



In situ

Use of data from NMCA's in Copernicus Services

EuroGeographics Webinar on Copernicus Service Agreement

Jose Miguel Rubio Iglesias (EEA)

9th March 2023



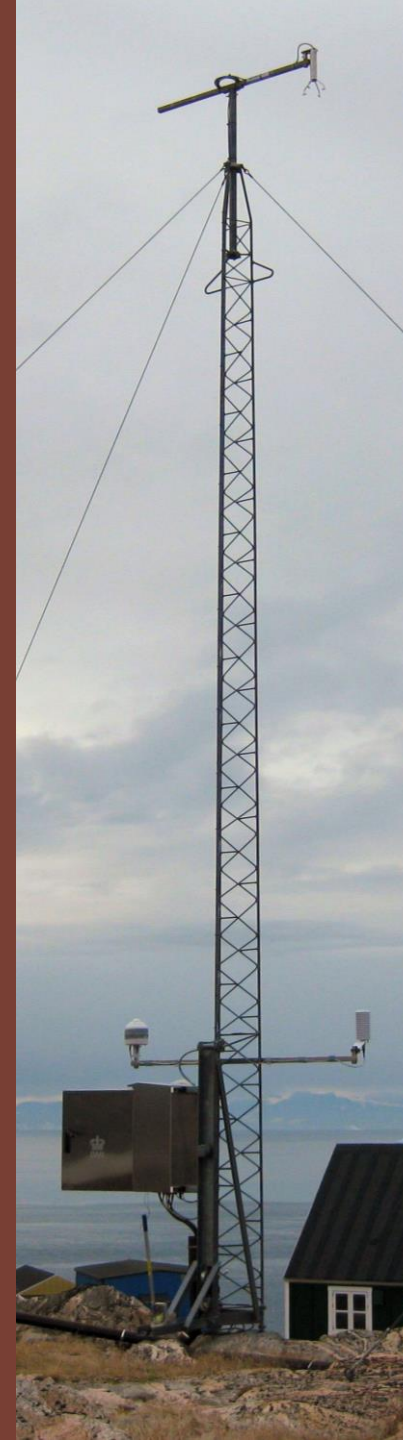
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Introduction – Copernicus and In Situ Data

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.



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Introduction – role of EEA in Copernicus In Situ

- **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.



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Introduction - Areas of work

State of Play

Requirement details

Name: Chisaght

Role: MFT Service

Quality Control Procedure: Automatic

Group: Ocean

Uncertainty: 0.2 mgd, 0.1 mgd, 0.01 mgd

Update Frequency: 1 day

Product details

Name: ARCTIC_ANALYSIS_FORECAST_BIO_004

Vertical Int: 100m

Scale: 1:1000000

Created by: Data provider network

Status: Draft

Group: Ocean

Area: Arctic

Component: Ocean

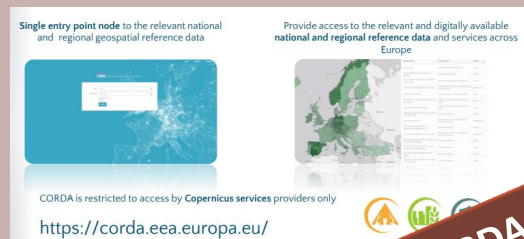
Service: Ocean

Estimated Entity: Ocean

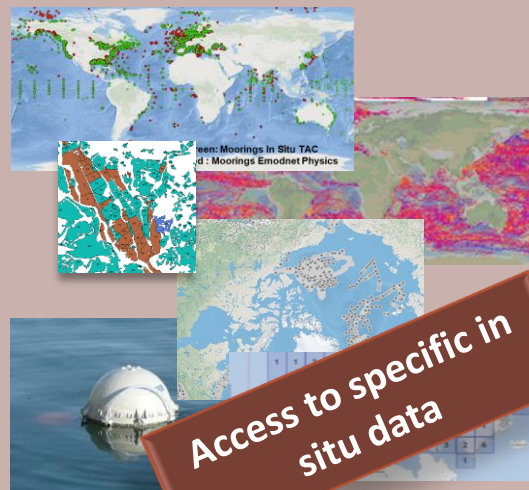


Fact Sheets and State of Play reports

Access to in situ data

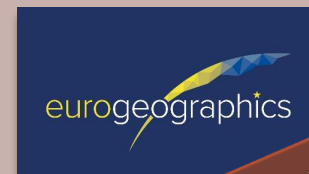


CORDA



Access to specific in situ data

Engaging with data providers



EuroGeographics



Eumetnet



EuroGeoSurveys

Provide advice and support



Reports



Working groups with EE



GEO, H2020/HEurope projects

Implementing the European Environment Agency



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Copernicus Europe's eyes on Earth




State of Play

Access to in situ data

Engaging with data providers

Provide advice and support


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

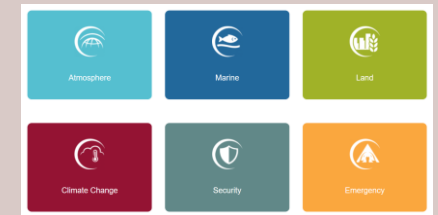
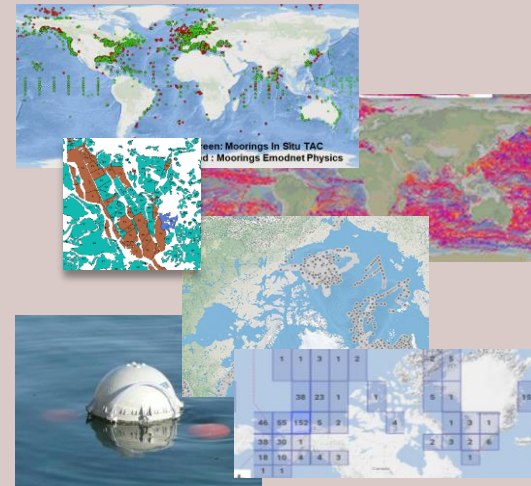


CORDA is restricted to access by **Copernicus services** providers only

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

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







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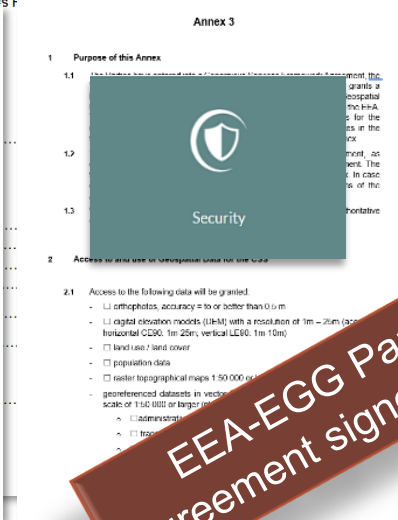
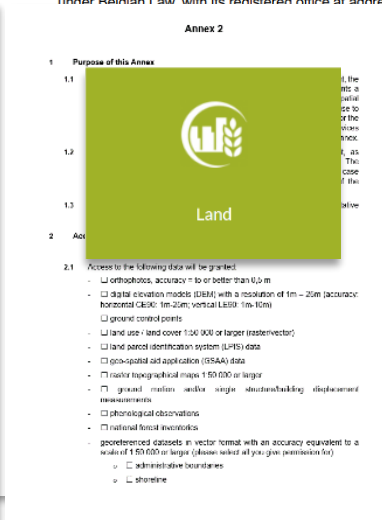
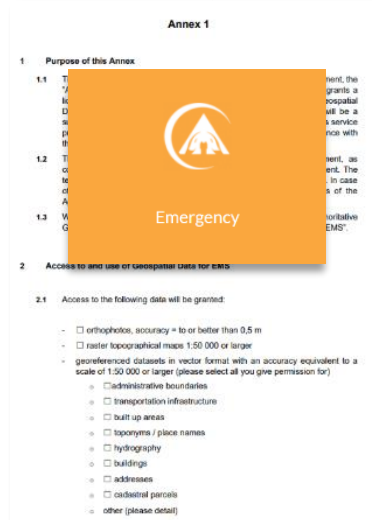
Copernicus Service Agreement with EuroGeographics



Copernicus Services Framework Agreement

Between:

EuroGeographics AISBL, an international non-profit organisation
under Belgian law with its registered office at address F 1111



EEA-EGG Partnership
Agreement signed 15/12/2022



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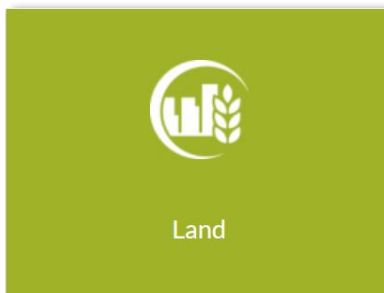
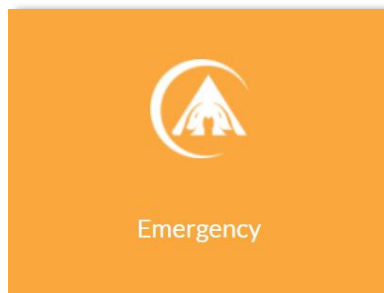
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Use of NMCA data in Copernicus Services

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



BORDER SURVEILLANCE COMPONENT

MARITIME SURVEILLANCE COMPONENT

SUPPORT TO EU EXTERNAL ACTION

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



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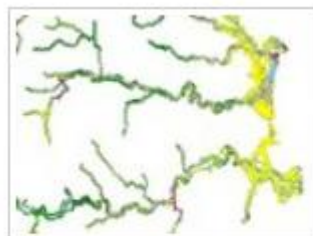
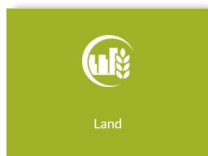


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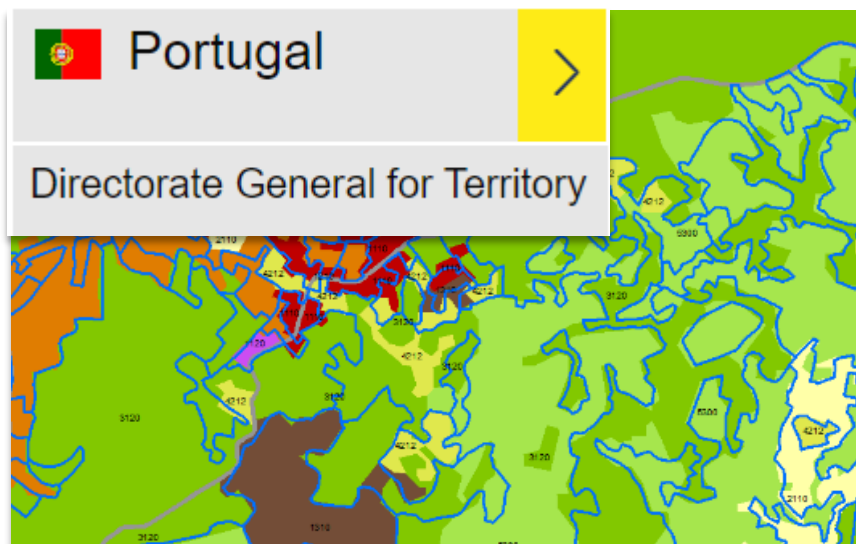
Use cases of NMCA data in Copernicus (I)



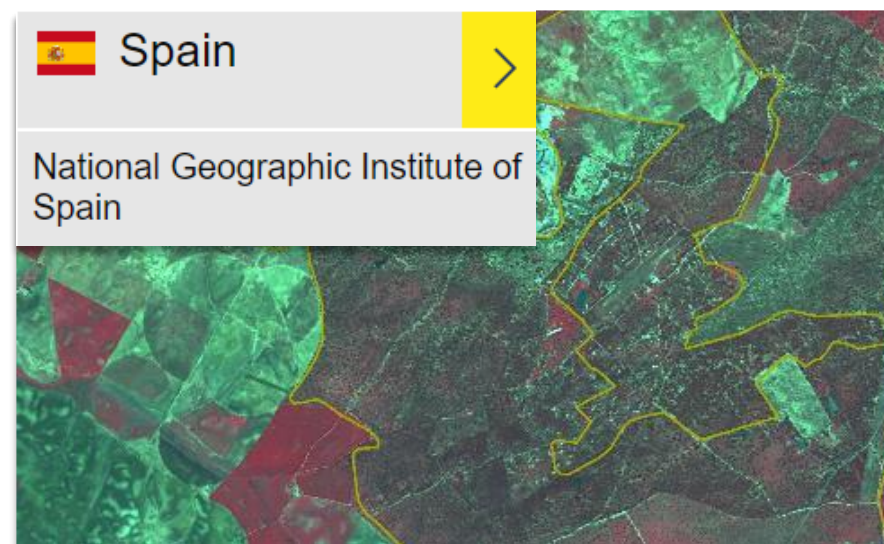
Riparian Zones (RZ)



Natura 2000 (N2K)



Carta de Uso e Ocupação do Solo (COS)



Sistema de Información de Ocupacion del Suelo de España (SIOSE)



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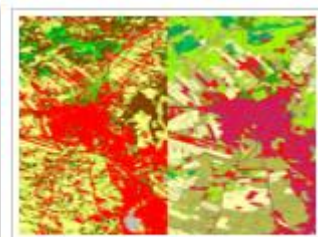
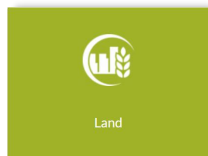


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Use cases of NMCA data in Copernicus (II)

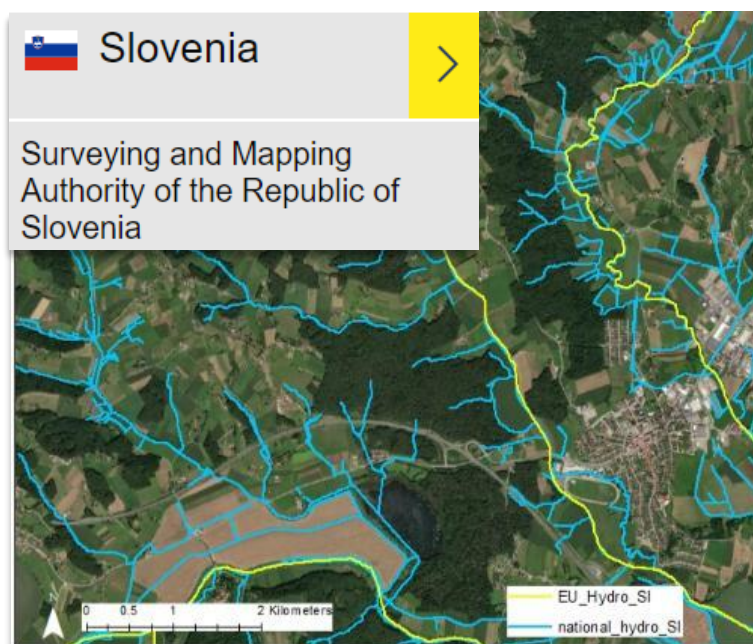
In situ



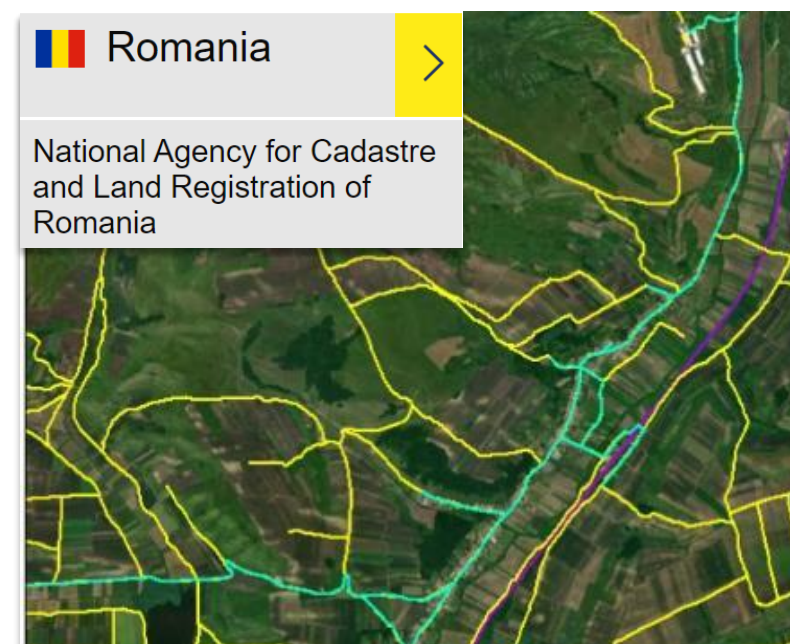
CLC+ Backbone



National Hydrological Data



National Hydrological Data



National Transportation Data



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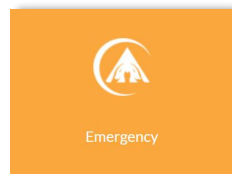


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Use cases of NMCA data in Copernicus (III)

In situ



Emergency



Risk and Recovery Mapping

Risk & Recovery Mapping supplies geospatial information in support of Disaster Management activities including prevention, preparedness, risk reduction and recovery plans.

EMSN054: Assessment of flood risk and economic impact, Drin river basin, Balkans

Event Time (UTC): 2018-08-01 00:00

Event Type: Flood

Activation Time (UTC): 2019-08-02 00:00

Activation Status: Closed

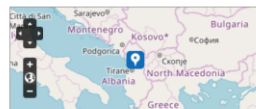
Affected Countries/Territories:

- Republic of Albania
- The Republic of North Macedonia
- Republic of Kosovo
- Montenegro

Area Descriptor: Albania, Macedonia, Montenegro, Serbia, Kosovo

Authorised User:

GHLZ, Federal Office of Civil Protection and Disaster Assistance (BBK)



EMSN105: Floods in Solingen, Germany

Event Time (UTC): 2021-07-13 00:00

Event Type: Flood

Activation Time (UTC): 2021-08-16 00:00

Activation Status: Closed

Affected Countries/Territories:

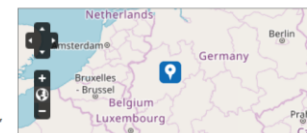
- Federal Republic of Germany

Area Descriptor:

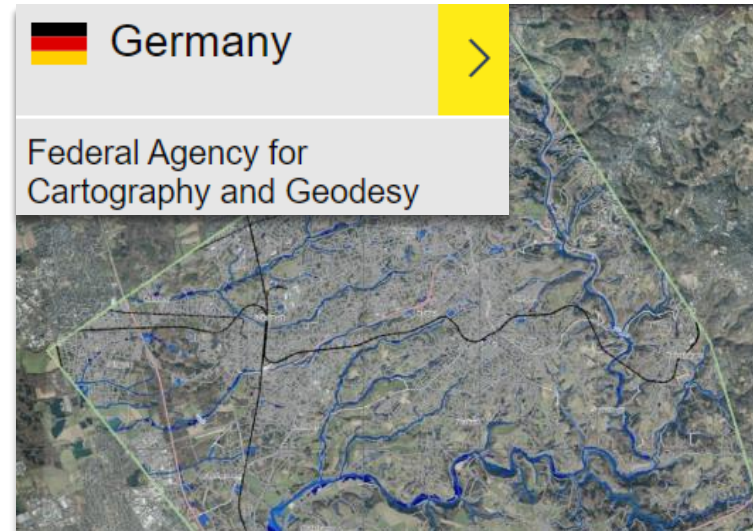
Solingen North Rhine Westphalia area, Germany

Authorised User:

Federal Office of Civil Protection and Disaster Assistance (BBK)



Orthophotos, DEM



National DTM, hydraulic and hydrographic data



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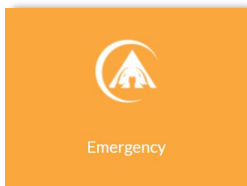


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Use cases of NMCA data in Copernicus (and IV)

In situ

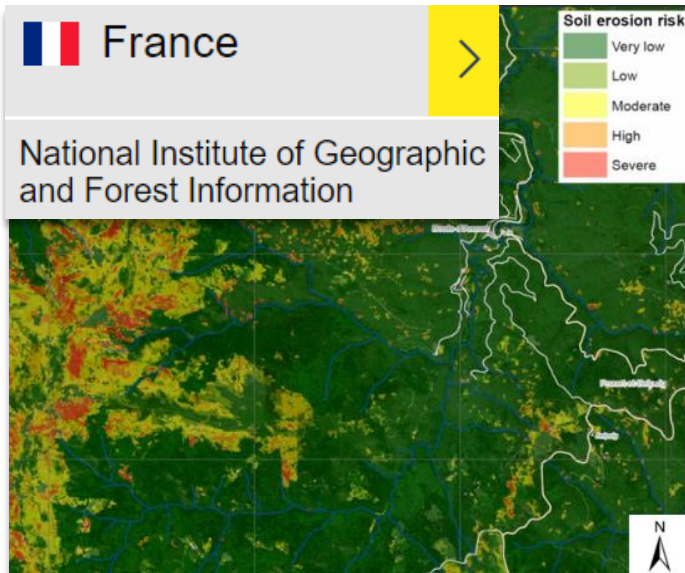


Emergency



EMSN073: Post Gloria storm impact assessment in eastern Pyrenees

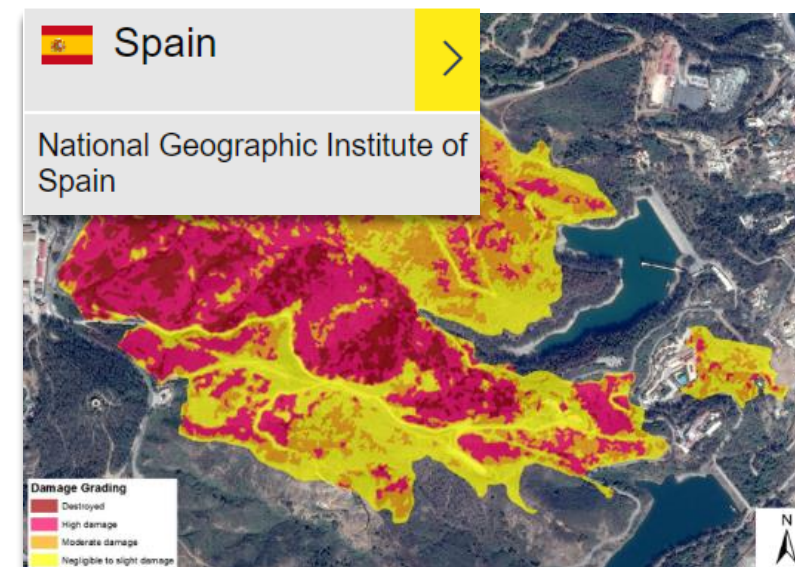
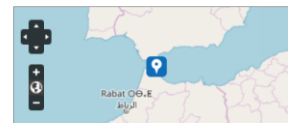
Event Time (UTC): 2020-01-21 01:00
Event Type: Wind storm
Activation Time (UTC): 2020-02-28 01:00
Activation Status: Closed
Affected Countries/Territories:
French Republic
Area Descriptor: Eastern Pyrenees
Authorised User:
DGSCGC (Direction générale de la sécurité civile et de la gestion des crises)



DTM (2012), Orthoimagery (2018)

EMSN137: Wildfire in Ciudad Autónoma de Ceuta, Spain

Event Time (UTC): 2022-09-09 22:45
Event Type: Wildfire (Forest fire)
Activation Time (UTC): 2022-09-12 16:59
Activation Status: Closed
Affected Countries/Territories:
Kingdom of Spain
Area Descriptor: Ceuta, Spain
Authorised User:
General Directorate of Civil Protection and Emergencies (CENEM) on behalf of the Área de Coordinación de Emergencias y Protección Civil de Ceuta (Spain)



Transport Network, SIOSE, Lidar

Use cases to be made available via our website



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Accessibility of your data through 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

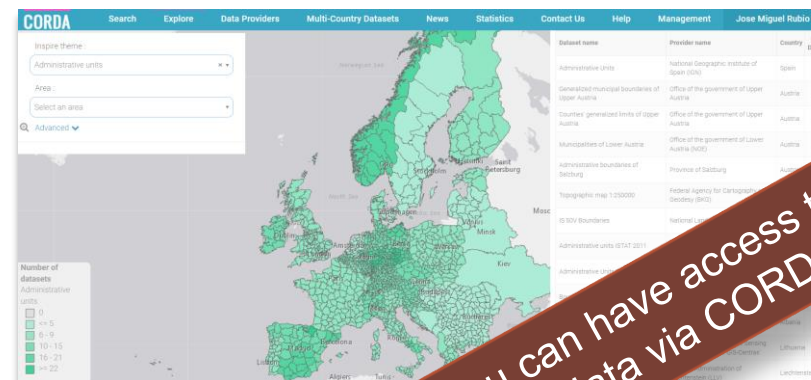


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Data Provider	Country	Number of datasets
State Authority for Geospatial Information (ASIG)	Albania	20
Federal Office of Metrology and Surveying (BEV)	Austria	5
National Geographic Institute of Belgium (NGI) / (IGN)	Belgium	11
Geodesy, Cartography and 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



You can have access to your data via CORDA!



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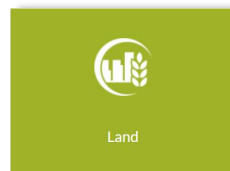
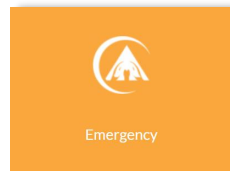


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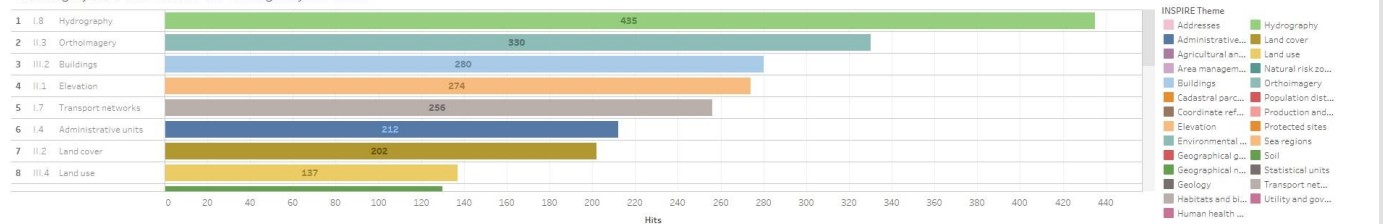
Accessibility of your data through CORDA

In situ



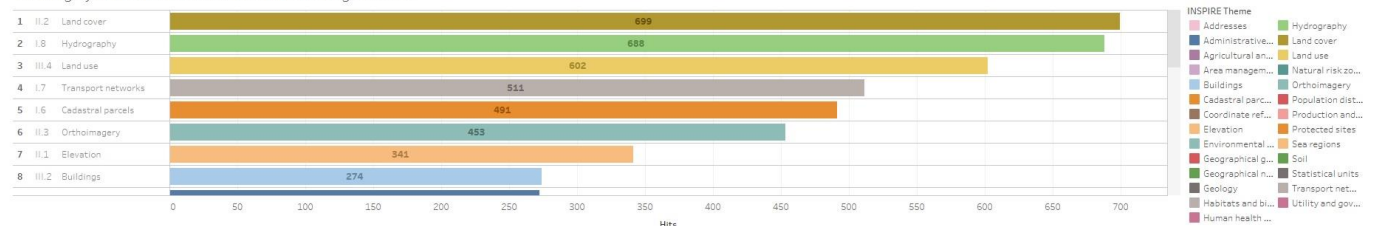
Rank	Dataset Name	Data Provider	Country	Hits
1	Topographic Map of North Rhine-Westphalia	Geobasis NRW - Surveying and Mapping, Cologne Government Regional Office	Germany	63
2	Base map 1: 5000	State Geodetic Administration of the Republic of Croatia (DGU)	Croatia	45
3	Buildings multi-country	European Environment Agency (EEA)	European Bodies	45
4	GSD-General Map	The Swedish mapping, cadastral and land registration authority	Sweden	40
5	DTK25 Digital Topographic Map 1:25000	Federal Agency for Cartography and Geodesy (BKG)	Germany	40
6	EuroGlobalMap	EuroGeographics	European Bodies	36
7	Topographic Database	National Land Survey of Finland (NLS) / (MML)	Finland	35
8	BOTRE - Geo-topographic database 2016 of Piedmont	Piedmont Region	Italy	35
9	Digital orthophotos 0.4 m	Federal Agency for Cartography and Geodesy (BKG)	Germany	31
10	Basic Landscape Model	Federal Agency for Cartography and Geodesy (BKG)	Germany	30

Ranking by INSPIRE themes for Emergency Services



Rank	Dataset Name	Data Provider	Country	Hits
1	GSD-General Map	The Swedish mapping, cadastral and land registration authority	Sweden	112
2	Basic Landscape Model	Federal Agency for Cartography and Geodesy (BKG)	Germany	66
3	EuroGlobalMap	EuroGeographics	European Bodies	63
4	GRBgis - Large-scale Reference File of Flanders	Flanders Information Agency	Belgium	60
5	Topographic Database	National Land Survey of Finland (NLS) / (MML)	Finland	49
6	Topographic Map of North Rhine-Westphalia	Geobasis NRW - Surveying and Mapping, Cologne Government Regional Office	Germany	49
7	TOP10NL Digital topographic map 1:10000	Cadastre, Land Registry and Mapping Agency	Netherlands	48
8	DTK25 Digital Topographic Map 1:25000	Federal Agency for Cartography and Geodesy (BKG)	Germany	48
9	Land Use and Cover Areas frame Survey - LUCAS 2012	Eurostat	European Bodies	44
10	NSO Raster	Norwegian Mapping Authority	Norway	40

Ranking by INSPIRE themes for Land Monitoring Services



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Next steps in the implementation of the agreement

- **Follow up signature of annexes** by EG members with EG Head Office
- **Review and ensure availability** of licensed datasets via CORDA by EEA/CORDA Team
 - We may contact you for cross-check some datasets
- **Provision of guidance** for NMCAAs
 - If data available via API/web services/FTP, no need to do anything from your side!
- **Webinar** in spring with CORDA experts
 - The idea is to introduce CORDA and solve any question you may have



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Thank you for your attention!

Jose Miguel Rubio Iglesias
Expert – Copernicus In Situ Data

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