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Blue-Cloud Workbenches for the creation of highly qualified physical and chemical data collections

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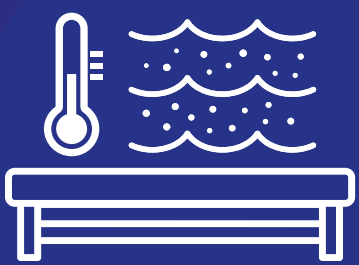
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Essential Ocean Variables Workbenches

Blue-Cloud is working on three big data processing Workbenches (WB). These will facilitate the generation of validated and harmonised data collections for selected Essential Ocean Variables (EOVs) for physics, chemistry and ecosystems, filling the existing gaps by integrating several datasets from different EU and non-EU Blue Data Infrastructures (BDIs) and providing EOVs datasets and workflows to EU operational services and the DTO.



Physics: Temperature & salinity

The integration of the data coming from different Blue Data Infrastructures (BDIs) relies on the interoperability of the data discovery and access services and the different metadata associated with the Temperature and Salinity observations, which will be mapped to a common metadata schema. Metadata harmonization allows to identify and handle potential duplicate observations. A further Quality Control procedure will provide an added-value and consistent EOVS dataset.

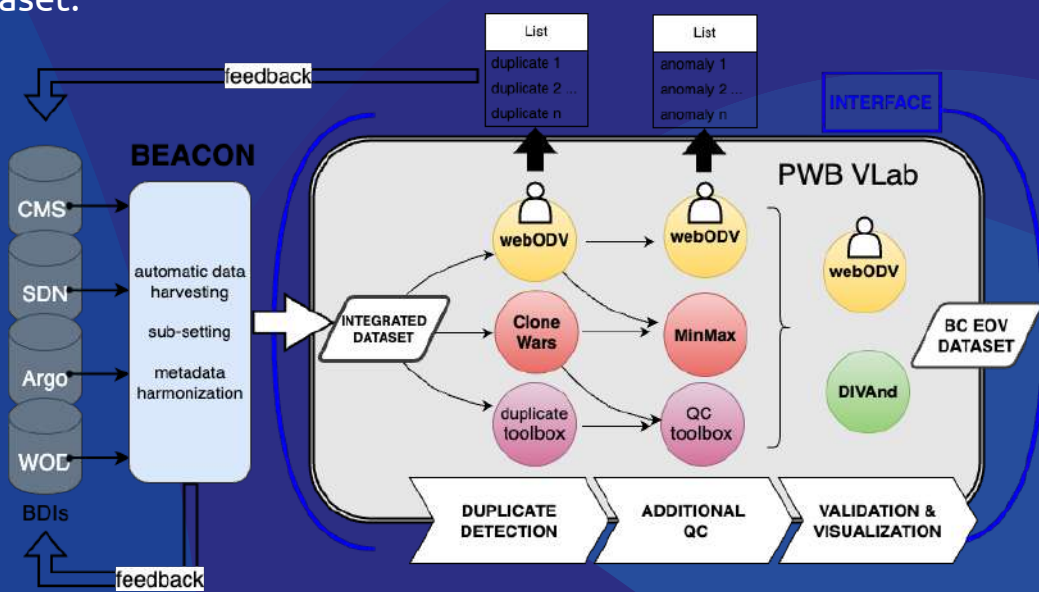


Figure 1: Physics WorkBench (PWB) workflow.

The PWB will be developed and tested for the Mediterranean Sea with the aim of extending it to the global ocean. In addition, the PWB will be available and extensible for a sustainable big data infrastructure that can be used in SeaDataNet, Copernicus or other data infrastructures.



Mediterranean Sea



Global Ocean



Eutrophication: Chlorophyll, nutrients and oxygen

Interoperability services of data infrastructures, common vocabularies and brokering services are used to enable the aggregation and harmonisation of eutrophication datasets from WOD, EMODnet and CMEMS, with great attention paid to semantic aspects. A specific protocol will be jointly developed to identify and handle possible duplicate observations as well as QC procedures.

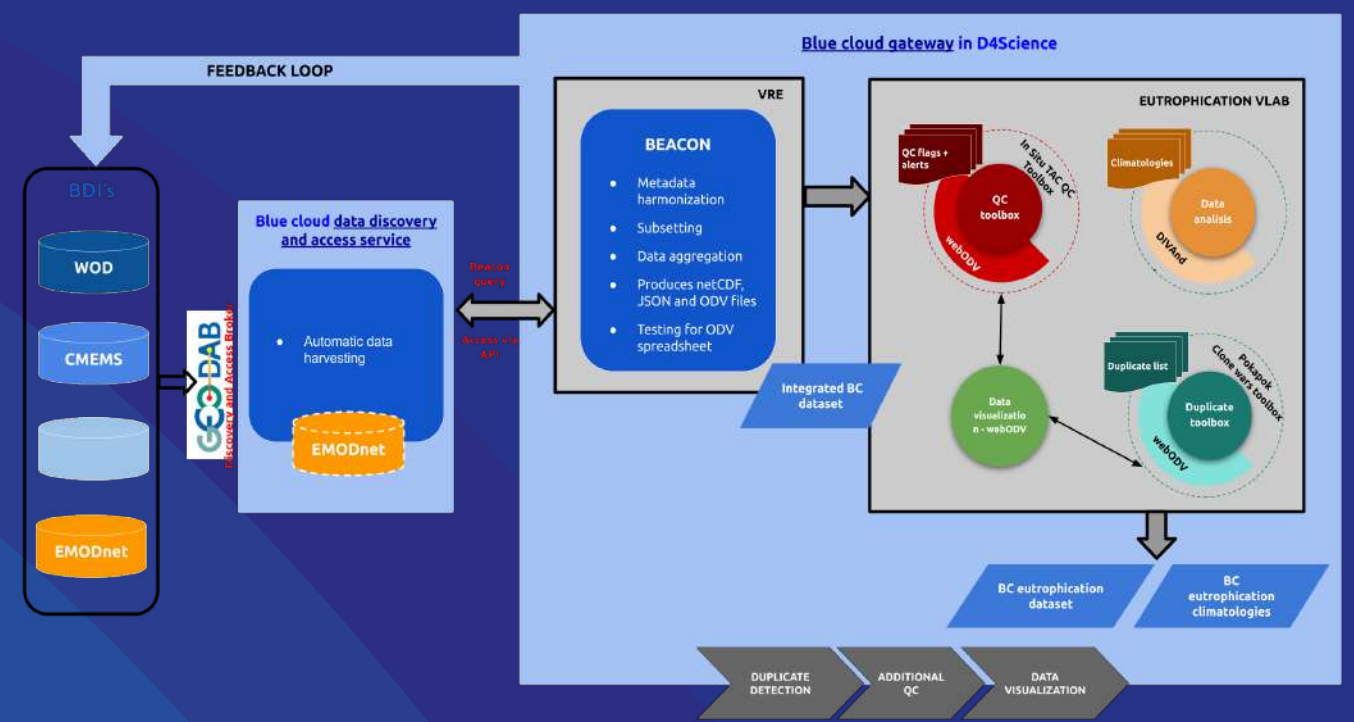
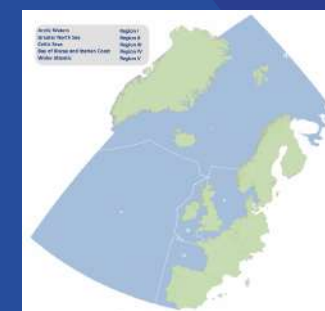


Figure 2: Eutrophication workbench (EWB) workflow.

The Eutrophication WB will provide a prototype for the Northeast Atlantic with the aim of extending it to the global ocean by the last year of the project.



Northeast Atlantic Sea.



Global Ocean

Blue-Cloud 2026 Consortium

