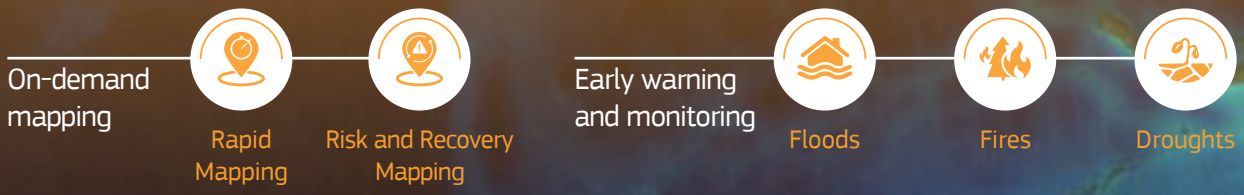
European Commission

The Copernicus Emergency Management Service

The Copernicus Emergency Management Service (CEMS) supports all actors involved in the management of natural or man-made disasters by providing geospatial information to inform decision making. CEMS constantly monitors Europe to forecast, analyse, and provide information for resilience strategies. In predicted events, the service immediately notifies users of their findings and 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 are created using satellite, in situ (ground) and model data. These show information about a disaster event on a scale, timeline, and perspective that only geospatial information can provide. CEMS products can examine changes to an area of Earth over a series of days, weeks, months, or years. The high level of detail allows disaster and risk management authorities to visualise the comprehensive impact of an event. The products can be quickly shared among all agencies involved in an incident to enable timely and consistent response actions.



ON-DEMAND MAPPING

The component provides on-demand detailed information for selected emergency situations that arise from natural or man-made disasters anywhere in the world.

- **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.
- **Risk & Recovery Mapping** supplies geospatial information in support of Disaster Management activities including prevention, preparedness, risk reduction and recovery phases.
- **Validation** performs quality checks and research aiming at a continuous improvement of CEMS – Mapping.

EARLY WARNING AND MONITORING

The component offers anticipatory critical geospatial information at European and global level through continuous monitoring and forecasts for floods, droughts, and forest fires through the following systems:

- The **European and Global Flood Awareness Systems (EFAS; GloFAS)** provide complementary flood forecast information supporting flood risk management at all levels.
- The **European Forest Fire Information System (EFFIS)** monitors forest fire activity in near-real time and supports wildfire management.
- The **European and Global Drought Observatory (EDO; GDO)** providing drought-relevant information, early-warnings and forecasts.

Space

COPERNICUS AT A GLANCE

Copernicus is an EU programme aimed at developing European information services based on satellite Earth Observation and in situ (ground) data. The information services provided will be freely and openly accessible to its Users, mostly public authorities.

copernicus
Europe's eyes on Earth

Protecting lives, assets, and the environment

The European Commission contributes information and support to actors involved in relief aid, disaster and risk management, and emergency response activities. Through CEMS, users have free and open access to the immense amount of immediate and historical data sets from the Copernicus Program, as well as information from our partner agencies. Emergency management professionals incorporate this information into their prediction, response, and recovery activities.

Copernicus EMS addresses disasters caused by natural hazards (floods, wildfires, earthquakes, tsunamis, volcanic eruptions, landslides, storms, droughts, etc.), as well as man-made hazards (industrial accidents, oil spills, etc.) inside and outside of the EU. A country's unique geographical, social and political characteristics that impact their response capacities help CEMS tailor their geospatial data to regional demands.

Actors include 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 in EU Member States and across the world.

BENEFITS & IMPACT

- Operational service 24/7/365
- Disaster risk reduction, prevention, prepared¬ness, recovery, and reconstruction through information delivery and analysis
- Fast information about difficult-to-access locations
- Imagery acquisition independent from the time of the day and weather conditions
- Quick assessment of large areas for damages to transport and infrastructure
- A unique overview on ongoing and forecasted events

EMS IN NUMBERS

CONTINUOUS **24H/365** OPERATIONS SINCE 2012

SUPPORTING **ALL** PHASES OF THE DISASTER MANAGEMENT CYCLE

1200 DROUGHT EVALUATIONS GLOBALLY PER YEAR

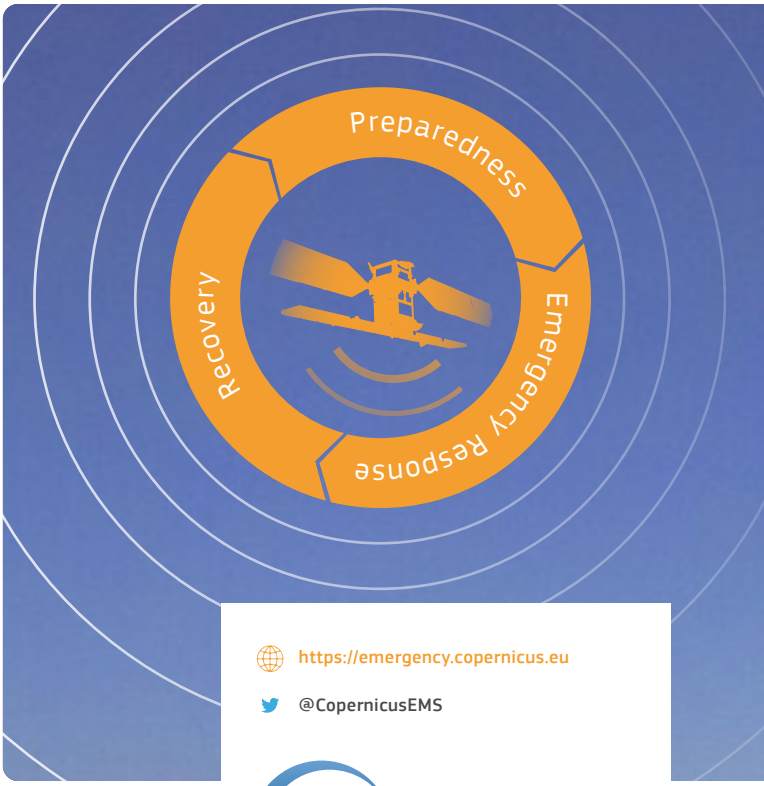
AVERAGE **1400** FLOOD WARNINGS ISSUED PER YEAR

500 ACTIVATIONS IN RAPID MAPPING MODE

HOW THE DATA IS BEING USED

The Copernicus Emergency Management Service has been active since April 1st 2012. Our products function in line with the European Commission's communication "Towards a Stronger European Union Disaster Response", adopted and endorsed by the Council in 2010, which underpins the importance of strengthening concerted actions in case of natural disasters including floods, which are amongst the costliest natural disasters in the EU.

CEMS supports the EC's priority for "A stronger Europe in the World" through Reinforcing our global leadership by offering a unique and indispensable service to nations outside the EU. CEMS delivers global observation information to all nations when requested through an EU Authorised User. Information provided by CEMS helps to save lives and protect assets of countries across the globe, further solidifying our role as a global leader.



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