In situ

The value of NMCAs data for Copernicus

Joint Conference PCC-CLRKEN EuroGeographics

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27 October 2023

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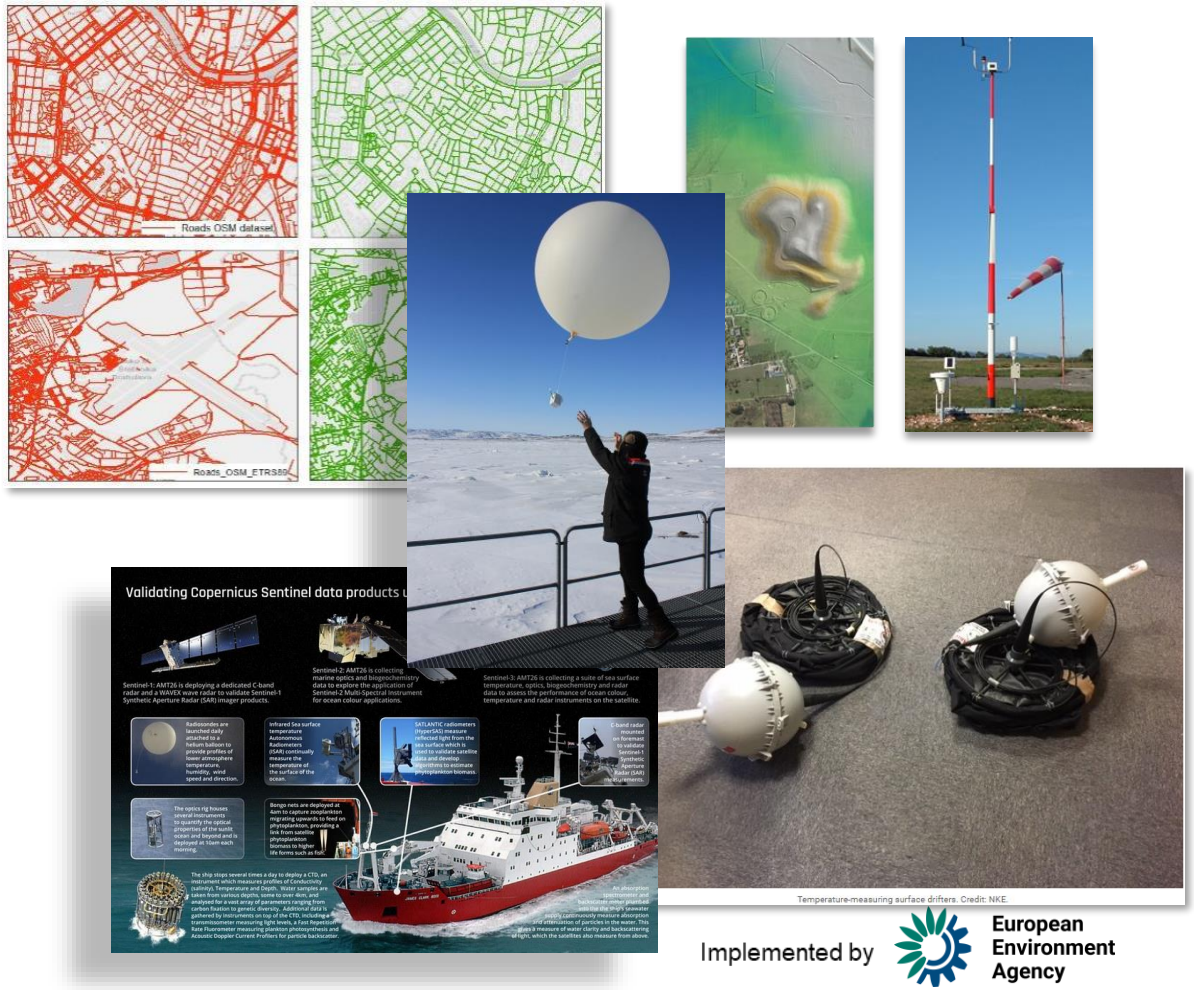
Introduction – Copernicus and In Situ Data

Key user requirements cannot be met unless Copernicus has access to essential in situ data

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

All Copernicus Services require in situ data to produce and validate their products

The Copernicus Space Component requires in situ data for calibration and validation of Sentinel observations



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Introduction – Copernicus and In Situ Data

Where is in-situ data coming from?

- Predominately from national data owners and providers → **YOU**

- Organised in European or global networks, organisations, and European Research Infrastructures.

Introduction – role of EEA in Copernicus In Situ

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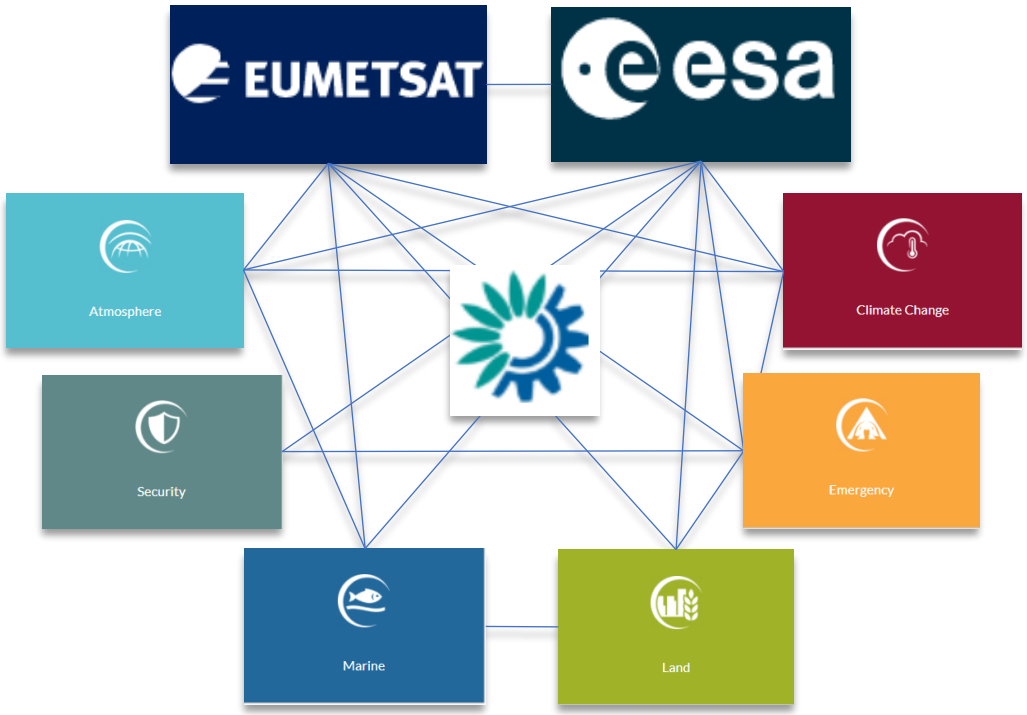
- **Entrusted Entities** access in situ data directly according to their operational needs.

  The Entrusted Entities are responsible for day-to-day activities, setting up and managing technical interfaces;

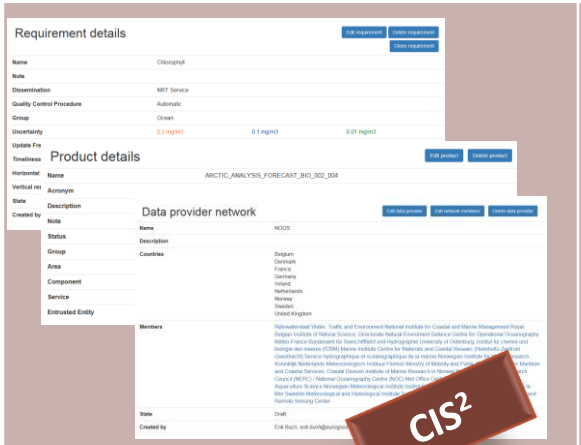
- **The EEA** intervenes in cases where a coordinated approach to accessing in situ data is required at a programmatic level.



Introduction - Areas of work

In situ

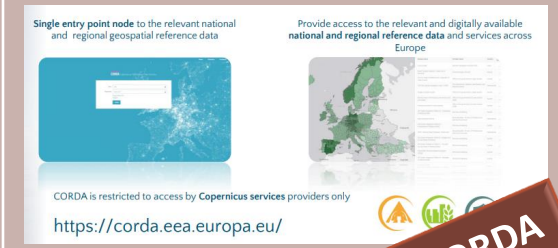
State of Play



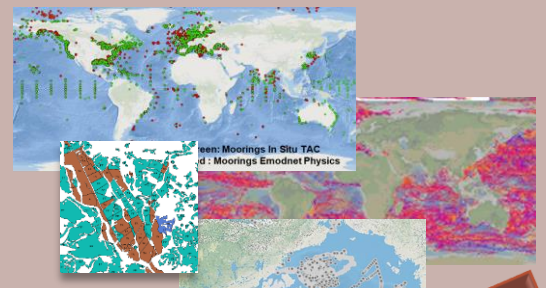
CIS²

Fact Sheets and State of Play reports

Access to in situ data



CORDA



Access to specific in situ data

Engaging with data providers

EuroGeographics

Eumetnet

EuroGeoSurveys

Provide advice and support

Reports

Working groups with EE

GEO GROUP ON EARTH OBSERVATIONS

HORIZON EUROPE

GEO, H2020/HEurope projects

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Use of NMCA data in Copernicus Services

In situ

- Settlements
- Industry and Utilities
- Hydrography
- Transport infrastructure
- Elevation
- Land cover
- Population/Census

Emergency

Land

Security

- BORDER SURVEILLANCE COMPONENT
- MARITIME SURVEILLANCE COMPONENT
- SUPPORT TO EU EXTERNAL ACTION

More info on requirements on https://insitu.copernicus.eu/

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Copernicus Service Agreement with EuroGeographics

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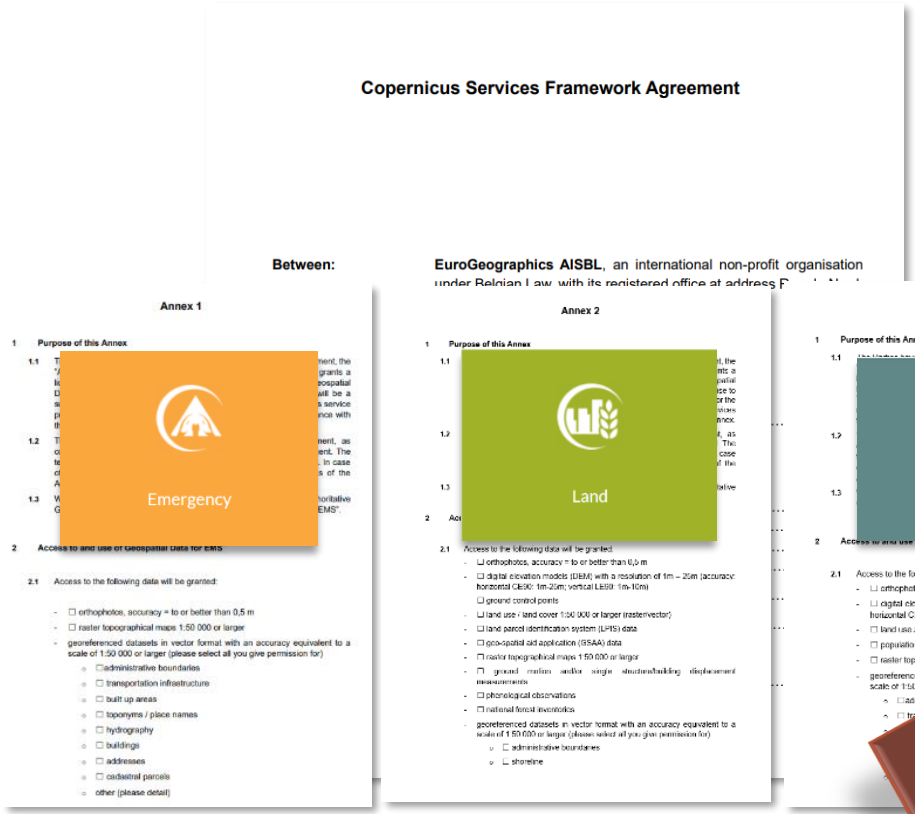

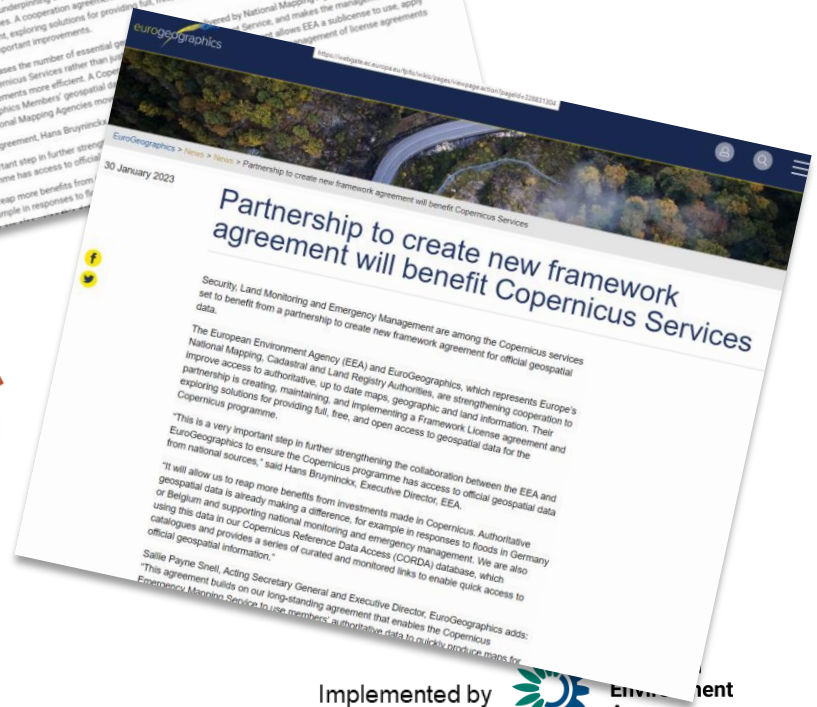

EEA-EG Partnership Agreement signed **15/12/2022**

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Status of signature of agreement with EG members

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Belgium National Geographic Institute of Belgium	**Czech Republic** Czech Office for Surveying, Mapping and Cadastre	**France** National Institute of Geographic and Forest Information	**Iceland** National Land Survey of Iceland	**Moldova** Agency for Land Relations and Cadastre of the Republic of Moldova	**Portugal** Directorate General for Territory	**Spain** National Geographic Institute of Spain
Belgium General Administration of Patrimonial Documentation	**Denmark** Agency for Data Supply and Infrastructure	**Germany** Working Committee of the Surveying Authorities of the Laender of the Federal Republic of Germany	**Ireland** Ordnance Survey Ireland	**Northern Ireland** Land and Property Services	**Slovakia** Geodesy, Cartography and Cadastre Authority of the Slovak Republic	**Sweden** The Swedish mapping, cadastral and land registration authority
Croatia State Geodetic Administration of the Republic of Croatia	**Estonia** Estonian Land Board	**Germany** Federal Agency for Cartography and Geodesy	**Latvia** Latvian Geospatial Information Agency	**Norway** Norwegian Mapping Authority	**Slovenia** Surveying and Mapping Authority of the Republic of Slovenia	**The Netherlands** Cadastre, Land Registry Mapping Agency
Cyprus Cyprus Department of Lands and Surveys	**Finland** National Land Survey of Finland	**Georgia** National Agency of Public Registry	**Malta** Malta Land Registry	**Poland** Head Office of Geodesy and Cartography	**Spain** General Directorate for the Cadastre	

27 EG members have already signed the new Framework Agreement
MANY THANKS!

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Access to geospatial data: CORDA

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Single entry point node to the relevant national and regional geospatial reference data

Provide access to the relevant and digitally available **national and regional reference data** and services across Europe

CORDA is restricted to access by **Copernicus services** providers only

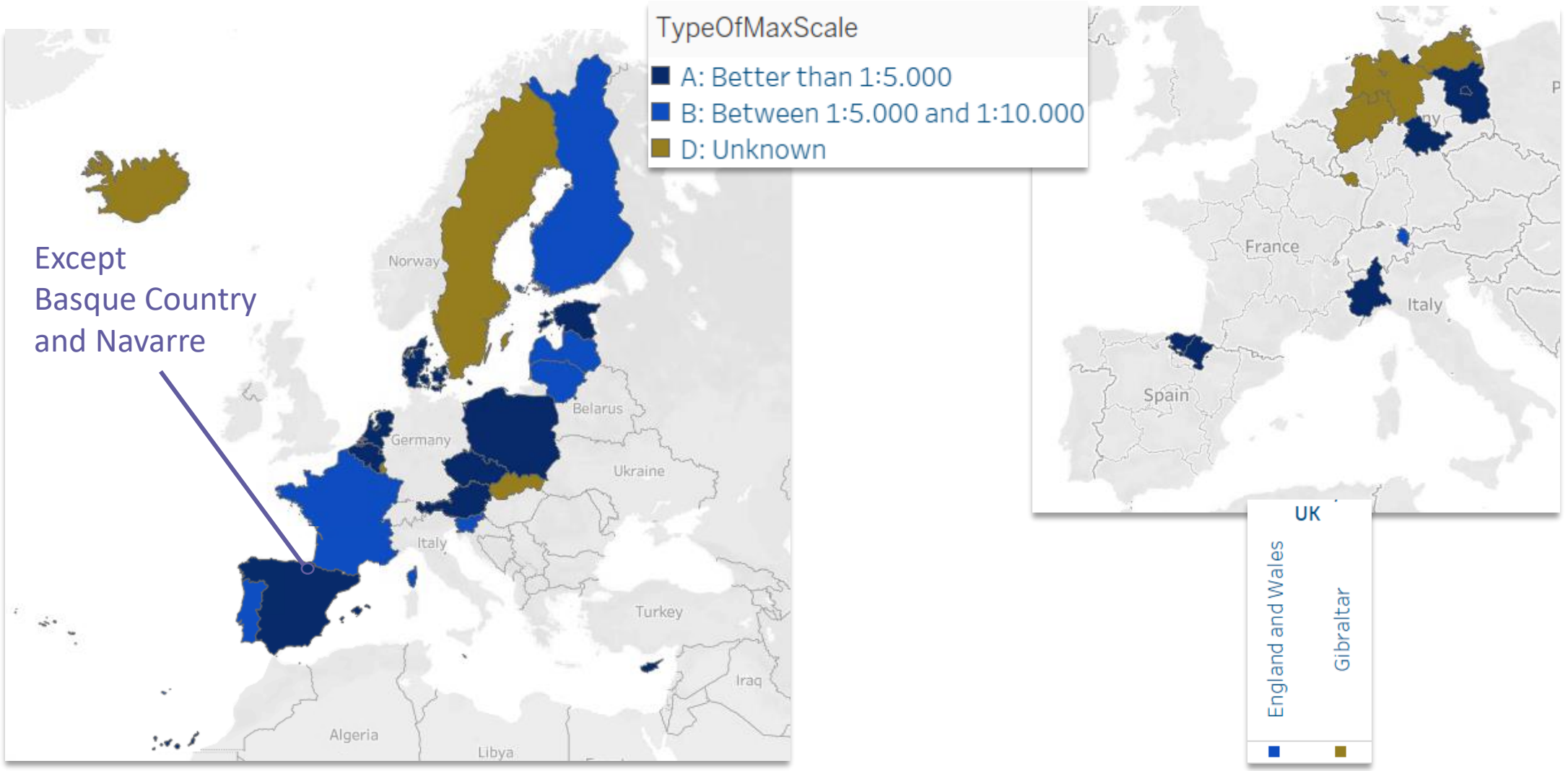
https://corda.eea.europa.eu/

Countries	Data providers	Datasets
40	273	1.855

Resources	Themes	Resource types
5.225	28	19

Cadastral Parcels (CP) datasets currently in CORDA

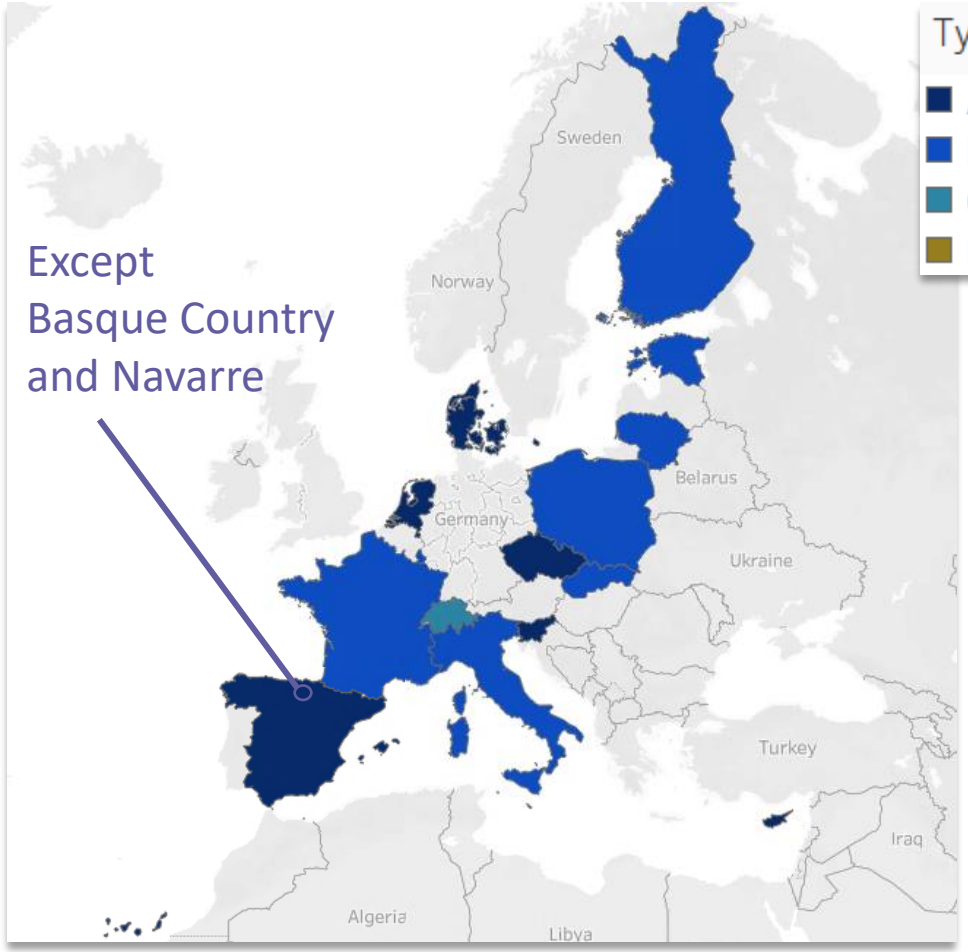
In situ

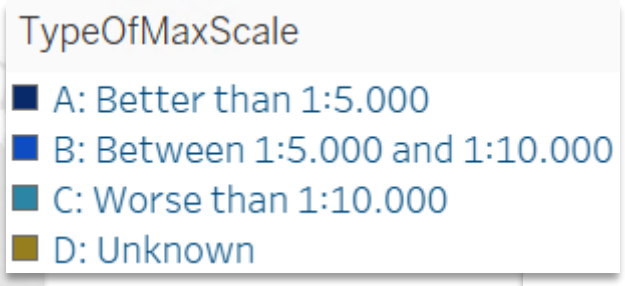


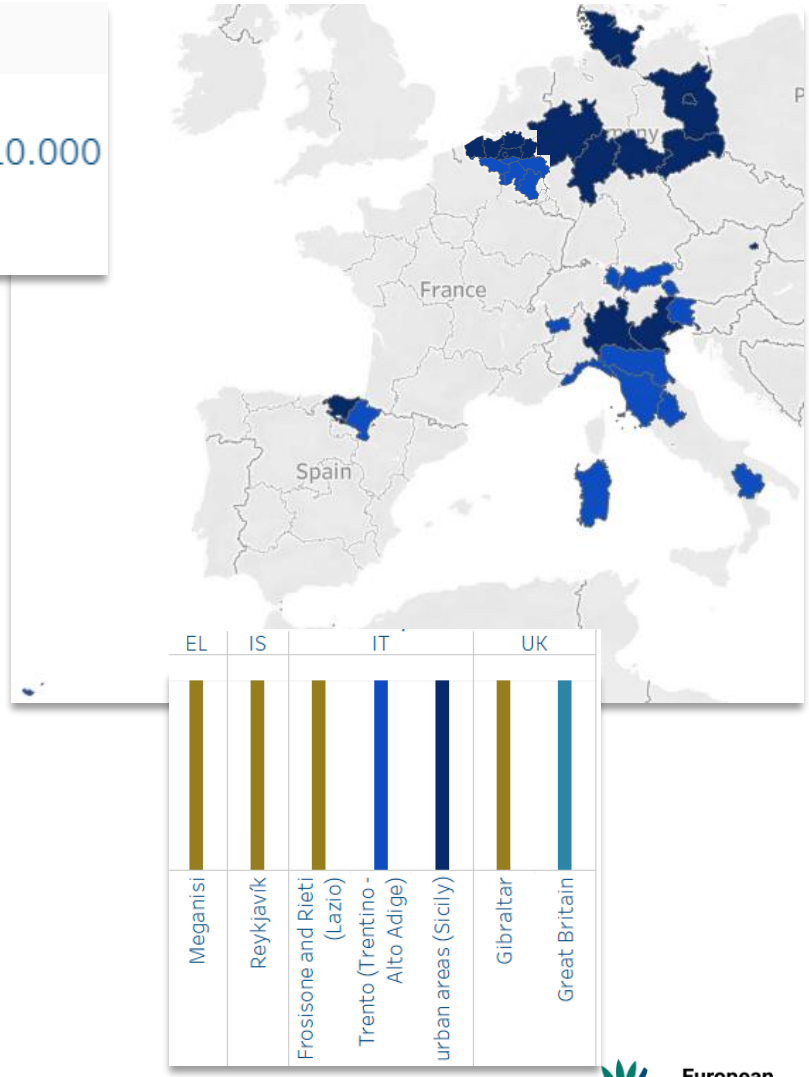
Source: CORDA's Database

Building (BU) datasets currently in CORDA

In situ







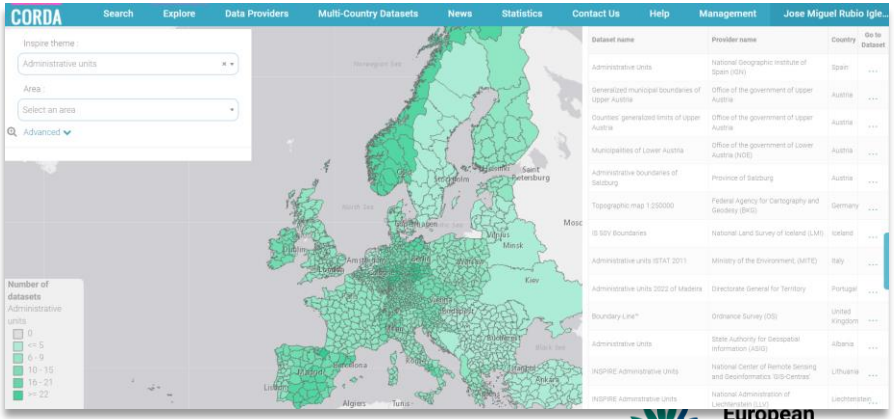
Source: CORDA's Database

Next steps in the Copernicus Framework Agreement

In situ

- **Follow up signature of annexes** by EG members with EG Head Office
- **Engage with** NMCAs to ensure access to their data via CORDA
  - CORDA team has assessed the existing data offers already available to Copernicus
  - EuroGeographics Head Office will act as a facilitator between NMCAs and CORDA team
  - Guidance material and use cases will be prepared
- **Online webinar** on 23 November with EG Members
- **Review CEMS Annex** to ensure it reflects correctly current requirements

Data Provider	Country	Number of datasets
State Authority for Geospatial Information (ASIG)	Albania	20
Federal Office of Metrology and Surveying (BEV)	Austria	5
National Geographic Institute of Belgium (NGI) / (IGN)	Belgium	11
Geodesy, Cartography and Cadastre Agency (AGCC)	Bulgaria	1
State Geodetic Administration of the Republic of Croatia (DGU)	Croatia	10
Cyprus Department of Lands and Surveys	Cyprus	19
Czech Office for Surveying, Mapping and Cadastre (CUZK)	Czechia	25
Agency for Data Supply and Efficiency	Denmark	17
Estonian Land Board	Estonia	17
National Land Survey of Finland (NLS) / (MML)	Finland	14
National Institute of Geographic and Forest Information (IGN)	France	15
National Agency of Public Registry	Georgia	1
Federal Agency for Cartography and Geodesy (BKG)	Germany	14



Additional activities in 2023-2024 with EuroGeographics

In situ

- Follow up **High Value Datasets IR** implementation and its impact on the availability of data for Copernicus

20.1.2023 EN Official Journal of the European Union L 19/43

COMMISSION IMPLEMENTING REGULATION (EU) 2023/138

of 21 December 2022

laying down a list of specific high-value datasets and the arrangements for their publication and re-use

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information (1), and in particular Article 14(1) thereof,

Whereas:

(1) It transpires from Directive (EU) 2019/1024 that an EU-wide list of datasets with a particular potential to generate socio-economic benefits and with harmonised re-use conditions is a significant enabler of cross-border data applications and services.

(2) The main objective of establishing the list of high-value datasets is to ensure that public data of highest socio-economic potential are made available for re-use with minimal legal and technical restriction and free of charge.

(3) Harmonising the implementation of the re-use conditions of high-value datasets entails the technical specification for making

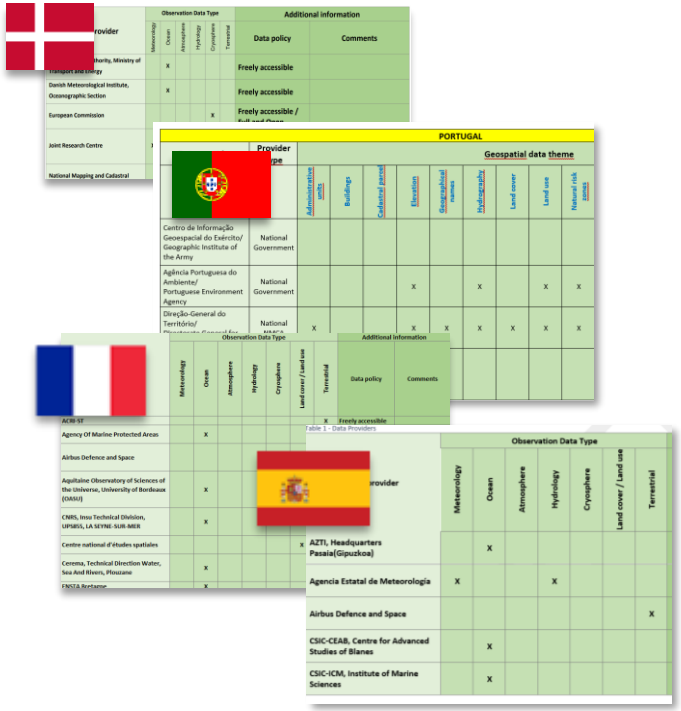
- Ensure the appropriate links between **OME2 project and Copernicus**
  - Collect the requirements/needs for a pan-European HVD via stakeholder meetings
  - Establish users within the EEA/Copernicus to test the first outcomes and give feedback

Communication – revamped in situ portal

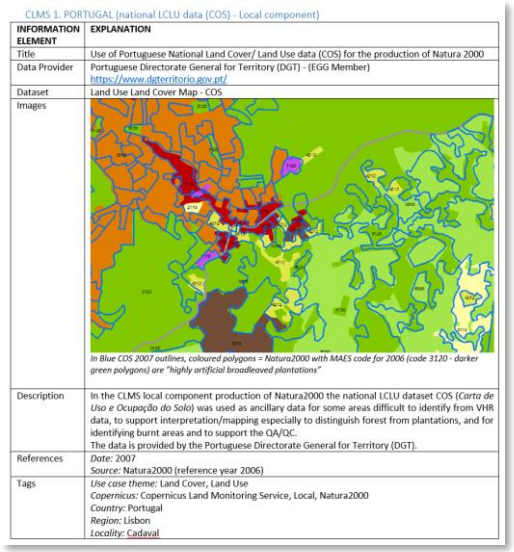
In situ

In Q4 2023 a project for a **revamped in situ portal** will kick off, including *inter alia*:

Country reports with national and regional data providers of in situ data to Copernicus



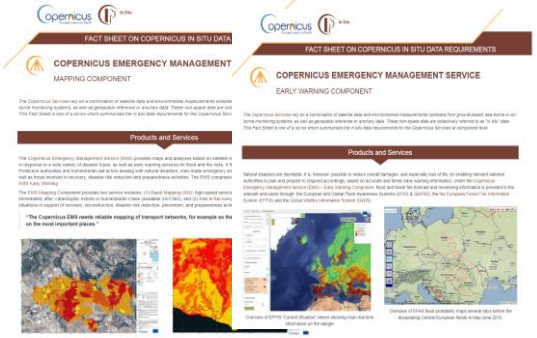
Use case database illustrating the use and importance of in situ data in Copernicus


CLMS 1- PORTUGAL (national LCLU data (COS) - Local component)

INFORMATION ELEMENT	EXPLANATION
Title	Use of Portuguese National Land Cover/ Land Use data (COS) for the production of Natura 2000
Data Provider	Portuguese Directorate General for Territory (DGT) - (EGG Member) https://www.dgterritorio.gov.pt/
Dataset	Land Use Land Cover Map - COS
Images	*In Blue COS 2007 outlines, coloured polygons = Natura2000 with MAES code for 2006 (code 3120 - darker green polygons) are "highly artificial broadleaved plantations"*
Description	In the CLMS local component production of Natura2000 the national LCLU dataset COS (*Carta de Uso e Ocupação do Solo*) was used as ancillary data for some areas difficult to identify from VHR data, to support interpretation/mapping especially to distinguish forest from plantations, and for identifying burnt areas and to support the QA/QC. The data is provided by the Portuguese Directorate General for Territory (DGT).
References	*Date:* 2007 *Source:* Natura2000 (reference year 2006)
Tags	*Use case theme:* Land Cover, Land Use *Copernicus:* Copernicus Land Monitoring Service, Local, Natura2000 *Country:* Portugal *Region:* Lisbon *Locality:* Cadaval

Access to Copernicus In Situ platforms (CIS², CORDA)

A new State of Play, articles, technical reports and factsheets



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Concluding remarks

- NMCAs are already contributing **essential data** to Copernicus services, making a big difference in Land and Emergency Applications ;
- The current contractual arrangement with **EuroGeographics** (within GEOID consortium) is helping bridging the data gaps still existing;
- The **Partnership Agreement** signed in 2022 is ensuring clear mutual understanding of Copernicus requirements and NMCA products;
- EEA and EG Head Office will pursue further **capacity building activities** to facilitate the actual implementation of the agreement with EG Members.

In situ

Thank you!

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