera
November 25, 4:41 PM · Blue-CloudProject

Dear #WP4 and Leonardo Candela,


I am working on a quick guide to share with my demonstrator partners on how to fill in the metadata when publishing datasets and products in the Blue Data Catalogue.

Data Discovery & Access service


Blue-Cloud
Pioneering innovative services for Marine Research & the Blue Economy

DATA DISCOVERY & ACCESS SERVICE

[FEEDBACK](#)
[LOGIN](#)

DATASET BASKET 0
 

Filter search





Free search

Date search

From

To

Geographic search

Blue Data infrastructures	Level 2 Search	Level 1 Results (25109)	Level 1 Total	Last update
 Ecotaxa	Level 2 Search	10	10	2021-10-31
 ELIXIR-ENA	Level 2 Search	32	32	2021-10-31
 EMODnet Chemistry	Level 2 Search	202	202	2021-10-31
 EuroArgo – Argo	Level 2 Search	16462	16462	2021-10-31
 EurOBIS – EMODnet Biology	Level 2 Search	893	893	2021-10-31
 ICOS data portal	Level 2 Search	149	149	2021-10-31
 SeaDataNet	Level 2 Search	841	841	2021-10-31
 SeaDataNet-products	Level 2 Search	49	49	2021-10-31
 Socat	Level 2 Search	6471	6471	2021-10-31

HOME
Level 1



Blue-Cloud

Data Discovery & Access service



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DATA DISCOVERY & ACCESS SERVICE

FEEDBACK

LOGIN

DATASET BASKET 0



Filter search

You searched for:

16.97274, -68.55469, 17.22656,
-16.29905

6902690

Reset all

Free search

Date search

From

yyyymmdd

To

yyyymmdd

SEARCH

RESET

Variables

SUBSURFACE PRESSURE

182

SUBSURFACE SALINITY

182

SUBSURFACE TEMPERATURE

182

Projects

CORIOLIS

182

Euro-Argo

182

PIRATA

182

Results found: 182 in 0.10 Seconds

(1 - 100)

100

182

VIEW MAP


Platform	Platform Code	Transmission System	Cycle	Cycle Start Date
<input type="radio"/> ARVOR-N Profiling Float	6902690	ARGOS	131	2018-11-03T20:21:00.000Z
<input type="radio"/> ARVOR-N Profiling Float	6902690	ARGOS	130	2018-10-24T20:27:00.000Z
<input type="radio"/> ARVOR-N Profiling Float	6902690	ARGOS	105	2018-02-16T20:11:00.000Z
<input type="radio"/> ARVOR-N Profiling Float	6902690	ARGOS	177	2020-02-06T20:49:00.000Z
<input type="radio"/> ARVOR-N Profiling Float	6902690	ARGOS	1	2016-03-28T17:15:00.000Z
<input type="radio"/> ARVOR-N Profiling Float	6902690	ARGOS	51	2016-08-25T19:51:00.000Z
<input type="radio"/> ARVOR-N Profiling Float	6902690	ARGOS	38	2016-06-12T20:01:00.000Z
<input type="radio"/> ARVOR-N Profiling Float	6902690	ARGOS	27	2016-05-21T20:02:00.000Z
<input type="radio"/> ARVOR-N Profiling Float	6902690	ARGOS	152	2019-06-01T20:39:00.000Z
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<input type="radio"/> ARVOR-N Profiling Float	6902690	ARGOS	133	2018-11-23T20:22:00.000Z
<input type="radio"/> ARVOR-N Profiling Float	6902690	ARGOS	123	2018-08-15T20:15:00.000Z


ARGO
Level 2



Blue-Cloud

Data Discovery & Access service

**Blue-Cloud**
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**Euro-Argo**

Filter search

You searched for:
16.97274, -68.55469, 17.22656, -16.29905
6902690

Free search

Date search
From
To

SEARCH

RESET

Variables

SUBSURFACE PRESSURE	182
SUBSURFACE SALINITY	182
SUBSURFACE TEMPERATURE	182

Projects

CORIOLIS	182
Euro-Argo	182
PIRATA	182


DATA DISCOVERY & ACCESS SERVICE

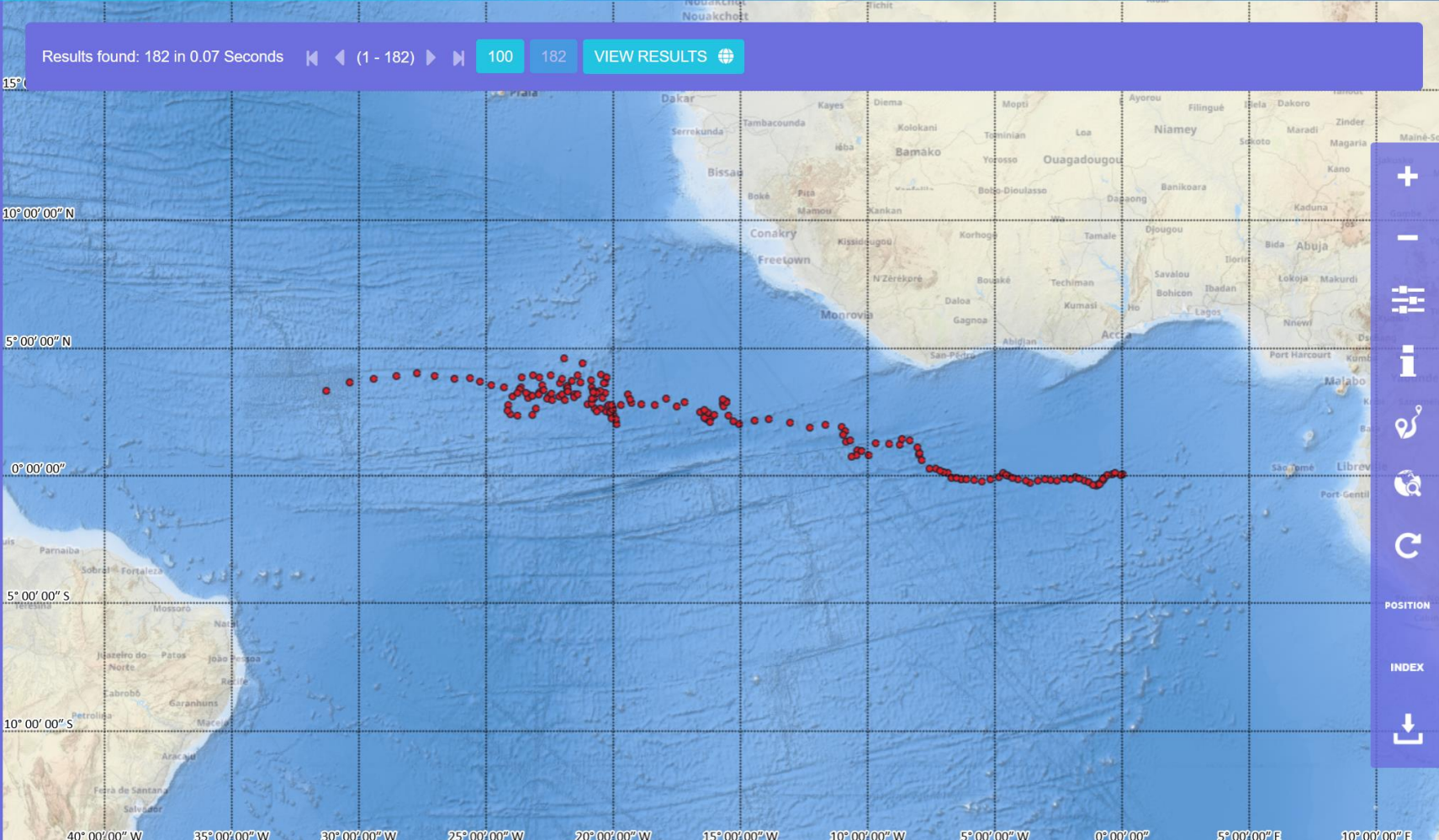
Results found: 182 in 0.07 Seconds

◀ ◁ (1 - 182) ▷ ▶

100 182


VIEW RESULTS








+


-












POSITION

INDEX




ARGO
Level 2

13



Blue-Cloud

Data Discovery & Access service


**Blue-Cloud**
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DATA DISCOVERY & ACCESS SERVICE

FEEDBACK

LOGIN

DATASET BASKET 0


SeaDataNet

Filter search

You searched for:

Ireland

bathymetry

Geological Survey Ireland

Free search

Date search

From

To

Geographic search

North

West

East

South

SEARCH

RESET

Discovery Parameter (P02)

Date and time

Bathymetry and Elevation

Parameter Group (P03)

Results found: 334 in 0.12 Seconds

100

334

VIEW MAP


Dataname	Country originator	Start date	End date	Instrument
<input type="radio"/> Celtic Explorer Bathymetry CE0701 Kerry...	Ireland	20070417	20070515	multi-beam echosounders Differential Global Positioning System receivers
<input type="radio"/> Celtic Explorer Bathymetry CE0702 Kerry...	Ireland	20070516	20070603	multi-beam echosounders Differential Global Positioning System receivers
<input type="radio"/> Celtic Voyager Bathymetry CV0901 Shan...	Ireland	20090318	20090331	multi-beam echosounders Differential Global Positioning System receivers
<input type="radio"/> Celtic Voyager Bathymetry CV0902 Dingl...	Ireland	20090515	20090610	multi-beam echosounders Differential Global Positioning System receivers
<input type="radio"/> Celtic Voyager Bathymetry CV0902 Kerry...	Ireland	20090515	20090611	multi-beam echosounders Differential Global Positioning System receivers
<input type="radio"/> Celtic Voyager Bathymetry CV0902 Trale...	Ireland	20090515	20090611	multi-beam echosounders Differential Global Positioning System receivers
<input type="radio"/> Celtic Voyager Bathymetry CV0903 Wexf...	Ireland	20090729	20090818	multi-beam echosounders Differential Global Positioning System receivers

SDN-CDI
Level 2





Blue-Cloud


Data Discovery & Access service


**Blue-Cloud**
Pioneering innovative services for Marine Research & the Blue Economy

DATA DISCOVERY & ACCESS SERVICE

FEEDBACK 


LOGIN 


DATASET BASKET 0 


**SeaDataNet**

Filter search

You searched for: [Reset all](#)

Ireland 

bathymetry 

Geological Survey Ireland 


Free search

Date search

From

To






Geographic search

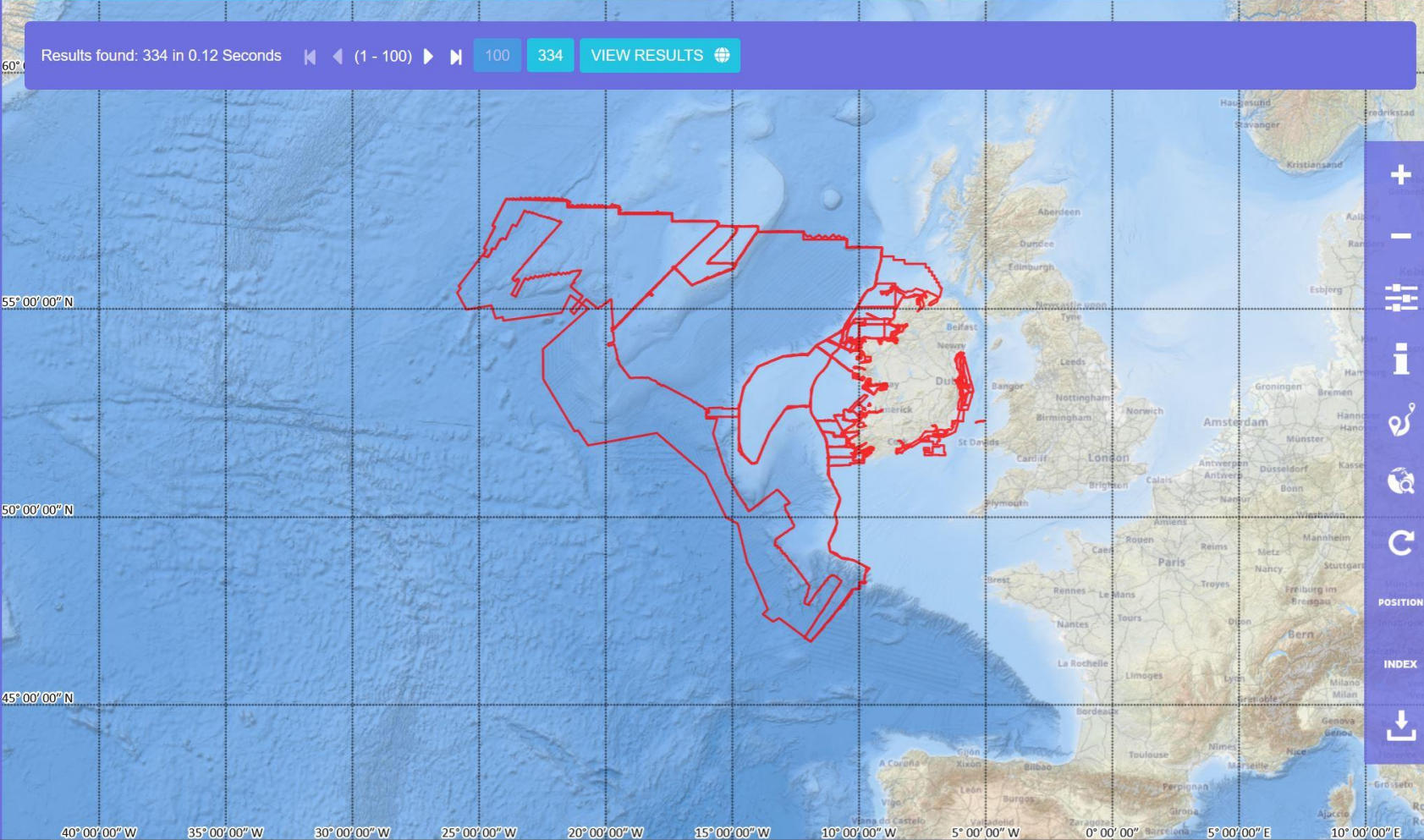



Discovery Parameter (P02)

Date and time	334
Bathymetry and Elevation	334

Parameter Group (P03)

Results found: 334 in 0.12 Seconds   (1 - 100)   100 334 [VIEW RESULTS](#) 





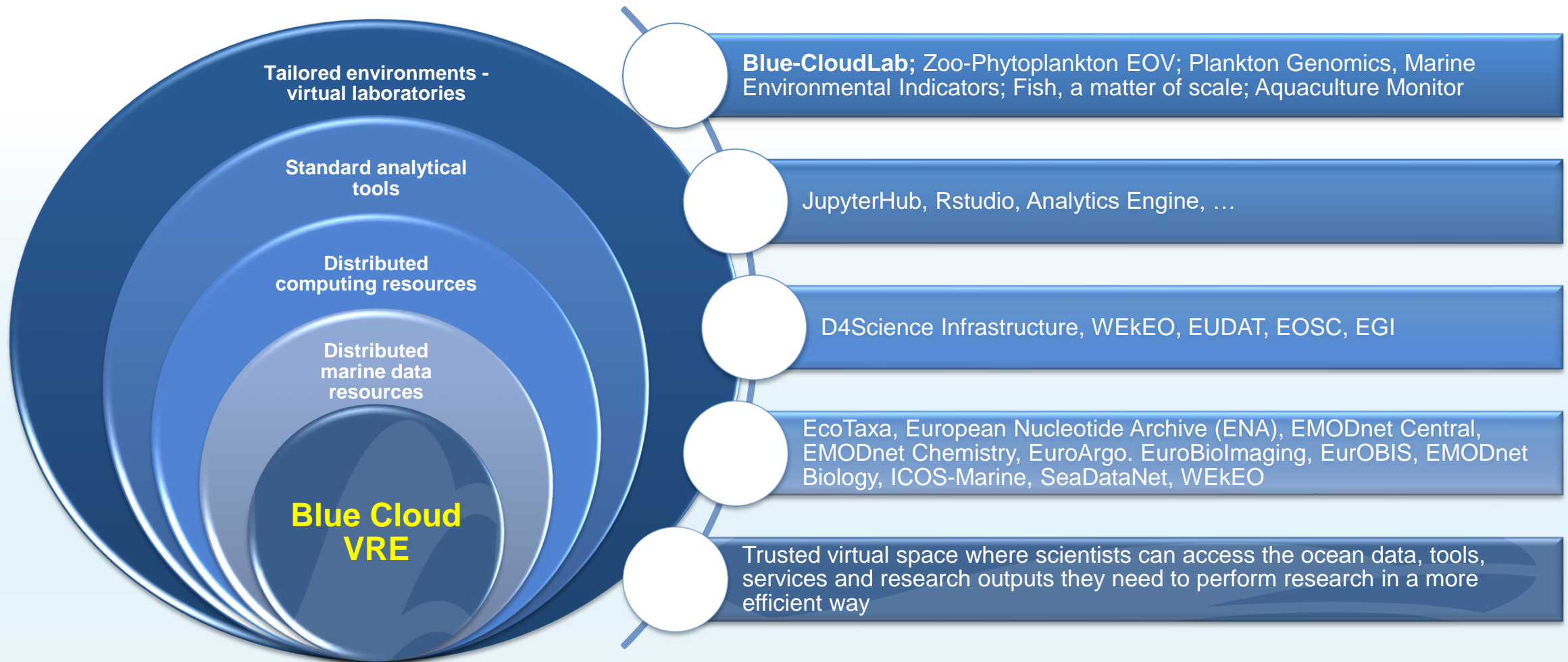
**SDN-CDI
Level 2**



Data Discovery & Access service

END DEMO

Blue-Cloud VRE



Blue-Cloud VRE



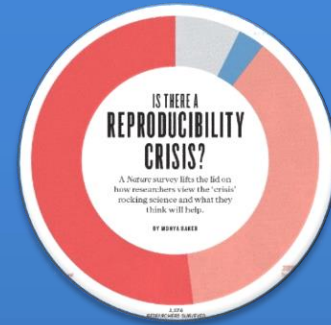
Collaboration



Sharing



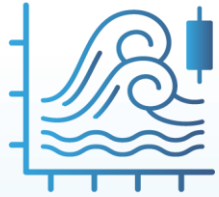
Reuse



Reproducibility

Blue Cloud VRE promotes Open Science

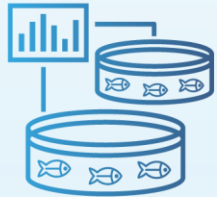
5 Virtual Labs at the VRE



Marine Environmental Indicators



Zoo & Phytoplankton EOVS products



Aquaculture Monitor



Plankton Genomics



Fish a matter of scales

ANY QUESTIONS?

THANK YOU