EEA’s In Situ Data Coordination Activities

Italian Copernicus User’s Meeting 15 Maj 2018
Coordination of in situ data component across services

Implementation of European and local land monitoring

Key user MAWP 2014-2020

• **Copernicus is a great success** and offers excellent Data and Information products to the users;

• **In situ data constitute part of the foundation** for Copernicus’ success;

• Copernicus relies primarily on **existing ‘in situ data’ capacities**;

• Copernicus collects and uses an **enormous amount of in situ data on** a routine basis;

• The **in situ data community benefits** from its cooperation with Copernicus.
Copernicus needs to find solutions to key challenges

- Data policy
- Sustainability
- Accessibility
- Data quality
- Coverage
- Timeliness
- Data gaps

“Stable and sustained long-term solutions are needed”

“Use restrictions are often incompatible with Copernicus’ data policy”

“Acknowledgement and attribution of ownership”

“Sustainability of in situ observing systems remains a strong concern”

“Access to locally available observations”
The benefits of coordination

- Building partnerships
  - European data providers and networks
  - Non-European data providers
  - International cooperation
- Data collection and sharing
- Overview & information gathering
- Knowledge sharing
- Awareness raising and use cases
- Support to internal coordination
Examples of what we do...

**Overview**
- Preparing in situ data State of Play reports (covering all six services)
- Creating and populating the Copernicus In Situ Component Information System (CIS²)
- Creating Fact Sheets for all Copernicus Services’ components

**Access**
- Managing partnership agreements with EuroGeographics, EuroGeoSurveys, and EUMETNET
- Managing access agreements with international partners
- Maintaining and adding content to the Copernicus Geospatial Reference Data Access Portal

**Awareness**
- Developing and maintaining the Copernicus in situ website
- Producing news articles and newsletters
- Representing the Copernicus in situ component at conferences and workshops
Find more information on

Insitu.copernicus.eu
In situ

CLMS - Local & Pan-European Component

Reliable and timely access to essential data is required to

• Support **visual interpretation** and feature delineation of land cover/use objects;

• Improve the **reliability and thematic accuracy** of the thematic products;

• Improve the **calibration of the density products** – imperviousness and tree cover density;

• Support **validation of products** and internal quality control steps.
Main challenges

• **Access:** Various geospatial in situ data exist at national and regional level, but are currently not accessible on a full, free and open basis;

• **Consistency:** Existing national datasets often differ significantly in their technical specifications and standards;

• **Timeliness:** The in situ data should meet the temporal requirements of the Pan-European CLMS component with its specific reference years.
Reliable and timely access to essential data is required to

- Reduce **delivery time** of the final products;
- Increase the **thematic and geometric accuracy** of the products;
- Provide **input** to flood area estimation and risk models;
- Support **quality assurance and validation** activities.
Main challenges

• The main challenge is accessing and exploiting in situ data within emergency management timeframe;
• For reference topographic datasets and pre-event aerial orthoimagery, global datasets are often insufficient;
• The quality of products would be significantly improved by access to higher-resolution and up-to-date datasets for e.g. assets, elevation and population;
• Whilst local in situ data may exist, they are either inaccessible, not accessible in the correct timeframe, or are made available in an inappropriate format.
Main benefits of CORDA

• Single point of entry;
• Provide links to national and regional geospatial data from across Europe;
• Monitor the availability of data services;
• Make data discovery easy;
• Restricted to access by Copernicus service providers;
• High reliability and accessibility;
• Simple to use.
Italian data provides contribute to CORDA

113 datasets from 7 data providers
Bilateral agreements with NMCAs

- Bilateral agreement with IMGI Italian Military Geographic Institute re data to CEMS.
- Data under the Scope of Agreements for Copernicus Emergency Management Services (CEMS) are:
  - Orthophoto, approx. accuracy 0,5m
  - Raster topographical maps 1:50 000 or larger
  - Georeferenced datasets in vector format with an accuracy equivalent to a scale of 1:50 000 or larger (georeferenced datasets are: administrative boundaries, transportation infrastructure, settlement boundaries and toponyms, hydrographic network, ...)
  - Digital Elevation Models (DEM) with a resolution of 1m-25m (accuracy horizontal CE90:1m-25m; vertical LE90:1-10m)
The EEA is collecting and combining INSPIRE data from Member States

Example: Administrative Units
• EEA and EUMETNET signed agreement on the provision of hydrological, meteorological and climatological data for the Copernicus Services;

• Eric Petermann, Executive Director of EUMETNET, emphasised the broad scope of the new arrangement, explaining that “Copernicus Services can reuse all the data produced by EUMETNET members for their own purposes free of charge. The only limitations are attribution of ownership and proper licensing with data owners in case of redistribution of such data”.
A few concluding remarks

- In situ data is an integrated and essential part of Copernicus;

- Data from Member States are critical to ensure the quality of Copernicus Data and Information products;

- Cross-cutting coordination is required to reach effective and cost-efficient solutions;

- A long-term strategy and operational solutions are needed to mitigate key challenges sustainability and data policy.
And a few questions

• Will Copernicus benefit from a more holistic and long-term approach to in situ data requirements, challenges, and solutions?

• Will a deeper and more targeted involvement of Copernicus Relays, Academy, and the Copernicus community in general incentivise data sharing and buy-in from in situ data providers?

• Could Copernicus’ in situ data capacities play a stronger cross-cutting role e.g. vis-à-vis efficient data collection, quality control, and data sharing for the benefit of Copernicus users and data providers?
Thank you for your attention