



CAL/VAL in Copernicus 2.0



Cal/Val activities are an integrated part of Copernicus to ensure end-to-end performances

- It ensures the satellites instruments are in good health and perform well
- It ensure to reach best quality of products at short -term and long-term
- It keeps processing de facto at the state-of-the-art

The considerable investments in the Space Segment and Services would not be leveraged fully and the users would not be satisfied with the quality of Copernicus data and information services without sustainable access to Cal/Val data and a long-term Copernicus Cal/Val plan.



Copernicus

Cal/Val in the Space Regulation

- Article 27.7

The Member States and the Commission shall cooperate in order to develop the in-situ component of Copernicus and ground calibration services necessary for the uptake of space systems and to facilitate the use of Copernicus in-situ data and reference data sets to their full potential, building on existing capacities.

- Article 50.C

Eligible actions under Copernicus shall cover:

(...) actions to provide and coordinate access to Copernicus in-situ and other ancillary data necessary for the generation, calibration and validation of Copernicus data and Copernicus information, including where appropriate and cost-effective the use of existing national capacities and avoiding duplications.



Copernicus

Key elements of the cal/val approach

The Copernicus cal/val approach :

- Covers all Sentinels
- Is agnostic of Sentinel missions, based on basic principles and best practices
- Identifies institutional responsibilities in a clear and unambiguous way (ESA, EUMETSAT and Copernicus Services)
- Quantifies appropriate investment needs and resources allocations, separated in Cal/Val and FRM activities
- Is efficient, cost-effective, accountable and transparent – allowing a better monitoring of the implementation
- Identifies dependencies on non-EU infrastructures, including agreements that need to be put in place to ensure operational data provision

Encompassed in Contribution Agreements with ESA and EUMETSAT



Copernicus

Cal/val approach consolidated for Copernicus 2.0 in 4 points

1. CAL/VAL approach

- Ground segment: convergence between ESA and EUM for a joint calval strategy and for product development roadmap
- Common FRM approach including funding rules, support from services in mission performances assessment
- Services: F4P common strategy and exchanges of practices on calval, specific support from JRC
- H2020 project (CCVS): to define an innovative and holistic and system strategy for the cal/val activities for and across all existing and planned Sentinels in an operational perspective to better access to the necessary infrastructure for FRM

2. Access to data

- General setup: in-situ, FRM data are provided in-kind through partnerships
- The coordination is performed directly by services/ESA/EUM when established links are in place
- EEA ensures the cross-cutting in-situ coordination



3. Partnerships

- Very important contribution of EU Member States through existing research or operational networks is still expected with the new space regulation in a free and open basis
- International partnerships from research programmes : e.g. ARGO, ICOS, WMO,...
- Cooperation arrangements with third-countries

4. Copernicus funding

- In-situ shall remain in-kind contribution and be handled through partnerships
- Additional delivery of FRM data may be supported by Copernicus