March Blue-Cloud 2026



Blue-Cloud 2026: thematic node for marine research and an incubator for the EU DTO

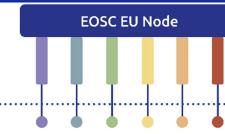
EOSC Symposium 2024, 23 October 2024

Sara Pittonet Gaiarin Senior Manager, Trust-IT Services Blue-Cloud 2026 project coordinator



Blue-Cloud federation: towards an EOSC thematic node for marine research

Blue-Cloud EOSC Marine Node



Research method Scientific applications





Data Discovery & Access Service (DD&AS)

An easy and FAIR service for discovering and retrieving multi-disciplinary data sets and data products managed and provided by leading Blue Data Infrastructures. The federation facilitates sharing of datasets as input for analytical and visualisation services and applications, that are hosted and further developed in the Blue-Cloud Virtual Research Environment (VRE).

Federated capabilities:

Data Lake Service and Data Brokerage Service

Data series Data products

VRE Blue-Cloud Core Services EOSC Core Services

∽eosc Blue-Cloud2026



Data Workbenches

Data intensive processes that facilitate the generation of validated and harmonised data collections for selected Essential Ocean Variables for physics, chemistry and ecosystems.



























VRE for Collaborative Research

Data preparation, Data analysis and Publication.























Resource Catalogue

Other EU Nodes

- AAl & Identity Mgmt
- Application Workflow Mgmt
- Monitoring & Accounting Order Management
- Mgmt System & Helpdesk



Virtual Laboratories

Collaboration

Researchers work closely together with the Blue-Cloud 2026 technical team to describe Virtual Lab workflows and technical requirements, in order to implement them in the Blue-Cloud VRE and further test its capabilities on specific topics.

Federated capabilities

- · Aquaculture Monitor
- · Coastal Observation Services
- Current Maps
- · Essential Ocean Variables products
- · Fishery Atlas
- · Marine Environmental Indicators

Other EU Nodes

Other EU Nodes



Stimulating Ocean Best Practices

- The Blue-Cloud project's ambitions and achievements are built on strong foundation of Ocean Best Practices
- Not least in the field of syntactic and semantic harmonisation
- >50 years ago, work on harmonisation started within the IODE's network of National Oceanographic Data Centres
- In Europe, it inspired the formation of a strong network of marine organisations bordering European seas, agreeing to follow common standards and best practices to make their data assets more accessible and exchangeable
- Using this legacy and semantic mappings, we are demonstrating that it is possible to harmonise across multiple infrastructures
- Future best practices will require more systematic use of FAIR vocabularies and URIs to enable faster and more automated workflows

Slide courtesy:

Gwenaëlle Moncoiffé and Alexandra Kokkinaki, NOC-BODC

As Blue-Cloud we work together with multiple Research Infrastructures in the marine and ocean landscape with the aim to innovate and strengthen the FAIRness of their data, metadata and machine services.

- encouraging uptake of controlled vocabularies and providing vocabulary mappings for semantic interoperability
- enriching metadata and data with a set of common metadata tags for syntactic interoperability
- streamlining and documenting web services for composability of service chains

We offer a flexible, dynamic, and powerful Virtual Research Environment for open science for a large community of researchers



Blue-Cloud

Federation Workshop

In this workshop, we aim at assessing Blue-Cloud federated services towards the needs and challenges of other research infrastructures active in marine and climate research, ultimately stimulating a debate around the impact of open science federation in practice.

6 November 2024 | Lisbon, Portugal

With: Euro-Argo ERIC, eLTER-RI, ICOS ERIC, EMSO ERIC, EUROBIS, CLIMAREST

