



ENVRI-Board

Presentation of **COP-IDEA** project



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*Most slides provided by
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In situ

COPERNICUS IN-SITU STATE OF PLAY AND EVOLUTION

EU Space Programme - Copernicus User Forum

José Miguel RUBIO IGLESIAS (EEA)

18 March 2025



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In-situ data in Copernicus

In situ

Copernicus in-situ data: **observations, geospatial reference and ancillary data** licensed or provided for use in Copernicus

What for?

- **Production and validation** in Copernicus services
- As stand-alone **observation** products
- **Cal/Val** of satellite sensors



Without in-situ data, Copernicus simply cannot deliver its data, products and services



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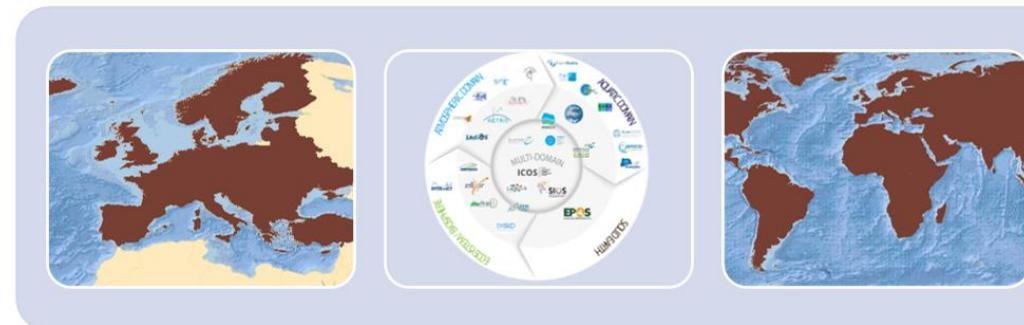
Where does in-situ data come from?



In situ

Copernicus relies on a **myriad of in-situ data providers** and networks at national, regional and global level.

Many of them are institutions from **Copernicus Participating Countries**.



European networks and countries



Research Infrastructures



International organisations, other countries



Long-term, open, and reliable access to essential in-situ data is a prerequisite



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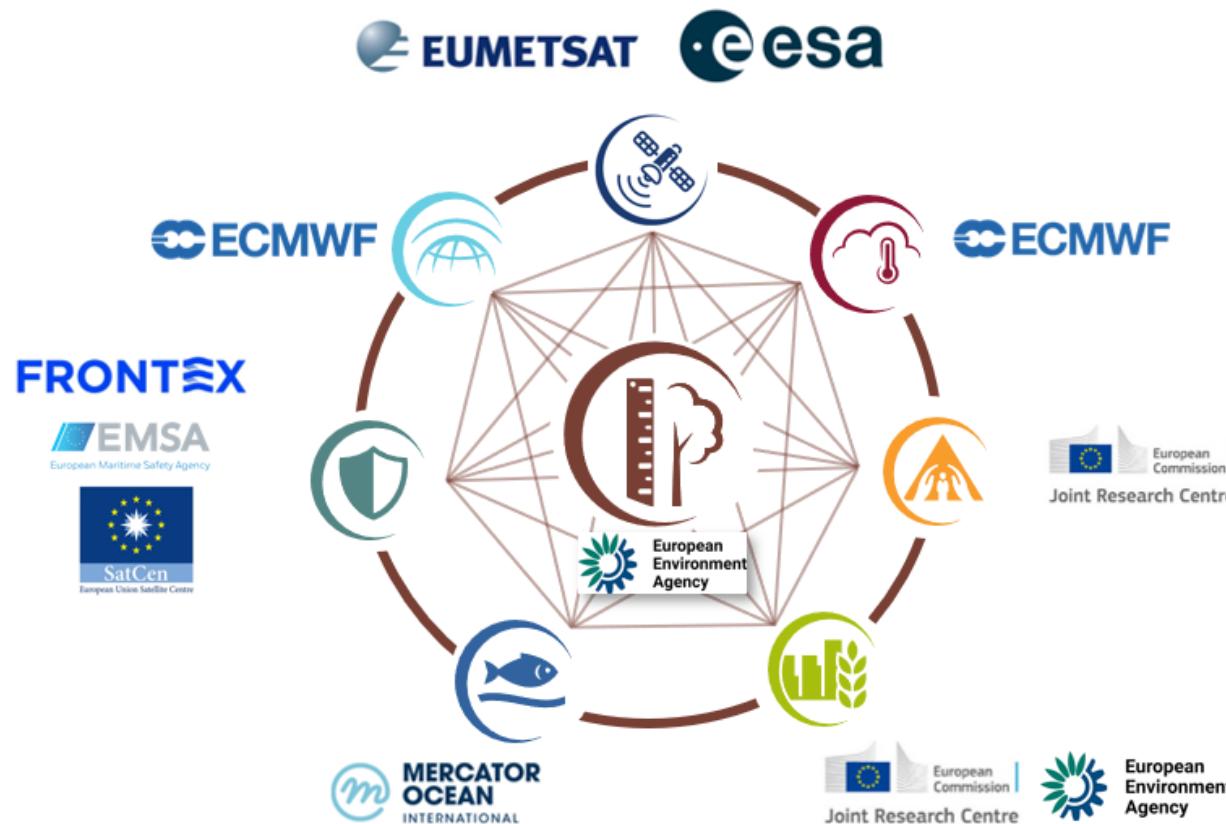


Governance of the Copernicus In-Situ



In situ

The **Entrusted Entities** manage and use in-situ data daily to meet their operational needs. The **EEA** steps in when a coordinated, programmatic approach is needed across Copernicus.



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Stakeholder engagement



In situ

**European
organisations and
networks**



**International
organisations and
networks**

**Research, academia and
private companies**



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Copernicus and Research Infrastructures



In situ

- Copernicus depends on data collected, managed and delivered by **European Research Infrastructures**
 - An overview has been prepared by the EEA which shall be available soon on the In-Situ website
- The already existing collaboration between Copernicus and RI may benefit from additional dialogue and exchange
- There is a need to address **the gap between Copernicus requirements and availability of resources** for RI
 - The workshop co-organised by Euro-ARGO and EEA and hosted by Moi in March 2024 is a blueprint to follow with other RI



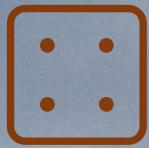
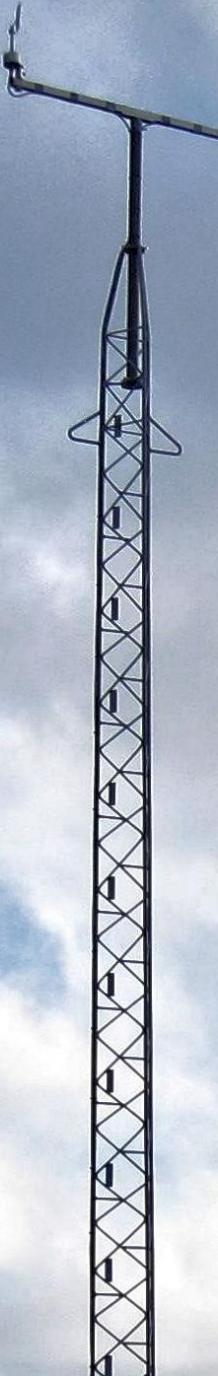
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**WHAT FOR A COPERNICUS
IN-SITU BEYOND 2027?**

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State of Play : key issues encountered



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Access conditions and use restrictions



Insufficient spatial coverage



Insufficient acknowledgement



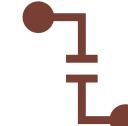
Not long enough historical high time series



Uncertain sustainability of critical networks



More data needed on specific areas



Fragmentation and heterogeneity



Lack of alignment with data providers



Increasing demands in frequency and resolution



Rapid accessibility

This will be reported and addressed in the Copernicus Strategic Research Agenda



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Europe's eyes on Earth

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Possible elements of a future in-situ component?



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Sustained support to key in-situ networks



Cross-cutting EO-oriented in-situ repositories



Closing data gaps



Acknowledgement via Copernicus In-Situ Label



In-situ National Collaboration Programme



Copernicus Annual Forum for in-situ providers



Strengthening partnerships



Integrated in-situ data and mission planning



CCM concept for in-situ providers



Innovation framework for in-situ technologies



Long-term evolution



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In-Situ Central Support: COP-IDEA

In situ



A. State of Play Activities

- A.1 Update, maintain, evolve and assess the Copernicus In-situ Component Information System (CIS2) content
- A.2 Maintenance and update of the State of Play of in-situ data (e.g. 2026 SoP report)
- A.3 Evolution of in-situ activities in Copernicus beyond 2027



B. Engagement with data providers

- B.1 Engagement with key European networks and data providers (EUMETNET, EuroGeographics...)
- B.2 Engagement with research infrastructures and other R&I activities (ENVRI)
- B.3 Engagement with international networks and data providers (e.g. WMO)
- B.4 Production of use cases



C. Provide support and advice on In-Situ topics

- C.1 Provision of support in the coordination of Copernicus In-situ Working Groups
- C.2 Provision of general consultancy on thematic and cross-cutting in-situ data expertise (atmospheric composition, hydrology, land, marine, polar, data sharing, alternative data sources...)



Communication activities



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COP-IDEA Details of Euro-Argo's involvement

- COP-IDEA: **COPernicus In-situ Data European Alliance** - consortium set up for 3 years
 - Two teams: Geospatial data team & Observation team
 - Mainly private companies (mostly in Geospatial data team)
 - Observation team: **EuroGOOS, EUMETnet, Euro-Argo ERIC, ACRI-ST, NILU, UKCEH + 2 consultants**
- Specific Contract 1 : [March 2025 – Spring 2026] – KO meeting 3-4 March at EEA (Copenhagen)
- **Euro-Argo ERIC in EIA:**
 - Member of the Consortium (was subcontractor in COINS)
 - **Objective:** Highlight the role of European RIs (including Euro-Argo) as data providers for Copernicus, at high level (EEA, DGs of the European Commission).
 - **Main Euro-Argo Activity** planned in the WP on « **engagement with RIs / innovation activities** »:
 - ✓ set up an *Exchange Forum* between ENVRI & Copernicus, alignment of requirements and RI service provision, including recommendations and financial & sustainability issues.





Main actions of Euro-Argo in COP-IDEA

- Creation of individual “briefs” based on a targeted questionnaire describing relevant RIs and RI projects
 - Will contribute to the draft of recommendations for the Copernicus Strategy
 - Contacts and actions split:

Euro-Argo	Marine	EMSO, Euro-Argo, ICOS, DANUBIUS RI and JERICO RI
NILU	Atmosphere	ACTRIS, EISCAT 3D, IAGOS and ICOS
ACRI-ST	Land	eLTER, EPOS, ICOS ETC and SIOS





Main actions of Euro-Argo in COP-IDEA

- Establishment of the Exchange Forum (EEs+RIs): online meeting, 6 November 2025
 - Setting up the scene
- First in-person Exchange Forum meeting, EEA premises in Copenhagen, February-April 2026.
 - Meeting with plenary and parallel sessions by domain (marine, atmosphere, land)
 - Scenario/Agenda:
 - ✓ requirements of & gaps identified by the Copernicus Entities
 - ✓ services of the RIs and new service opportunities via technological developments (roadmaps)
 - ✓ alignment of requirements and RI service provision, including recommendations and financial & sustainability issues





Thank you

