



In situ

Towards improved use of NMCA's data and services by Copernicus

Henrik Steen Andersen
European Environment Agency





In situ

Copernicus uses geospatial information

Copernicus Services need access to open, up-to-date, and harmonised geospatial information across Europe for production and validation purposes.

Data produced by NMCA's are key to the success of Copernicus.

EEA and EuroGeographics' secretariat are working closely together with a view to improving our cooperation, data access, and knowledge exchange.



European Environment Agency (EEA)

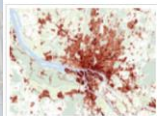


In situ

Copernicus Land Monitoring Service

Key USER

High Resolution Layers



Imperviousness



Forests



Grassland

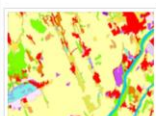


Water & Wetness

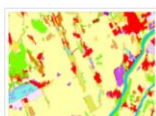


Small Woody Features

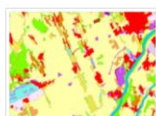
CORINE Land Cover



CLC 1990



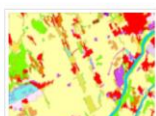
CLC 2000



CLC 2006



CLC 2012



CLC 2018



CHA 1990-2000

Local



Urban Atlas



Riparian Zones



Natura 2000 (N2K)



Coastal Zones

Key Copernicus land monitoring products requiring geospatial data to meet end user requirements regarding content and quality.



In situ

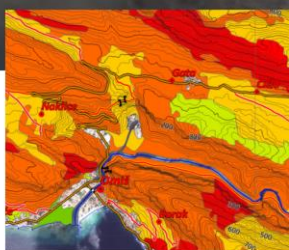
Copernicus Emergency Management Service

Key USER

RISK AND RECOVERY MAPPING

The **On-demand Mapping service** provides on-demand detailed information for emergency situations that arise from natural or man-made disasters anywhere in the world (e.g. flood, fire, earthquake, storm, industrial accidents). It supports all phases of the emergency management cycle: Rapid Mapping supports the emergency response; and Risk and Recovery the preparedness and recovery phases.

The **Risk and Recovery Mapping service** is offered in an international context of the Sendai Framework for Disaster Risk Reduction and targeting information layers that support decision making in the emergency management phases that are not directly related to response. Global efforts in disaster risk reduction recognise the role of satellite and aerial sensor imaging data sets and/or related value-adding information services in preparedness, prevention, and reconstruction. The EMS mapping for disaster risk reduction and recovery service will remain a unique European contribution in this context, as it focuses on the information extraction for hazard characterization in a range of preparedness, recovery, and response contexts.



Assets and Population Exposure Map - Forest Fire Risk Assessment (Croatia)

Copernicus
Europe's eyes on Earth

Space

RAPID MAPPING

The **On-demand Mapping service** provides on-demand detailed information for emergency situations that arise from natural or man-made disasters anywhere in the world (e.g. flood, fire, earthquake, storm, industrial accidents). It supports all phases of the emergency management cycle: Rapid Mapping supports the emergency response; and Risk and Recovery the preparedness and recovery phases.

Rapid Mapping provides geospatial information within hours or days of a service request in order to support emergency management activities in the immediate aftermath of a disaster. The service and its outcomes are used by various actors active in the field of crisis management – with e.g. national civil protection of the EU Member States, EU agencies and services, and international humanitarian aid organisations. The outcomes are both ready-to-print maps to quickly visualise the main results, and geospatial data to be integrated in geoinformation systems for further analysis. All mapping products are available for free on the portal and in the activation viewer (except for sensitive activations).



Example of a delineation product, showing the extent of the flooded area, the main access roads, and the settlements.

Copernicus
Europe's eyes on Earth

Space

Key Copernicus emergency management products requiring geospatial data to meet end user requirements regarding content and quality.

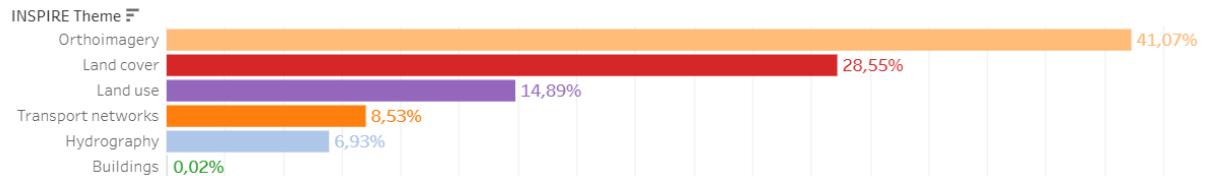


In situ

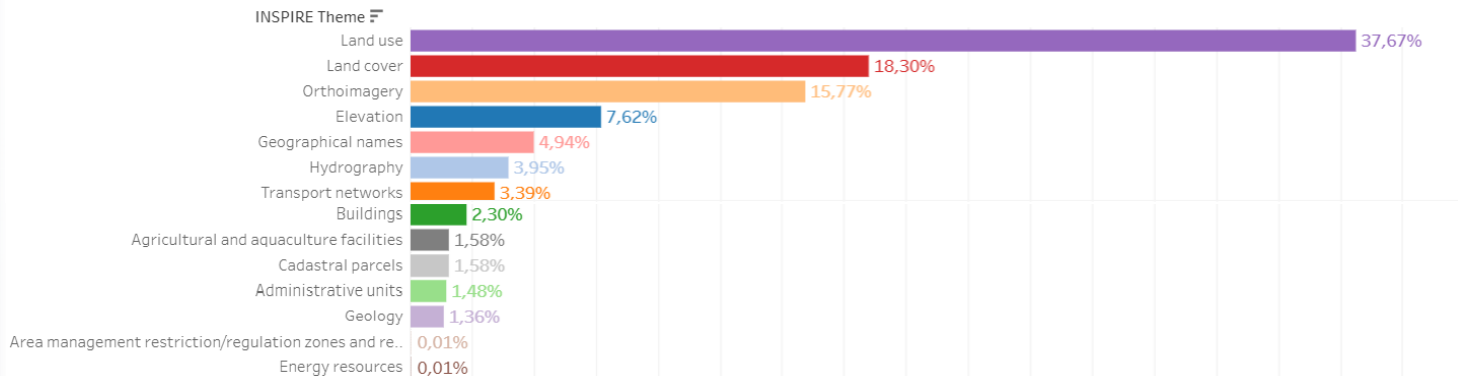
What data are the Services looking for?



Copernicus Land Monitoring Services



Copernicus Emergency Management Services





In situ

EEA's main cross-cutting activities

**Maintain an
overview of the
Copernicus In
Situ Component**

**Improve access
to selected in
situ data**

**Raise awareness
about the
Copernicus In
Situ Component**

This work is done in close cooperation with the Copernicus Services

The EEA is supported by the GEOID consortium led by e-geos.
EuroGeographics is member of GEOID.





In situ

The EEA is creating an overview

Requirement details

Name

Note

Dissemination

Quality Control Procedure

Data details

Name

Note

Update Frequency

Area

Product details

Name

Acronym

Description

Note

Data provider network

Name

Description

Countries

Belgium
Denmark
France
Germany
Ireland
Netherlands
Norway
Sweden
United Kingdom

Members

Rijkswaterstaat Water, Traffic and Environment National Institute for Coastal and Marine Management Royal Belgian Institute of Natural Sciences, Directorate Natural Environment Defence Centre for Operational Oceanography Météo-France Bundesamt für Seeschifffahrt und Hydrographie University of Oldenburg, Institut für chemie und biologie des meeres (ICBM) Marine Institute Centre for Materials and Coastal Research (Helmholtz-Zentrum Geesthacht) Service hydrographique et océanographique de la marine Norwegian Institute for Water Research Koninklijk Nederlands Meteorologisch Instituut Finnish Ministry of Mobility and Public Works, Agency for Maritime and Coastal Services, Coastal Division Institute of Marine Research in Norway Natural Environment Research Council (NERC) / National Oceanography Centre (NOC) Met Office Centre for Environment, Fisheries and Aquaculture Science Norwegian Meteorological Institute Institut Français de Recherche pour l'Exploitation de la Mer Swedish Meteorological and Hydrological Institute Danish Meteorological Institute Nansen Environmental and Remote Sensing Center

Created by

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In situ

The Copernicus In Situ Component Information System

Edit requirement

Delete requirement

Clone requirement



FACT SHEET ON COPERNICUS IN SITU DATA REQUIREMENTS



COPERNICUS EMERGENCY MANAGEMENT SERVICE

EARLY WARNING COMPONENT

The Copernicus Services rely on a combination of satellite data and environmental measurements collected from ground-based, sea-borne or air-borne monitoring systems, as well as geospatial reference or ancillary data. These non-space data are collectively referred to as "in situ" data. This Fact Sheet is one of a series which summarises the in situ data requirements for the Copernicus Services at component level.

Edit data

Delete data

Clone data



FACT SHEET ON COPERNICUS IN SITU DATA REQUIREMENTS



COPERNICUS EMERGENCY MANAGEMENT SERVICE

MAPPING COMPONENT

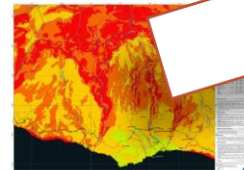
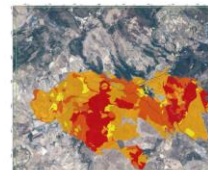
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Products and Services

The Copernicus Emergency Management Service (EMS) provides maps and analyses based on satellite imagery (before, during or after a crisis) in response to a wide variety of disaster types, as well as early warning services for flood and fire risks. It thereby supports crisis managers, Civil Protection authorities and humanitarian aid actors dealing with natural disasters, man-made emergency situations, and humanitarian crises, as well as those involved in recovery, disaster risk reduction and preparedness activities. The EMS comprises two components: EMS Mapping and EMS Early Warning.

The EMS Mapping Component provides two service modules: (1) Rapid Mapping (RM): high-speed service delivery in the midst of, or immediately after, catastrophic events or humanitarian crises (available 24/7/365), and (2) Risk & Recovery Mapping (RRM): for pre- or post-crisis situations in support of recovery, reconstruction, disaster risk reduction, prevention, and preparedness activities.

"The Copernicus EMS needs reliable mapping of transport networks, for example so that relief efforts can be targeted on the most important places."



Fact Sheets



Overview of datasets



Reports

EuroGeographics General Assembly May 2021

European Environment Agency



European Commission





In situ

The EEA and EuroGeographics

- The EEA has signed an overarching Partnership agreement with EuroGeographics;
- The EEA has signed bilateral agreements with 22 National Mapping Agencies;
- The EEA has evaluated key activities initiated by EuroGeographics with Copernicus' requirements in mind:
 - European Location Services (ELS & OpenELS);
 - Core Reference Data Set prototype.





In situ

CORDA and National Mapping Agencies

- CORDA is a controlled and monitored gateway to geospatial data restricted to Copernicus services;
- CORDA gives access to datasets from 256 data providers – almost 2000 datasets and 5900 data services;
- CORDA contains links to more than 430 datasets covering 14 themes produced by mapping agencies in 30 countries.

Country	Provider_Name
Austria	Federal Office of Metrology and Surveying (BEV)
Belgium	National Geographic Institute (NGI) / (IGN)
Switzerland	Federal Directorate of Cadastral Surveying
Switzerland	Swiss Federal Office of Topography
Cyprus	Department of Lands and Surveys of Cyprus
Czechia	Czech Office for Surveying, Mapping and Cadastre (CUZK)
Germany	Federal Agency for Cartography and Geodesy (BKG)
Denmark	The Danish Agency for Data Supply and Efficiency
Estonia	Estonian Land Board
Greece	Mapping and Cadastral
Spain	National Geographic Institute (IGN)
Finland	Geomatics Centre
France	IGN
Italy	IGM
Poland	Geodesy and Cartography
Portugal	Geodesy and Cartography
Romania	Geodesy and Cartography
Slovakia	Geodesy and Cartography
Turkey	Geodesy and Cartography
United Kingdom	Land Registry
United Kingdom	Ordnance Survey

Themes	AU	BE	CH	CY	CZ	DE	DK	EE	EL	ES	FI	FR	GE	HR	IE	LU	LV	NL	NO	PO	PT	RO	SE	SI	SK	TR	UK	Total
Addresses(I.5)	11	1	6	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Administrative units(I.4)	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	95
Basic Map	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Buildings(I.2)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	23
Cadastral parcels(I.1)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	52
Geographical names(I.3)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	34
Hydrography(I.6)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	48
Land cover(II.2) / Land use(II.4)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19
Natural cover(III.2)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18
Orthoimagery(II.3)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	33
Population distribution - demography(III.10)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
Statistical units(III.1)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8
Transport networks(I.7)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31
Total	12	11	30	17	25	17	16	17	2	26	12	20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	437





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Multi-Country dataset

Multi-country datasets are based on INSPIRE compliant and compatible data made available according to the INSPIRE Directive





In situ

Take home messages

Current situation

- Individual license agreements limited to the Copernicus Emergency Management Service;
- A Partnership Agreement signed March 2017;
- Scattered news articles on the importance and use of geospatial data by Copernicus.

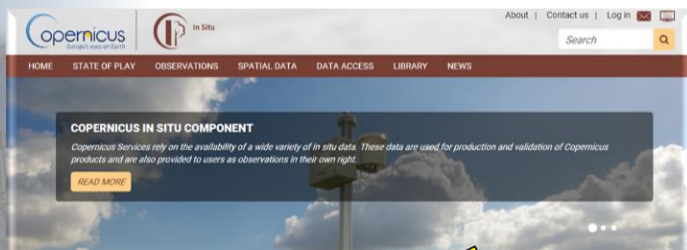
The future

- One license agreement between the EEA and EuroGeographics with reduced use restrictions for the benefit of all Copernicus services;
- An improved Partnership Agreement reflecting our joint vision on cooperation and data sharing;
- Better recognition of NMCAs essential contributions to Copernicus.



In situ

For more information



EXPLORE THE COPERNICUS IN SITU COMPONENT

Copernicus is the European Union's revolutionary Earth Observation and Information Management system. It provides a world of insight about our planet to global citizens, public authorities, policy makers, scientists, entrepreneurs and businesses. Copernicus transforms information from multiple sources into a single, freely available to everyone at no cost. Copernicus transforms information from multiple sources into a single, freely available to everyone at no cost. Copernicus transforms information from multiple sources into a single, freely available to everyone at no cost.

Insitu.copernicus.eu

Discover the Copernicus Services



Home > News > Interview: Mick Cory, EuroGeographics

An interview with Mick Cory, Secretary General and Executive Director, EuroGeographics

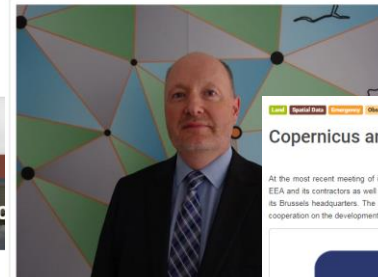
Mick Cory, Secretary General and Executive Director of EuroGeographics, shares his thoughts on the changing environment for the organisation, and its relationship with Copernicus.



Open Data | State of Play | Spatial Data | Data Access

Open Data in Denmark: An interview with Olav Eggers, Danish Agency for Data Supply and Efficiency

Olav Eggers is a senior consultant at the Danish Agency for Data Supply and Efficiency (SDFE). He explains how the Danish approach to e-government paved the way for a wide-ranging open data policy, and how the seeds of this progressive approach are now bearing fruit.



Olav Eggers, Danish agency for data supply and efficiency



EVENTS

No upcoming events at this time.

Copernicus and the National Mapping Agencies

At the most recent meeting of its Copernicus Knowledge Exchange Network (KEN), EuroGeographics hosted the EEA and its contractors as well as representatives of several national mapping and cadastral agencies (NMCA) at its Brussels headquarters. The meeting helped to foster mutual understanding of the EEA's coordination role, and cooperation on the development of the European Location Framework was identified as a fruitful way forward.



Enhanced cooperation potential between the EEA and EuroGeographics has been identified in key areas, such as on the European Location Framework (Credits: EuroGeographics).

High quality mapping products are an essential element of the reference data used by the Copernicus Services. There is already good cooperation between the Copernicus In Situ community and NMCA, reflected for example in the cooperation agreement between the European Environment Agency (EEA), as the coordinator of the Copernicus In Situ component and EuroGeographics, the coordinating body for national mapping agencies in the EU and beyond.

EuroGeographics General Assembly May 2021



Thank you for your attention

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