



# The Copernicus Emergency Management Service



On-demand  
mapping

Copernicus is an EU programme aimed at developing European information services based on satellite Earth Observation and in situ data. The Copernicus Emergency Management Service (CEMS) supports all actors involved in the management of natural or manmade disasters by providing geospatial data and images for informed decision making. CEMS constantly monitors Europe and the globe for signals of an impending disaster or evidence of one happening in real time. It immediately notifies national authorities of their findings or can be activated on-demand and offers to provide them with maps, time-series or other relevant information to better manage disaster risk. CEMS products show information about a disaster event on a scale, timeline, and perspective that only geospatial information can provide. They can examine changes to an area of Earth over a series of days, weeks, months, or years. The CEM service is always free of charge for users. The Copernicus Emergency Management service has two main components: On-demand Mapping as well as Early Warning and Monitoring.

On-demand  
mapping



Rapid  
Mapping



Risk and Recovery  
Mapping

Early warning  
and monitoring



Floods



Fires

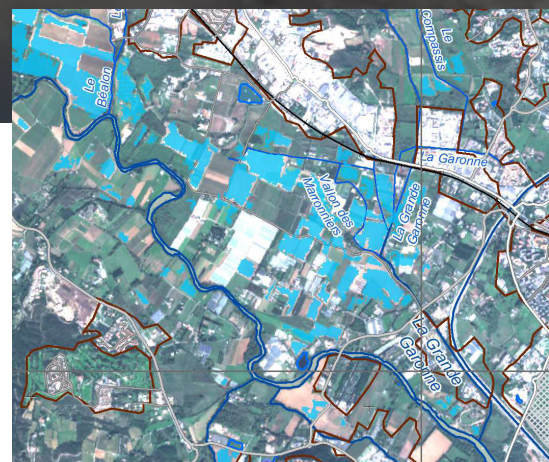


Droughts

## 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.

Space

# Supporting emergency response



The service is based on the acquisition, processing, and analysis, in rapid mode, of satellite imagery and other geospatial raster and vector data sources. In order to provide information within 24h of a user's request, the workflow is highly standardised, and the products are following a set of parameters such as product type and production mode.

## 4 PRODUCT TYPES

- **Reference Product:** Quick knowledge on the territory and assets prior to the emergency
- **First Estimate Product:** Fast assessment of most affected locations
- **Delineation Product:** Assessment of the event impact, extent, update of the situation
- **Grading Products:** Information about the damage grade, its spatial distribution and extent, update of the situation

## SERVICE LEVELS

1. **SL 1:** production in 24/7/365; to be delivered within 2–12 hours after image reception
2. **SL 2:** production during working days and delivery time 1–5 working days after image reception



Access the portfolio



List of Activations

## RAPID MAPPING IN NUMBERS

UNDISCONTINUED  
**24H/7/365**  
OPERATIONS  
SINCE 2012

**60%** OF THE  
ACTIVATIONS ARE  
IN EUROPE

**4** STANDARD  
PRODUCTS  
AVAILABLE

**POST  
DISASTER**  
SCENARIO

FASTEST PRODUCT  
DELIVERED WITHIN  
**3HR** FROM IMAGE  
RECEPTION, ON AVERAGE

## HOW THE DATA IS BEING USED

CEMS Rapid Mapping can only be triggered by or through an Authorised User, which include National Focal Points in the EU Member States and countries participating in the Copernicus programme, as well as European Commission services and the European External Action Service.

<https://emergency.copernicus.eu/mapping/ems/how-use-service>

CEMS supports crisis managers, civil protection and hydro-meteorological authorities, 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. As an EU service, the CEMS's first priority is responding to EU needs and interests, whether from within the EU or abroad.

