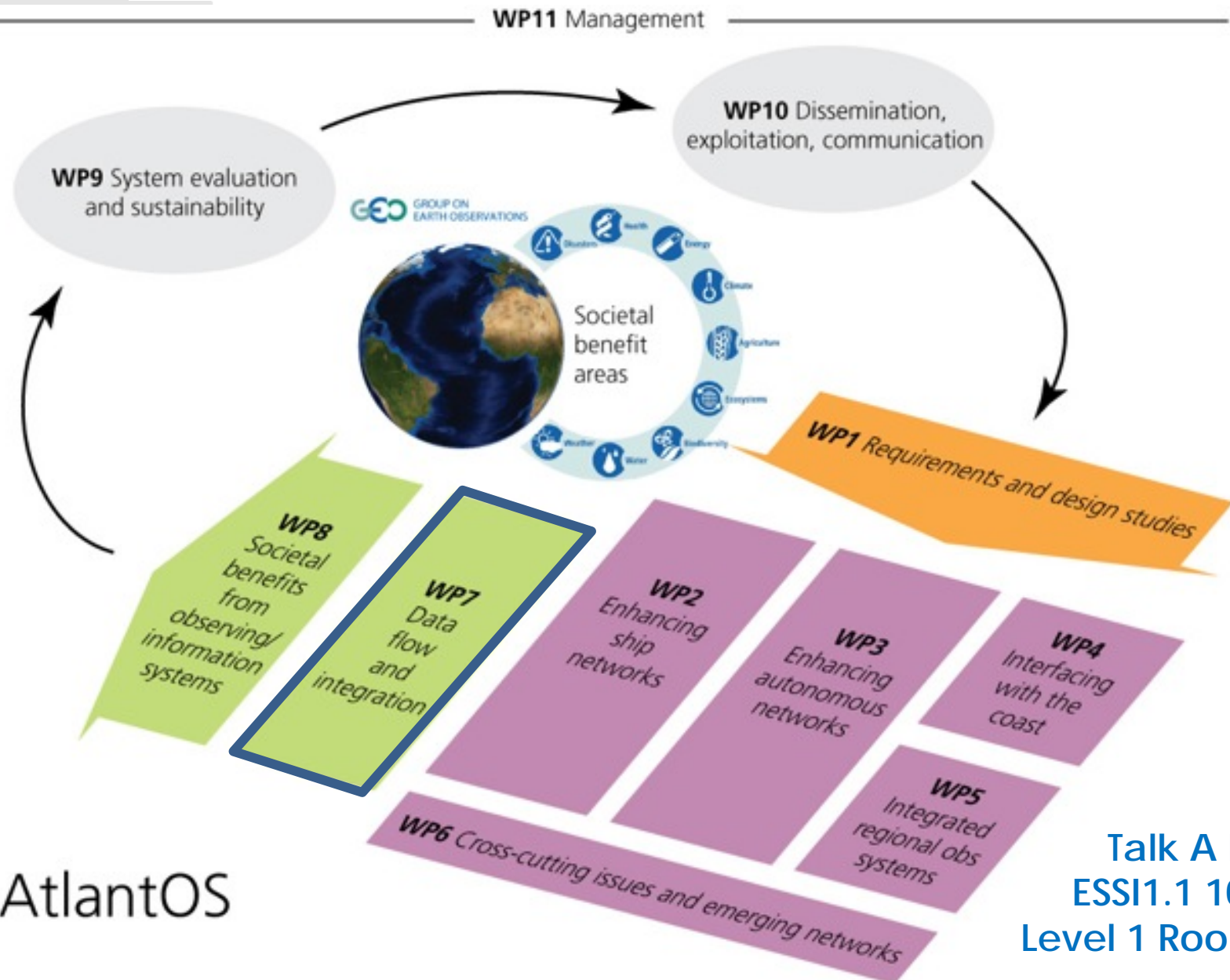


A large, stylized blue globe with white grid lines, showing the continents of Europe, Africa, and Asia. It is positioned on the left side of the slide, partially cut off by the edge.

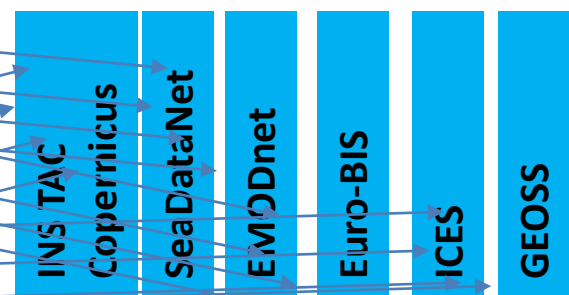
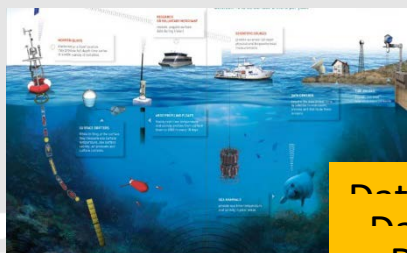
## Enhancing Atlantic In Situ data flow and data integration

Authors: S. Pouliquen /V. Harscoat /Ifremer  
and WP7 partners  
Date:24<sup>th</sup> April 2017  
Version:1.0



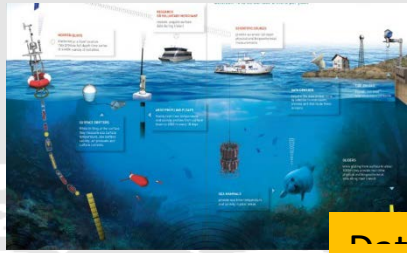


# Starting Point



- Ad'hoc interfaces between each Integrator and Observation provider :  
⇒ duplication of efforts
- Lack of common standards to identify platforms , institutions, parameters ...  
⇒ risk of mixing apples with oranges , traceability of use difficult
- Lack of commonly agreed Real Time QC: ⇒ duplication of efforts
- Lack of knowledge of the existence of some data and products :  
=> "underuse" of existing services

# The long term goal



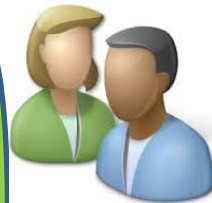
Data mgt  
for network

TOOLS

INS TAC  
Copernicus  
SeaDataNet  
EMODnet  
Euro-BIS  
ICES  
GEOSS

TOOLS

Services



Users

Virtual Data exchange backbone

Standardization between networks  
from acquisition to service to users

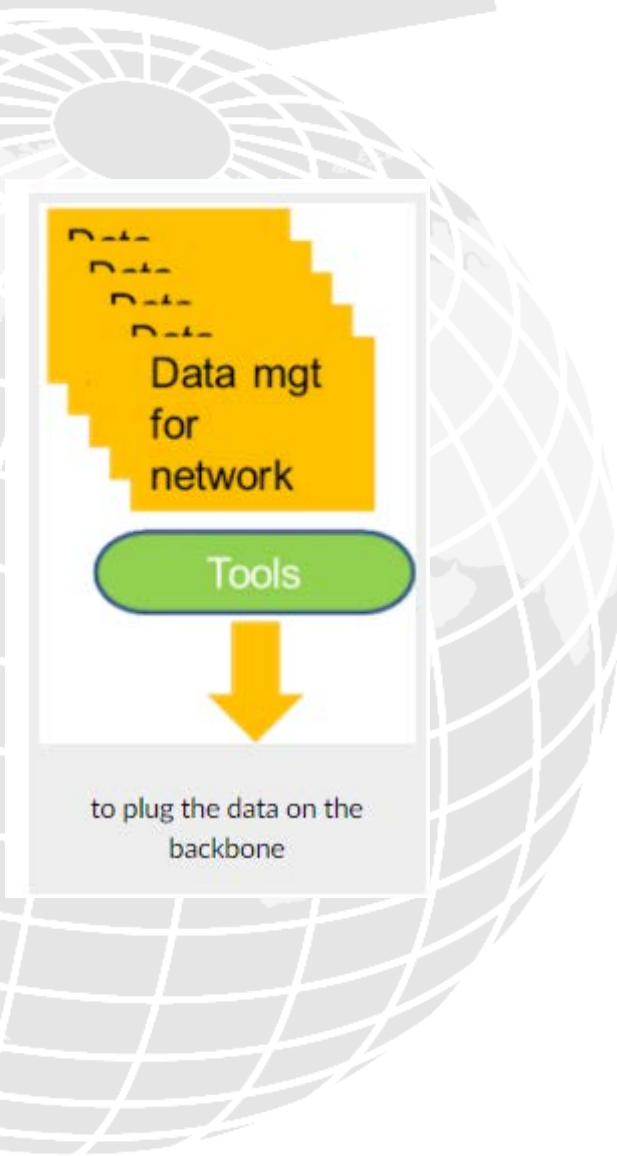


Standardization between networks  
from acquisition to service to users

- To facilitate access to the broad array of **Atlantic observations** and avoid “mixing apples and oranges”, the actors first **agreed on common standards** for metadata and data description **relying on existing international standards and protocols**  
*(detailed in D7.1 Data Harmonization and D7.2 QC Report)*
  - **Mandatory Metadata** (unique ids for platforms/stations, unique codes for the Institutions that provide data) for guaranteeing a continuum between **data-platform-institution** in an unambiguous way across the Networks
    - **WMO** whenever possible
    - C17 SeaDataNet Platform catalogue for most platforms and ICES directory for stations
    - EDMO SeaDataNet catalogue for Institutions,
  - **Common vocabularies** for metadata and data description (AtlantOS mapping vocabulary) :SeaDataNet P01 and P06, CF convention (P07) and WoRMS for Taxa
  - **Minimum NRT** (24 hours to several days) QC procedures for a core of 7 variables (measured by more than one network) : T, S, Current, O2, Chl, Nitrate, Sea level, Carbon

# Enhance existing network services

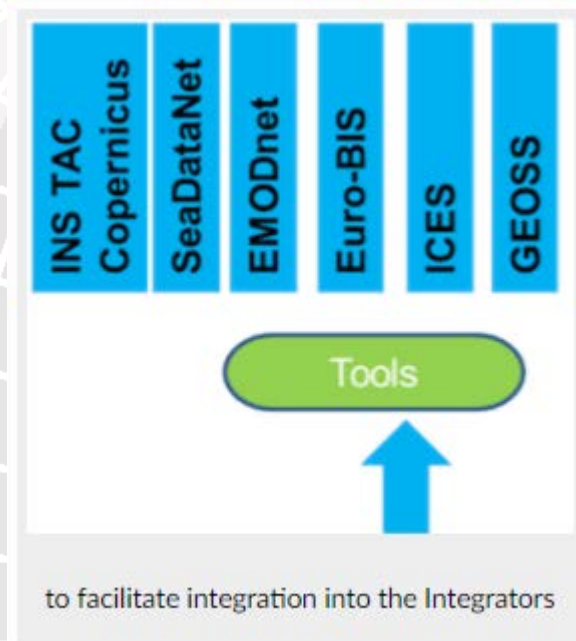
- **Develop integrated access to the best copy of Network Data**
  - **Global data Centres** : Argo , OceanSites, Drifters , EGO-GLIDER
  - Facilitate **integration into International centres** : CPR , ADCP, EU Ferrybox data into GOSUD
  - **Share tools to provide a additional services on those portal based on OGC standards** (WMS, WFS, SWE)
- **Implement common RTQC procedures**
- **Data citation:** support network to develop a DOI (Data Object Identifier) strategy for their Network





# Upgrade existing Integrators to better serve networks and users

- **Synchronize with the Network portals** to integrate the highest quality data
- Customize their Services to **provide additional viewing and downloading facilities** on Network data
- **Enlarge** Network Data **usage**
- Develop a common strategy for providing **feedback of use to platform operators and networks**
- Provide **archiving facilities** to Networks if needed



# AtlantOS Catalogue

<https://www.atlantos-h2020.eu/>

Home About AtlantOS News Publications

## AtlantOS

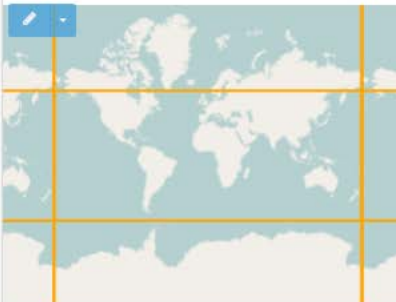
Optimising and Enhancing the Integrated Atlantic Ocean Observing Systems

Project Information Consortium members Members

- Concepts & Objectives
- AtlantOS - Project Information
- Work Packages
- Deliverables
- Milestones
- Atlantic Ocean observation is currently undertaken through a variety of international, more sustainable, more efficient initiatives. The AtlantOS initiative will have a long-lasting and sustainable impact on the scientific community and the public.

Integrated Data Portal AtlantOS catalogue

Search ...



Search ...

Results 1 to 3 on 3 : 20 by page

Sort by: Popularity

Global Ocean- In-Situ Near-Real-Time Observations

Short description: For the Global Ocean- The In Situ Thematic Assembly Centre (INS TAC) integrates near real-time in situ observation data. These data are collected from main global networks (Argo, GOSUD, OceanSITES, GTS) completed by ...

Source: E.U. Copernicus Marine Service Information

Global Ocean- Delayed Mode gridded CORA- In-situ Observations objective analysis i...

Short description: For the Global Ocean- Gridded objective analysis fields of temperature and salinity using profiles from the reprocessed in-situ global product CORA (INSITU GLO TS REP OBSERVATIONS)

Source: E.U. Copernicus Marine Service Information

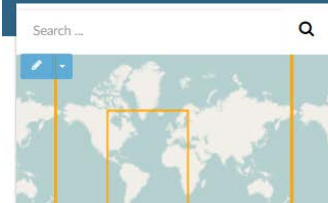
ELEMENTS OF THE INTEGRATED SYSTEM

☒ Products (3)

☐ ESSENTIAL VARIABLES

Reset filters

Search ...



Search ...

Results 1 to 6 on 6 : 20 by page

Sort by: Popularity

Sea Surface Salinity from Research Vessels and VOS (NRT & DM)

Continuous Plankton Recorder(CPR) data from the Sir Alister Hardy Foundation for Ocean Science

GOSUD aims at assembling in-situ observations of the world ocean surface collected by a variety of ships and at distributing quality controlled

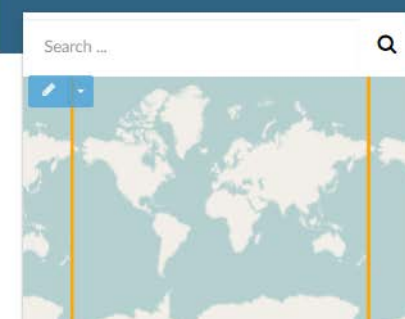
The Sir Alister Hardy Foundation for Ocean Science (SAHFOS) is an international charity that operates the Continuous Plankton Recorder (CPR) in the North Atlantic since 1957

AtlantOS catalogue | AtlantOS

www.gosud.org

Applications Observations EuroArgo WWW CMEMS ENVRI IFREMER Perso PROJETS Renaviso Google Maps GOOS Webinars sismer-Assistance

Search ...



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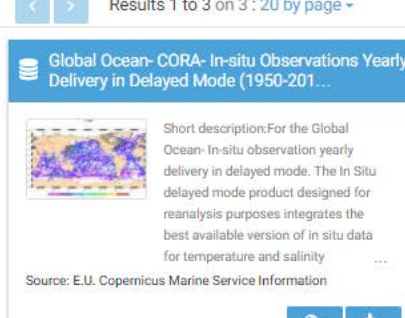
EMODnet Physics

EMODnet Physics provides a combined array of services and functionalities to obtain free-of-charge data, meta-data and data products on the physical conditions of European sea basins and oceans as recorded by more than 20.000 platforms (fixed ...

In Situ Thematic Centre for Copernicus Marine Environment Monitoring Service

The in-situ TAC integrates and quality control in a homogeneous manner in situ data from outside Copernicus Marine Environment Monitoring Service (CMEMS) data providers to fit the needs of internal and external users. It provides access to integrated datasets.

Search ...



Search ...

Results 1 to 3 on 3 : 20 by page

Sort by: Popularity

Global Ocean- CORA- In-situ Observations Yearly Delivery in Delayed Mode (1950-201...

Short description: For the Global Ocean- In-situ observation yearly delivery in delayed mode. The In Situ delayed mode product designed for reanalysis purposes integrates the best available version of in situ data for temperature and salinity ...

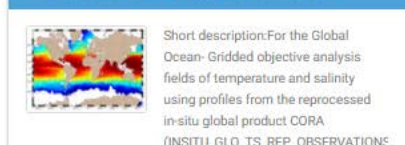
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Search ...



Search ...

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Sort by: Popularity

Global Ocean- Delayed Mode gridded CORA- In-situ Observations objective analysis i...

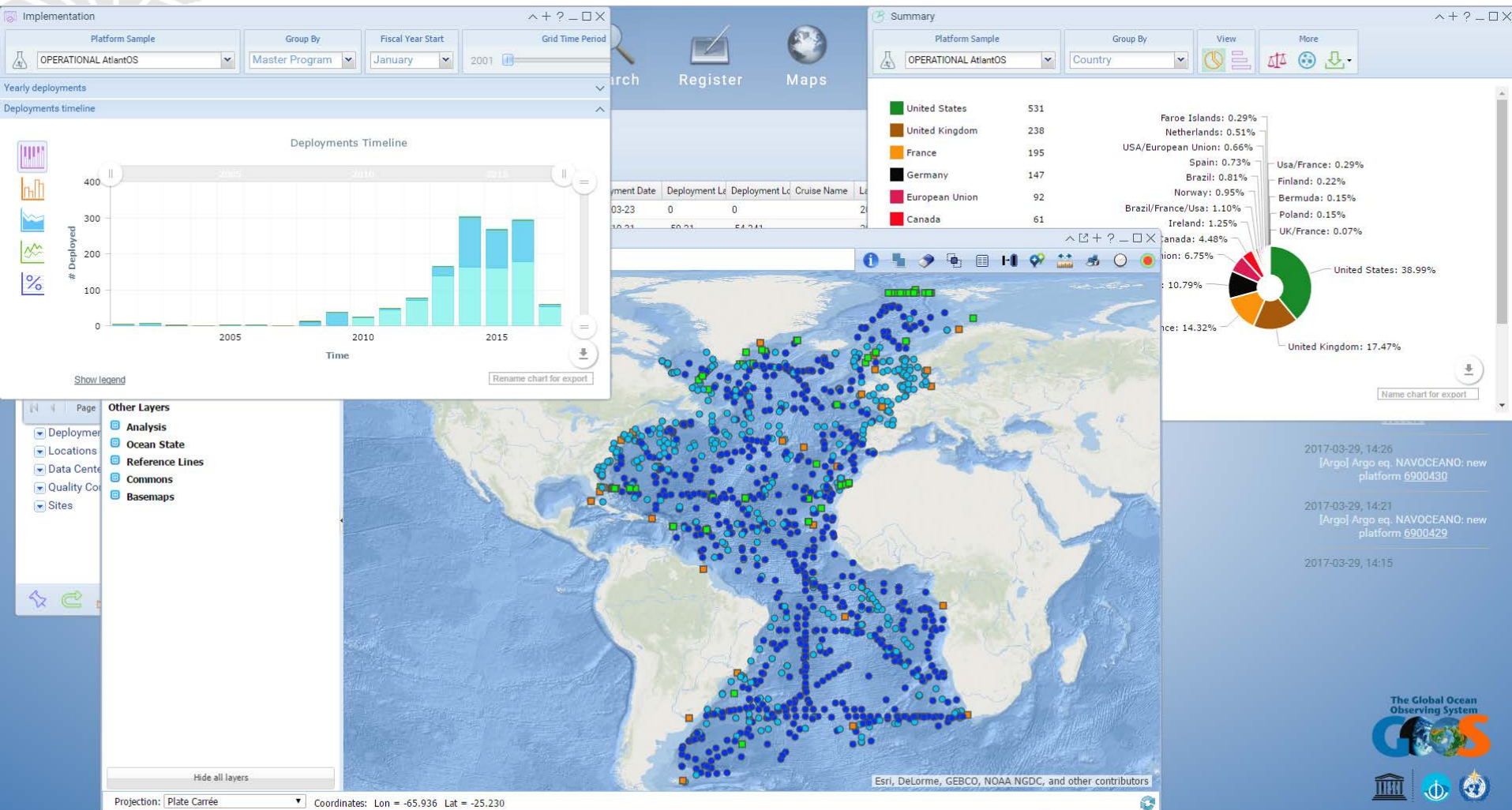
Short description: For the Global Ocean- Gridded objective analysis fields of temperature and salinity using profiles from the reprocessed in-situ global product CORA (INSITU GLO TS REP OBSERVATIONS)

Source: E.U. Copernicus Marine Service Information



# Monitoring at JCOMMOPS

<http://www.jcommops.org/board>



2017-03-29, 14:26  
[Argo] Argo eq. NAVOCEANO: new platform 6900430

2017-03-29, 14:21  
[Argo] Argo eq. NAVOCEANO: new platform 6900429

2017-03-29, 14:15

# Monitoring at EuroGOOS

- <http://www.emodnet-physics.eu/atlantos/>



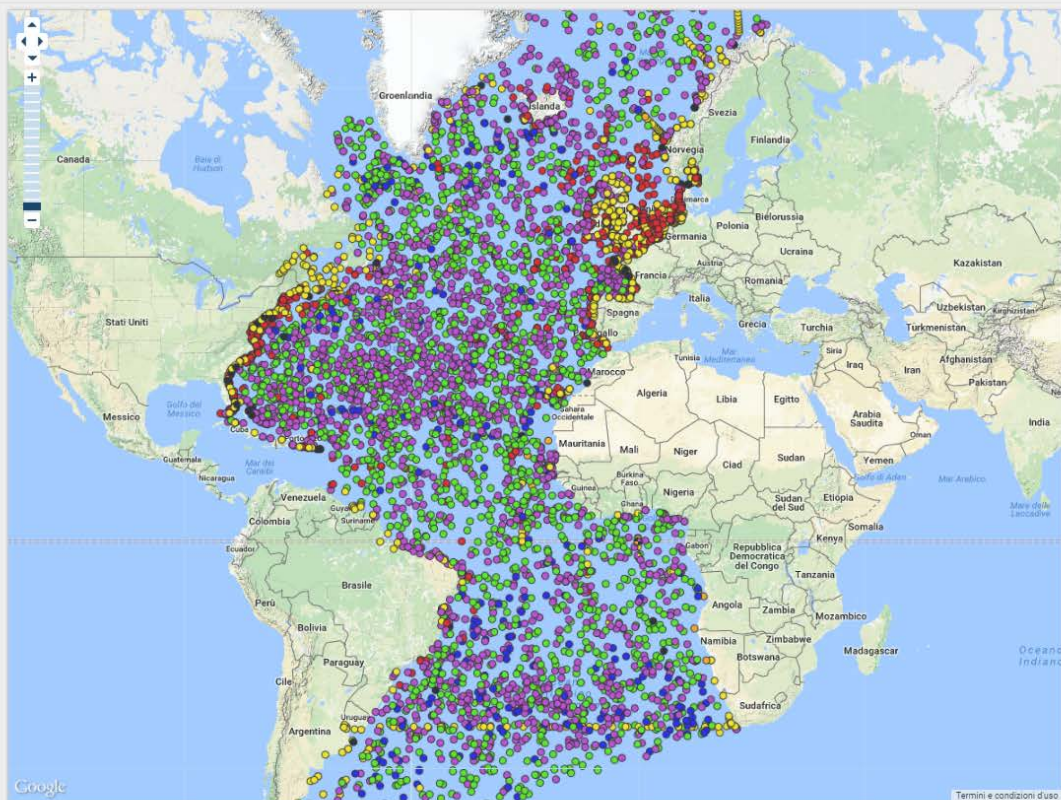
EU Horizon 2020 project

A large scale EU Horizon 2020 research and innovation project contributing to the Trans-Atlantic Research Alliance and GEO.

62 Partners, 18 Countries

International integration of Atlantic ocean observing activities - further supporters / members are welcome.

Dashboard WMS WFS



- ☒ all active platforms
- ☐ platforms of type: mooring
- ☐ platforms of type: ferrybox
- ☐ platforms of type: HF radar
- ☐ platforms of type: glider
- ☐ platforms of type: argo
- ☐ platforms of type: drifting buoy
- ☐ platforms of type: profiler
- ☐ water temperature parameters
- ☐ waves parameters
- ☐ wind parameters
- ☐ water salinity/conductivity/density parameters
- ☐ currents parameters
- ☐ chemical parameters
- ☐ sea level parameters
- ☐ light parameters
- ☐ other parameters
- ☐ atmosphere parameters

For more data please visit EMODnet Physics Map Portal



**EMODnet**  
European Marine  
Observation and  
Data Network



# Monitoring at EuroGOOS

- <http://www.emodnet-physics.eu/atlantos/>



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Dashboard WMS WFS



Direction technique  
infrastructures de transport et matériaux

[CLICK TO OPEN PLATFORM INFO](#)

Platform code 62069  
Lon/Lat -4.9683/48.2903  
Parameters code DEPH; VAVH; VAVT; VPSP; VHM0; TEMP; VPED; VEPK; VTPK; VCMX; VSMC  
Parameters descr Waves, Water Temperature  
Platform type MO  
Data type Latest, Monthly, Historical  
Country France  
Provider CEREMA Centre Etudes et Expertise sur les Risques Environnement Mobilité et Aménagement  
Data owner CEREMA - Centre Etudes et Expertise sur les Risques Environnement Mobilité et Aménagement -  
Sea region France  
Last data Celtic Sea, AtlantOS  
2017/04/04 15:30:00

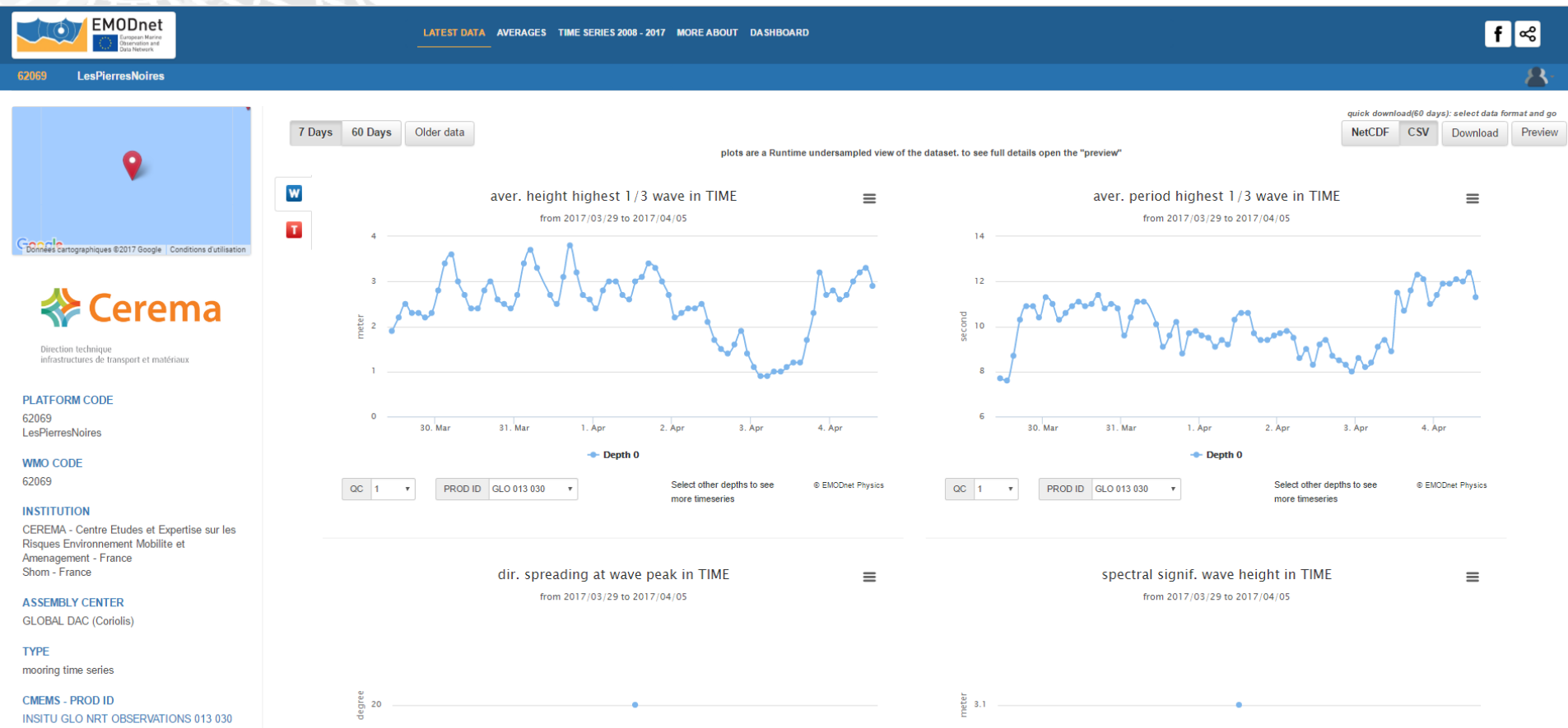
- ☒ all active platforms
- ☐ platforms of type: mooring
- ☐ platforms of type: ferrybox
- ☐ platforms of type: HF radar
- ☐ platforms of type: glider
- ☐ platforms of type: argo
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- ☐ chemical parameters
- ☐ sea level parameters
- ☐ light parameters
- ☐ other parameters
- ☐ atmosphere parameters

For more data please visit EMODnet Physics Map Portal



# Using Viewing from other integrators

- <http://www.emodnet-physics.eu/atlantos>



# Monitoring at EuroGOOS

<http://www.emodnet-physics.eu/atlantos/dashboard>



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Dashboard

WMS

WFS

Data networks and Providers

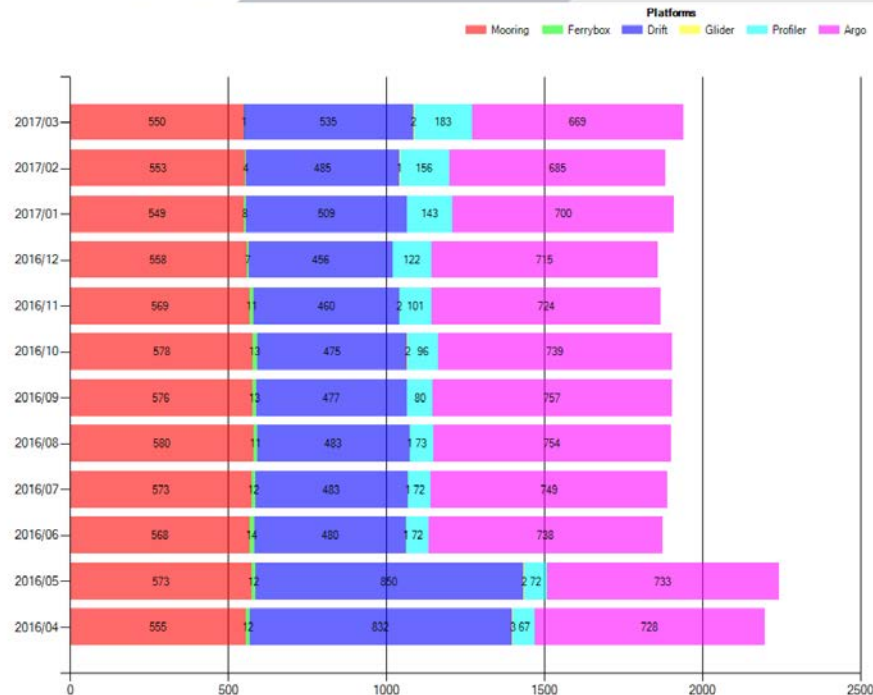


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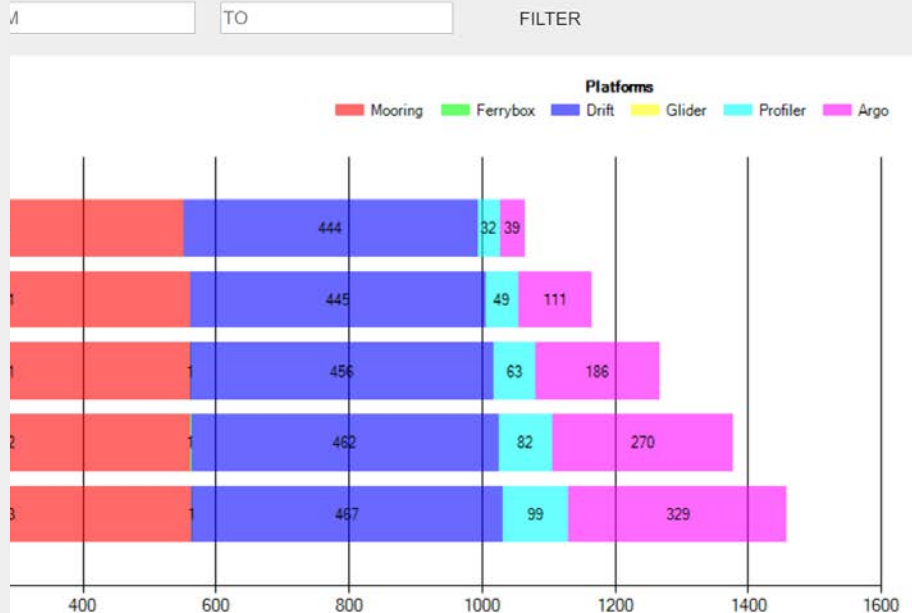


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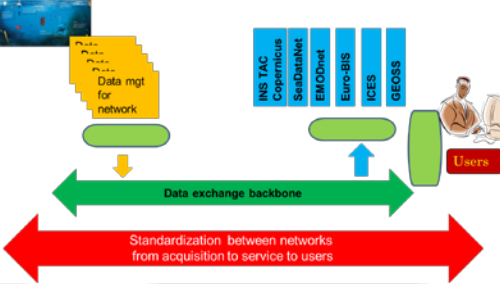
62 Partners, 18 Countries

International integration of Atlantic ocean observing activities – further supporters / members are welcome.

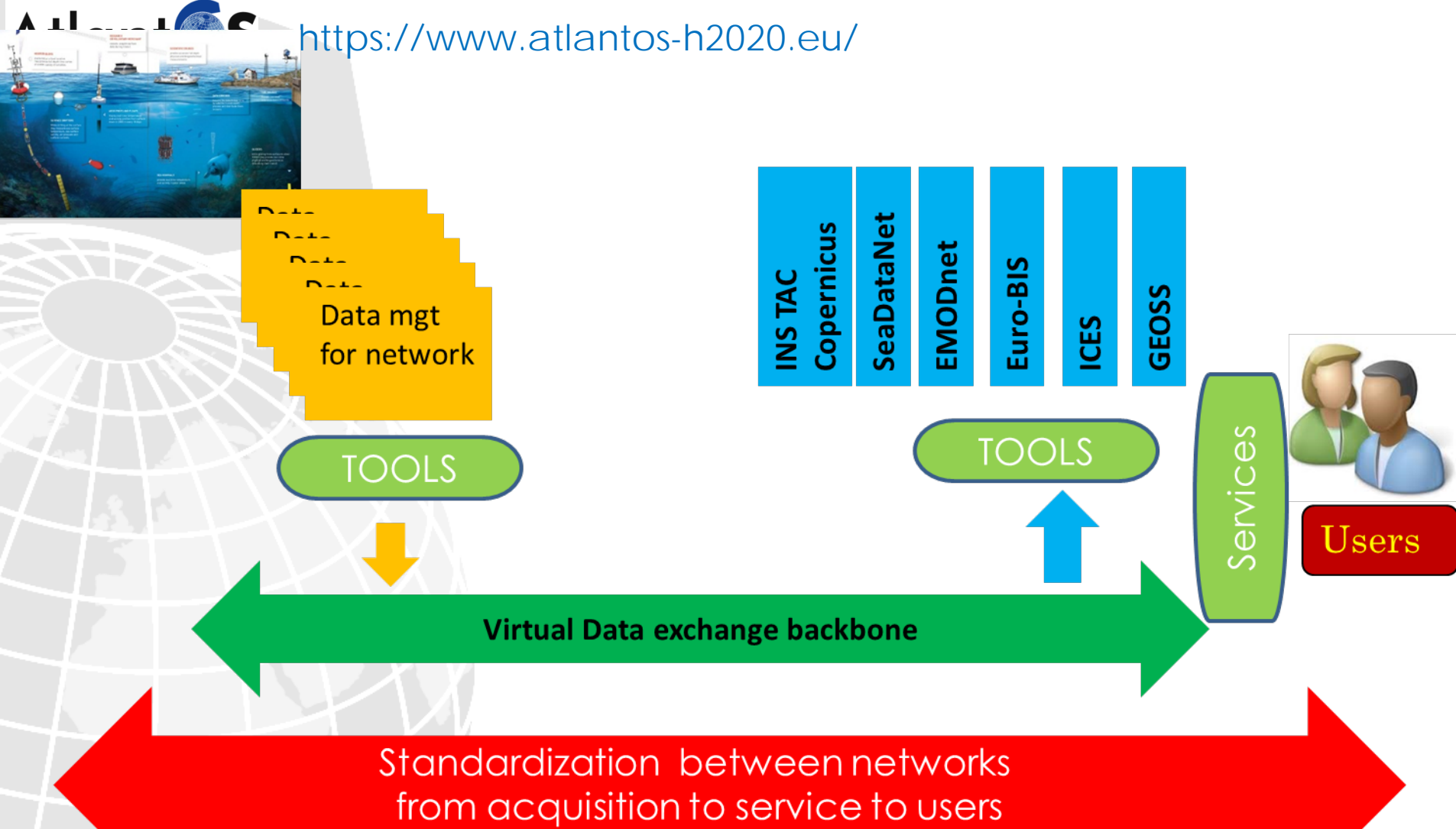




# Benefits for Users



- For Operational users
  - Extended coverage in time and space for CMEMS products (T&S Current Sea Level Wave O2 Chl) both for Forecast and reanalysis
  - Have access to better products for Ecosystem model validation
  - Improvement of existing products in European Seas
- For research
  - Enhanced quality of the Historical products will be developed in partnership with the Networks and the Integrators
- For Networks
  - Extend user community for the Networks
  - Improve traceability and monitoring tools on Networks data
- For AtlantOS
  - Provide tools for the AtlantOS coordination tool to access the AtlantOS observing system and contribute to the development of an integrated vision and plan for Atlantic Ocean observations



An enhanced system based on existing (sustained) infrastructures that will last after the end of AtlantOS project

# AtlantOS

## AtlantOS Transatlantic Ocean Data Harmonization Workshop

Brussels on the 7-8<sup>th</sup> June 2017

Contact : K Koop-Jakobsen ([kjakobsen@marum.de](mailto:kjakobsen@marum.de))  
S Pouliquen ([atlantos\\_wp7\\_coordination@ifremer.fr](mailto:atlantos_wp7_coordination@ifremer.fr))

**Scope:** The goal is to get key organizations for Atlantic data management together, from all continents bordering the Atlantic, in order to get an overview of **the data landscape**, and **identify key actions to improve transatlantic ocean data exchange**.

*The workshop shall provide inputs for a roadmap for improved transatlantic data exchange in a truly transatlantic context.*



This project has received funding from  
the European Union's Horizon 2020  
research and innovation programme  
under grant agreement No 63321.