

FAIR Data Principles 1: Foundational components, best practices and standards

Welcome & overview

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Coordinator



A federated European FAIR and Open Research Ecosystem for oceans, seas, coastal and inland waters

A collaborative web-based environment with open and seamless access to services for storage, management, analysis and re-use of research data, providing simplified access to an unprecedented wealth of multi-disciplinary datasets from observations, analytical services, and computing facilities essential for blue science.

Your [Open Science platform](#) for collaborative marine research

[Blue-cloud.org](https://blue-cloud.org)

Funding: HORIZON-INFRA-2022-EOSC-01 | RIA - Research and Innovation action

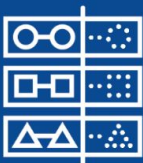


Funded by
the European Union



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.



Virtual Research Environment (VRE)

An Open Science platform for collaborative marine research, using a wide variety of datasets and analytical tools, complemented by generic services such as sub-setting, pre-processing, harmonising, publishing and visualisation.

The VRE hosts different Virtual Labs and is going to include thematic Workbenches, which users can access with existing credentials in EOSC, the European Open Science Cloud. Multi-disciplinary datasets retrieved from the Blue-Cloud DD&AS can be exploited in the VRE. All methods and services in the Catalogue are exchanged with the EOSC Portal Catalogue & Marketplace.



Physics: temperature & salinity

This Workbench will implement a cloud-based workflow to generate harmonised, validated and customisable EOV data collections for temperature and salinity, integrating datasets released from different EU and non-EU data infrastructures for the test region of the Mediterranean Sea. The optimised workflow will allow users and big data infrastructures to rapidly/systematically derive and upgrade integrated data collections and generate different datasets as e.g. gridded climatologies.



Eutrophication: chlorophyll, nutrients, oxygen

This Workbench will define and implement an efficient production workflow to merge, aggregate and harmonise multi-source datasets managed by Copernicus Marine Service, EMODnet Chemistry and the World Ocean Database, together with key EU RIs and build highly qualified EOV datasets for eutrophication variables: chlorophyll, nutrients, oxygen. Tested for the North East Atlantic, the aim is to further extend it to the global ocean during the last year of the project.



Ecosystem-level EOVs

This Workbench will improve the availability, quality and interoperability of large collections of plankton observations based on traditional counts, quantitative imaging and genomic methods available from the EMODnet/EurOBIS and ELIXIR data infrastructures. It will develop a generic modelling workflow to generate high-quality interpolated maps of the global distribution of these plankton entities. It will generate ecosystem-level EOVs following clear QA/QC steps and according to best practices in habitat modelling.



Carbon-Plankton Dynamics

This model will use carbon units to study nutrient availability, productivity, organic matter, and interactions in marine regions beyond MIRAMARE.



Global Fisheries Atlas

Expanding operational fisheries V Labs in Blue-Cloud, enabling global access to fisheries data. Experience enhanced knowledge management and spatial data interoperability for impactful research and insights.



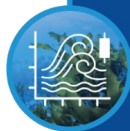
Coastal currents from observations

Improve integration and accuracy of ocean surface current data with Blue-Cloud 2026. Generate integrated maps using HF radar, drifter, and satellite altimetry data.



Integration of coastal ocean observations along Europe

Integrate diverse ocean data for enhanced knowledge base. Blue-Cloud 2026 combines JERICO-RI data, advanced visualisations, and expanded functionalities for valuable coastal insights.



Marine Environmental Indicators

This V Lab enables monitoring, assessment, and decision-making for marine areas. Exploit diverse data sources in a unique analysis service for online computation of indicators.

Unlock the potential of Open Science and FAIR data principles for marine research

Comprehensive lessons and materials that guide you in utilising Blue-Cloud services for Open Science in marine research. The Academy also hosts dedicated courses to foster the uptake of Open Science practices and explore the challenges and solutions in applying the FAIR foundational components, standard and practices towards data interoperability to achieve FAIRification in the marine data community.

Discover how to harness the power of our platform and embrace Open Science practices in the ocean science domain. Join us on this educational journey - check the Academy and sign up for the upcoming training opportunity.

In partnership with



Blue-Cloud Training Academy



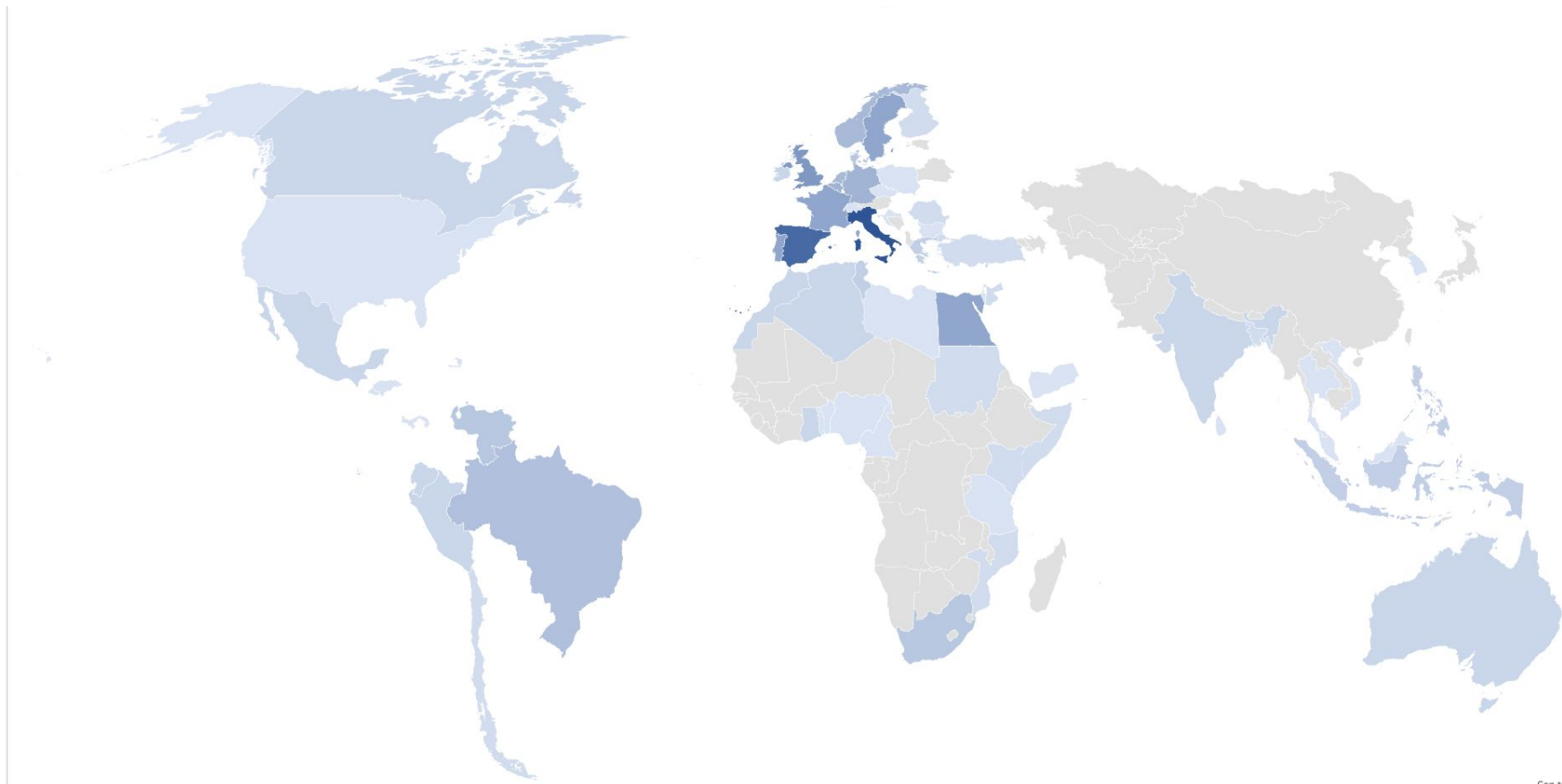
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FAIR Data Principles 1

Foundational components, best practices and standards

This webinar will explore the challenges and solutions in applying the FAIR foundational components on the journey from FAIR Principles to FAIR Practices to achieve FAIRification in the marine data community.

Time	Session	Presenter
14.00 - 14.10 UTC (16.00 - 16:10 CEST)	Welcome & overview	Sara Pittonet, Blue-Cloud2026 coordinator
14.10 - 14:20 UTC (16.10 - 16:20 CEST)	Interoperability in the marine domain through FAIR best practices and standards	René Garello , IEEE and Blue-Cloud2026
14.20 - 14.35 UTC (16.20 - 16.35 CEST)	Process and developments to achieve marine data FAIRness to support Virtual Research	Peter Thijssse , MARIS and Blue-Cloud2026
14.35 - 14.50 UTC (16.35 - 16.50 CEST)	Practical examples how improved marine data FAIRness supports developers and end-users in current developments in Virtual Research	Alexandra Kokkinaki , NOC UK and Blue-Cloud2026
14.50 - 15.05 UTC (16.50 - 17.00 CEST)	Making marine data truly interoperable and reusable: data harmonisation, validation, and qualification from various sources for the creation of streamline data handling for Essential Ocean Variables (EOV)	Simona Simoncelli , INGV, and Alessandra Giorgetti , OGS and Blue-Cloud2026
15.05 - 15.15 UTC (17.00 - 17.15 CEST)	Getting FAIR done: a view from RDA Europe	Najla Rettberg , RDA
15.15 - 15.30 UTC (17:15 - 17.30 CEST)	Q&A & next appointments	Sara Pittonet, Blue-Cloud2026 coordinator



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3-5 Oct 23
Galway

European Operational Oceanography
for the Ocean we want – addressing
the **UN Ocean Decade Challenges**

Blue-Cloud 2026 is taking part in the session "The future of operational oceanography" on **5 October 9:00-10:50 CEST**, moderated by Ghada El Serafy (Deltares), as Technical Coordinator **Dick Schaap**, MARIS talks about the future of cloud services to deliver FAIR & Open data and analytical services, instrumental for the Digital Twins of the Oceans.

Organised by:



EuroGOOS
European Global Ocean
Observing System



Foras na Mara
Marine Institute



2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development



International Digital Twins of the Ocean Summit 2023

November 9 - 12, 2023 • Xiamen, China

Advancing DTOs architectures and interoperability



Powering the European Marine Data Ecosystem

For a digital and green future



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Blue-Cloud | Gateway

Blue-Cloud 2026, a federated European FAIR and Open Research Ecosystem for oceans, seas, coastal and inland waters

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