

SUNSHINE Training Webinar 2

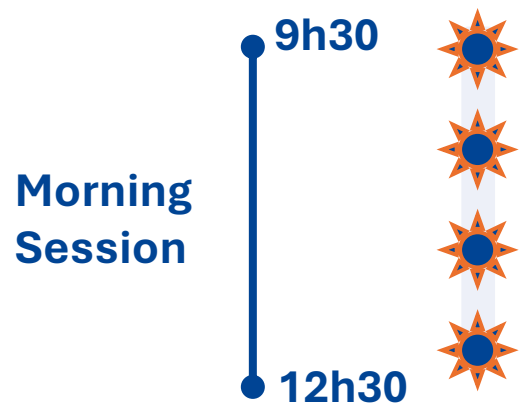
Using EU Space Services to Tackle Wildfires and Floods



SUNSHINE

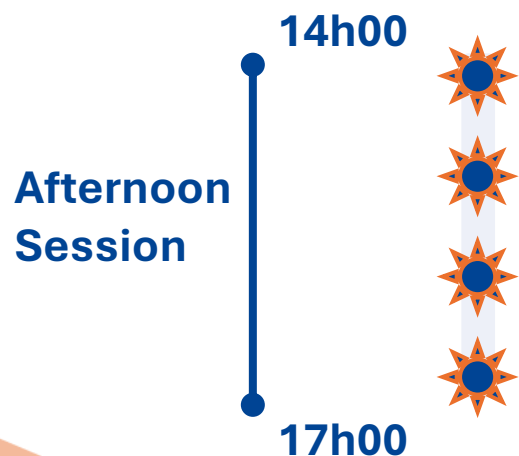
Leveraging EU Space data and services for disaster resilience

Agenda



Welcome & Introduction to SUNSHINE project
EFAS service, platform and access
RM service for support in **flood management**
Quiz and Q&A

Lunch break



Welcome & Introduction to SUNSHINE project
RRM service for support in **fire management**
EFFIS service, platform and access
Quiz and Q&A

Some rules to consider



- ★ This webinar is being **recorded**
(recording of the webinar will be available on the *SUNSHINE* page of the UCPKN website)



- ★ **Stay muted** when not speaking to avoid disruptions and background noise.



- ★ Use the “**Raise Hand**” function or the Chat during the Q&A sessions.



- ★ **Be respectful and concise** when sharing comments or questions.



- ★ You may activate the option for automatically translated captions by clicking on “**Live Transcript**”.

Meet the Speakers



Annita Elissaiou
Project Officer
EENA



Sabrine Amzil
Remote Sensing
Engineer & Land
Surveyor
CEMS EFAS
UNISTRA -
SERTIT



Stephen Clandillon
ICube-SERTIT
Director CEMS RM
UNISTRA - SERTIT



Kristin Fleischer
Project Manager
CEMS RRM
IABG



Ahmed Abuzeid
Civil &
Environmental
Engineer
CEMS EFFIS
IABG

The SUNSHINE Project



SUNSHINE

The **SUNSHINE** Project



Europe in the face of disasters...

- ☀ Climate change, natural hazards, safety threats increasing in frequency and intensity.
- ☀ Pressing need for stronger civil protection and international cooperation
- ☀ The need to be well-prepared to handle disasters is more important than ever.

The SUNSHINE Project

Background

- **Request** made by the **European Parliament & the Member States of the European Union**:
 - ✦ *How to better understand the EU space services?*
 - ✦ *What is the potential of EU space services to support national civil protection authorities?*

The SUNSHINE Project

Satellites at the service of disaster management

EU Space Programme

- ✦ EU is developing and operating space infrastructures with great potential for civil protection community
- ✦ Space data and services for observation, monitoring, mapping, public warning...
- ✦ Applications for safety and security expanding fast.

How to make best use of space capabilities in times of crisis?

The SUNSHINE Project

What is the SUNSHINE project about?

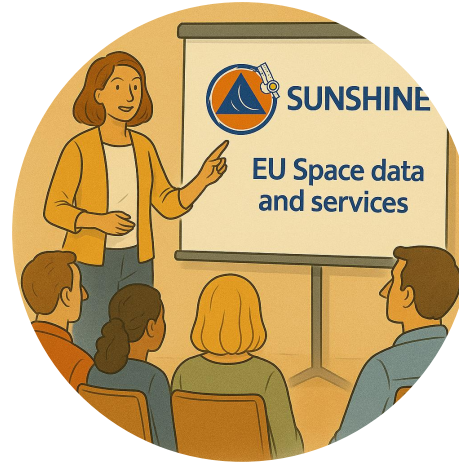
- ✦ Present and demonstrate the EU space services
- ✦ Help the civil protection community understand what they can do & how to use them
- ✦ Support operational integration in national systems and procedures

The project will strengthen resilience of EU Member States through dedicated trainings and exercises on the use of EU Space services.

The SUNSHINE project consortium



Seminars



Webinars



Trainings

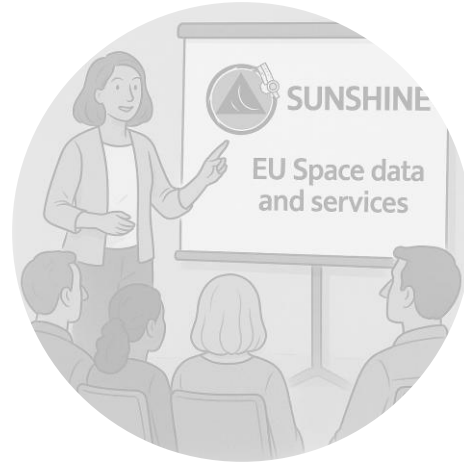


Bilaterals



Exercises

4 Seminars



5 Webinars

2 communication webinars

3 training webinars



SUNSHINE Trainings



2 Exercises

1 Bilateral

per Member State



Who are the SUNSHINE trainings for?

Operational & Strategic Actors

Civil protection authorities, emergency services & first responders, crisis & disaster management team leads, technical emergency teams, ministries responsible for civil protection.

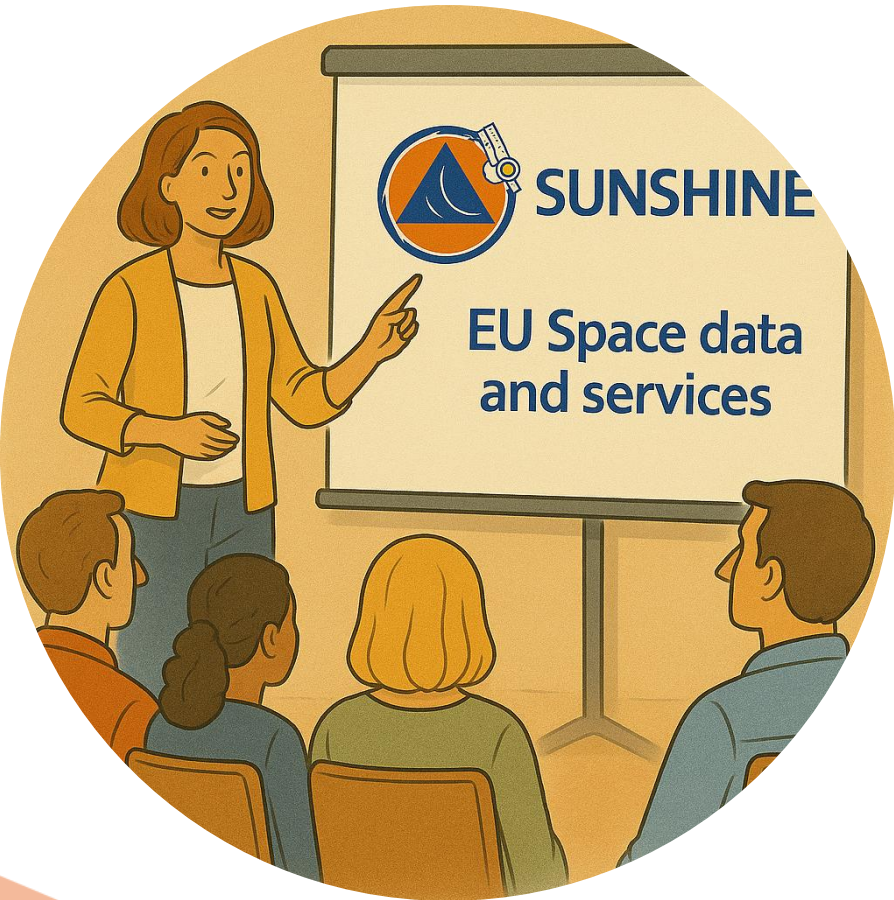
High-Level Technical Knowledge Actors

Technical experts, training coordinators, technological institutes, national scientific bodies & research centres, members of the Union Civil Protection Knowledge Network

Political & Coordination Actors

Policymakers on a national and local level, EU institutions, international & European organisations, NGOs, EU Coordination bodies

The **SUNSHINE** seminars



- ✦ Taking place over 4-days
- ✦ In-depth training on EU Space components and applications for crisis management
- ✦ “Train-the-trainer” approach ensures accuracy, relevance, and replicability
- ✦ Practical demonstrations on the use of EU space data and services

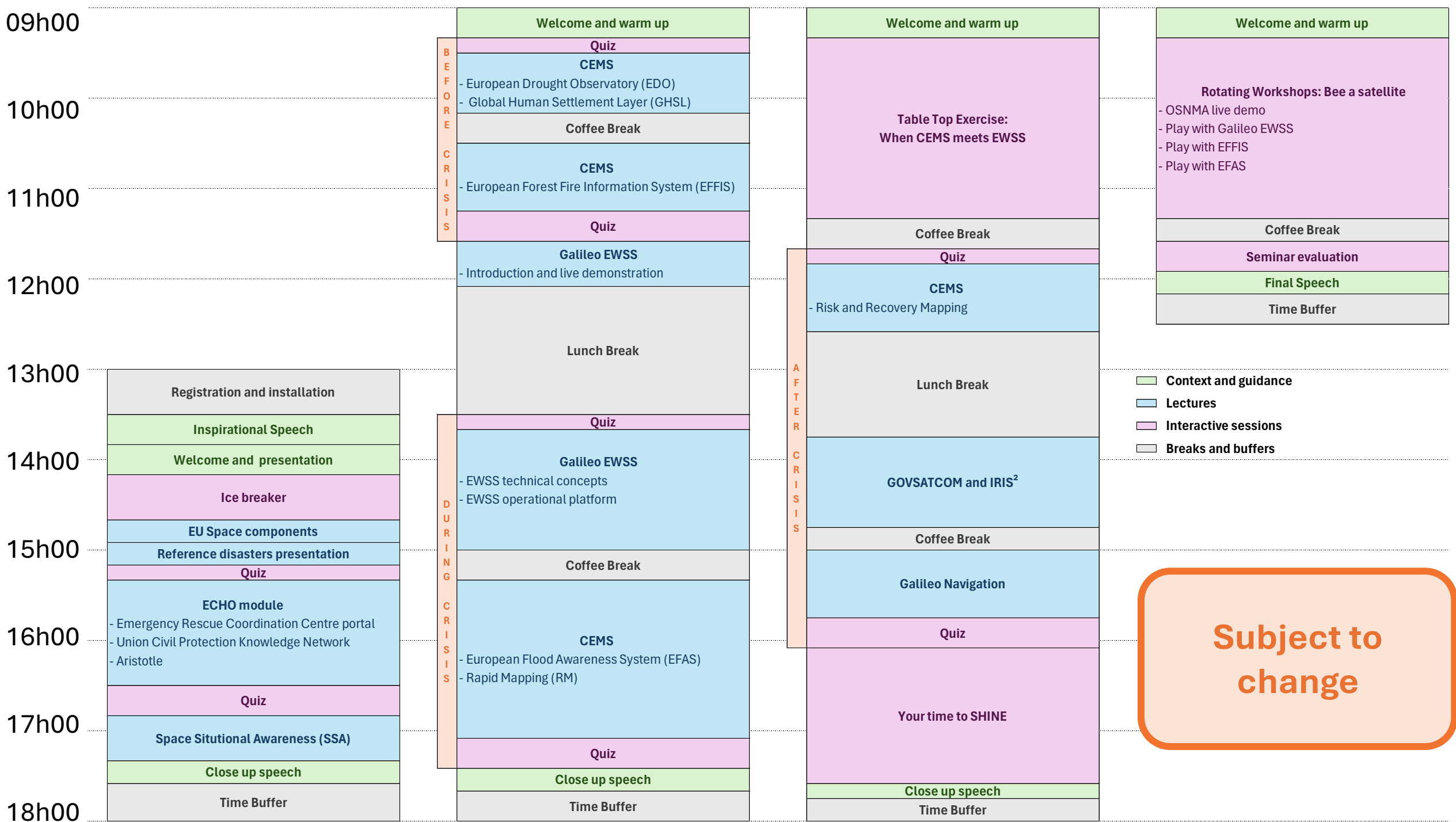
The **SUNSHINE** seminars

REGISTER HERE



https://ec.europa.eu/eusurvey/runner/SUNSHINE_TrainingSeminars_ExpressionOfInterest

- ✦ Registration is open for the next seminar
 - **23rd to 26th of June 2026 in Zagreb, Croatia**
- ✦ Registration is free (financed by EC) but travel & accommodation costs are not covered
- ✦ Selection of profiles based on Expression of Interest form



The **SUNSHINE** webinars

3 Training Webinars

- ★ Online sessions focused & targeted learning on specific EU space components
- ★ Presentations by experts of the SUNSHINE consortium
- ★ Detailed sessions on the purpose, functions, use and real-world applications of EU space assets
- ★ **Next dates:**
 - 10th September – GovSatCom & IRIS² (final agenda TBC)



SUNSHINE Exercises

Putting theory into practice again with immersive simulations

★ SIMEX:













- **Put theory into practice** using all EU space assets and tools in a realistic crisis situation
- **Collaborate and take decisions** in real time, transform your knowledge in skills

★ How to participate?

- Next session: 6-7 October in Brussels (DG DEFIS headquarters)
- **Pre-requisite: *Participation in a training seminar***

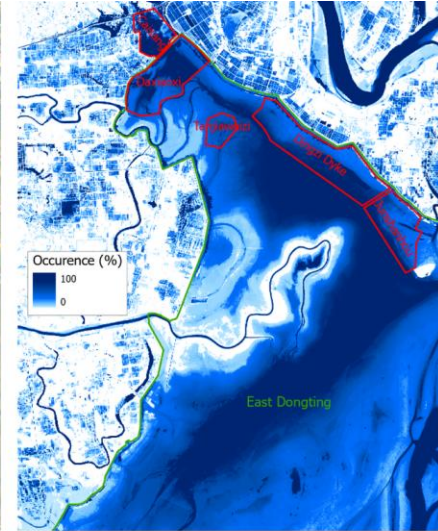
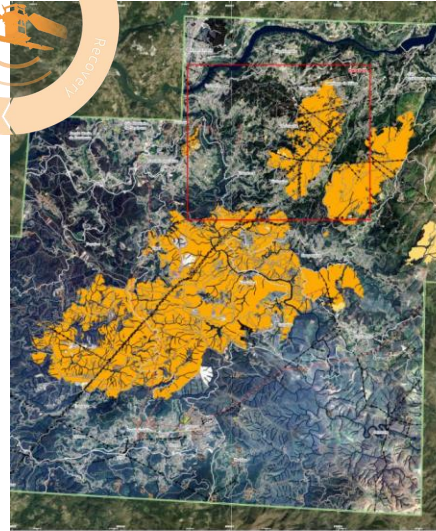


Mark your calendar!

	Oct 25	Nov 25	Dec 25	Jan 26	Feb 26	Mar 26	Apr 26	May 26	Jun 26	Jul 26	Aug 26	Sep 26	Oct 26
Seminars		 25-28 Nov Tallinn, Estonia				 3-6 March Strasbourg, France		 5-8 May Timișoara, Romania	 23-26 June Zagreb, Croatia				
Webinars	 Communication 1 30 Oct			 CEMS & Galileo 20 Jan		 Communication 2 2 Apr		 CEMS 4 June			 SatCom 10 Sept		
Bilaterals				 Bilateral Meetings with 27 Member States									
SIMEX						 24-25 March						 6-7 Oct	

Sabrina Amzil

Land Surveyor | Remote Sensing Engineer



My expertise: Rapid Mapping

What I'll be presenting:
CEMS EFAS – CEMS RM






European Flood Awareness System (EFAS) User Guide



SUNSHINE

You will be able to

-  Understand the **purpose** of the **European Flood Awareness System (EFAS)**.
-  **Access and use the service.**
-  **Use notifications** issued by EFAS in **flood crisis management.**

What is EFAS?

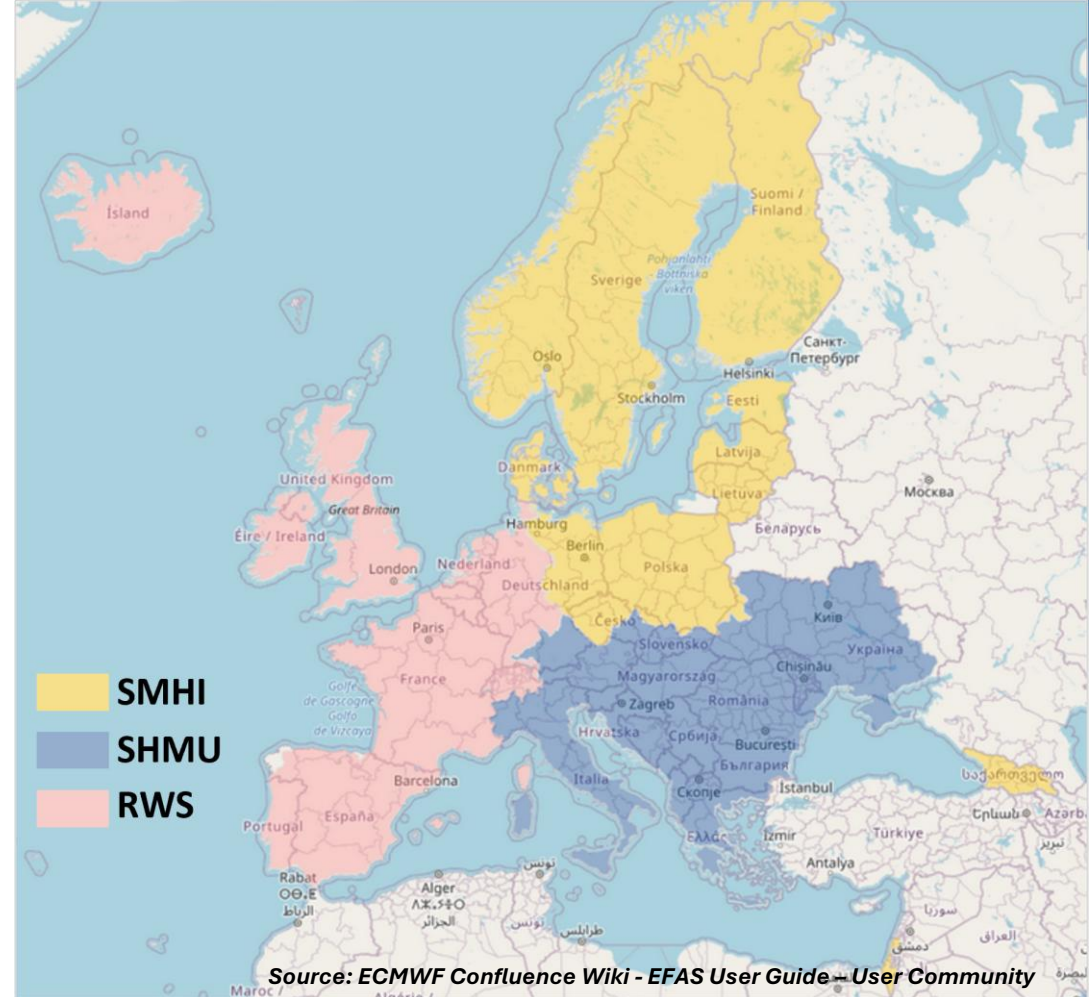
- **Hydrological monitoring and forecasting system across Europe.**
- **Developed** by the **European Commission** and the European Centre for Medium-Range Weather Forecasts (**ECMWF**).
- **First operational pan-European flood forecasting system** to help in decision making.
- Major input from member states, **in situ data**.
- Integrated into the **Copernicus Emergency Management Service (CEMS)** since 2012.

■ European Flood Awareness System service providers



Who can access EFAS?

Access	Free and open (limited restrictions)
Flood warnings	Reserved for Member States Real-time data restricted to EFAS partners
Eligible partners	Flood forecasting or risk management authorities, all levels
Free Partnership countries	EU and non-EU Full, Third party, Research projects
How to join?	- Sign Conditions of Access agreement with the EFAS Dissemination Centre - Contact the CEMS Hydrological Forecast Analytics and Dissemination Centre by filling the <i>contact us</i> page : https://www.efas.eu/contact



EFAS partner regional agreements and corresponding dissemination centre:

- **Swedish Meteorological and Hydrological Institute (SMHI)**
- **Slovak Hydrometeorological Institut (SHMI)**
- **Rijkswaterstaat Waterdienst (RWS)**

EFAS Partnerships

EFAS partner

- Any national, regional or local **authority** with a legal obligation to **provide flood forecasting services**, or
- Authority with a national role in **flood risk management** within its country and the European Commission Services, i.e. DG ECHO-ERCC, DG DEFIS and JRC.



Full and free access to all EFAS real-time forecasts, products and notifications.

EFAS Partnerships

EFAS partner

- Any national, regional or local authority with a legal obligation to provide flood forecasting services, or
- Authority with a national role in flood risk management within its country and the European Commission Services, i.e. DG ECHO-ERCC, DG DEFIS and JRC.



Full and free access to all EFAS real-time forecasts, products and notifications.

EFAS third party partner

- Any **authority** that **contribute to flood risk management** within a country often **in close collaboration** with the **relevant flood forecasting authorities** (e.g. civil protection, environmental ministries, etc.).
- Normally **nominated** or **revoked by** the **EFAS Partner** for his relevant geographic area.



Full and free access to all EFAS real-time forecasts, products and notifications in their region.

EFAS Partnerships

EFAS partner

- Any national, regional or local authority with a legal obligation to provide flood forecasting services, or
- Authority with a national role in flood risk management within its country and the European Commission Services, i.e. DG ECHO-ERCC, DG DEFIS and JRC.



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EFAS third party partner

- Any authority that contribute to flood risk management within a country often in close collaboration with the relevant flood forecasting authorities (e.g. civil protection, environmental ministries, etc.).
- An EFAS Third Party Partner is formally nominated or revoked by the EFAS Partner for his relevant geographic area.



Full and free access to all EFAS real-time forecasts, products and notifications in their region.

EFAS research projects partner

- Organisations working on specific **research projects** and want to **test EFAS products**.
- **Request** to the EFAS Partner in their region.
- Once approved, **research agreement** outlining the use of the EFAS products is **signed**.



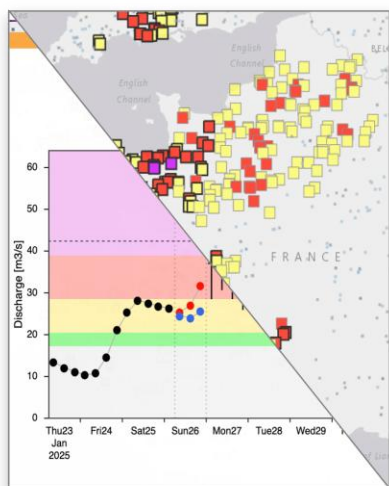
- **Only limited, restricted access** to EFAS forecasts and products
- **No redistribution** to individuals or institutions **outside the signed agreement**.

What does EFAS deliver?

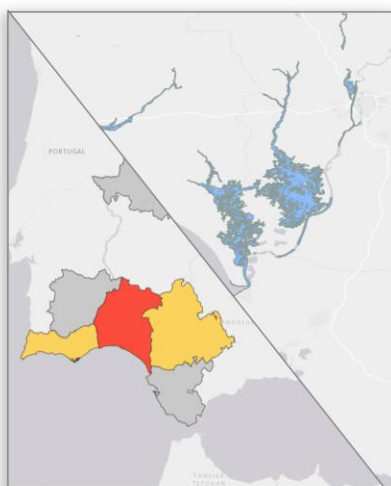
Earth
Observation
Data

Modelling, In situ and Satellite Data

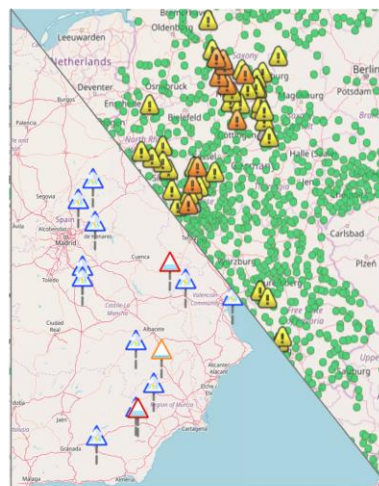
Riverine flood forecasts (hazard)



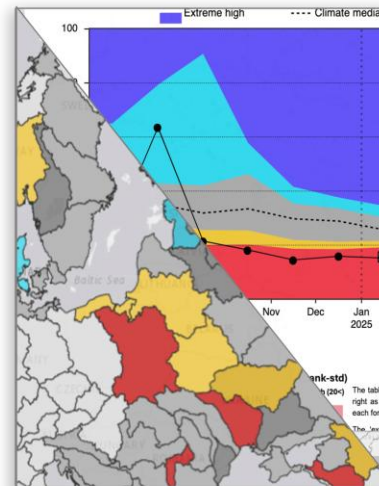
Riverine flood forecasts (impact)



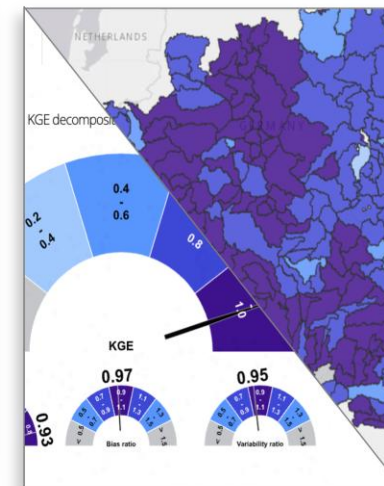
Monitoring of EFAS & National notifications



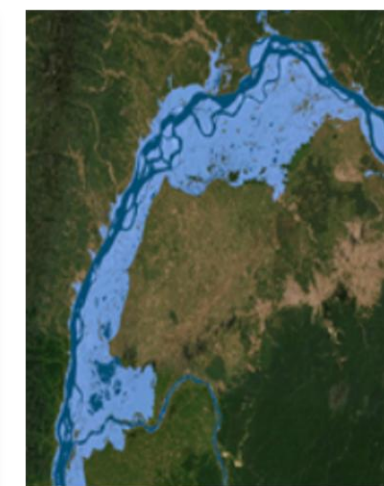
Sub-seasonal and seasonal outlook



Model Performance & Forecast skill



Satellite-based flood monitoring



Source: ECMWF Confluence Wiki - EFAS User Guide

Lead time indicates how far into the future the forecast stretches

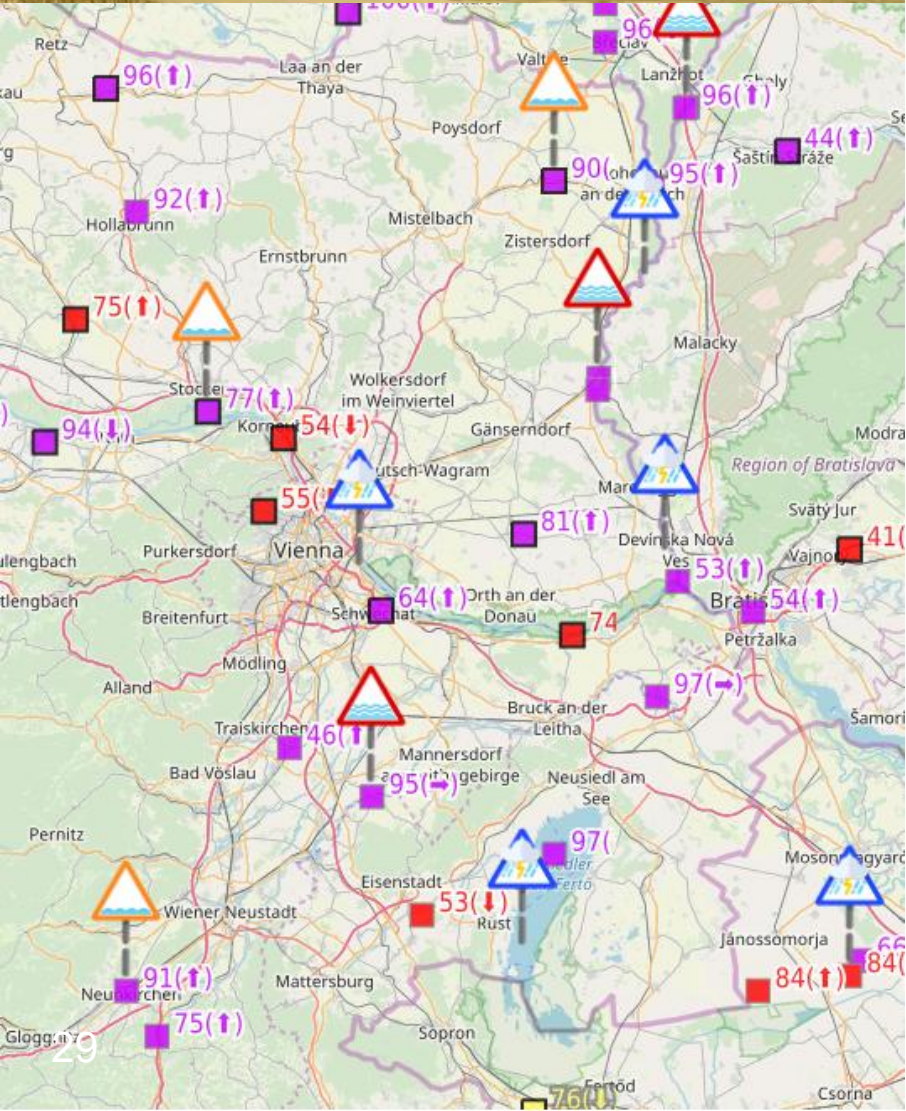
Access and availability



- **Medium range forecast** have maximum lead time of 10 days.
- **Flash flood forecasts** are updated twice a day and have a modelling time step of 6-hours.
- **Seasonal and sub-seasonal forecasts** are publicly available in real-time for general public.
- **Other forecasts** released publicly after a 30 day delay

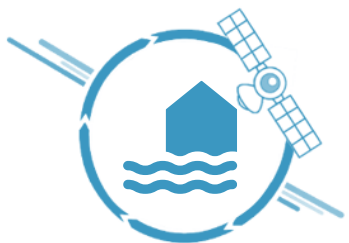
Step by Step Hands-On

European Flood Awareness System



Access EFAS under:

european-flood.emergency.copernicus.eu/



Central-Eastern Europe Flood

- **11 Sept 2024:** Storm *Boris* brought record-breaking rainfall to Central & Eastern Europe.
- Flooding affected **Austria, Czechia, Poland,** and seven other neighbouring countries.
- Persistent rain caused **major river overflow,** including along the Danube.
- Peak rainfall occurred **13–16 Sept** in eastern Austria and the Czechia–Poland border region.

EMS activations for floods in Central and Eastern Europe in September 2024

Source: Copernicus Emergency Management

In focus: Floods in Central and Eastern Europe

Timeline:

13 September 2024 - Ongoing

10

requests for emergency maps

72

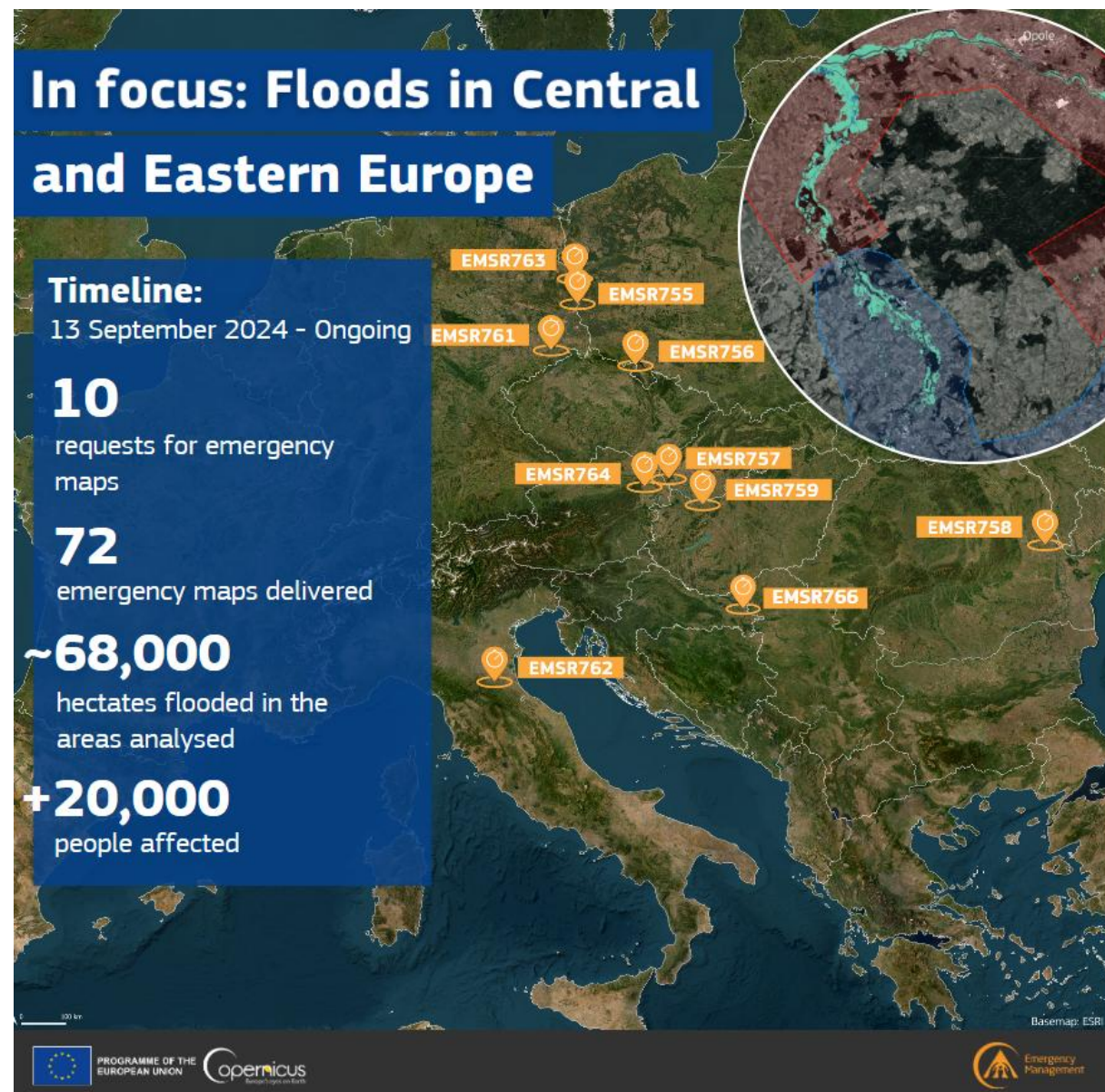
emergency maps delivered

~68,000

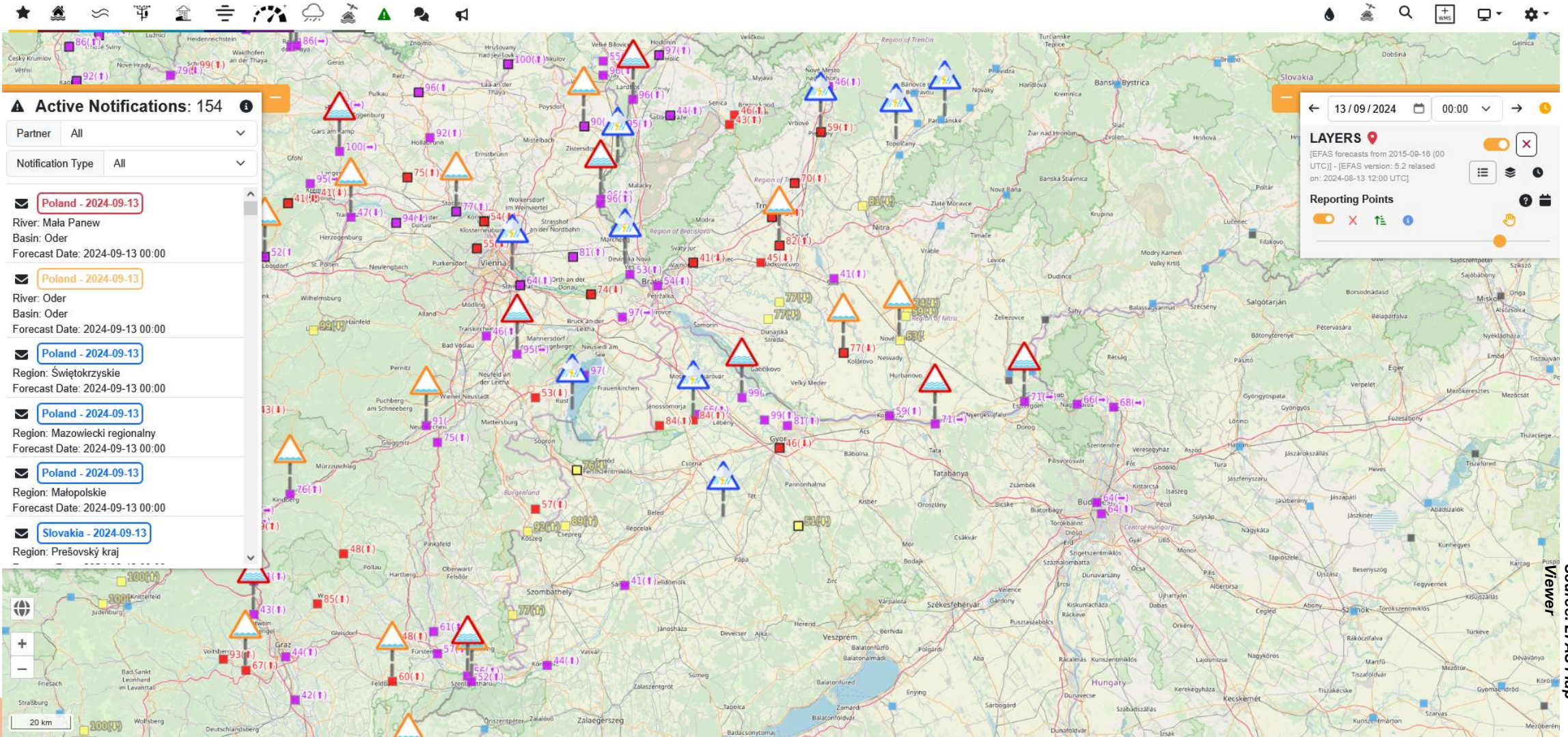
hectares flooded in the areas analysed

+20,000

people affected



EFAS Notifications



Active Flood Notifications displayed on the map

EFAS Notifications Explained

Standard Notification

Catchment Area $\geq 1000 \text{ km}^2$

Total Probability $\geq 50\%$, Event Lead Time* $\geq 48 \text{ hours}$

Short delay, informal, Catchment Area $\geq 500 \text{ km}^2$

Total Probability $\geq 40\%$, Event Lead Time $> 0 \text{ hours}$

EFAS Formal Flood Notification

Country(ies): Slovakia

River(s): Hron (Danube)

Predicted start of event: Thursday, 15th of August 2024 - 18:00

Earliest predicted peak: Friday, 8th of August 2024 - 12:00

Total probability to exceed a 5-year return period threshold: 84 %

Total probability to exceed a 20-year return period threshold: 23 %

Forecast date: 2024-08-14 00 UTC

Comment: -



This is the only notification you will receive for this event! Please follow the evolution of the event on [EFAS](#).

EFAS FORECASTER ON DUTY

Note: An EFAS Notification is valid for the upstream and downstream river stretch of the same name that exceeds the 50% total probability threshold shown in the flood probability layer in the same country.

LEAVE A FEEDBACK FOR THIS NOTIFICATION

[Leave the Feedback!](#)

(you need to be logged in on the EFAS website)

*Lead time indicates how far into the future the forecast stretches

[Open a preview with the notification's details HERE](#)

EFAS Informal Flood Notification

Country(ies): Slovakia

River(s): Hron (Danube)

Predicted start of event: Thursday, 15th of August 2024 - 18:00

Earliest predicted peak: Friday, 8th of August 2024 - 12:00

Total probability to exceed a 5-year return period threshold: 84 %

Total probability to exceed a 20-year return period threshold: 23 %

Forecast date: 2024-08-14 00 UTC

Comment: This EFAS Flood Notification is informal due to the short forecast lead-time (< 48 hours)



This is the only notification you will receive for this event! Please follow the evolution of the event on [EFAS](#).

EFAS FORECASTER ON DUTY

Note: An EFAS Notification is valid for the upstream and downstream river stretch of the same name that exceeds the 50% total probability threshold shown in the flood probability layer in the same country.

LEAVE A FEEDBACK FOR THIS NOTIFICATION

[Leave the Feedback!](#)

(you need to be logged in on the EFAS website)

[Open a preview with the notification's details HERE](#)

EFAS Flash Flood Notification*

NOTIFICATION DETAILS:

Country(ies): **United Kingdom**

Administration Region(s): **Armagh City, Banbridge and Craigavon**

Likely start of event: **Sunday, 11th of August 2024 - 18:00**

Probability to exceed a 5-year flash flood return period threshold: **57 %**

Probability to exceed a 20-year flash flood return period threshold: **98 %**

ADDITIONAL INFORMATION:

Forecast date: 2024-08-08 00 UTC

Affected area susceptible to landslides: Very High: 0 km², High: 0 km², Moderate: 0 km²

Forecaster Comments: -

This is the only notification you will receive for this event! Please follow the evolution of the event on [EFAS](#).

More information about the EFAS flash flood notifications is available on the [EFAS wiki](#)

EFAS FORECASTER ON DUTY

** indicating a high probability of extreme precipitation and potential flash flooding*

LEAVE A FEEDBACK FOR THIS NOTIFICATION

[Leave the Feedback!](#)

(you need to be logged in on the EFAS website)

[Open a preview with the notification's details HERE](#)

EFAS Notifications Explained



- **Catchment area** $\geq 150 \text{ km}^2$ and $\leq 1000 \text{ km}^2$
- **Probability** of the flash flood return period (shown by the ERIC reporting points layer) **exceeding the 5 year threshold is $\geq 30\%$**
- **Lead time*** to the event is $\leq 48 \text{ hours}$

**Lead time indicates how far into the future the forecast stretches*

Source: ECMWF Confluence Wiki - EFAS User Guide



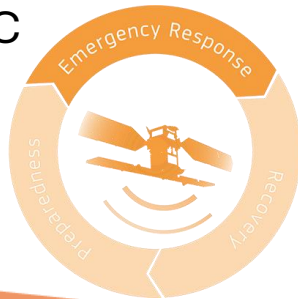


EFAS pre-tasking of CEMS RM

- **Pre-tasking:** when EFAS forecasts a **high-risk flood event**, it sends a **pre-tasking request** to the Rapid Mapping (RM) system **to acquire imagery** before the worst of the flood hits.
- **E-mail** “*Early warning-based satellite image pre-tasking for potential Rapid Mapping activation*” + **AOI in kml and geojson format.**

The data acquired in the pre-tasking activation EMSR980 were used in:

→ The activation **EMSR759** started on 14/09/2024 at 15:59 UTC



Sent: Friday, 13 September, 2024 12:58:03

Subject: Early warning-based satellite image pre-tasking for potential Rapid Mapping activation

-  [AOI_AT_CZ_SK_HU_2024-09-13.geojson](#) (111.3 KB) [Preview](#) | [Download](#) | [Remove](#)
-  [AOI_AT_CZ_SK_HU_2024-09-13.kml](#) (86.4 KB) [Preview](#) | [Download](#) | [Remove](#)

NOTE: This is NOT an activation of Copernicus EMS Rapid Mapping (RM) but a request for pre-tasking satellite images in view of a potential RM activation by the Mapping Authorised User.

Request ID: <EMSR980>

Early warning system: <EFAS>

Phenomenon type: <Flood>

Situation description: < **Water levels on the Danube River and its tributaries are expected to exceed the 20-year flood level starting on Saturday** >

Expected start of the event: <14/09>

Expected event peak: <14/09 00:00 UTC>

Expected duration: <4>

Recommended image acquisition window: <14/09 00:00 UTC > to <18/09 00:00 UTC >

Affected country(s): <Austria><Czechia><Slovakia><Hungary>

Affected region(s): <Niederosterreich-AT12><Burgenland-AT11><Vysocina-CZ063><Jihomoravsky kraj-CZ064><Pardubicky kraj-CZ053><Olomousky kraj-CZ072><Zlinsky kraj-CZ072><Bratislavsky kraj-SK010><Trnavsky kraj-SK021><Nitriansky kraj-SK023><Nyugat-Dunantul-HU22><Kozep-Dunantul-HU21><Kozep-Magyarorszag-HU10>

Affected major citie(s): <Vienna><Brno><Olomouc><Bratislava><Budapest>

Affected river basin(s): <Danube><Morava>

For further information contact: <Zinaw Shenga> <+421944631830>

EFAS Officer on Duty

Source: CEMS RM Operators Email

Example of pre-tasking request received by EMS during Danube Floods



Why is EFAS-based pre-tasking important for CEMS?



* Given that user requested the production of maps



- Having satellite images ready or en-route early.
- A gain of often 24 hours in delivering CEMS Rapid Mapping products!

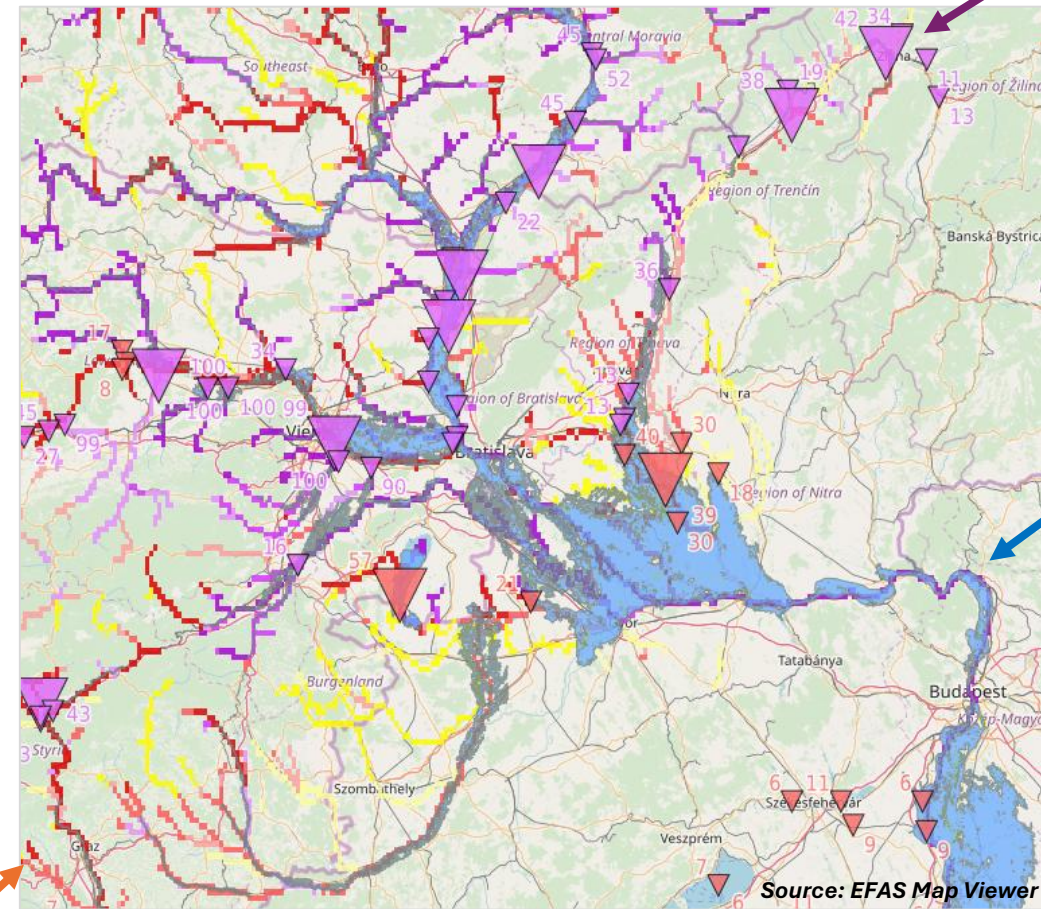


After EFAS Notification What do you do?

- **Check the event on the map viewer**
- **Analyse auxiliary information** (e.g., rainfall, soil moisture, etc.)
- Active notifications show up on the map:
 - △ → Formal Flood Notification
 - ▲ → Informal Flood Notification
 - ▲ → Flash Flood Notification
- Analyse the discharge hydrograph
 - Compare **different forecasts**
 - Assess **forecast uncertainty**



Extreme runoff Reporting Points



Rapid Flood Forecasting



Flood probability

Danube river forecasts on EFAS (Vienne, 15/09/2024)



SUNSHINE






Funded by the European Union

After EFAS Notification




What do you do?

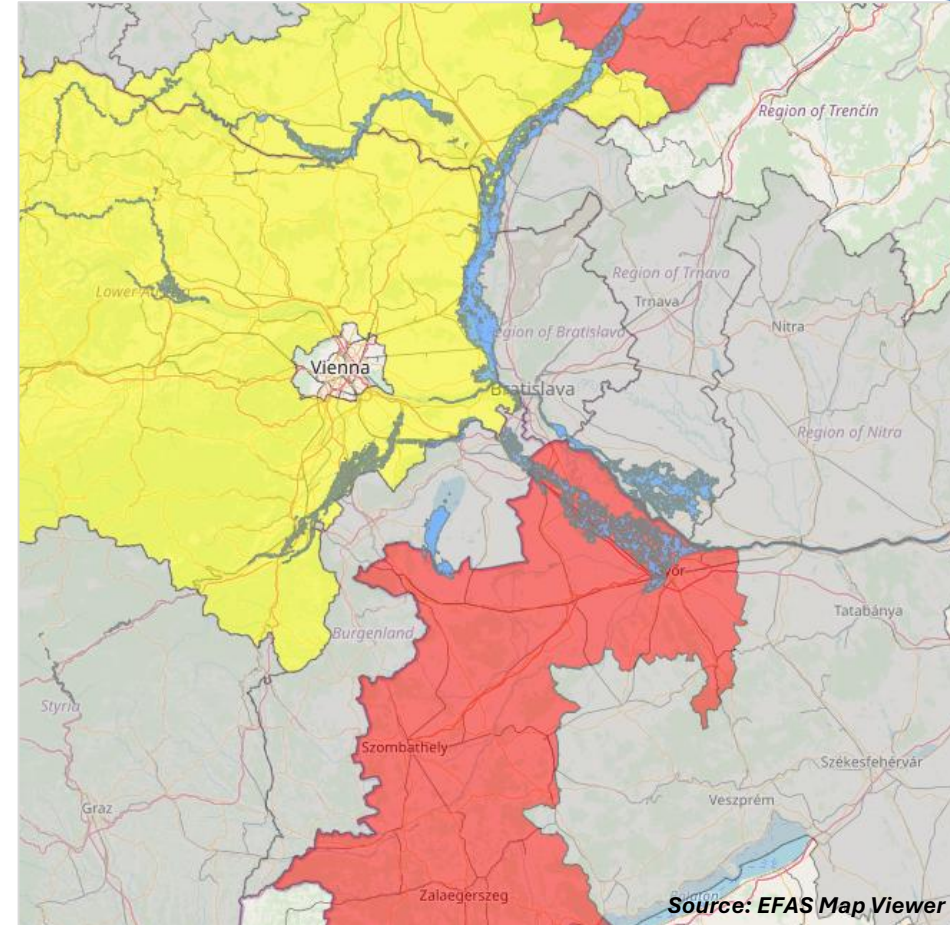
Suggested layers to analyse:

Formal and informal Notifications

- Model performance and Forecast skill (Evaluation Menu )
- Initial conditions ( menu)
- Expected consequences (Flood summary menu )
 - Rapid Flood Mapping layer
 - Rapid Impact Assessment layer

Flash Flood Notifications

- Landslide susceptibility (Static menu )
- Soil moisture (Initial conditions  menu)
- Affected area and accumulated precipitation (Flash Flood )



Rapid Flood Mapping (blue) and impact assessment layers (red and yellow);

Danube river forecasts on EFAS (Vienna, 11/09/2024)

How to learn in depth and stay up-to-date?




EFAS User Guide

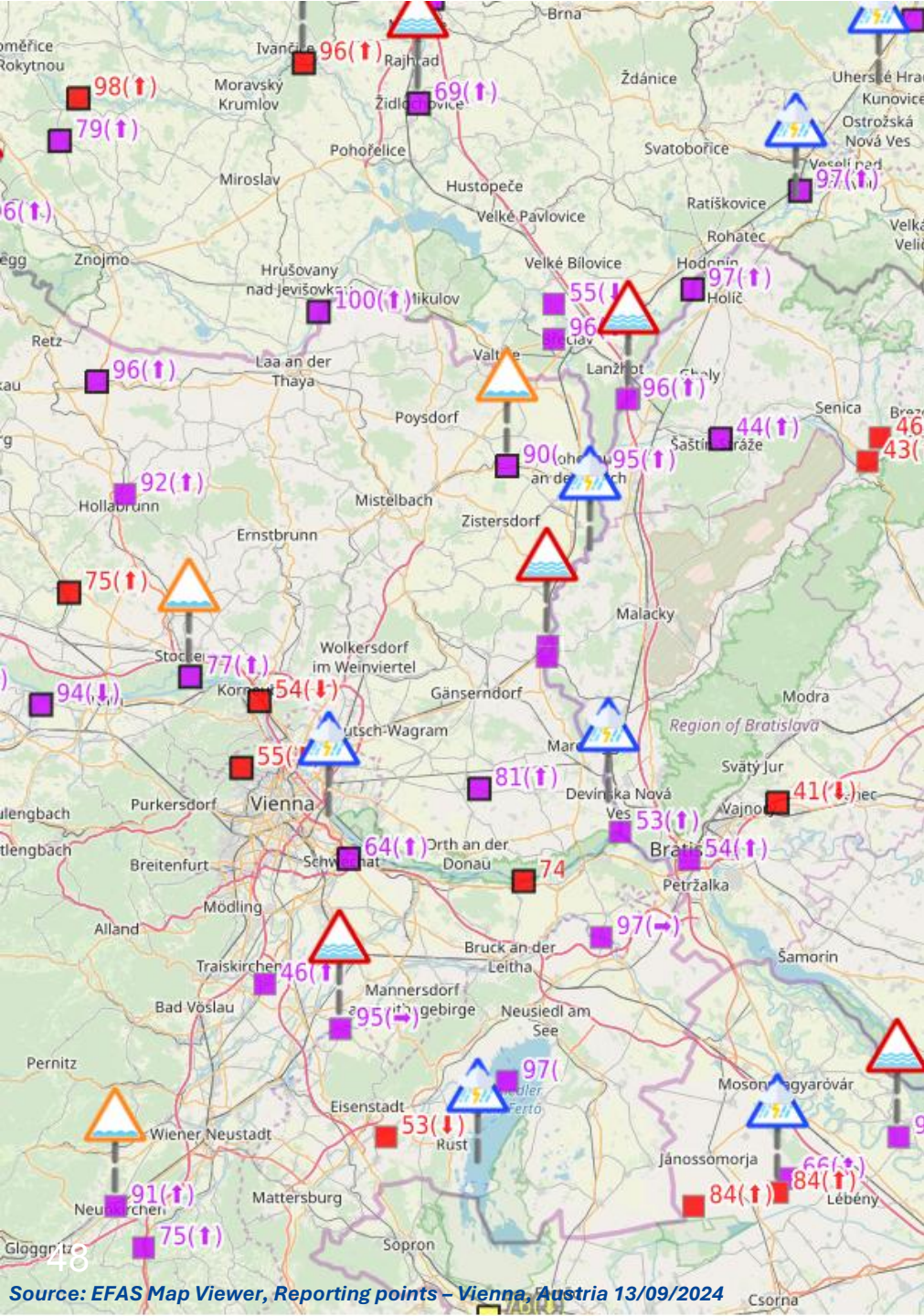
A wealth of information on EFAS is given with, amongst other things:

- EFAS User Community
- EFAS products, overview
- Hands-on guide for EFAS partners
- EFAS Resources (including training material: Webinars (good for first-time user), archived data
- Contributing to EFAS
- FAQ in EFAS
- EFAS Glossary

Key takeaways

Now you know about:

-  **EFAS authorised users and conditions of access.**
-  **Specific layers to analyse when you receive an EFAS notification.**
-  **How EFAS alerts help civil protection trigger RMS early, improving coordination and response during flood emergencies.**



Source: EFAS Map Viewer, Reporting points – Vienna, Austria 13/09/2024

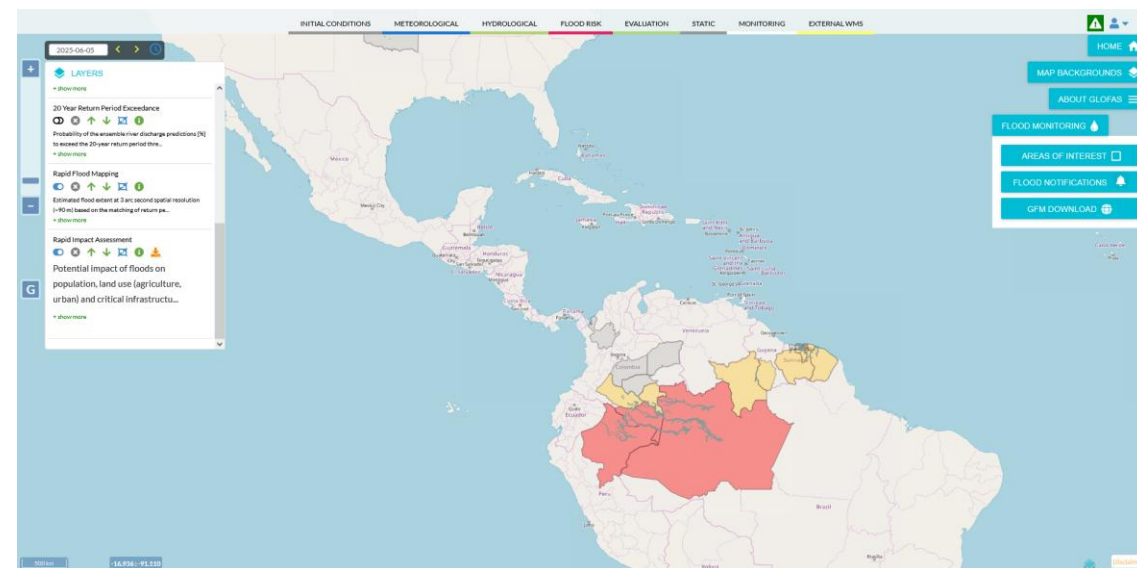
And globally?

Global Flood Awareness System – GloFAS

- Provides **global hydrological forecasts**.
 - Combines **weather forecasts** and **hydrological modeling**.
 - Integrated with the [Global Flood Monitoring \(GFM\)](#) product.
- **GFM** provides **near real-time flood detection** at a resolution of 20 m using **Sentinel-1**.

Explore GloFAS here

→ <https://global-flood.emergency.copernicus.eu/>



GloFAS Portal including GFM downloading platform. Amazon river flood forecast, 05/06/2025.

Thank you for your attention

Any questions?

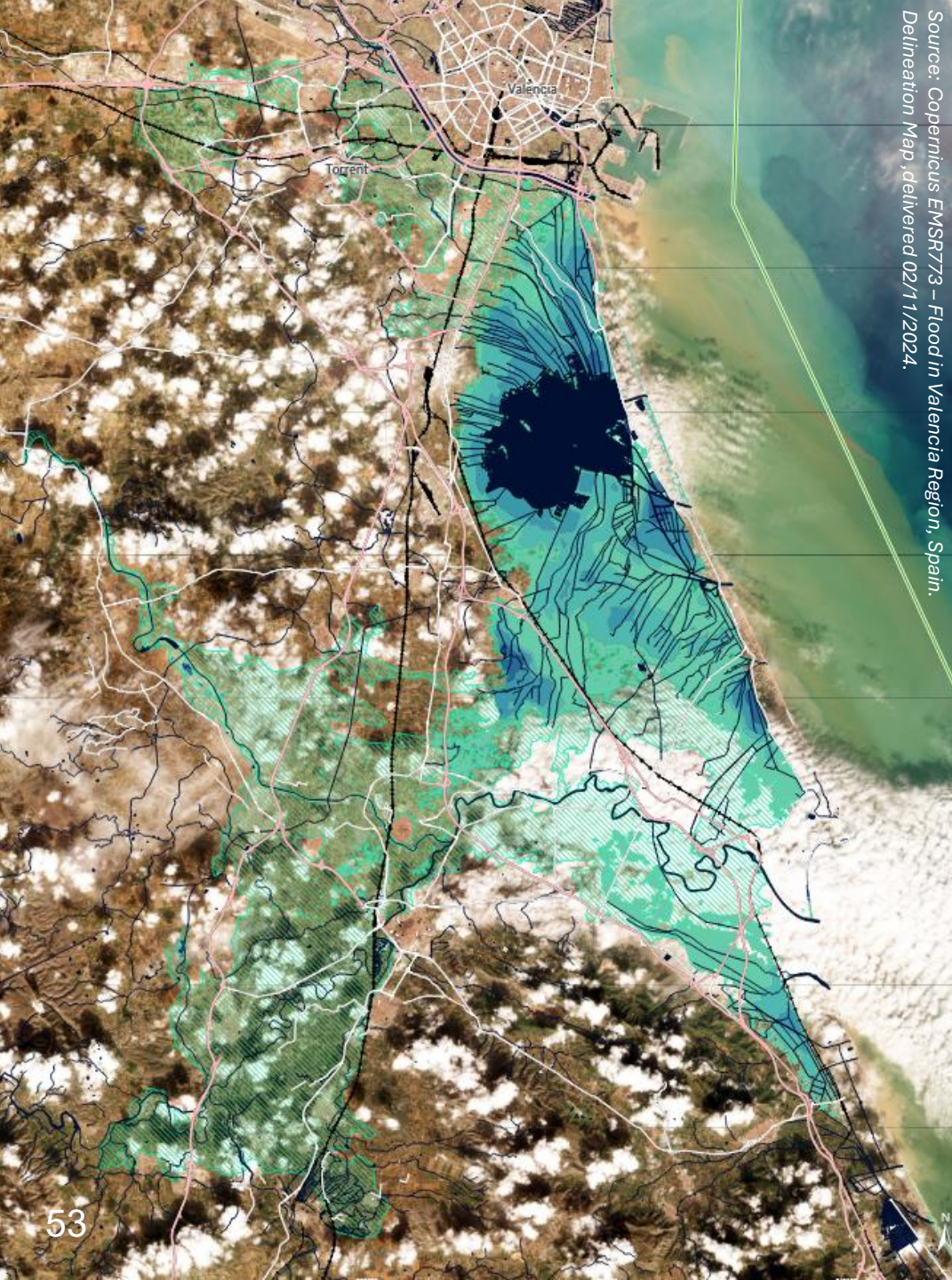


SUNSHINE

Copernicus Emergency Rapid Mapping Service User Guide



SUNSHINE



You will be able to



Know what is the **purpose** of the Copernicus Emergency Rapid Mapping Service



Understand the **service timeline** and **product portfolio**



Access and use the **service** to have an **effective support** in the emergency response phase



What does the Rapid Mapping Service do?

- Supports **Emergency Management** activities during and in the immediate **aftermath** of a **disaster**.
- Procures **satellite** or **aerial imagery** in a rapid mode, uses geo-spatial modelling and ground information when available.
- **Assesses event extent** and **impact** within hours of a service request.
- **Delivers** crisis information from **2 hours** after satellite image reception.



Who can request the service?

 Only **Authorised Users** can request the service directly

 **Associated Users**, who must coordinate with their Authorised User to submit a request

 **General public**

- Cannot request the service
- May follow activations on the website (except those under sensitivity restrictions)

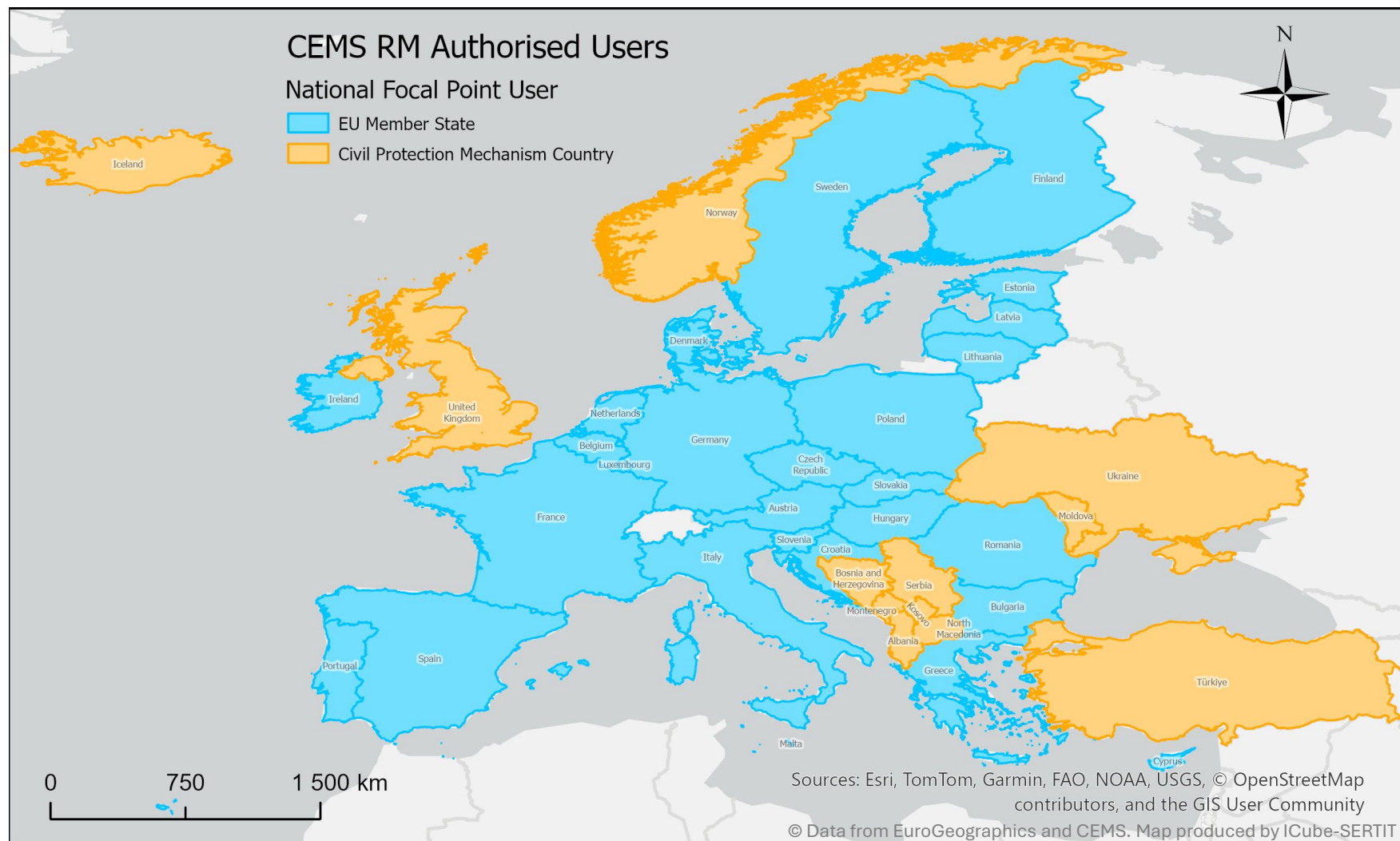
Who are the Authorised Users?

- **27 EU Member States**
- **11 Civil Protection Mechanism Countries**
- **EC/EU Focal Point User:**

→ **EC Services:** *DG-ECHO, DG DEFIS, DG INTPA, DG HOME, DG JRC.*

→ **EU Services:** *EU Intelligence Analysis Centre, Delegations of the European Union.*

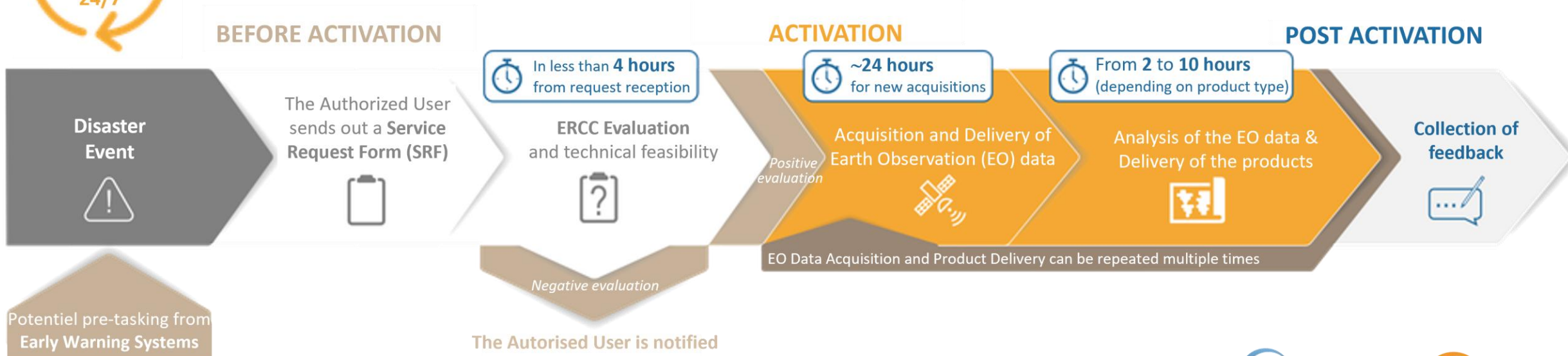
→ **EU agencies** like the *European Environmental Agency*



Rapid Mapping Service Timeline



Rapid Mapping – Timeline for Emergency Response



ERCC: Emergency Response and Coordination Centre



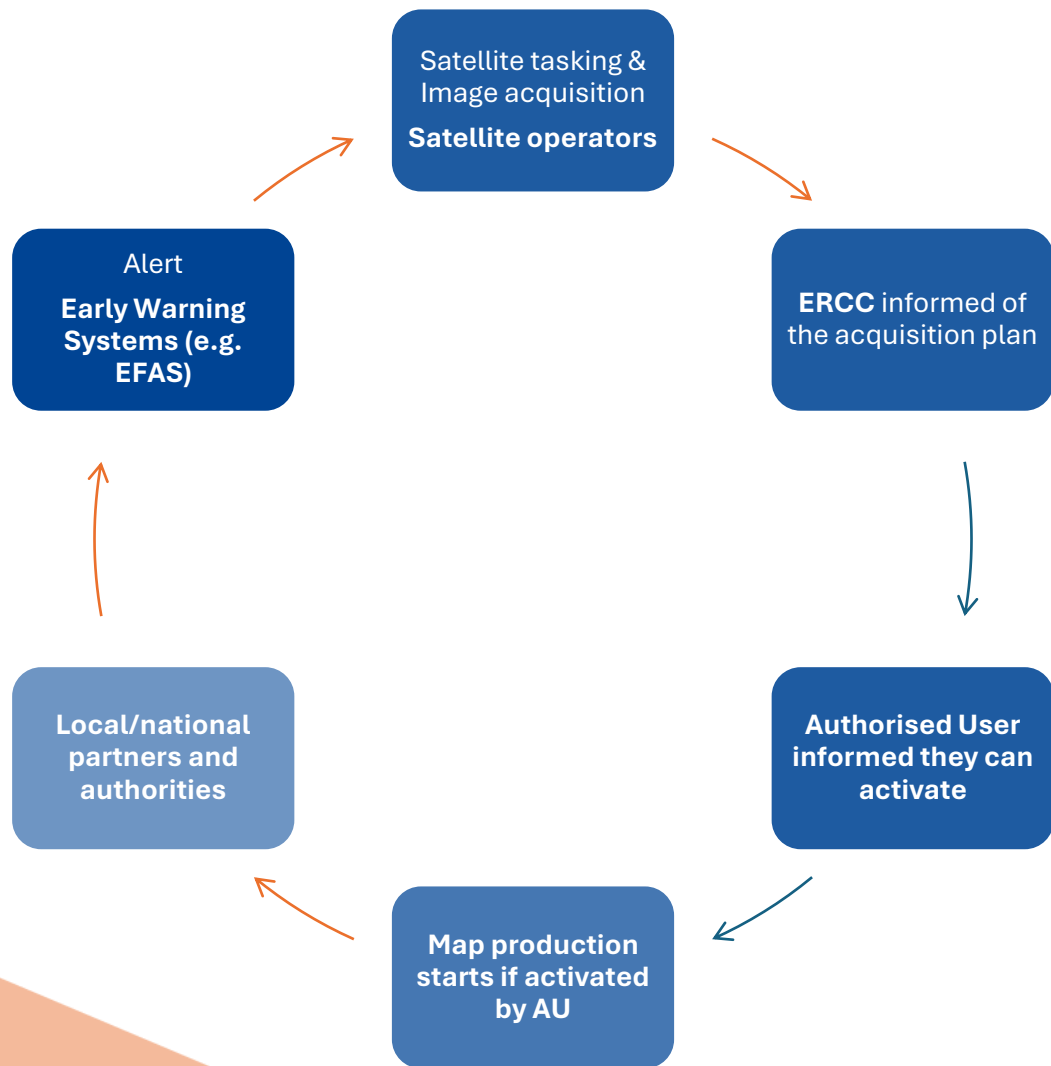
PROGRAMME OF THE EUROPEAN UNION



Source: Copernicus EMS, Fundamentals.



What happens during pre-tasking?



CEMS RM

1. Receives **EFAS Alert notification**.
2. Tasks **satellite acquisitions**
3. **Informs** the European Response and Coordination Centre (**ERCC**) of the acquisition plan.
4. The ERCC informs the **Authorized User** that can then activate or not CEMS RM
5. If **yes**, map **production starts**.
If **no**, the **images are archived**

A Question

- Why consider pre-tasking?



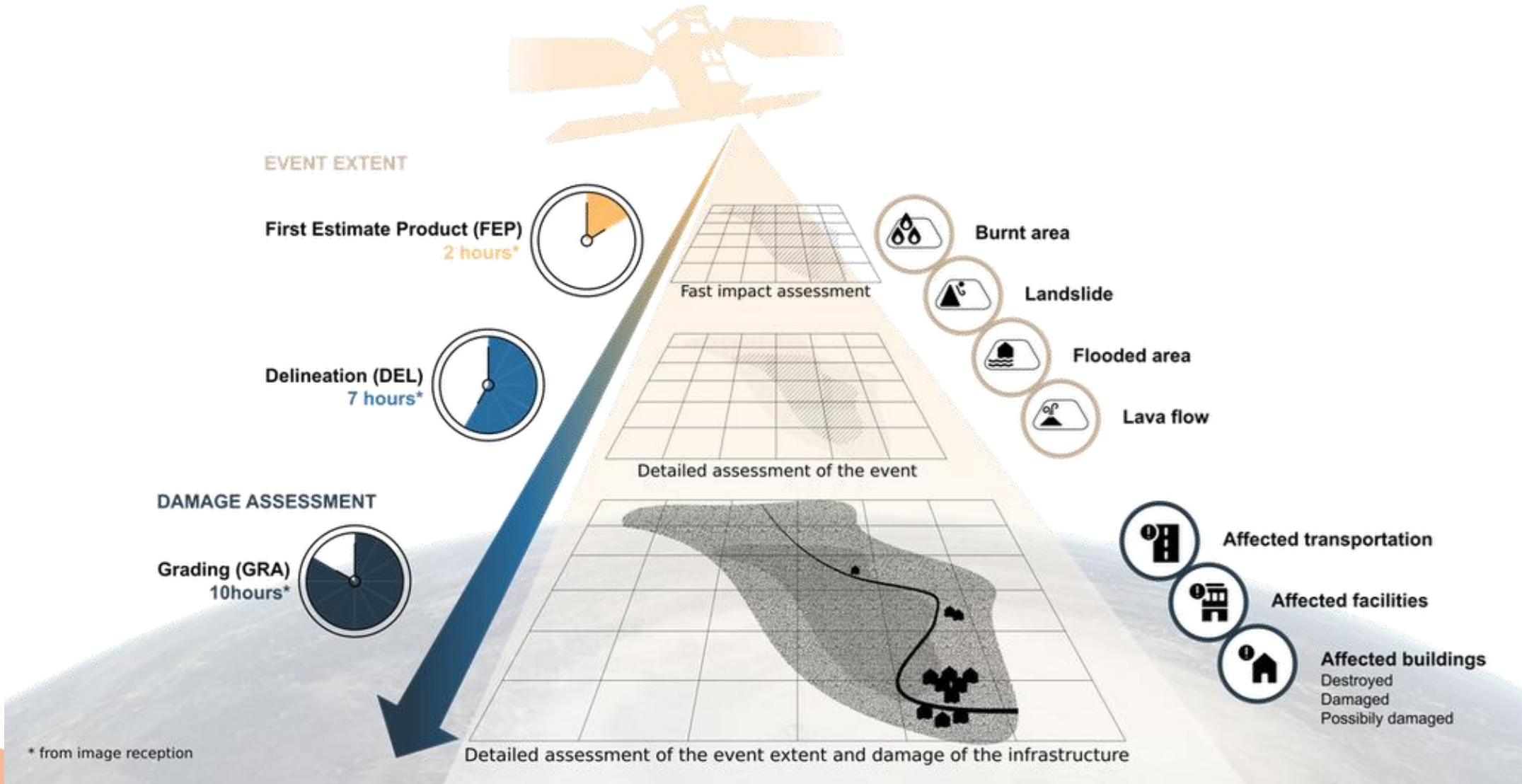
* Given that user requested the production of maps

- A gain of often 24 hours in delivering CEMS Rapid Mapping products!

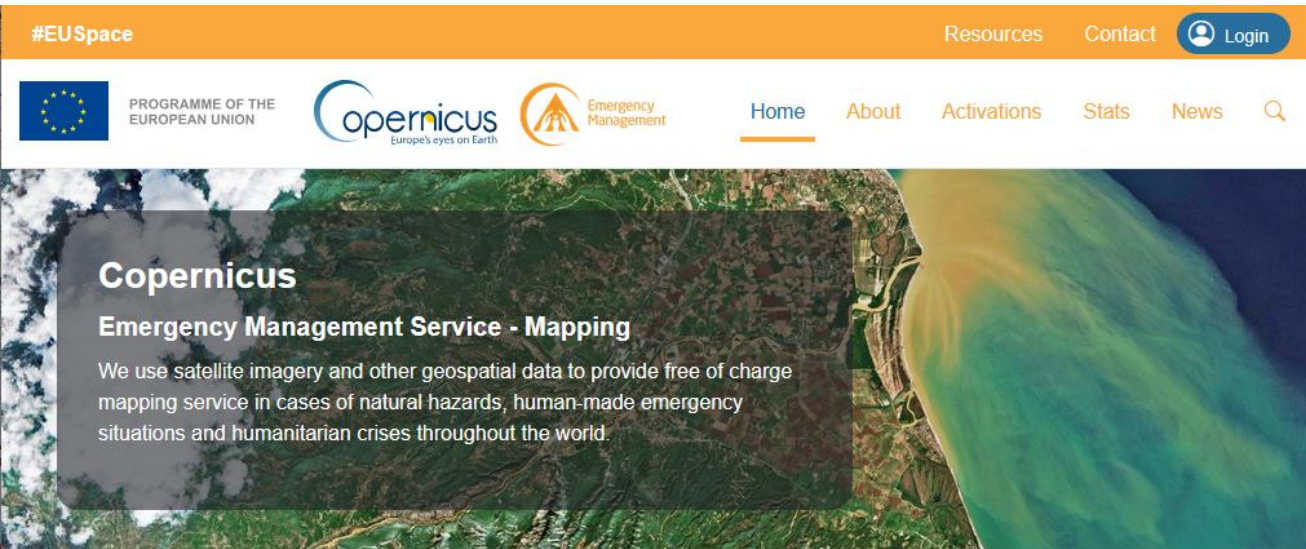
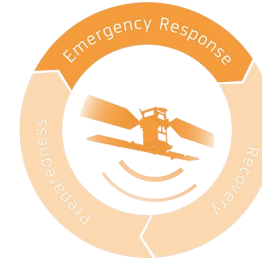
What does the service deliver?



Rapid Mapping - Portfolio for Emergency Response



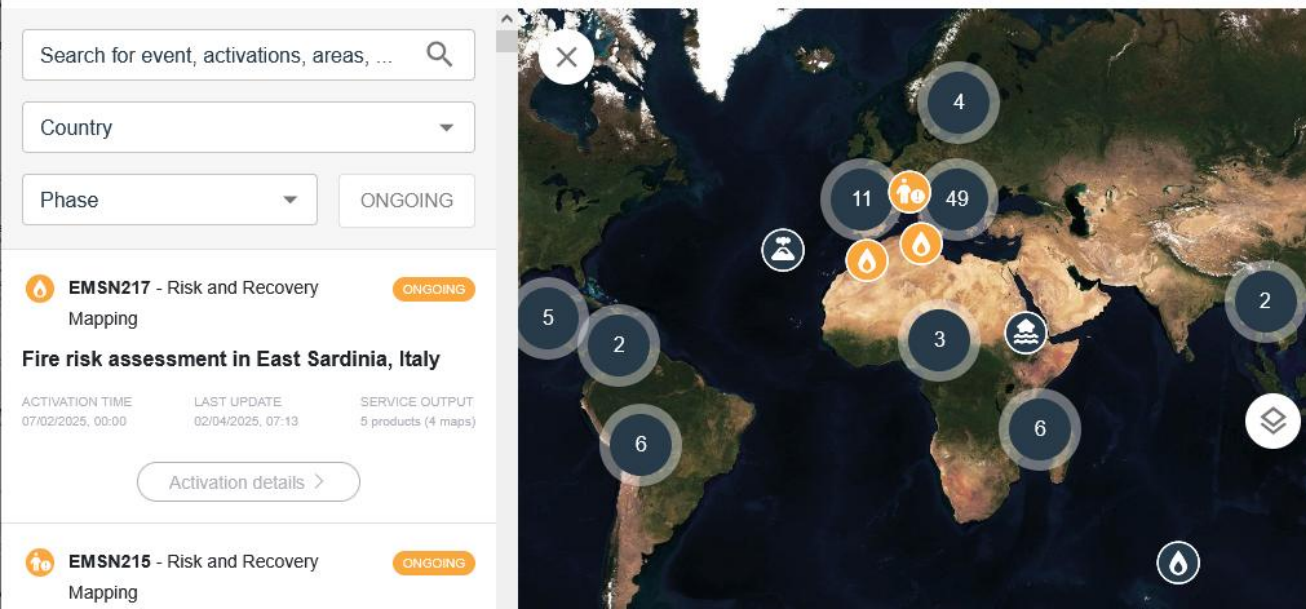
CEMS Interface

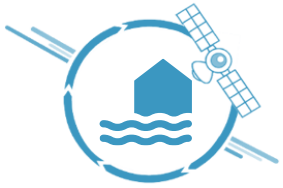


CEMS Interface

Activations to check:

- [EMSR759](#): Central-Eastern Europe Floods (2024, September-October)
- [EMSR760](#): Wildfires in Portugal (2024, September)
- Fires in Greece (2022): 11 activations between June and August 2022





Flood Product Overview

Flood in Central-Eastern Europe on the Danube in Hungary, Austria, and Slo



RM Activation number: EMSR759

Activation time: 14/09/2024, 15:59 UTC

Event type: Flood




Affected countries: Austria, Hungary, Slovakia

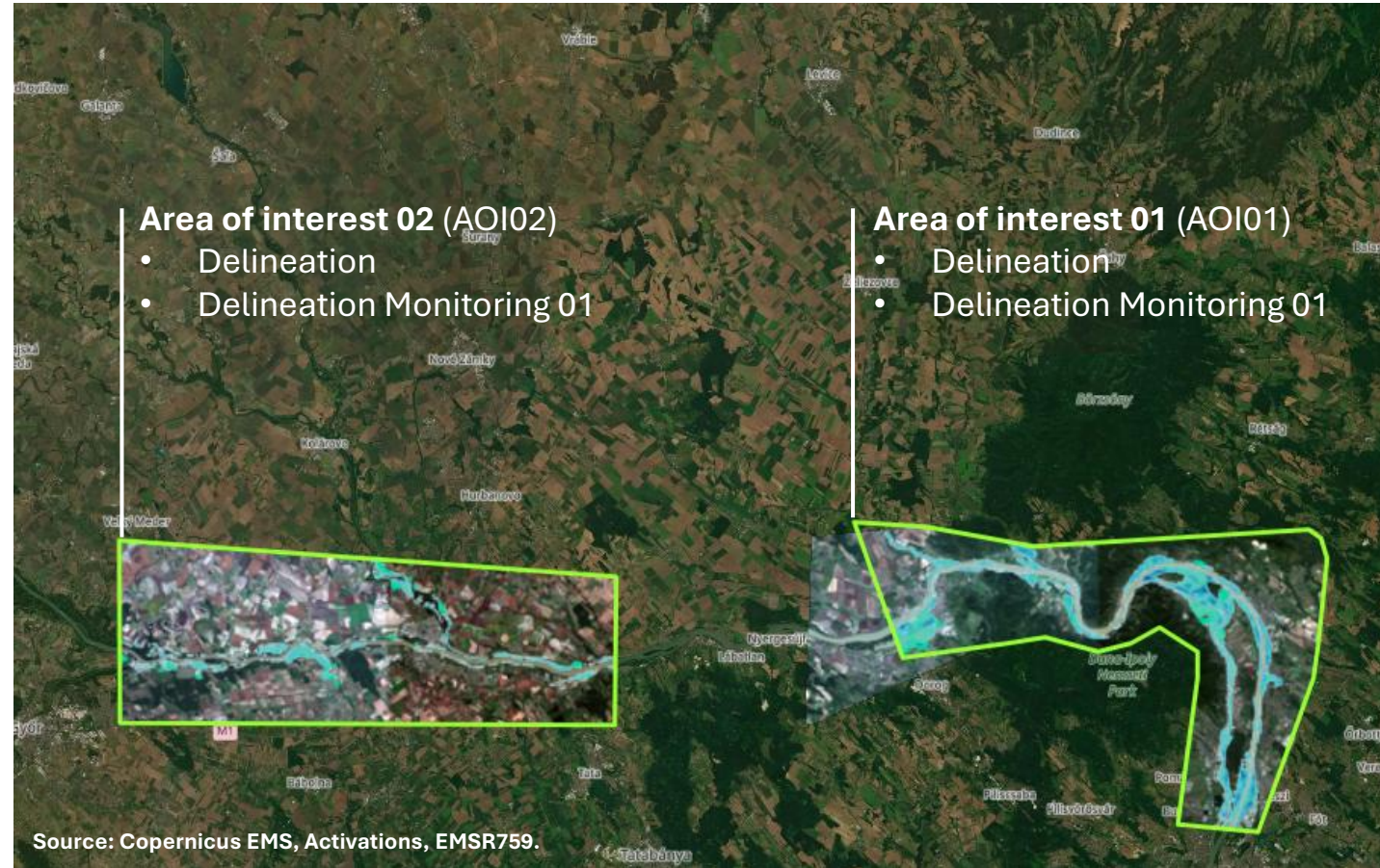
Activation Reason: On 13 September 2024, from 06:00 local time, downpours started affecting the Danube Basin. Maximum precipitation is expected on the weekend of 14 September 2024. Water levels are expected to rise into the middle of the week starting the 15 September 2024.

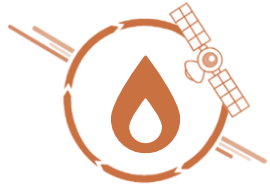
Number of analysed areas: 2

Number of produced products: 4 (DEL, DEL MONIT01)

Event Extent:

EMSR759	Total affected
 Roads [km]	289.9
 Built-up [ha]	117
 Population [No.]	3000
Max Event Extent [ha]	5571.1





Fire Product Overview

Wildfire in Portugal



RM Activation number: EMSR760

Activation time: 16/09/2024, 17:35

Event type: Wildfire




Affected countries: Portugal

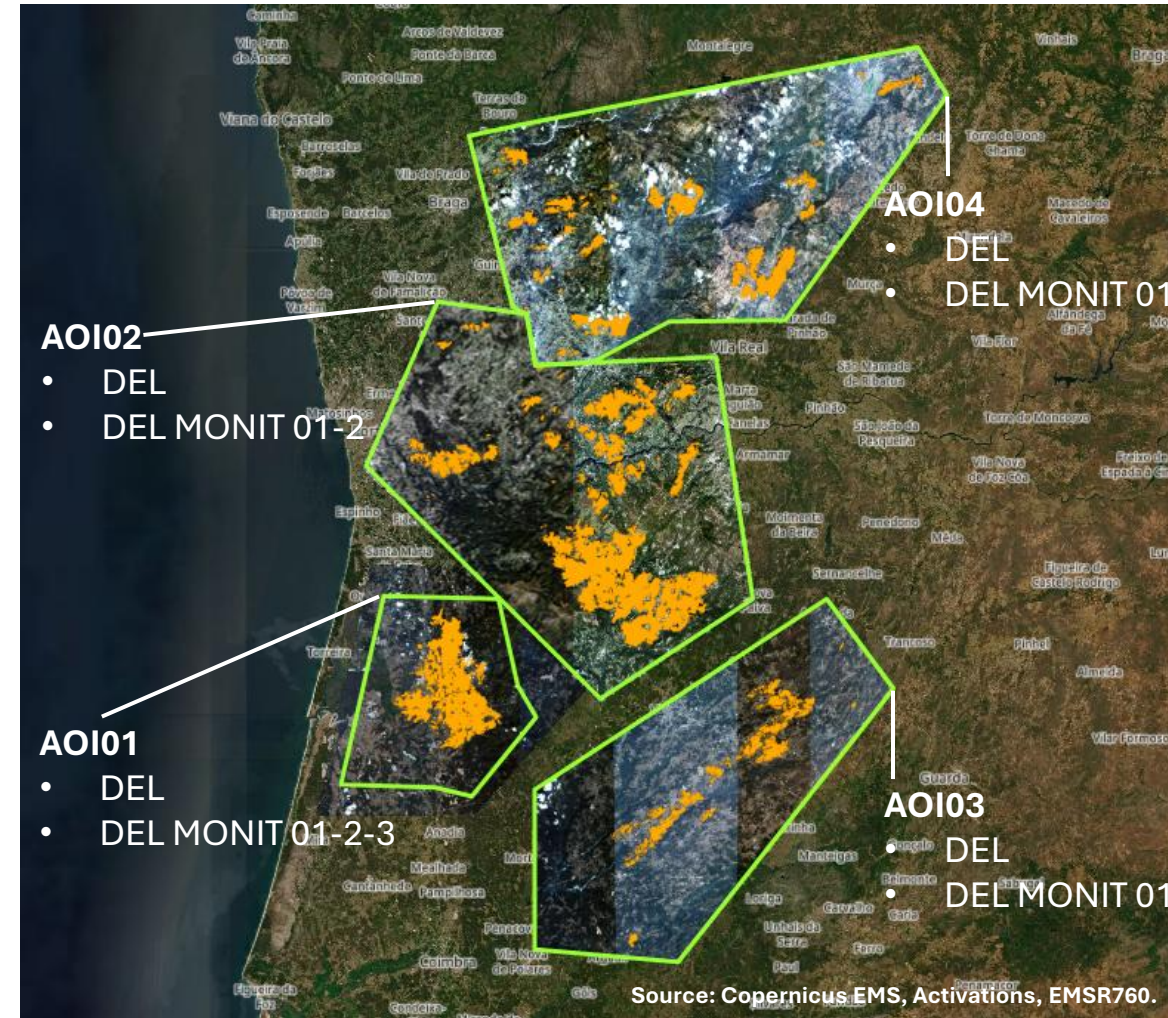
Activation Reason: On the 15 September 2024, a wildfire started in the municipalities of Oliveira de Azemeis, Sever do Vouga and Albergaria-a-Velha, in Aveiro region. The fire expanded rapidly due to the high temperature and strong winds. Since the 18 September 2024, additional areas are impacted by wildfires as well. In the fire combat are actually present 5300 operationals, 1625 vehicles and 26 airplanes and helicopters. Fires are still very active. Copernicus EMS Rapid Mapping is requested to provide fire extent.

Number of analysed areas: 4

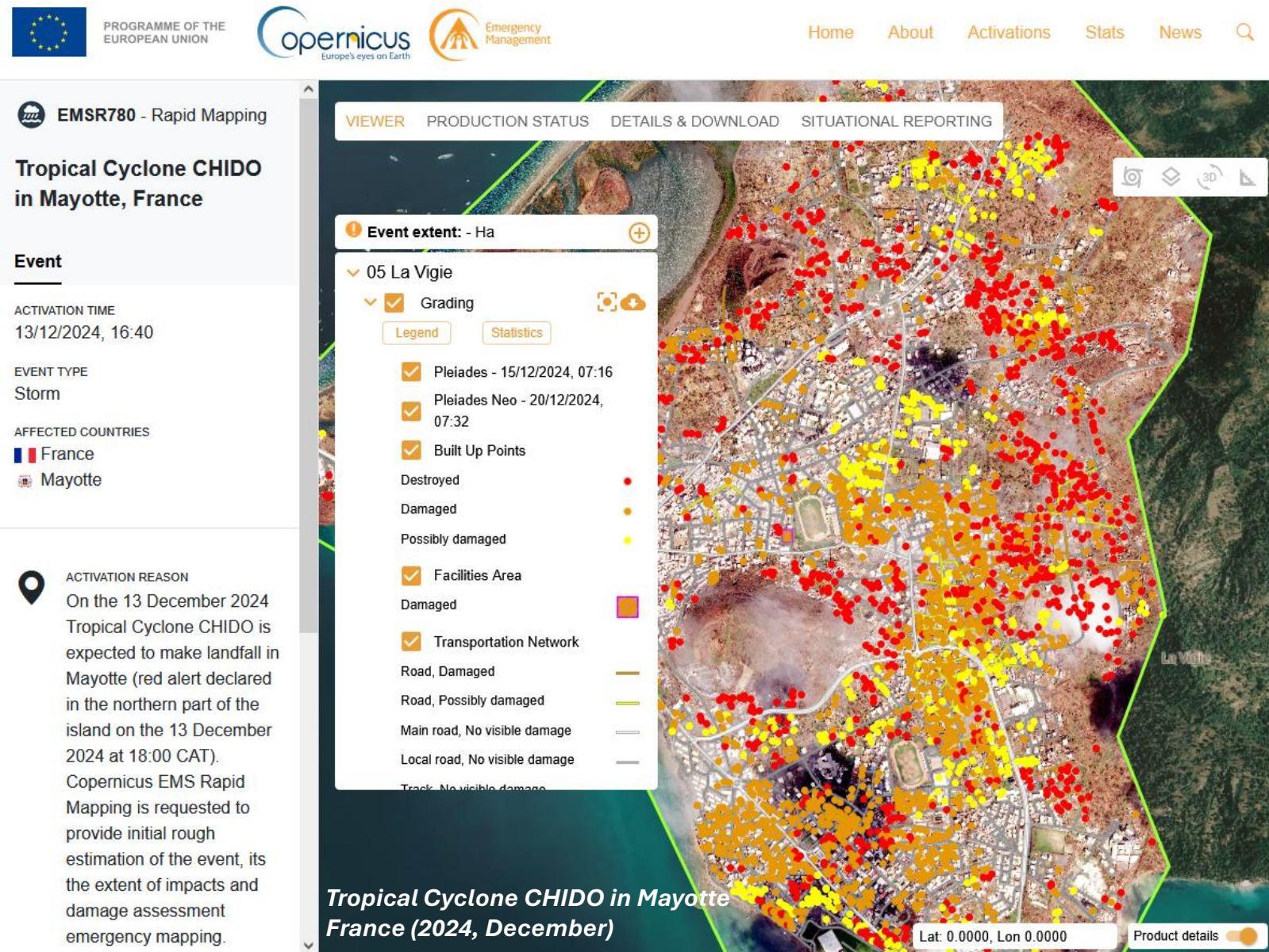
Number of produced products: 11

Event Extent:

EMSR760	Total affected
 Roads [km]	3886.8
 Built-up [ha]	478.7
 Population [No.]	14400
Max Event Extent [ha]	116053.8



Post-Event Image Visualisation



The screenshot displays the Copernicus Emergency Management viewer interface. On the left, a sidebar provides event details for Tropical Cyclone CHIDO in Mayotte, France, including activation time (13/12/2024, 16:40), event type (Storm), and affected countries (France, Mayotte). The main area shows a satellite map of Mayotte with a green outline of the island. A legend panel is open, showing a hierarchy of damage assessment categories: Event extent (- Ha), 05 La Vigie, Grading, Pleiades - 15/12/2024, 07:16, Pleiades Neo - 20/12/2024, 07:32, Built Up Points, Destroyed (red dots), Damaged (orange dots), Possibly damaged (yellow dots), Facilities Area, Transportation Network, Road, Damaged (thick brown line), Road, Possibly damaged (thin brown line), Main road, No visible damage (grey line), Local road, No visible damage (thin grey line), and Track, No visible damage (thin grey line). The map is overlaid with numerous colored dots corresponding to these categories. At the bottom, the coordinates are Lat: 0.0000, Lon 0.0000 and a 'Product details' button is visible.

PROGRAMME OF THE EUROPEAN UNION

Copernicus Europe's eyes on Earth

Emergency Management

Home About Activations Stats News

EMSR780 - Rapid Mapping

Tropical Cyclone CHIDO in Mayotte, France

Event

ACTIVATION TIME
13/12/2024, 16:40

EVENT TYPE
Storm

AFFECTED COUNTRIES
France
Mayotte

ACTIVATION REASON
On the 13 December 2024 Tropical Cyclone CHIDO is expected to make landfall in Mayotte (red alert declared in the northern part of the island on the 13 December 2024 at 18:00 CAT). Copernicus EMS Rapid Mapping is requested to provide initial rough estimation of the event, its the extent of impacts and damage assessment emergency mapping.

VIEWER PRODUCTION STATUS DETAILS & DOWNLOAD SITUATIONAL REPORTING

Event extent: - Ha

05 La Vigie

Grading

Legend Statistics

Pleiades - 15/12/2024, 07:16

Pleiades Neo - 20/12/2024, 07:32

Built Up Points

Destroyed

Damaged

Possibly damaged

Facilities Area

Damaged

Transportation Network

Road, Damaged

Road, Possibly damaged

Main road, No visible damage

Local road, No visible damage

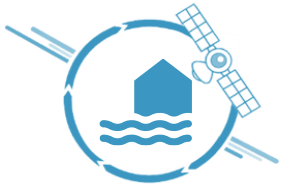
Track, No visible damage

Tropical Cyclone CHIDO in Mayotte France (2024, December)

Lat: 0.0000, Lon 0.0000

Product details

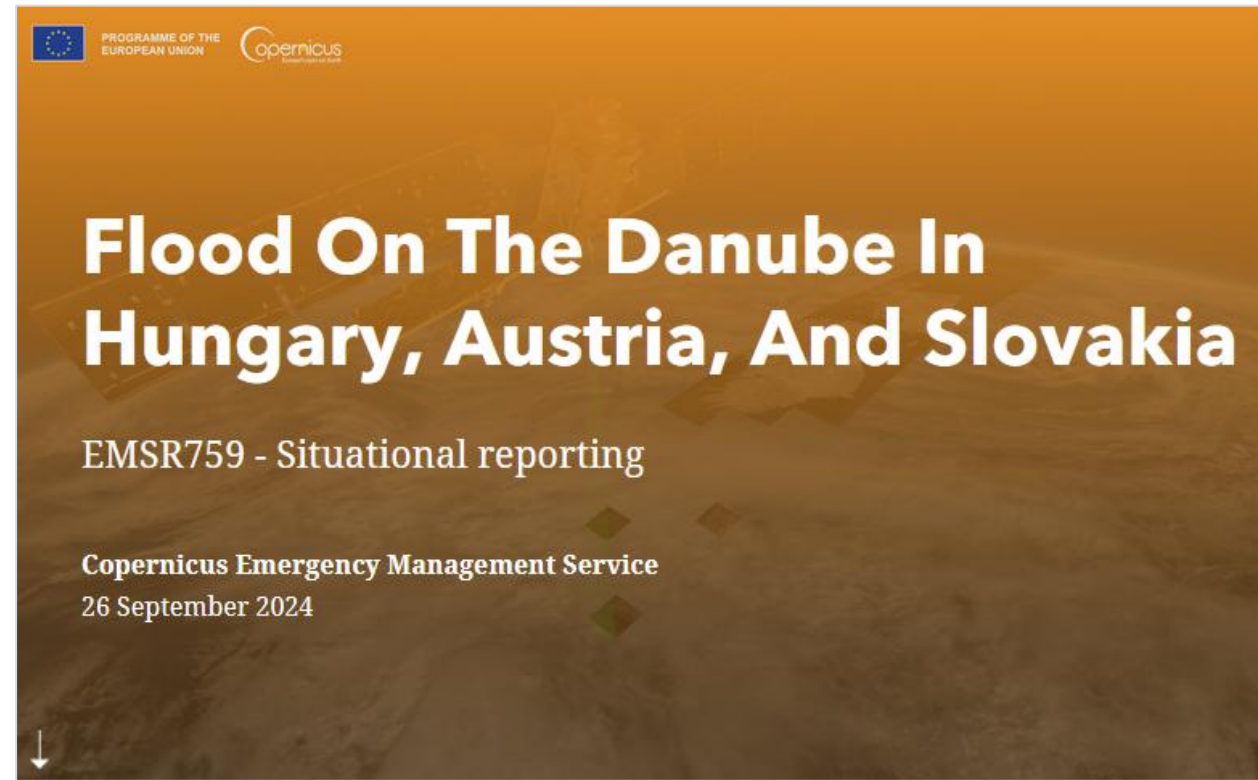
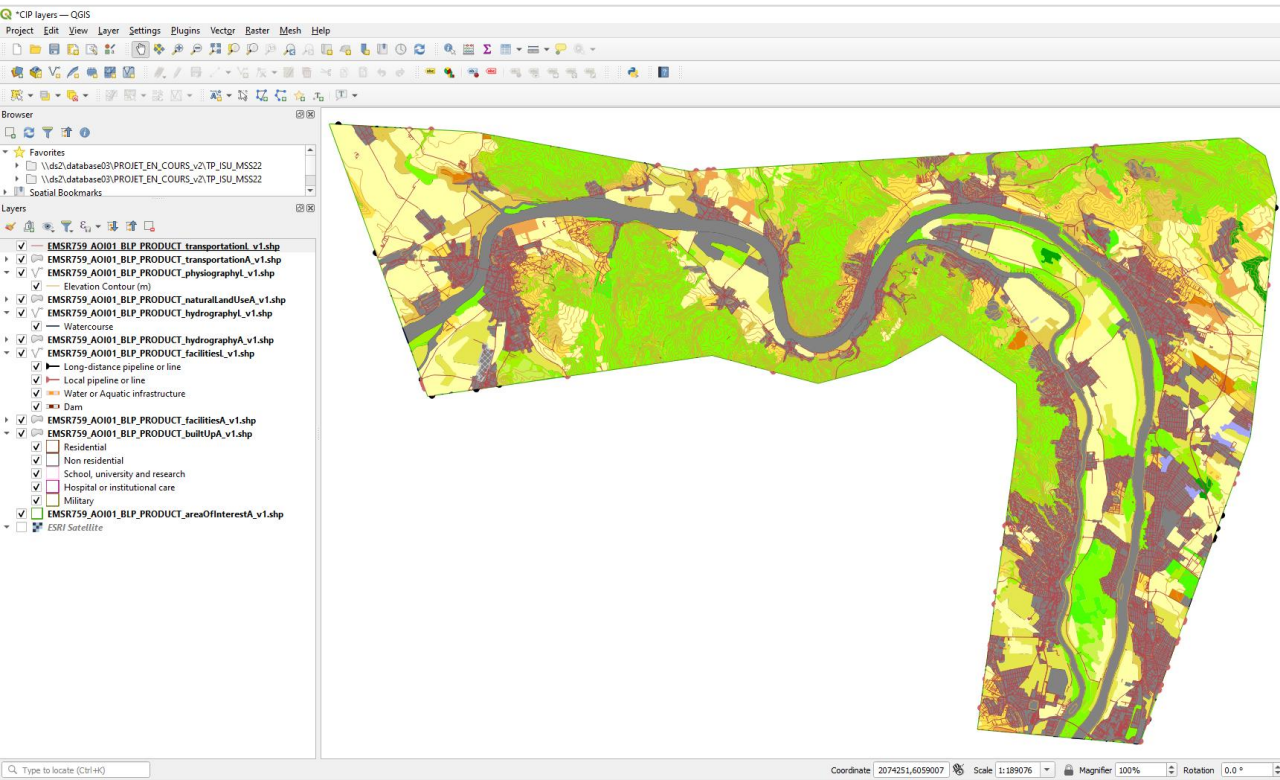
- **HR or VHR Images** can be **viewed** interactively on the **activation viewer**, along with the other product details.
- The **resolution** of these shared images is **downgraded**, but **users** have **rapid access** to them as soon as they are received.
- Other **HR open-source images**, such as **Sentinel-1/2** can be downloaded from the [Copernicus Browser](#)



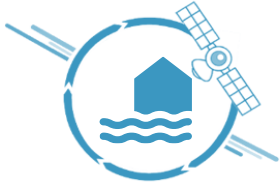
Product Delivery

✓ Base Layer Package (BLP)

✓ Situational Reporting



Source: Copernicus EMS, Activations, EMSR759.



Product Delivery

✓ Geospatial datasets of crisis information

✓ Ready-to-print Map + Event Statistics

EMSR759 AOI: 01 Esztergom Delineation

Consequences within the AOI		Unit of measurement	Affected	Total in AOI
Flood trace		ha	244,7	
Flooded area*		ha	4.570,9	
Maximum flood extent**		ha	4.571,7	
Estimated population		Number of inhabitants	- 2.700	- 190.000
Built-up	Residential Buildings	ha	91,6	5.688,1
	Office buildings	ha	2,6	46,9
	Wholesale and retail trade buildings	ha	0,01	82,6
	Industrial buildings	ha	7,8	927,2
	School, university and research buildings	ha	0,3	51,5
	Hospital or institutional care buildings	ha	0,01	12,8
	Military	ha	0	30,9
	Cemetery	ha	0	53,3
Transportation	Airfield runways	ha	3,9	70,9
	Helipad	ha	0	0,3
	Airfield runways	km	0,2	2,4
	Highways	km	0	44,2
	Primary Road	km	9,4	188,7
	Secondary Road	km	7,1	77,9
	Local Road	km	51,7	1.764,9
Cart Track	km	156,9	1.767,3	
Long-distance railways	km	0,4	362,4	
Facilities	Setting Basin	ha	0,1	13,7
	Dams	ha	0	0,1
	Constructions for mining or extraction	ha	0	180,1
	Power plant constructions	ha	0	41,0
	Sport and recreation constructions	ha	61,7	428,7
	Other civil engineering works not elsewhere classified	ha	0	32,8
	Long-distance pipelines, communication and electricity lines	km	13,5	131,7
	Local pipelines and cables	km	35,2	372,4
	Breakwater	km	0	0,1
	Dams	km	0	1,2
	Land use	Arable land	ha	1.729,3
Pastures		ha	973,9	3.597,2
Forests		ha	853,9	15.297,2
Other		ha	601,7	15.477,8
Heterogeneous agricultural areas		ha	471,9	6.093,3
Shrub and/or herbaceous vegetation association		ha	183,6	2.718,6
Permanent crops		ha	1,1	711,7
Inland wetlands	ha	0	124,7	

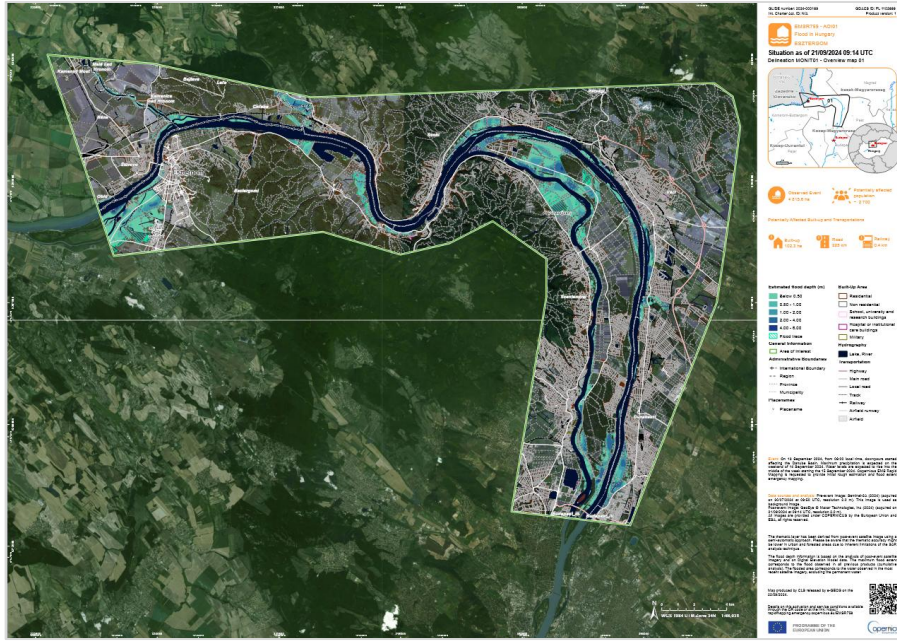
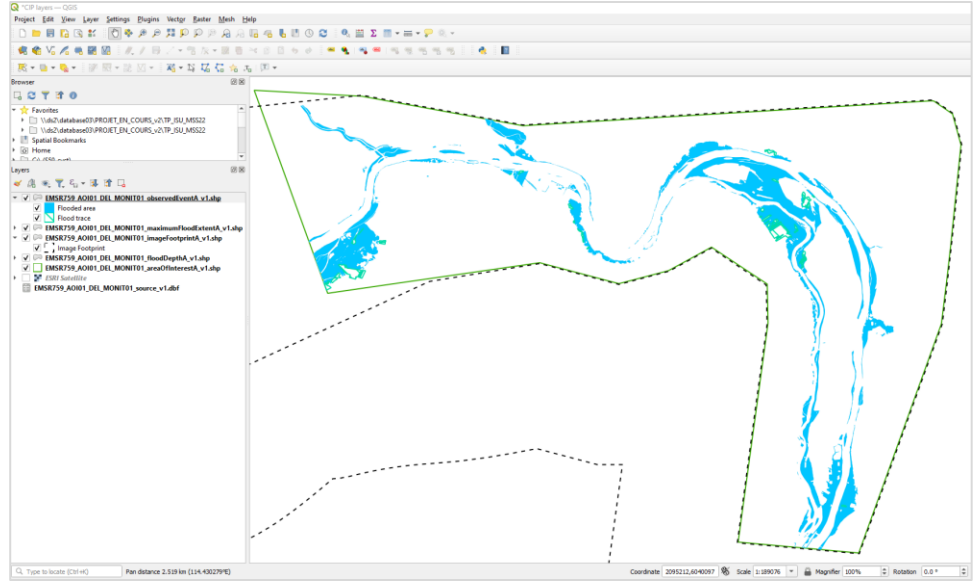
* Corresponds to the water observed in the most recent satellite imagery, excluding permanent water
 ** Corresponds to the water observed in all previous products and in all crisis imagery, excluding permanent water (cumulative analysis).

Disclaimer:
 Full disclaimer and other helpful information available in the online manual:
<https://em.agency.copernicus.eu/mapping/online-manual/rapid-mapping-products>
 © European Union / Copernicus Emergency Management Service

Data Access:
 All data displayed on the map(s), as well as the Physiography and Land Use - Land Cover layers, are available in the Crisis Information Package and the Base Layer Package (for reference data). The table above is available in editable format in the Crisis Information Package. All products and data are also available for download on the portal.

Estimated Population:
 Estimated population is based on Copernicus Global Human Settlement Layer (GHSL) dataset. Additional population datasets and analysis are available in the summary table.

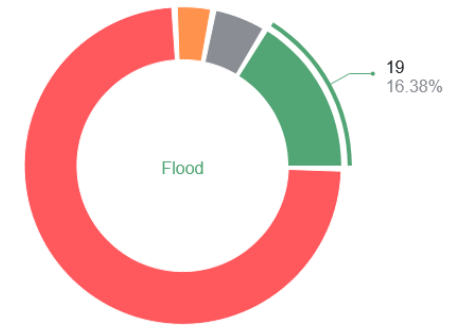
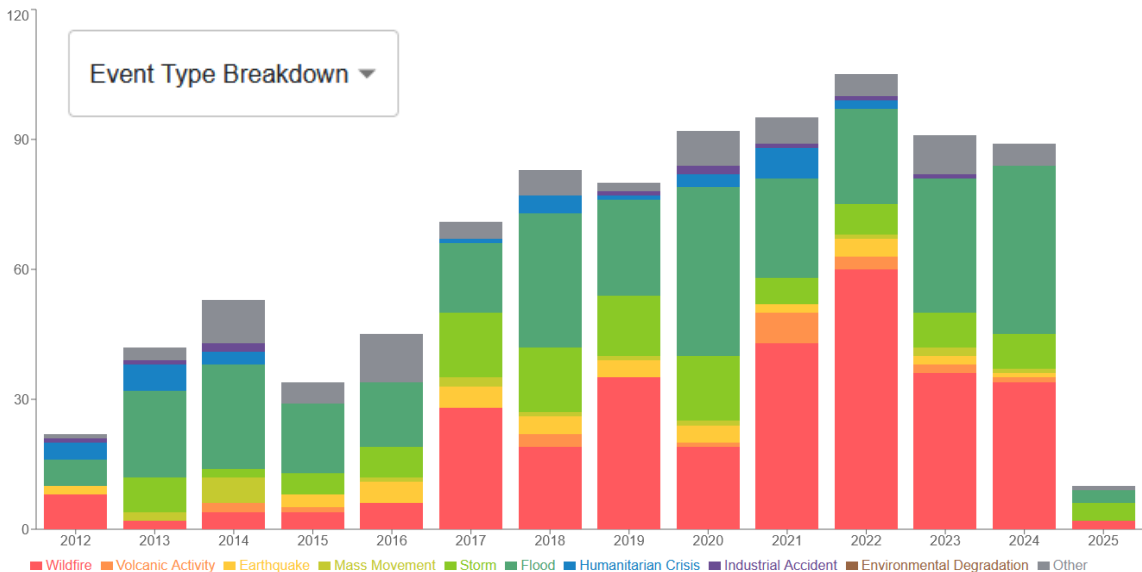
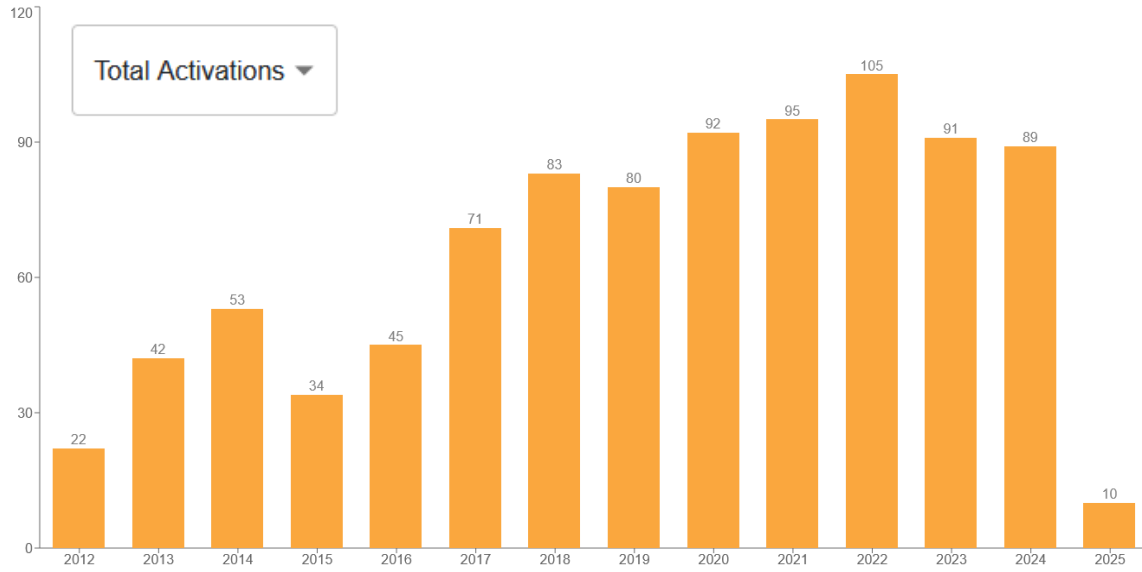
Data sources:
 Base Vector Layers: OpenStreetMap © OpenStreetMap contributors (2024), Wkimapia.org, GeoNames 2015, Corine Land Cover (CLC) 2018, EuroBoundaryMap 2017 ©EuroGeographics.
 Inset Maps: JRC 2013, GISCO 2010 © EuroGeographics, Natural Earth 2012, CCM River DB © EUJRC2007, GeoNames 2015.
 DigitalElevation Model: FABDEM (ForestAndBuildingsremovedCopernicusDEM) removes building and tree height biases from the Copernicus GLO 30 Digital Elevation Model (DEM) (Arbus, 2020).



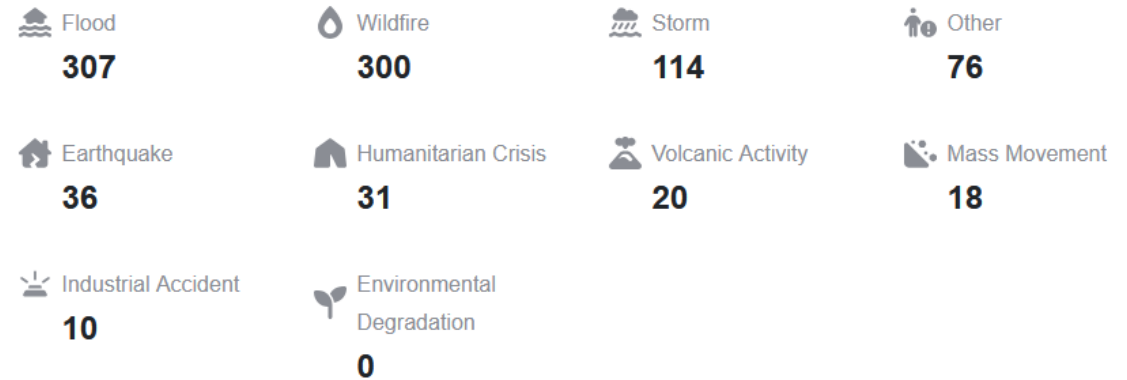
Workshop Session

CEMS Statistics

Events	116
Flood	19
Other	6
Volcanic Activity	4
Wildfire	87



by event type



by country



Source: Copernicus EMS, Stats.

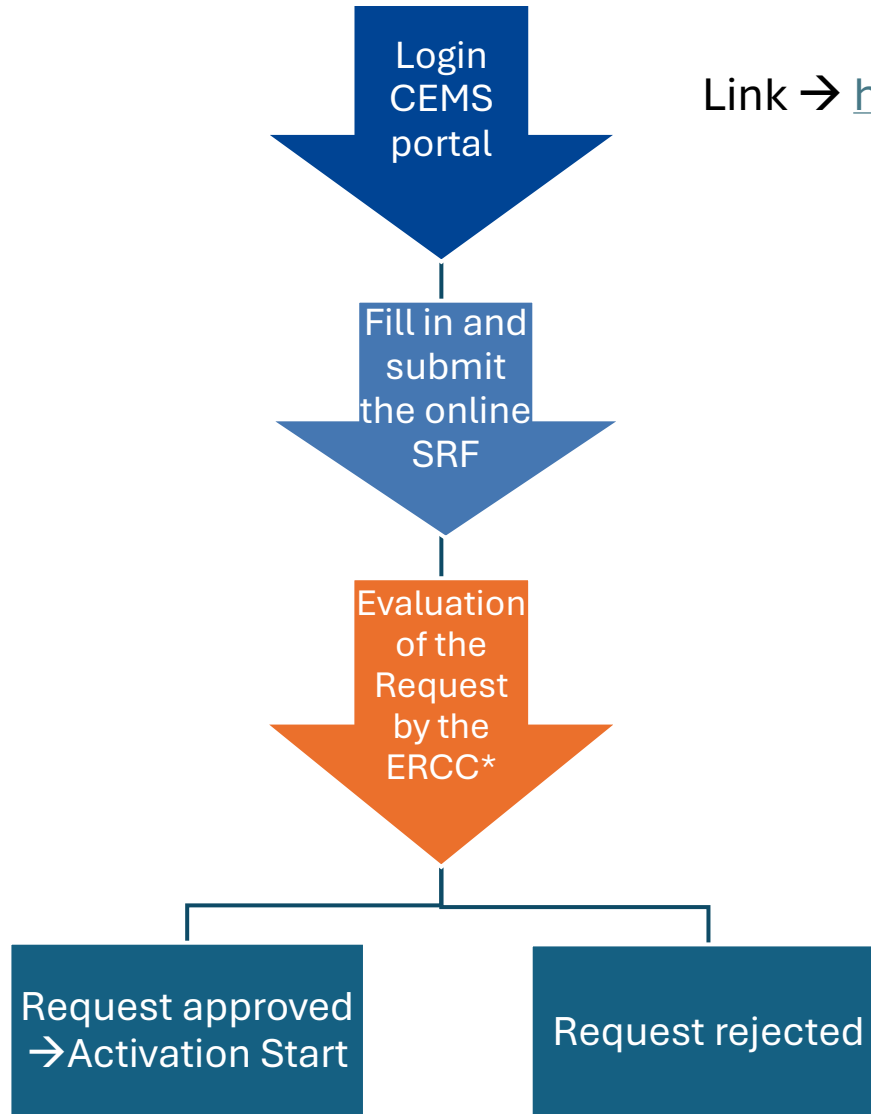


SUNSHINE



Funded by the European Union

How to Request the Service?



Link → <https://mapping.emergency.copernicus.eu/>



Service Request Form – Phase 1

Select the service: Emergency Response

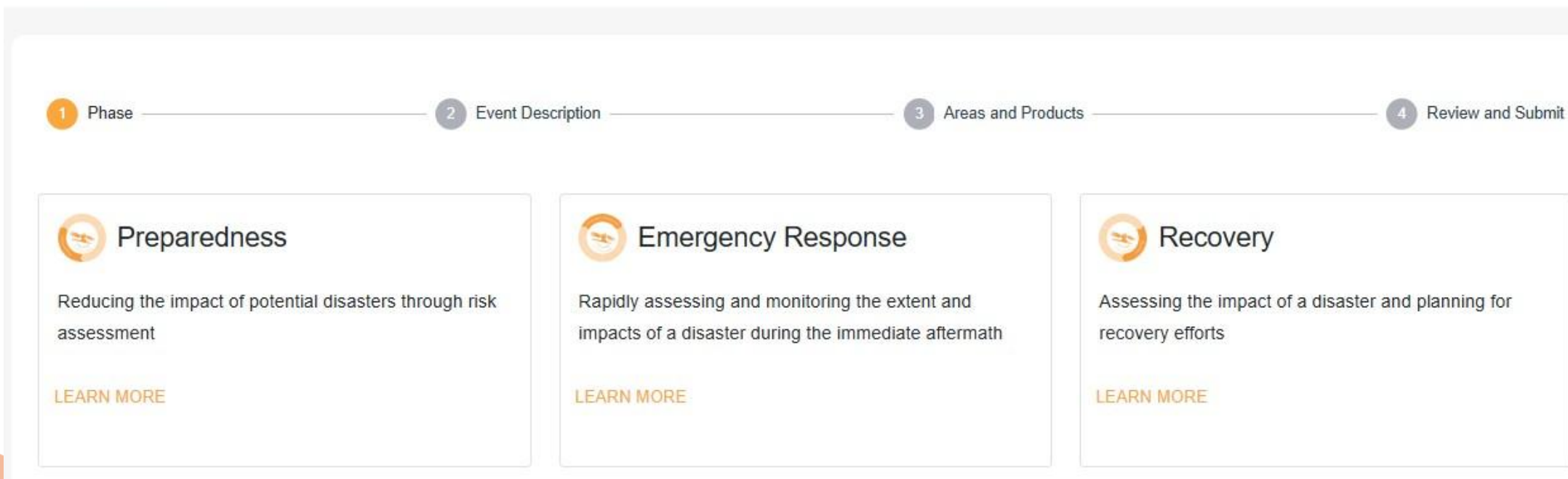
CEMS on-Demand Mapping Service Request Form

Link → <https://mapping.emergency.copernicus.eu/>

Select the service you want to request. Do you need the information for Emergency response (hence as soon as possible) or is it for Preparedness or Recovery purposes?

Check out the [documentation](#) for more information on the Service Request Form.

Try the [SRF Training](#) version to learn more on how to request an activation.



The screenshot displays a four-step progress bar at the top: 1 Phase, 2 Event Description, 3 Areas and Products, and 4 Review and Submit. Below the progress bar are three service selection cards, each with an icon, a title, a description, and a 'LEARN MORE' link.

- Preparedness**: Reducing the impact of potential disasters through risk assessment. [LEARN MORE](#)
- Emergency Response**: Rapidly assessing and monitoring the extent and impacts of a disaster during the immediate aftermath. [LEARN MORE](#)
- Recovery**: Assessing the impact of a disaster and planning for recovery efforts. [LEARN MORE](#)

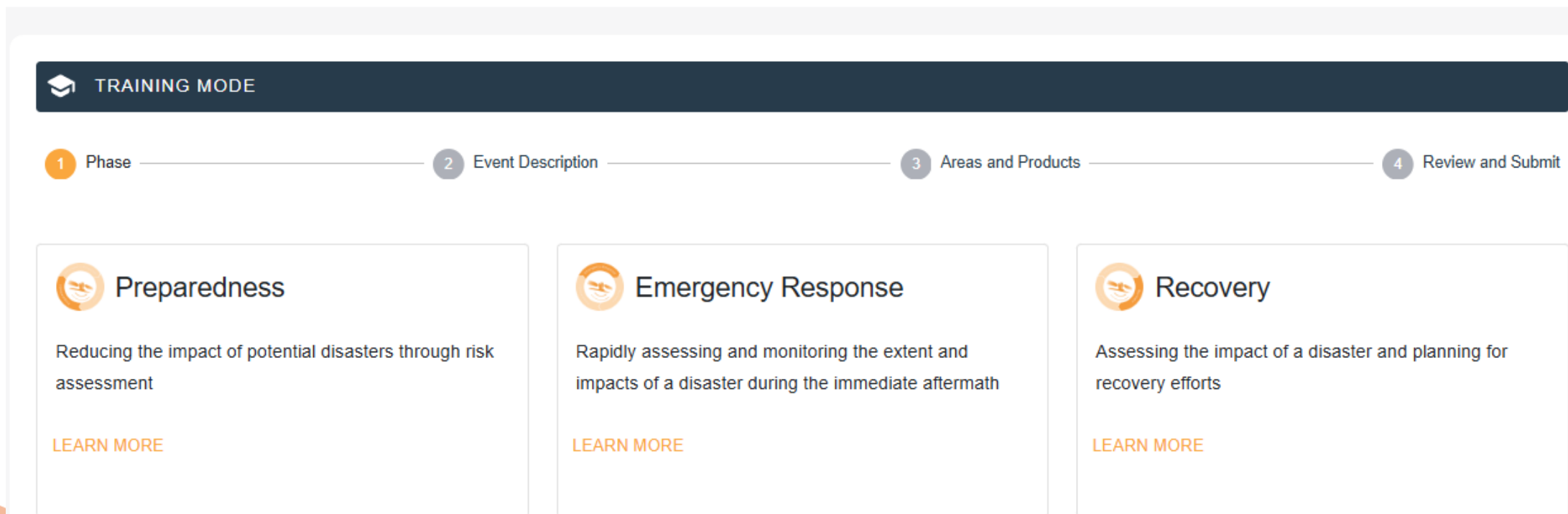
Service Request Form – Phase 1

Select the service: Emergency Response

CEMS on-Demand Mapping Service Request Form

Select the service you want to request. Do you need the information for Emergency response (hence as soon as possible) or is it for Preparedness or Recovery purposes?

Check out the [documentation](#) for more information on the Service Request Form.



The screenshot shows a web interface for the Service Request Form. At the top, a dark blue bar contains a graduation cap icon and the text "TRAINING MODE". Below this is a horizontal progress bar with four steps: "1 Phase", "2 Event Description", "3 Areas and Products", and "4 Review and Submit". The "Phase" step is currently active. Underneath the progress bar are three service selection cards, each with an orange circular icon containing a stylized sun and a person. The first card is for "Preparedness" with the description "Reducing the impact of potential disasters through risk assessment" and a "LEARN MORE" link. The second card is for "Emergency Response" with the description "Rapidly assessing and monitoring the extent and impacts of a disaster during the immediate aftermath" and a "LEARN MORE" link. The third card is for "Recovery" with the description "Assessing the impact of a disaster and planning for recovery efforts" and a "LEARN MORE" link.

Service Request Form – Phase 2

 TRAINING MODE



To proceed to next steps, Event Type and Affected Country are mandatory fields.

Event identification

Event Type * Affected country * Event Date & Time

Ongoing

To your knowledge, is the disaster still ongoing or upcoming?

Yes No

Activation Reason

Brief description of the event, the estimated impact and/or potential risk, the current situation, why you would need an activation

Reason *

➔ The **Activation reason** is required before submitting the request but can be filled at a later step, where you can invite someone to help you complete this request in the *Review and Submit* section.

Sensitive

If this activation is marked sensitive, its products will not be publicly disseminated

Yes No

PREVIOUS

SAVE NEXT

Service Request Form – Phase 3

 TRAINING MODE

✓ Phase — ✓ Event Description — 3 Areas and Products — 4 Review and Submit

If you don't have the information to complete this step, you can invite someone to help you complete it in the Review and Submit section.

Select products

First Estimate Delineation Grading

Which area(s) should be analysed?

Upload KML File

or drag and drop a file here

And / or

Draw an Area
Add an AOI by drawing it on the map.

[Rapid Mapping for Emergency Response Portfolio](#)

Data to share
Useful data you can share with us: e.g. Cadastral data, Digital Terrain Model, Drone/Plane images, Field data.

Data that you can share

Why share data? By sharing data with us, you can contribute to increasing the accuracy of the product delivered.

How to share data? Following the acceptance of the activation request, we will offer you a way to easily transfer the data

All data will be used EXCLUSIVELY in the frame of this activation



Upload KML File

If you are not sure which areas are to be analysed, ERCC can help you.



 TRAINING MODE

→ Draw an Area

- Only one polygon per AOI
- If you are not sure which areas are to be analysed ERCC can help you.

→ Product Selection

You can add another area of Interest here

Data to share
Useful data you can share with us: e.g. Cadastral data, Digital Terrain Model, Drone/Plane images, Field data.



AOI Name

Select available products

- Delineation
- Grading
- First Estimate

Based on the event evolution/dynamic, the service can provide Delineation and Grading monitoring products.

REMOVE AOI

ADD AOI

Rapid Mapping for Emergency Response Portfolio

Data that you can share

National DIEM


Load Copernicus GFM information

- GFM Observed Flood Extent
- GFM Image Footprint



Add Copernicus GFM Information

Service Request Form – Phase 4

 TRAINING MODE

- Phase
- Event Description
- Areas and Products
- 4 Review and Submit

Event Description

Phase Emergency Response Mapping

Event type Flood

Affected country Austria

Event date 02/06/2025, 00:00

Ongoing Yes

Activation Reason Test

Sensitive No

 **Review your submission**

Areas and Products

AOI Number	Name	Area [Km ²]	Products
1	No name	19	Delineation Grading First Estimate
Totals: 1	AOI	19	

A Situational Reporting will be available online and updated during the entire activation.

Data to share National DEM

Service Request Form – Phase 4

Review and Submit

The authorised user contact number



Communication

You can add a list of recipients of activation-related notifications

Ask hand over

Invite someone to help you complete the request. You won't be able to edit the form until they've granted you the same access in return.

Contact Phone Number *

Users in CC

Email address

SAVE & SHARE

Evaluation of the Request

- Click on "**Send for approval**" once you finalised your Service Request Form.
- The **form** is automatically **sent to the ERCC**.
- You are promptly informed whether the **request is approved or rejected**.

PREVIOUS










NEW: Handover to a different user



SAVE

SEND FOR APPROVAL

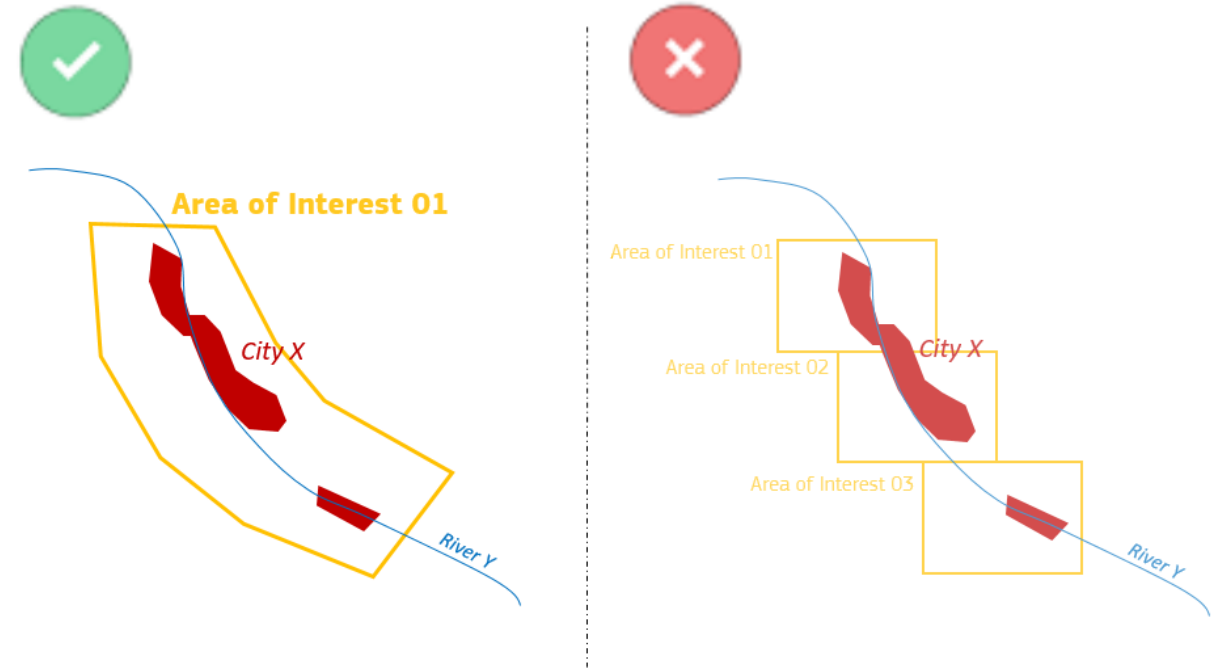
Best Practices for Activating CEMS RMS

 Trigger Early	Trigger the service during or right after the event to maximize imagery acquisition speed.
 Complete the SRF Clearly	The Service Request Form must include a clear event description and a well-defined Area of Interest (AOI), which can later be refined with RM operators.
 Share Field Info	Field data helps validate or refine satellite-based crisis products.
 Provide DTM for Floods	A quality DTM enhances flood mapping accuracy – provide it if available.
 Get Trained in Advance	Familiarize yourself with the CEMS RM portfolio and request procedures.
 English Contact Person	Choose someone fluent in English to streamline communication with RM operators.
 Stay Reachable	Remain accessible during activation to support emergency response tasks.
 Understand EO Limitations	Review EO product limitations to ensure responsible usage.
 Send Feedback	User feedback helps RM operators improve service quality.

Definition and Digitisation of Area of Interest

Guidelines for defining an area of interest (AOI)

- **Flexible shape**
- **No overlap and no adjacency between AOIs**
- In **rural areas**: favour populated places over uninhabited area
- In **coastal areas**: exclude the sea/ocean
- In **border area**: define the AOI considering the most **detailed administration boundaries of the country** requested and include only the country requested.
- **Minimum area: 10 km²**



Source: Copernicus EMS, Rapid Mapping Manual, Related Documents.

Definition and Digitisation of Area of Interest

Guidelines for defining an area of interest (AOI)

For flood event



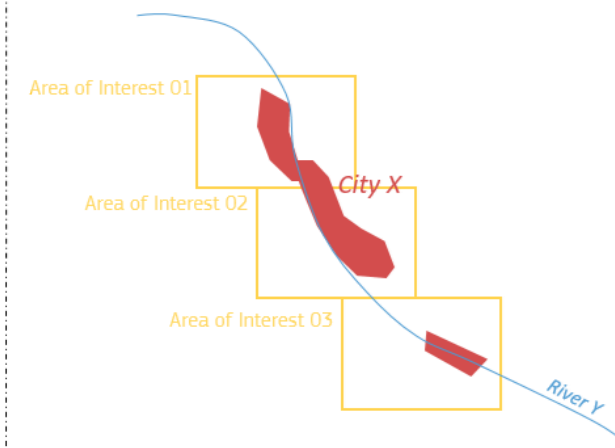
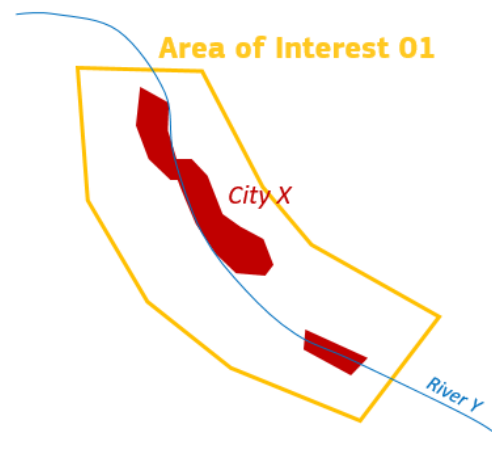
Focus on the **area within the river bed** and exclude unexposed area (e.g. high ground/slope).

Visit the **EFAS** portal for events in Europe and the **GloFAS** portal for events outside Europe for **possible adjustments**.

For fire event



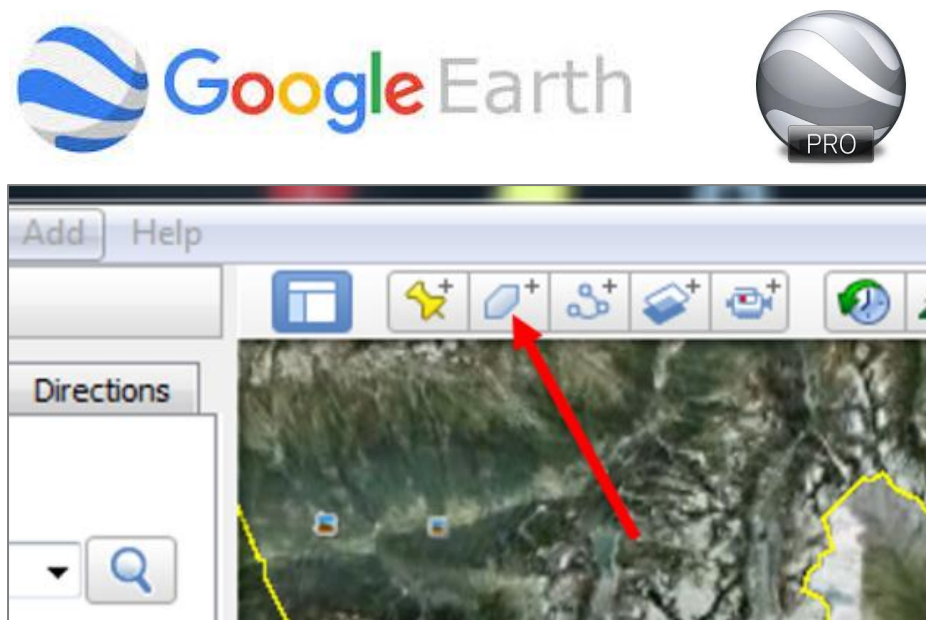
Compare and possibly **adjust** with the hotspots and burnt area identified by **EFFIS** for events in Europe or **GWIS** for events outside Europe.



Source: Copernicus EMS, Rapid Mapping Manual, Related Documents.

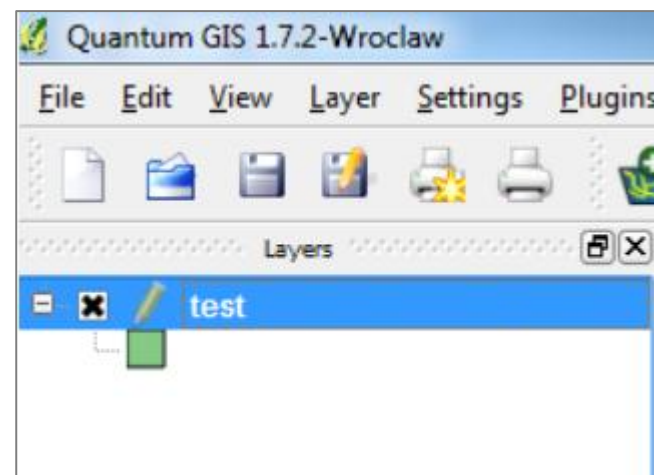
Where to Digitise an AOI?

- Digitisation in **Google Earth** software



Tool to draw polygons on Google Earth

- Digitisation in a **GIS software** (QGIS, ArcgisPro) and conversion into a KML/KMZ
- Exported KML/KMZ will be in WGS84 geographical coordinates



Quantum GIS conversion tool from shapefile(.shp) to kml



ArcGIS Pro

Crisis information, but in what form?

Imagery access

Rapid availability on the Activation Viewer

➤ Avoids Users having to download Gigabytes of satellite data

✓ This is a **recent service evolution** following a user request

<https://rapidmapping.emergency.copernicus.eu/EMSR809>

GIS vector files (per layer)

- ESRI shapefiles (.shp, .shx, .dbf, .prj),
- TopoJSON,
- Styling rules in SLD format

Map Format

- Layered geospatial PDF
- Follows **map legend** and **data model**
- Supports **layer grouping and naming**

Map Delivery Specifications

- Standard layout in PDF, **A1 ISO printing, 200 dpi** full-colour resolution, **No transparencies** (toggle on/off layers)

A Question of Quality?

- Products go through **many quality controls**
 - **during production**
 - **and offline**, to improve thematic extraction processes
- **Completeness** (no missing or corrupted files)
- **Content** (developed next slide)
- ✓ Increasingly automatic

A Question of Quality?

Product content

Crisis information

- ✓ Thematic accuracy
- ✓ Consistency of crisis information between AOIs within the same activation

GIS layers

- ✓ Topological consistency of crisis information layers
- ✓ Positional accuracy of crisis information layers
- ✓ Attribute consistency

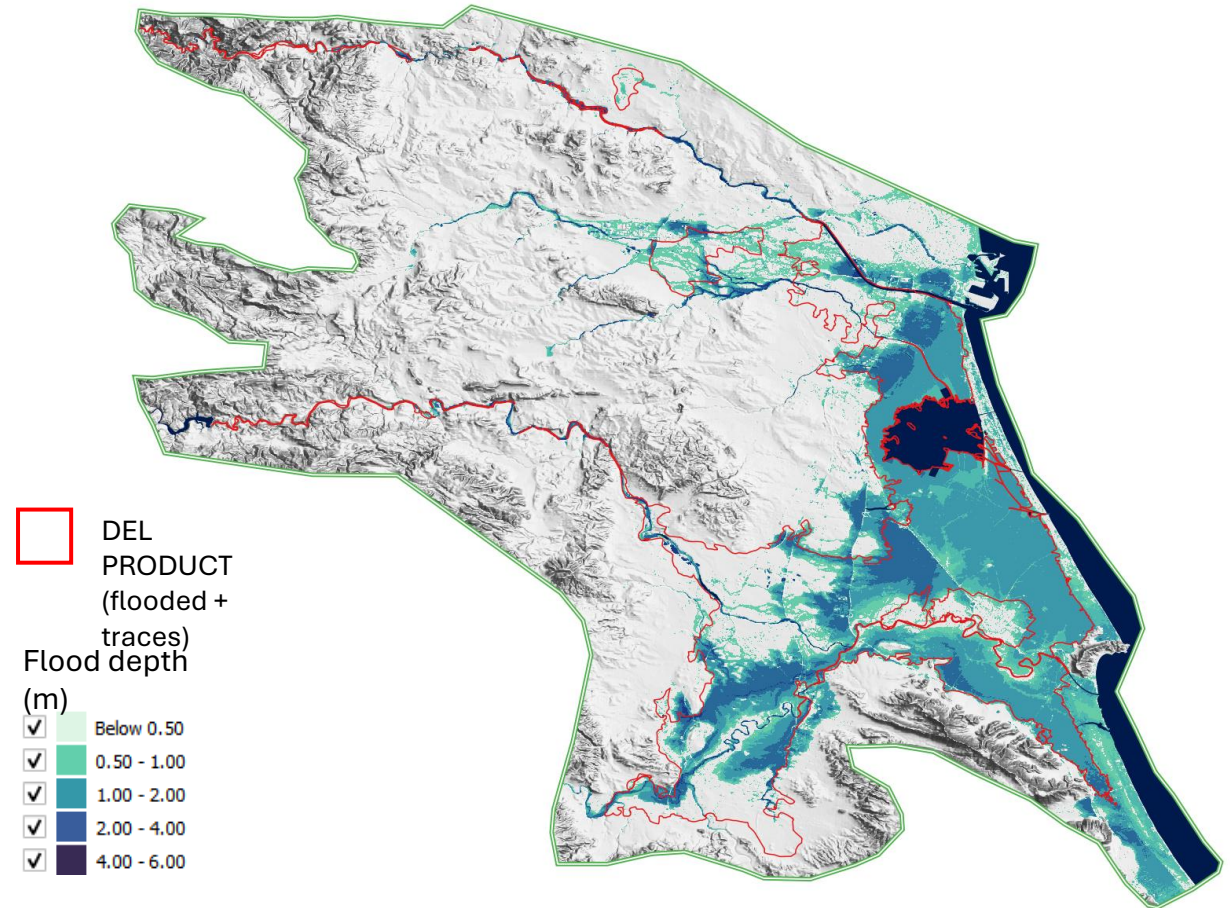
Maps

- ✓ Prominence of crisis information
- ✓ Completeness and correctness of maps
- ✓ Consistency of symbology

Does the service evolve?

Well, yes! The very recent Flood modelling & depth product

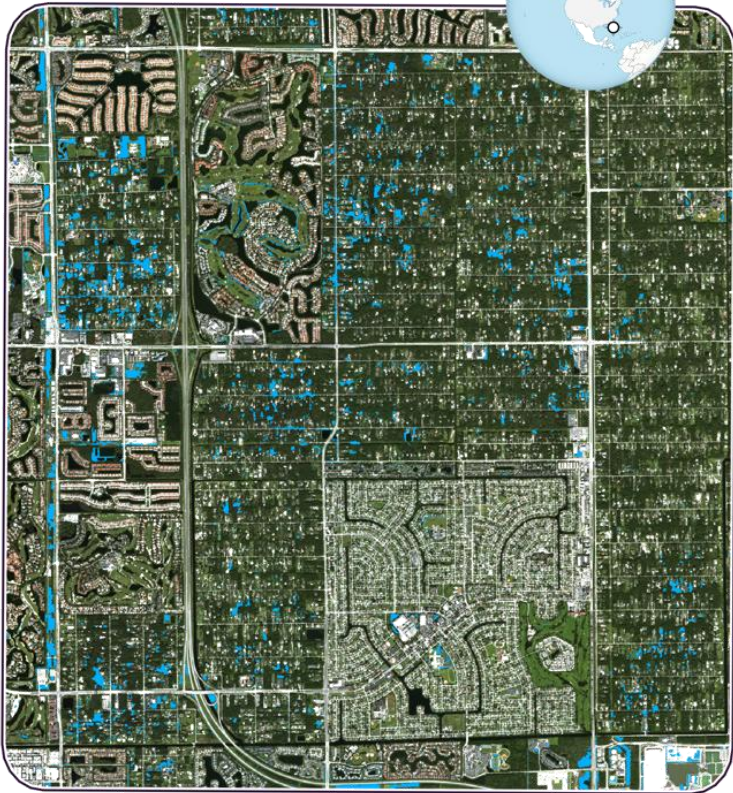
Operational in September 2025



Does the service evolve?

Flood depth and modelling, possible even in urban areas

Hurricane Ian in Fort Myers, Florida
Crisis image, WorldView-02 (30/07/2022)



Reference information
□ Area of interest
■ Hydrography

Crisis information
■ Observed flood extent

Hurricane Ian in Fort Myers, Florida
Extrapolated flood extent (EXFLOS) on 30/09/2022



Reference information
□ Area of interest
■ Hydrography

Crisis information
■ Observed flood extent
■ Extrapolated flood extent

Hurricane Ian in Fort Myers, Florida
Extrapolated flood depth (EXFLOS) on 30/09/2022



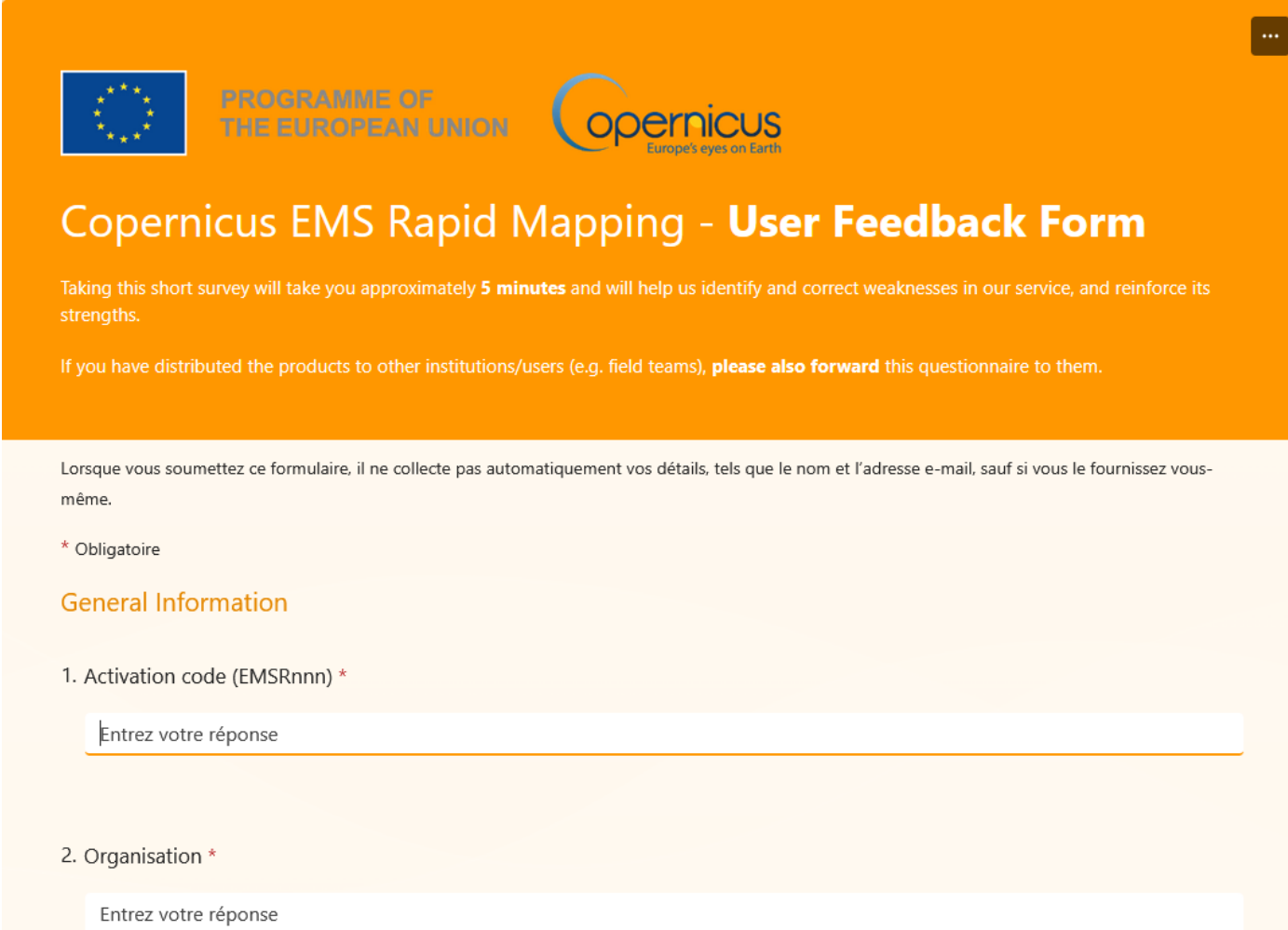
Reference information
□ Area of interest
■ Hydrography



Crisis information
Flood depth (m)
0 1

User Feedback – Latest version

5-10 min survey about:

- **General information** (*organisation, email,...*)
- **Communication**
- **Usability** of the **product**
- **Handling** of the **service** and of the **products**
- Further **comments** and **recommendations**



 PROGRAMME OF THE EUROPEAN UNION 

Copernicus EMS Rapid Mapping - User Feedback Form

Taking this short survey will take you approximately **5 minutes** and will help us identify and correct weaknesses in our service, and reinforce its strengths.

If you have distributed the products to other institutions/users (e.g. field teams), **please also forward** this questionnaire to them.

Lorsque vous soumettez ce formulaire, il ne collecte pas automatiquement vos détails, tels que le nom et l'adresse e-mail, sauf si vous le fournissez vous-même.

* Obligatoire

General Information

1. Activation code (EMSRnnn) *

2. Organisation *

Extract from the User Feedback Form. Source: Copernicus EMS.

User Feedback – Latest version

EMSR870

2. Organisation *

SERTIT

3. Name and Surname

Stephen Clandillon


4. Email address

s.clandillon@unistra.fr

5. Please specify your area of work *


Autre

SP

6. Did you have difficulties defining your request for activating the service? 


Yes

No

7. During the activation, did you receive the support you needed from the ERCC and/or the Service Provider? 

Yes

No

8. Did you feel well informed about the activation development? 

The frequency of sending notifications was appropriate and their content was clear.

Yes

No

9. Did you use the products? *

Yes

No

Suivant

Page 1 sur 5

Précédent

Suivant

Page 2 sur 5

User Feedback – Latest version

10. Which product was particularly useful?


- First Estimate Product (FEP)
- Delineation (DEL)
- Grading (GRA)
- Situational Reporting (SR)
- Reference (REF)

11. Which product(s) need improvement?

- First Estimate Product (FEP)
- Delineation (DEL)
- Grading (GRA)
- Situational Reporting (SR)
- Reference (REF)

12. Was/Were the product(s) delivered in time to be integrated in your crisis management activities?

- Yes
- No

13. Was/Were the product(s) accurate? 


Did the information presented correspond to the reality on the ground? (e.g. event extent, potentially affected population, number of affected buildings)

	Accurate	Need improvement	Not accurate	I don't know
Delineation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grading	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Handling of the products

14. The format you used the **most** on your work was:

- Maps (PDF)
- Geospatial datasets
- Situational Reporting (SR)
- Product Viewer (on the website)
- API

15. Delivery Format Usefulness 

If a statement does not apply, select 'Not Applicable' rather than 'Neutral'

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Not Applicable
The Maps have clear layouts, legends and labels	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Maps contain all needed information with an appropriate level of detail	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Summary table (on the last page of the Maps) is clear and relevant	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Geospatial datasets is easy to understand (file name, content)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Geospatial datasets contain all needed information	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Situational Reporting contains all needed information	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Products Viewer contains all needed information	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Products Viewer is organised in an intuitive way	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Any additional comments or suggestions on the different delivered formats?

For example, did you miss some information in the Situational Reporting? Or did you have difficulties finding some information in the Products Viewer (on the website)?

Entrez votre réponse

User Feedback – Latest version

Further comments and recommendations

17. What is your overall satisfaction with the service? *

Not at all satisfied ☆ ☆ ☆ ☆ ☆ Extremely satisfied

18. Any additional comments on the service, or recommendations for improving it?

Entrez votre réponse

19. Would you be interested in an online meeting to discuss the activation or receive training on the service?

Yes

No

Précédent

Envoyer

Page 5 sur 5

Want to know more?

About CEMS & User guide Resources



Videos

- CEMS Introduction
- Showcase videos : Wildfires in July 2024, Floods in Germany (June 2024), Landslides in Ischia Island (November 2022)

Printable PDFs

- The Copernicus Emergency Management Service
- Copernicus EMS Service Overview Brochure
- CEMS Flyer Rapid Mapping
- CEMS Flyer Risk Recovery Mapping




Storymap

- What is CEMS On-Demand Mapping?



Key takeaways

Now you know:

-  **CEMS Authorised Users and the conditions of access**
-  **Activating the service** is possible by submitting the **Service Request Form**
-  **Downloading products** from the **activation viewer** is open to public

Thank you for your attention

Any questions?



SUNSHINE

Now, let's check you were not sleepy ...

Join us in an interactive quiz to challenge your knowledge on EFAS and RM!

SCAN ME



Q&A session



*Please use the “**Raise Hand**” function, or write your question directly in the Chat*

What comes next?

Upcoming Training Opportunities

Seminars

- ☀ 23rd to 26th of June 2026 in Zagreb, Croatia

Simulation Exercises

- ☀ 6th to 7th of October 2026 in Brussels, DG DEFIS

REGISTER HERE



Interested to participate? **Scan the QR code** to fill in the Expression of Interest form!

Want to watch the webinar again?

The **recording** of the webinar and **slides** presented will be available on the SUNSHINE page of the Union Civil Protection Knowledge Network platform.

Follow this page for more updates and news from the SUNSHINE project!



**SUNSHINE page on
UCPKN platform**

Webinar Evaluation

SCAN HERE





SUNSHINE

Contacts

Reach out to us for any further questions!

For the SUNSHINE Trainings: Annita Elissaiou
ae@eena.org & sunshine@telespazio.com

For the SUNSHINE Exercises: Simon Taillefer
simon.taillefer@telespazio.com & sunshine@telespazio.com

General questions on SUNSHINE:
ec-sunshine-seminars@ec.europa.eu
sunshine@telespazio.com



SUNSHINE

Thank you for joining!

SUNSHINE Training Webinar 2

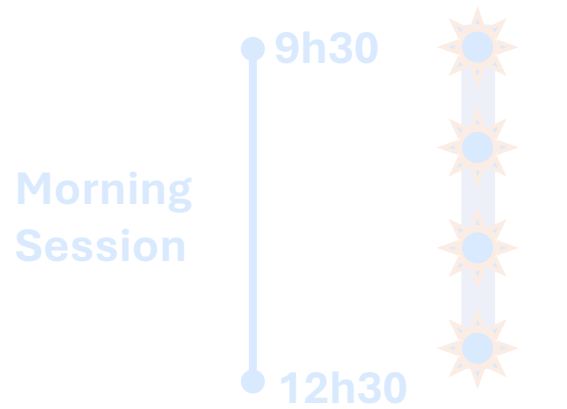
Using EU Space Services to Tackle Wildfires and Floods



SUNSHINE

Leveraging EU Space data and services for disaster resilience

Agenda



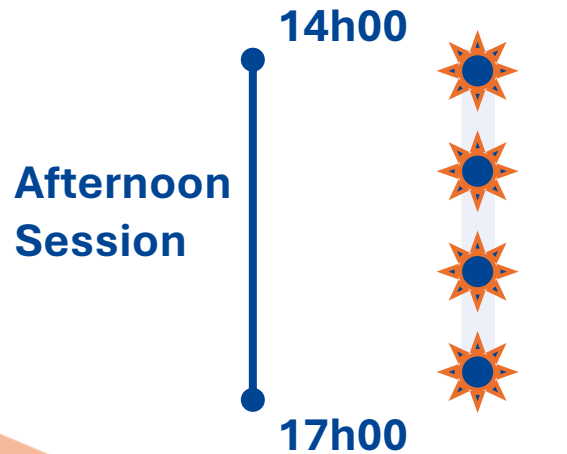
Welcome & Introduction to the SUNSHINE project

EFAS service, platform and access

RM service for support in flood management

Quiz and Q&A

Lunch break



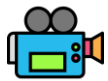
Welcome & Introduction to SUNSHINE project

RRM service for support in fire management

EFFIS service, platform and access

Quiz and Q&A

Some rules to consider



- ★ This webinar is being **recorded**
(recording of the webinar will be available on the *SUNSHINE* page of the UCPKN website)



- ★ **Stay muted** when not speaking to avoid disruptions and background noise.



- ★ Use the “**Raise Hand**” function or the Chat during the Q&A sessions.



- ★ **Be respectful and concise** when sharing comments or questions.



- ★ You may activate the option for automatically translated captions by clicking on “**Live Transcript**”.

Meet the Speakers



Annita Elissaiou
Project Officer
EENA



Sabrina Amzil
Land Surveyor –
CEMS EFAS
UNISTRA - SERTIT



Stephen Clandillon
ICube-SERTIT
Director – CEMS RM
UNISTRA - SERTIT



Kristin Fleischer
Project Manager
CEMS RRM
IABG



Ahmed Abuzeid
Civil &
Environmental
Engineer
CEMS EFFIS
IABG

The SUNSHINE Project



SUNSHINE

The **SUNSHINE** Project



Europe in the face of disasters...

- ☀ Climate change, natural hazards, safety threats increasing in frequency and intensity.
- ☀ Pressing need for stronger civil protection and international cooperation
- ☀ The need to be well-prepared to handle disasters is more important than ever.

The SUNSHINE Project

Background

- **Request** made by the **European Parliament & the Member States of the European Union**:
 - ✦ *How to better understand the EU space services?*
 - ✦ *What is the potential of EU space services to support national civil protection authorities?*

The SUNSHINE Project

Satellites at the service of disaster management

EU Space Programme

- ✦ EU is developing and operating space infrastructures with great potential for civil protection community
- ✦ Space data and services for observation, monitoring, mapping, public warning...
- ✦ Applications for safety and security expanding fast.

How to make best use of space capabilities in times of crisis?

The SUNSHINE Project

What is the SUNSHINE project about?

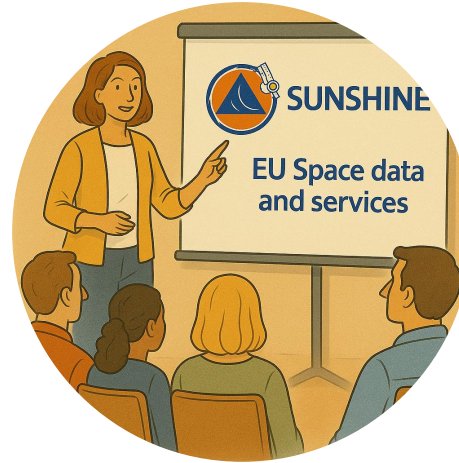
- ✦ Present and demonstrate the EU space services
- ✦ Help the civil protection community understand what they can do & how to use them
- ✦ Support operational integration in national systems and procedures

The project will strengthen resilience of EU Member States through dedicated trainings and exercises on the use of EU Space services.

The SUNSHINE project consortium



Seminars



Webinars



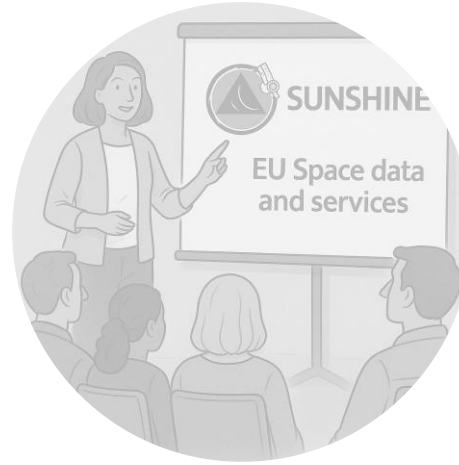
Trainings



Bilaterals



4 Seminars



5 Webinars

2 communication webinars

3 training webinars



SUNSHINE Trainings



2 Exercises

1 Bilateral

per Member State



Who are the SUNSHINE trainings for?

Operational & Strategic Actors

Civil protection authorities, emergency services & first responders, crisis & disaster management team leads, technical emergency teams, ministries responsible for civil protection.

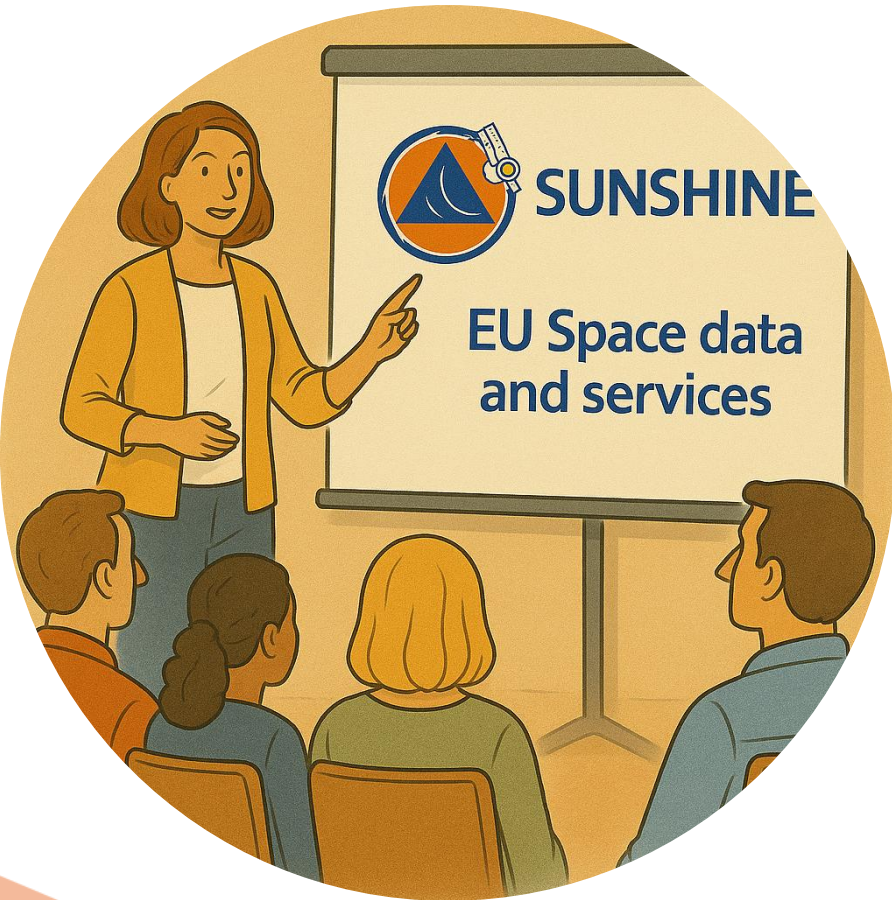
High-Level Technical Knowledge Actors

Technical experts, training coordinators, technological institutes, national scientific bodies & research centres, members of the Union Civil Protection Knowledge Network

Political & Coordination Actors

Policymakers on a national and local level, EU institutions, international & European organisations, NGOs, EU Coordination bodies

The **SUNSHINE** seminars



- ✦ Taking place over 4-days
- ✦ In-depth training on EU Space components and applications for crisis management
- ✦ “Train-the-trainer” approach ensures accuracy, relevance, and replicability
- ✦ Practical demonstrations on the use of EU space data and services

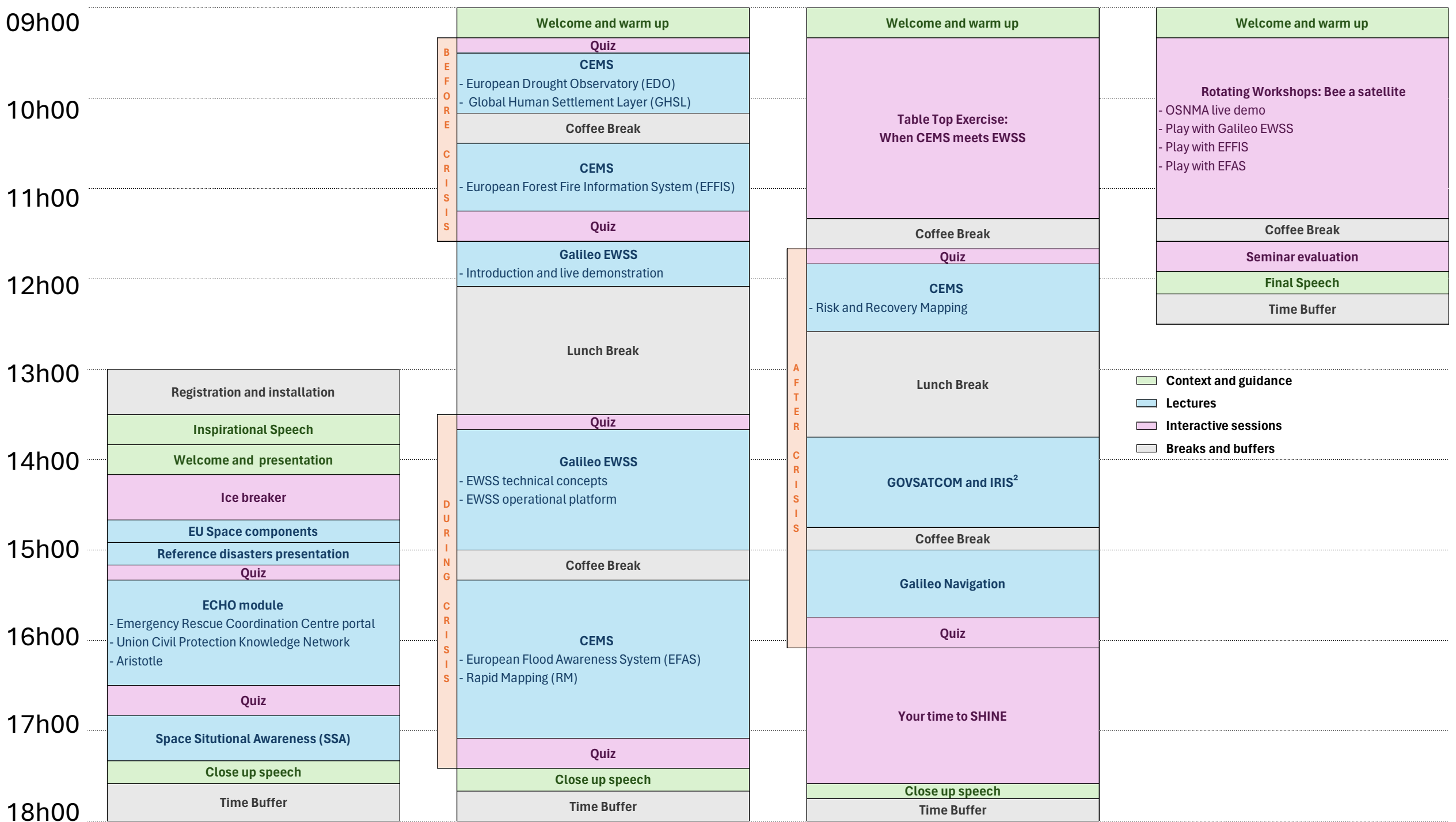
The **SUNSHINE** seminars

REGISTER HERE



https://ec.europa.eu/eusurvey/runner/SUNSHINE_TrainingSeminars_ExpressionOfInterest

- ✦ Registration is open for the next seminar
 - **23rd to 26th of June 2026 in Zagreb, Croatia**
- ✦ Registration is free (financed by EC) but travel & accommodation costs are not covered
- ✦ Selection of profiles based on Expression of Interest form



The **SUNSHINE** webinars

3 Training Webinars

- ★ Online sessions focused & targeted learning on specific EU space components
- ★ Presentations by experts of the SUNSHINE consortium
- ★ Detailed sessions on the purpose, functions, use and real-world applications of EU space assets
- ★ **Next dates:**
 - 10th September – GovSatCom & IRIS² (final agenda TBC)



SUNSHINE Exercises

Putting theory into practice again with immersive simulations

★ SIMEX:













- **Put theory into practice** using all EU space assets and tools in a realistic crisis situation
- **Collaborate and take decisions** in real time, transform your knowledge in skills

★ How to participate?

- Next session: 6-7 October in Brussels (DG DEFIS headquarters)
- **Pre-requisite: *Participation in a training seminar***



Mark your calendar!

	Oct 25	Nov 25	Dec 25	Jan 26	Feb 26	Mar 26	Apr 26	May 26	Jun 26	Jul 26	Aug 26	Sep 26	Oct 26
Seminars		 25-28 Nov Tallinn, Estonia				 3-6 March Strasbourg, France		 5-8 May Timișoara, Romania	 23-26 June Zagreb, Croatia				
Webinars	 Communication 1 30 Oct			 CEMS & Galileo 20 Jan		 Communication 2 2 Apr		 CEMS 4 June			 SatCom 10 Sept		
Bilaterals				 Bilateral Meetings with 27 Member States									
SIMEX						 24-25 March						 6-7 Oct	

Kristin Fleischer

Project Manager



My expertise: Project
Manager CEMS RRM

What I'll be presenting:
Risk and Recovery
Mapping









CEMS RRM - Risk & Recovery Mapping




SUNSHINE

You will be able to

-  Explain the CEMS Risk & Recovery Mapping (RRM) service
-  The CEMS RRM product portfolio
-  Request the Service
-  Access the results



CEMS RRM service

- **Operational** service providing custom products related to user needs
- Support:  **prevention/ preparedness** &  **recovery/ resilience**
- Basis: **satellite & aerial** imagery, geospatial data, statistics, ground information
- Scale: **local** to **regional**
- Focus: natural & human-induced **disasters**
- Aim: facilitating **decision-making** for disaster prevention and climate adaptation

Disaster phases & portfolio



Various Potential Natural Disasters

- **Response, Preparedness & Mitigation Planning**
- **Agricultural Resilience** (productivity, drought)
- **Environmental Hazard Assessment**
- **Ground Deformation Monitoring**
- **Humanitarian Crises** (displacement, evolution)
- **Reference Data Mapping** (Assets, LULC, DEM)



Disaster Risk

Hazard: Destructive phenomenon threatening life, assets & the environment. Assessment of nature, extent & intensity under certain scenarios.

Examples: flood, dam break, fire, storm, earthquake, volcanic eruption and landslide.

Exposure (direct/indirect): location, quantification & qualification/value of assets per hazard scenarios.

Examples: population, buildings, infrastructure, economic capacity, farmland.



Vulnerability: Severity of population & assets being affected.

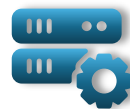
Examples: physical (fragile vs. robust buildings), social (old vs. young population), economic, environmental

RISK: The **potential loss** or **damage** of life & assets which could occur to a system, society or a community. Determined probabilistically as a function of

$$Risk = Hazard \times Exposure \times Vulnerability$$

Disaster phases & portfolio

Modelling of Past Events



Delineation of the event



Asset Damage/Impact Assessment



Asset Reconstruction Monitoring



Post Disaster Risk Analysis



• Humanitarian Crises

- Displaced person camps






• Reference Data

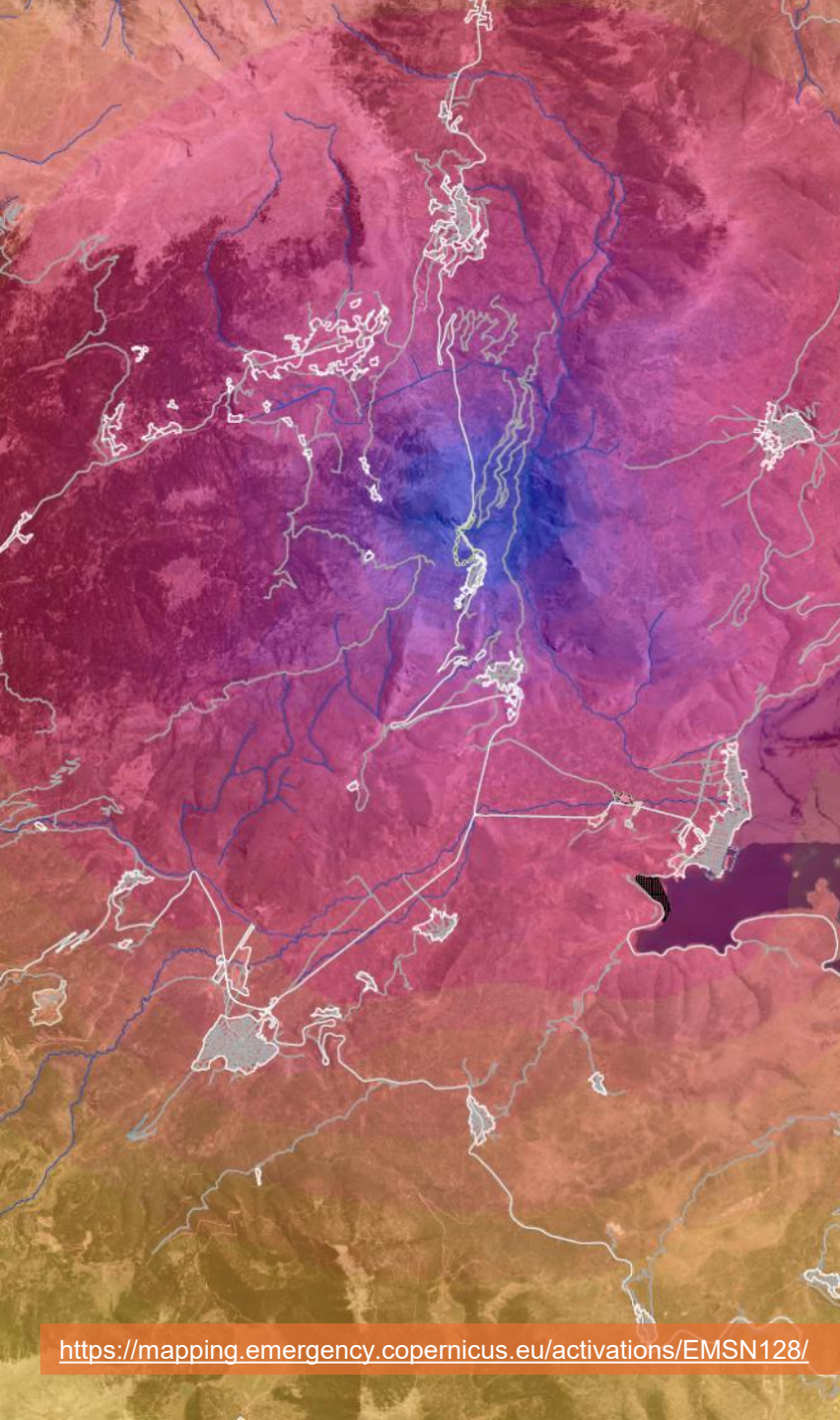
- Post-disaster DEM,
- Ground monitoring,
- LULC changes



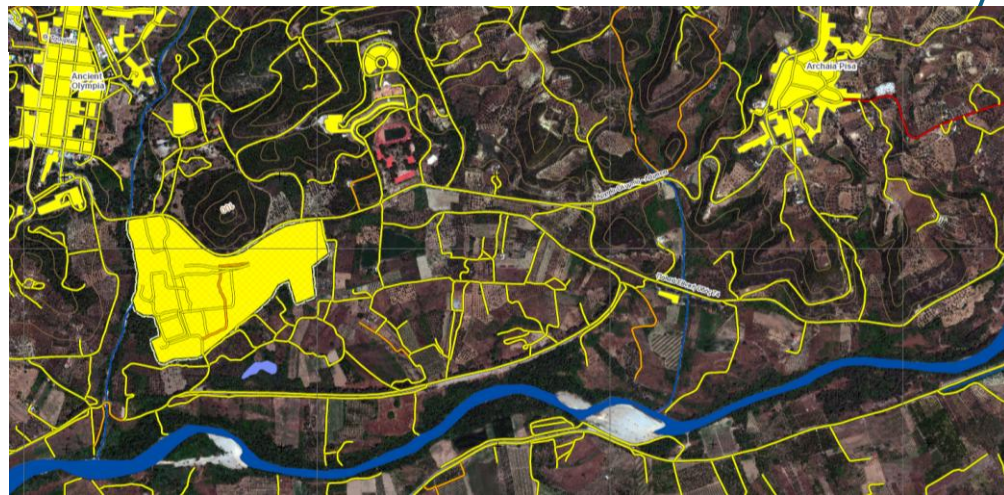
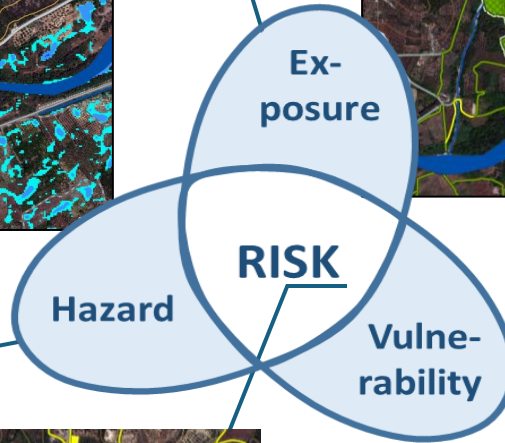
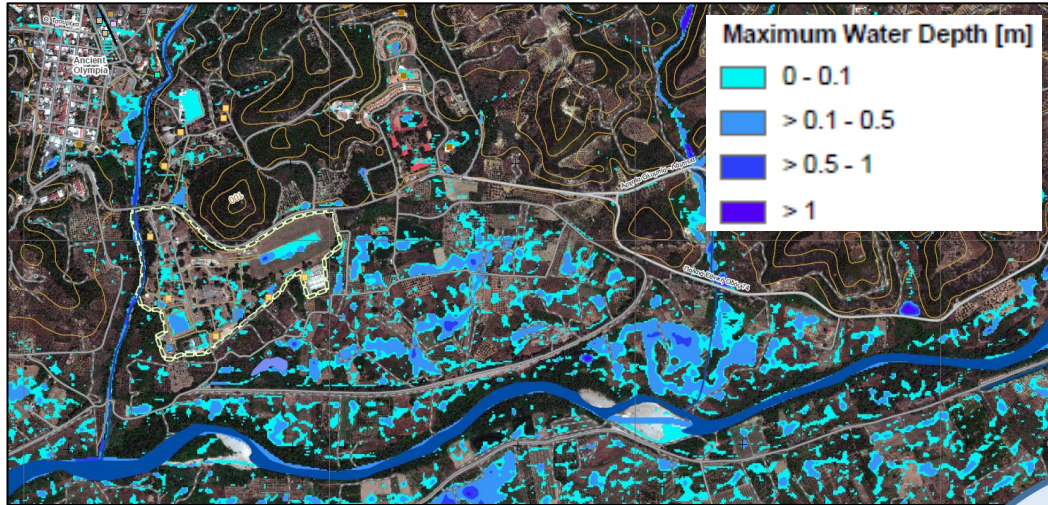
Various Occurred Natural Disasters

Example Preparedness

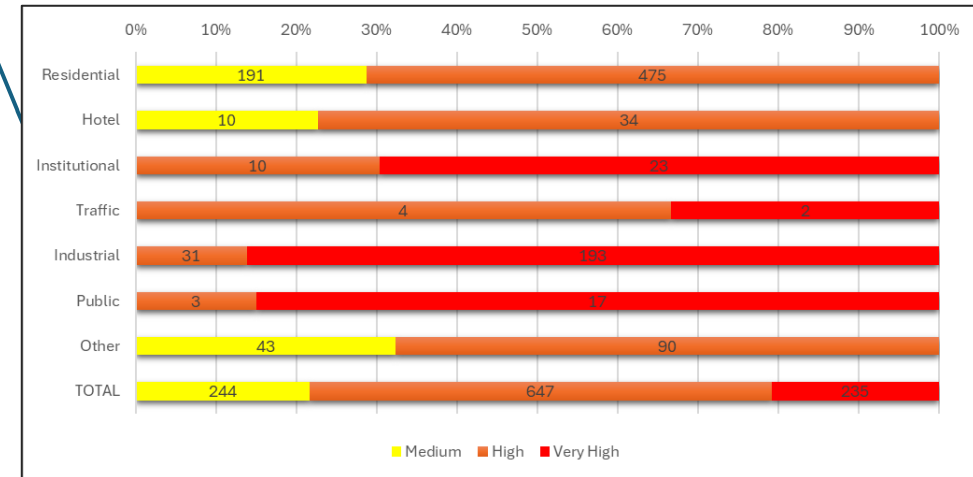
- EMSN128 Multi-risk analyses for Delphi and Ancient Olympia archaeological sites in Greece (2022)
- Requested by: Greece General Secretariat for Civil Protection
- Thematic coverage:  FLOOD  FLASH FLOOD  FIRE  LANDSLIDE/ EROSION  EARTHQUAKE
- Main aims and usage
 - Assessment of hazard, exposure, vulnerability, (multi-)risk
 - Evaluation of evacuation, response, accessibility
 - Support to contingency & emergency management and civil protection plans



Disaster Risk

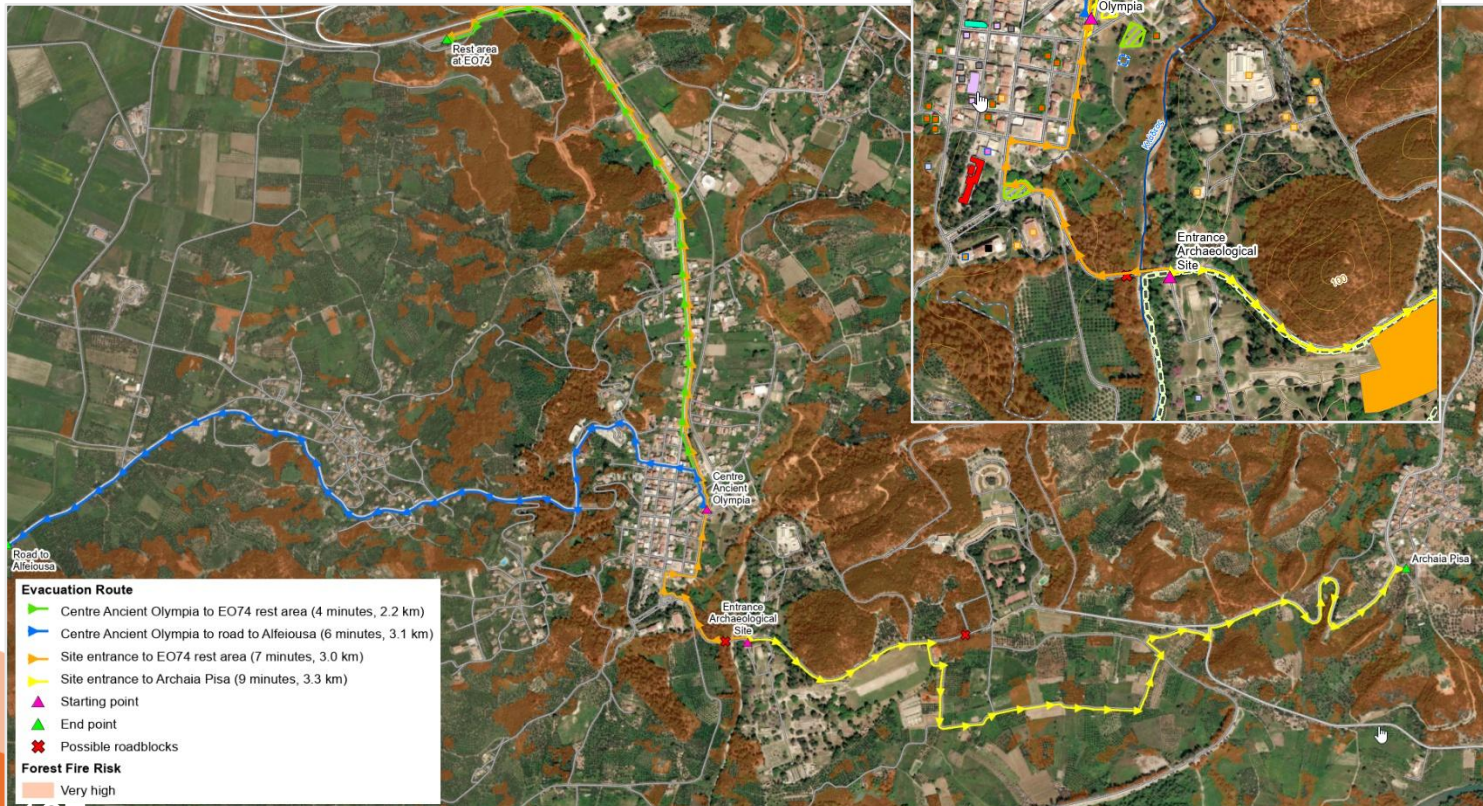


Vulnerability of buildings





Evacuation & Response

Evacuation & response planning




Mitigation measures/ recommendations

Recommendation	Location
To prevent the Archaeological Site from being cut off, special attention should be paid to keeping the bridges clear.	
The same applies to a culvert on the Palaia Ethniki Odos 74 road, which runs east between Ancient Olympia and Archaia Pisa.	

Evacuation plan for	Situation & focus of action	Evacuation planning requires ...
Forest fire (seasonal: summer, hot & dry weather)	<ul style="list-style-type: none"> Relevant damage: Blocked roads due to fire <p>Focus before/ during event:</p> <ul style="list-style-type: none"> Fast and secure evacuation of all people Avoiding areas of high fire load Gathering places for organized evacuation (car convoys) and/or encircled people 	<ul style="list-style-type: none"> Fire situation analysis by predicting potential fire spreading (fire lines/ probability) Identifying evacuation routes (fast & safe) Identifying gathering places (evacuation in groups, with cars & busses) Potential helicopter landing sites Dimensioning of transportation units (road classes) Identification of first aid/ basic supply sites Estimation of affected people (dimensioning transportation/ gathering sites)
Flash/ plain flood (seasonal: Oct-March)	<ul style="list-style-type: none"> Relevant damage: damaged infrastructure; blockages (water, material) <p>Focus before/ during event</p> <ul style="list-style-type: none"> Fast & secure evac. (flash food/ plain flood) Avoiding areas of potential fast runoff/ water flow & accumulation Consideration of existing infrastructure (non-exposed) Gathering places for people 	<ul style="list-style-type: none"> Flood exposure maps + buffer Analysis of infrastructure network for evacuation (roads, bridges) - What category? Are they accessible? Are they damaged? Analysis of situation. Identification of areas cut-off by water - separate evacuation units Identification of gathering places/ potential helicopter sites Dimensioning gathering places, transportation units Identification of first aid/ basic supply sites

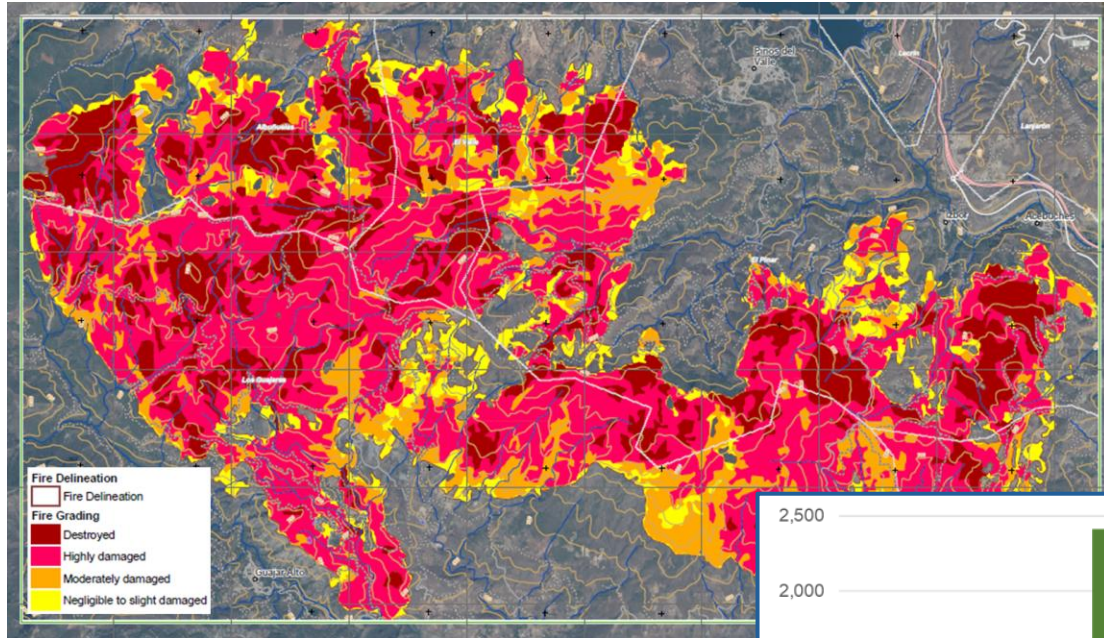
Example Recovery

- EMSN183 Forest fire impact assessment in Sierra de Los Guajares, Spain (2023)
- Requested by: General Directorate of Civil Protection and Emergencies on behalf of Ministry of Interior/ Guardia Civil/ Head of the Nature Protection Service
- Thematic coverage: 
FIRE
- Main aims and usage
 - Damage delineation and grading
 - Impact assessment on assets & population
 - Economic loss assessment
 - Evidence for police investigation

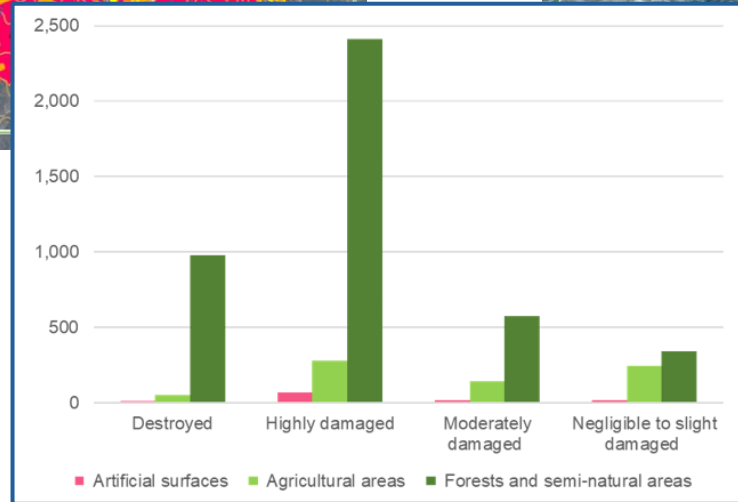
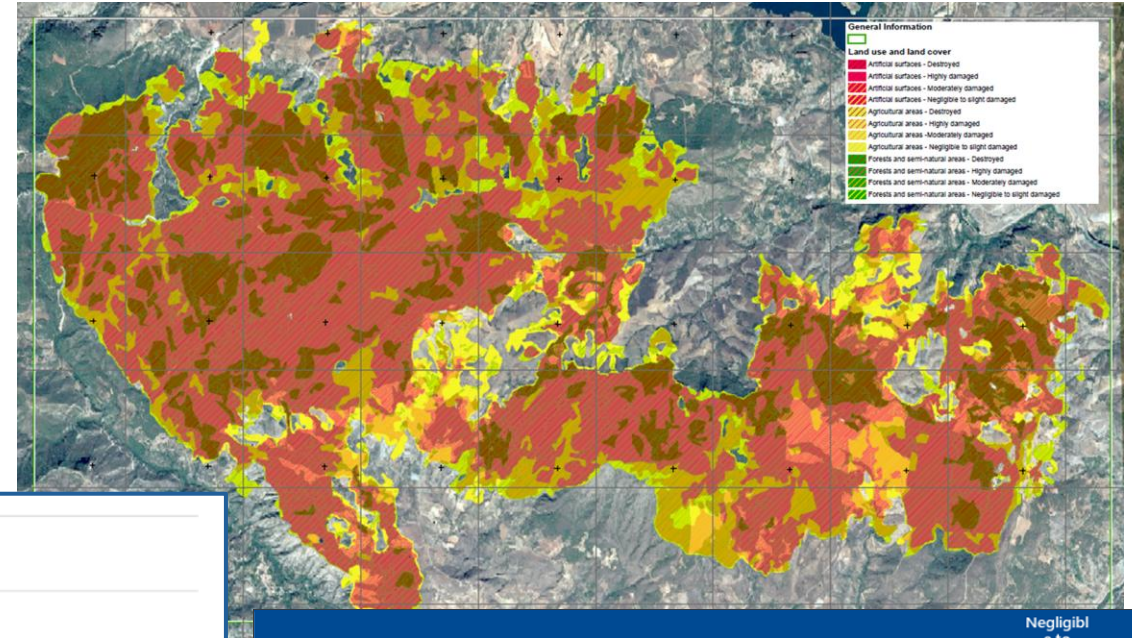


Fire extent & impact

Fire delineation & grading



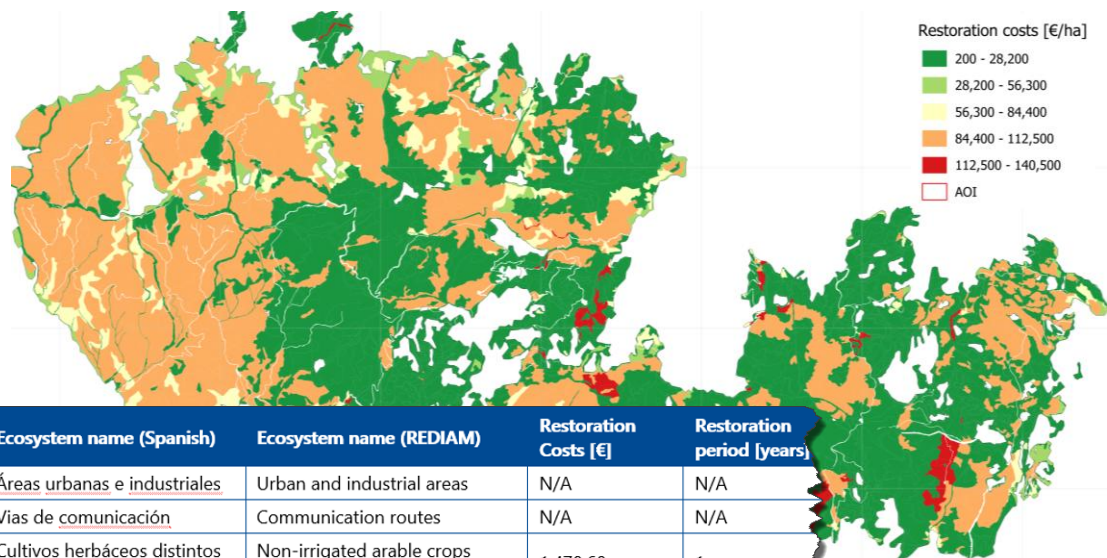
Impact on assets & land cover



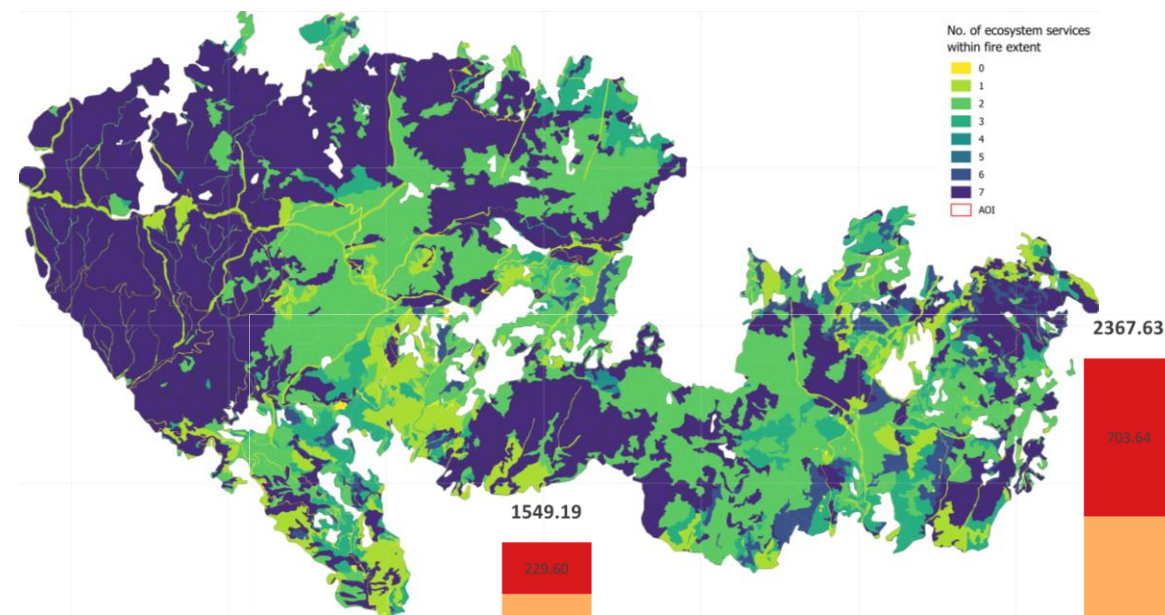
	Unit of measurement	Destroyed	Highly damaged	Moderately damaged	Negligible to slight damaged	Total affected	Total	
Burned Area	ha	1,044.29	2,759.76	731.07	606.16	5,141.29		
Population	No.	8	44	14	43	108	2,440	
Built-up	Non-residential buildings	No.	0	11	5	25	41	59
	Residential buildings	No.	0	1	3	3	7	1,600
Transportation	Highway	km	0.00	0.00	0.00	0.00	0.00	10.53
	Primary road	km	0.00	0.00	0.00	0.00	0.00	4.50
	Secondary road	km	0.00	0.00	0.00	0.00	0.00	3.30
	Local road	km	0.40	2.72	0.61	0.93	4.67	62.10
	Cart track	km	9.90	47.50	11.63	17.97	87.01	252.00
	Trail	km	0.30	0.54	0.25	0.82	1.91	5.80
	Bridge and elevated highway	No.	0	1	0	0	1	22
Facilities	Tunnel	No.	0	0	0	0	0	2
	Solar Panel	ha	0.00	0.00	0.01	0.01	0.02	2.50
	Dams	ha	0.00	0.00	0.00	0.00	0.00	0

Direct/ indirect costs

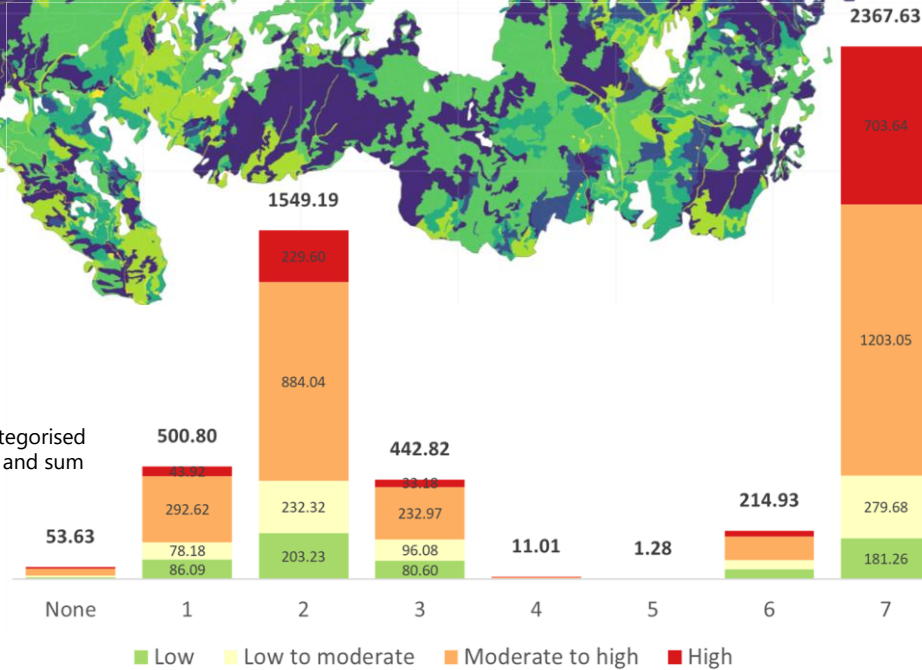
Restoration costs (direct costs)



Affected ecosystem services (indirect costs)



Area [ha] affected by fire, categorised by fire severity (low to high) and sum of ecosystem services



CLC code	Ecosystem name (Spanish)	Ecosystem name (REDIAM)	Restoration Costs [€]	Restoration period [years]
111	Áreas urbanas e industriales	Urban and industrial areas	N/A	N/A
122	Vías de comunicación	Communication routes	N/A	N/A
211	Cultivos herbáceos distintos de arroz en secano	Non-irrigated arable crops other than rice	1,478.68	1
221	Viñedos	Vineyards	7,541.24	5
222	Otros cultivos leñosos en regadío	Other irrigated woody crops	7,204.30	5
222	Otros cultivos leñosos en secano	Other rainfed woody crops	221,001.34	5
222	Frutales de cáscara en secano	Rainfed nut orchards	614,723.60	5
223	Olivares en regadío	Irrigated olive groves	7,751.09	15
223	Olivares en secano	Rainfed olive groves	602,303.61	15
231	Otros pastizales arbolados	Other wooded pastures	4,573.29	1
242	Mosaicos de cultivos agrícolas (nivel 4)	Agricultural crop mosaics (level 4)	29,573.21	1
243	Asociaciones de cultivos y vegetación natural	Crop associations and natural vegetation	85,368.80	1
311	Encinares de arbolado denso	Holm oak groves with dense woodland	101,922.92	40

Requesting the Service

Are you authorised to request the service?

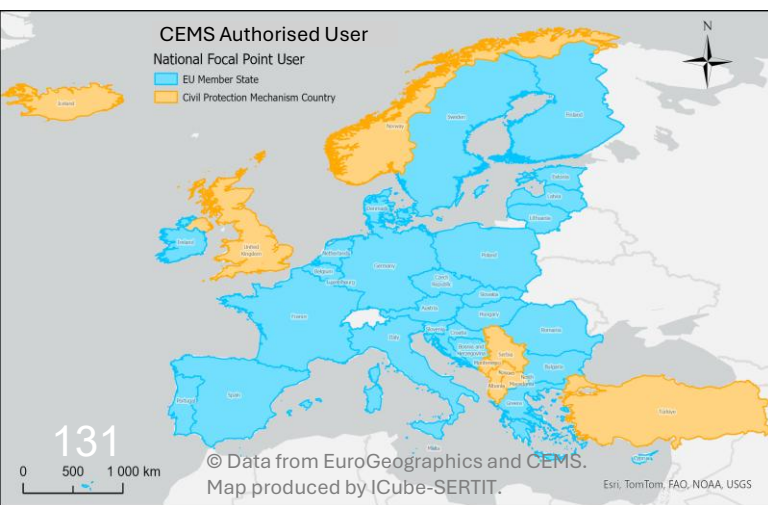


Only **Authorised User** can request the service! List of AUs [here](#).

- National Focal Points in the 27 EU Member States
- 9 Countries in the European Civil Protection Mechanism
- Via the EC/EU Focal Point:
 - EC services: DG-ECHO, DG DEFIS, DG INTPA, DG HOME, DG JRC
 - EU services: EU Intelligence Analysis Centre, EU Delegations
 - EU Agencies: e.g. European Environmental Agency

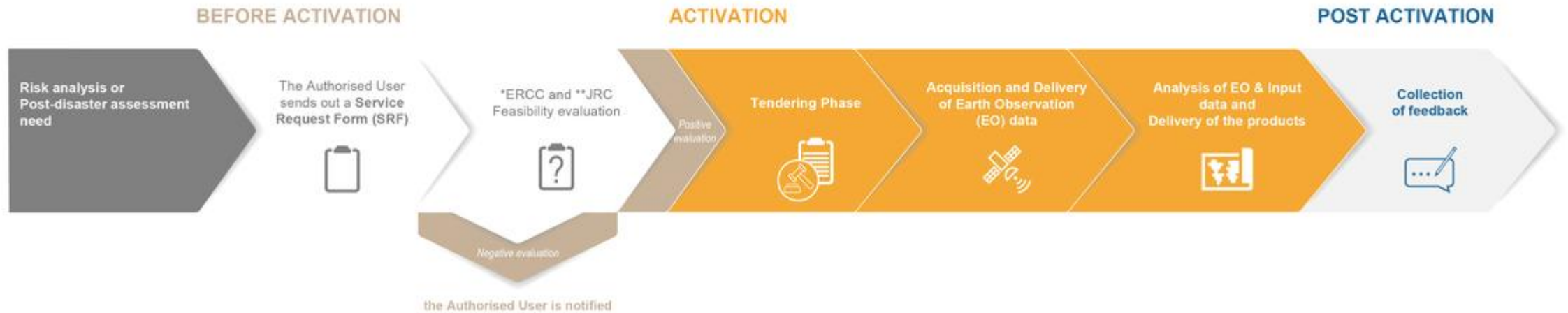
Not an **Authorised User**?

- Public authority and organisation, NGO, international organisation?
→ Please trigger, coordinate with and go through your Authorised User!



Risk & Recovery Mapping Timeline

Timeline for Risk and Recovery Mapping

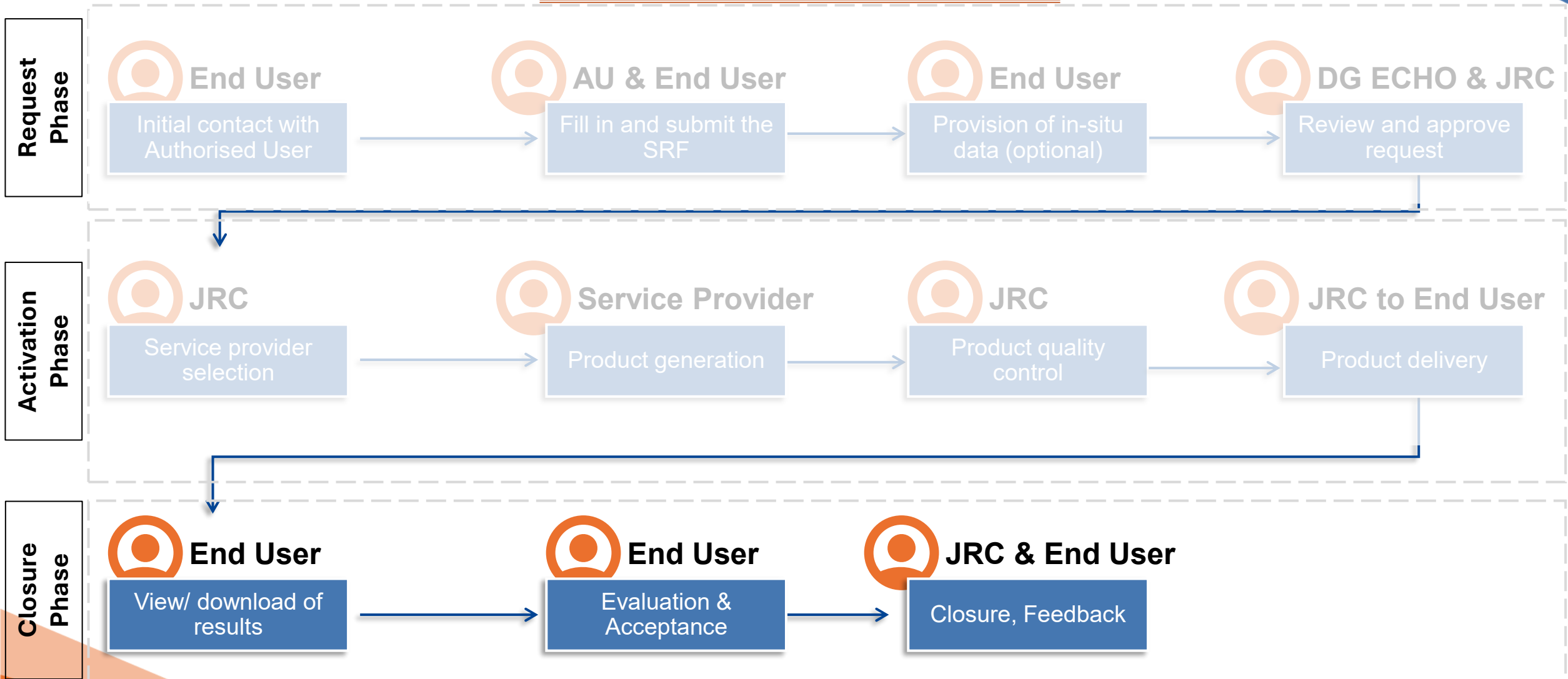


*ERCC: Emergency Response and Coordination Centre
**JRC: European Commission's Joint Research Centre

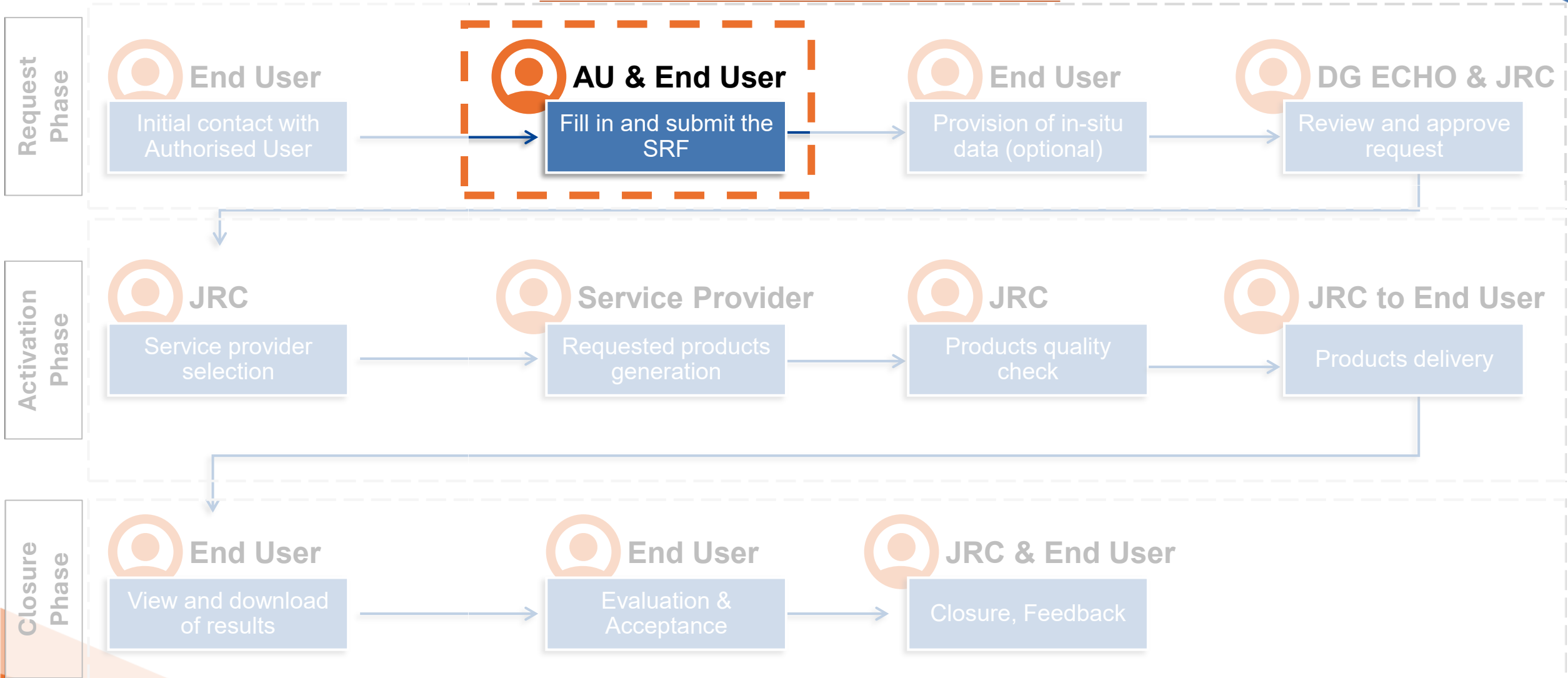


Source: Copernicus EMS, Fundamentals.

Request Workflow



Request Workflow



SRF – important advice

“Story telling”:

- What is the purpose and the overall context of the request?
- What is the objective of the request? Which problem / issue is to be addressed?
- Which questions need to be answered?
- What type of analysis is needed?

Product description:

- **Complete, clear and precise.**
- List of **local/ in-situ data** that can be **provided.**

Maintain **close exchange** with your **Authorised User** and JRC!

Service Request Form

Select the service: Emergency Response

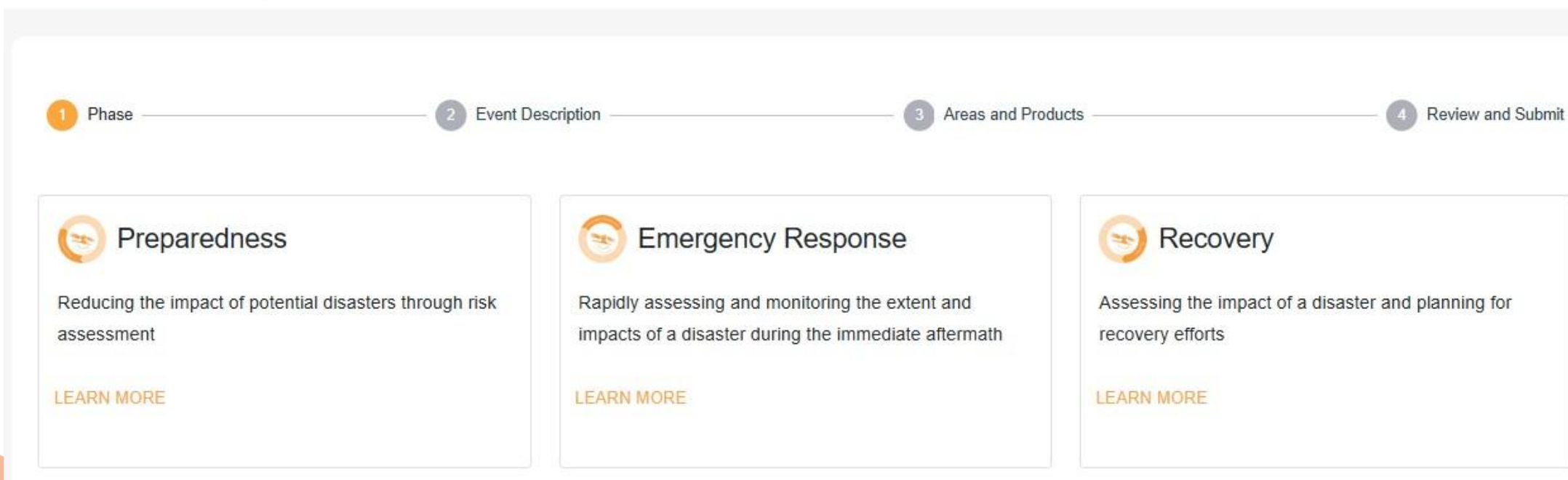
CEMS on-Demand Mapping Service Request Form

Link → <https://mapping.emergency.copernicus.eu/>

Select the service you want to request. Do you need the information for Emergency response (hence as soon as possible) or is it for Preparedness or Recovery purposes?

Check out the [documentation](#) for more information on the Service Request Form.

Try the [SRF Training version](#) to learn more on how to request an activation.



The screenshot displays a four-step progress bar at the top: 1 Phase, 2 Event Description, 3 Areas and Products, and 4 Review and Submit. Below the progress bar are three service selection cards:

- Preparedness**: Reducing the impact of potential disasters through risk assessment. [LEARN MORE](#)
- Emergency Response**: Rapidly assessing and monitoring the extent and impacts of a disaster during the immediate aftermath. [LEARN MORE](#)
- Recovery**: Assessing the impact of a disaster and planning for recovery efforts. [LEARN MORE](#)


Service Request Form

Select the service: Emergency Response


CEMS on-Demand Mapping Service Request Form

Select the service you want to request. Do you need the information for Emergency response (hence as soon as possible) or is it for Preparedness or Recovery purposes?

Check out the [documentation](#) for more information on the Service Request Form.


 TRAINING MODE

1 Phase — 2 Event Description — 3 Areas and Products — 4 Review and Submit

 **Preparedness**


Reducing the impact of potential disasters through risk assessment

[LEARN MORE](#)

 **Emergency Response**

Rapidly assessing and monitoring the extent and impacts of a disaster during the immediate aftermath

[LEARN MORE](#)

 **Recovery**

Assessing the impact of a disaster and planning for recovery efforts

[LEARN MORE](#)

Service Request Form

 TRAINING MODE

1 Phase ————— 2 Event Description ————— 3 Areas and Products ————— 4 Review and Submit

To proceed to next steps, Event Type and Affected Country are mandatory fields.

Event identification

Event Type *

Affected country *

Event Date & Time 

Ongoing

To your knowledge, is the disaster still ongoing or upcoming?

Yes No

Activation Reason

Brief description of the event, the estimated impact and/or potential risk, the current situation, why you would need an activation

Reason *

➔ The **Activation reason** is required before submitting the request but can be filled at a later step, where you can invite someone to help you complete this request in the *Review and Submit* section.

Sensitive

If this activation is marked sensitive, its products will not be publicly disseminated

Yes No

PREVIOUS

SAVE

NEXT

Service Request Form

 TRAINING MODE

1 Phase — 2 Event Description — **3 Areas and Products** — 4 Review and Submit

If you don't have the information to complete this form, you can hand over to someone to help you complete it in the Review and Submit section.

Which area(s) should be analysed?

Upload KML / KMZ File(s)

or drag and drop files here

Upload KML File
If you are not sure which areas are to be analysed, AU/ERCC/JRC can help you.

And / or

Draw an Area

Add an AOI by drawing it on the map.

Describe the requested products

[Product Portfolio](#)

Products

NO pre-defined product list
Tell us story and needs!

Additional Information and Data

Any additional information or relevant data you can share with us (e.g., cadastral data, digital terrain models, drone or aerial images, field data)

Additional Information and Data

Why share data? By sharing data with us, you can contribute to increasing the accuracy of the product delivered.

How to share data? Following the acceptance of the activation request, we will offer you a way to easily transfer the data

All data will be used EXCLUSIVELY in the frame of this activation



Service Request Form

 TRAINING MODE

✓ Phase ————— ✓ Event Description ————— ✓ Areas and Products ————— 4 Review and Submit

Event Description

Phase Recovery Mapping

Event type Humanitarian Crisis
Affected country Anguilla
Event date No date provided
Ongoing Not specified
Activation Reason No reason provided
Sensitive No

Areas and Products

AOI Number	Name	Area [Km ²]
Totals: 0	AOIs	0

Products No additional info

Data to share No additional info

Communication

Contact Phone Number *

Add notification recipients and mark End Users



Ask hand over

Invite someone to help you complete the form. You won't be able to edit the form until they've granted you the same access in return.

SAVE & SHARE

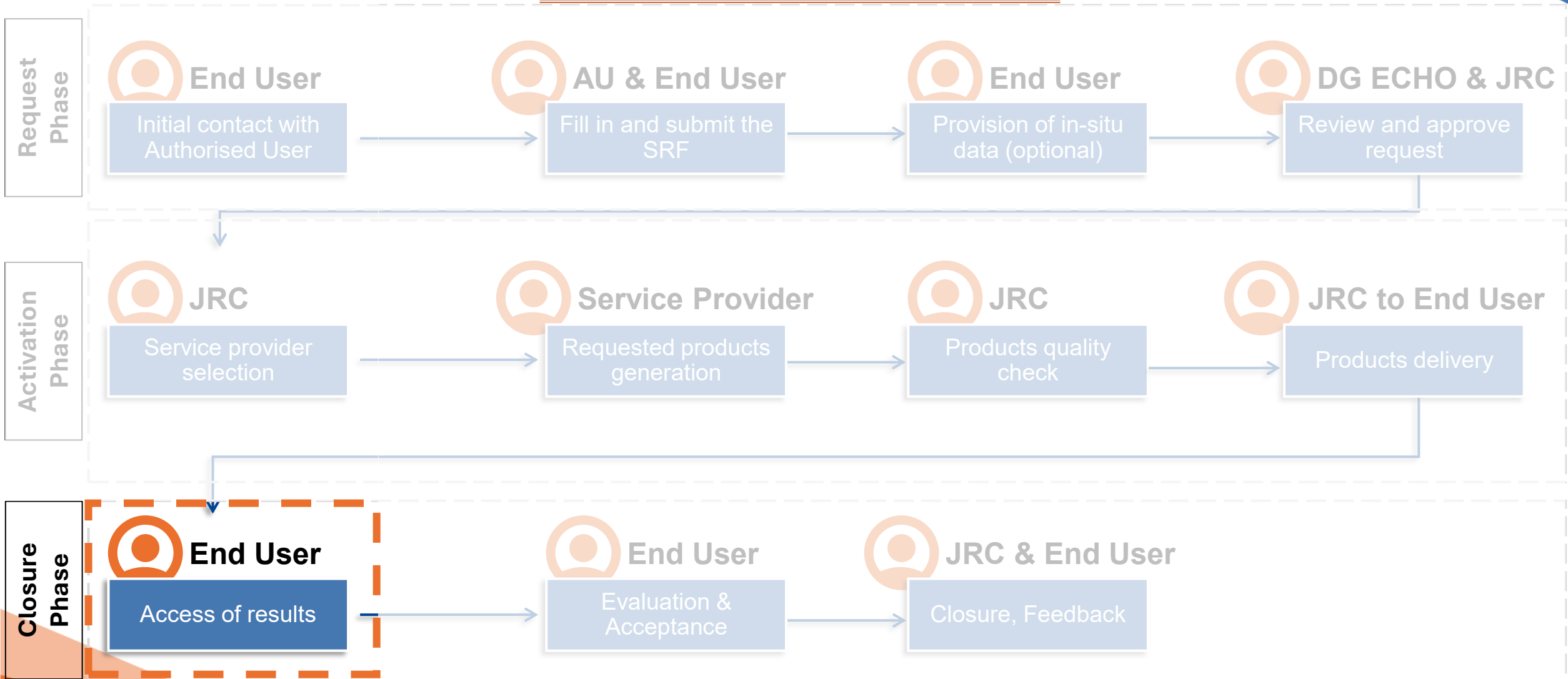
← Invite others to support

SAVE

SIMULATE SUBMISSION

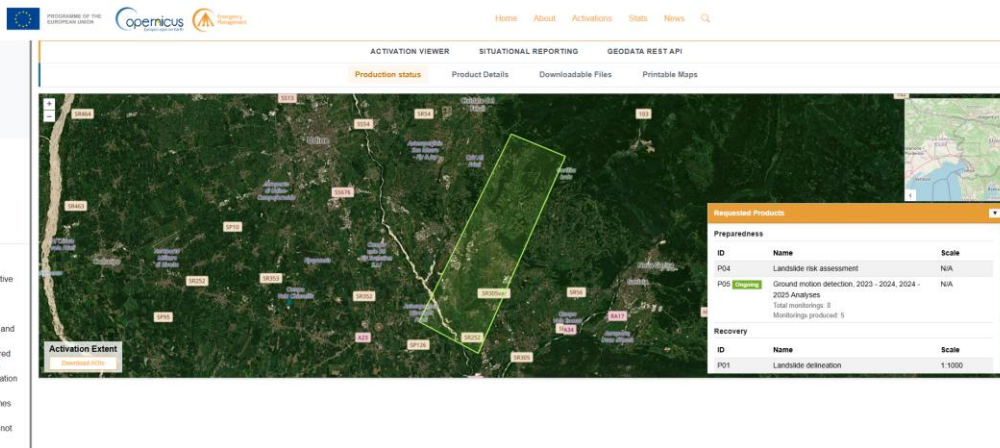


Request Workflow



How to access the results

<https://mapping.emergency.copernicus.eu/activations/>



Offline components for download

- AOI, Geodata (vector or raster)
- Report, Maps
- API

Downloadable files

Reporting material

It includes the Technical Report, a comprehensive document detailing the context, description, methodology, quality, and limitations of activation products, aimed at facilitating GIS integration. If requested, impact assessment/exposure analysis tables are included here. Additional reporting material may be available on a case-by-case basis.

[Download](#)

17.31 MB - zip

Geospatial Data

Geospatial data is distributed in geodatabase and geogon formats for vector data and tiff format for raster data. It includes symbologies for all layers in jyr and sld formats and INSPIRE-compliant metadata in xml format. Different and/or additional geodata formats may be available on a case-by-case basis.

[Download](#)

503.38 MB - zip

Raster Deliverables

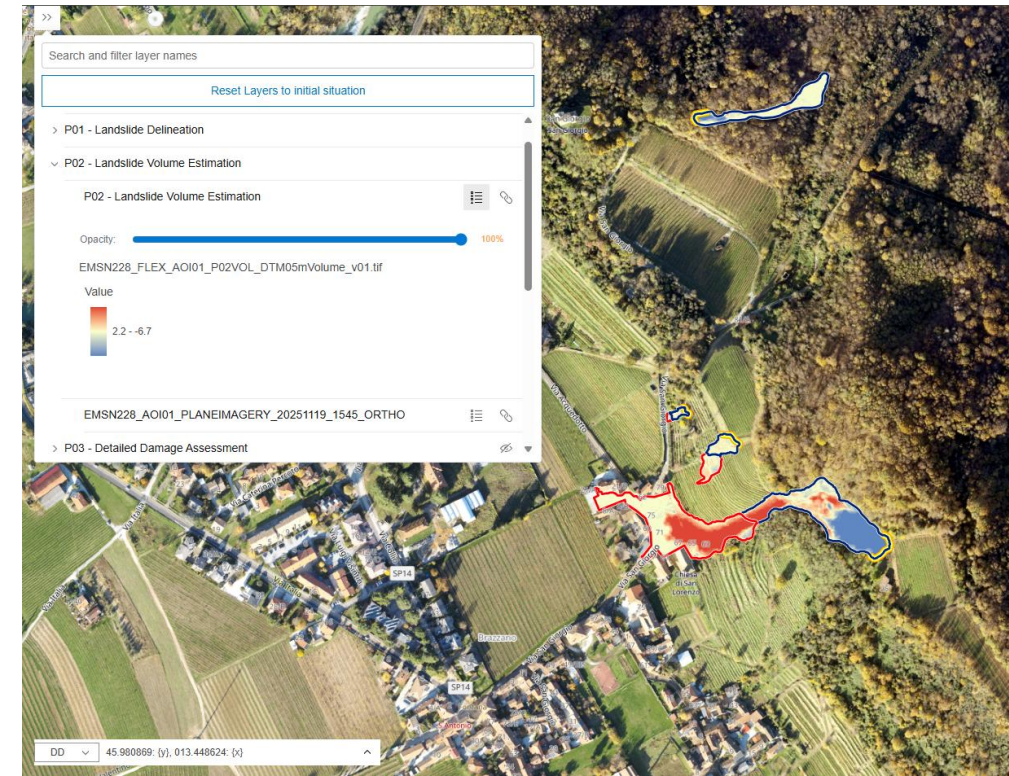
Raster deliverables consist of extensive geospatial datasets included in the activation products. Available as a separate download when the total file size is significant.

[P02, P05_MONIT00, P05, P05_MONIT01, P05_MONIT02, P05_MONIT03, P05_MONIT04, P06 raster data](#)

115.21 MB - zip

Online component - Activation Viewer

- 2D/ 3D maps
- Situational Reporting
- Statistics Dashboard



Now you know



The objective of the CEMS RRM service



The disaster phases covered by the CEMS RRM



The portfolio potential of the CEMS RRM



The RRM workflow



How to access the results

Thank you for your attention

Any questions?



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Useful resources

- [Home | Copernicus EMS On-demand Mapping](#)
- [About | Copernicus EMS On-demand Mapping](#)
- [Activations | Copernicus EMS On-demand Mapping](#)

Ahmed Abuzeid

Civil and Environmental Engineer



My expertise: Geospatial Analysis

What I'll be presenting:
EFFIS & EFFIS User Guide

The Psychology of Peoples.

Gustave Le bon



European Forest Fire Information System Overview

Copernicus Emergency Management Services



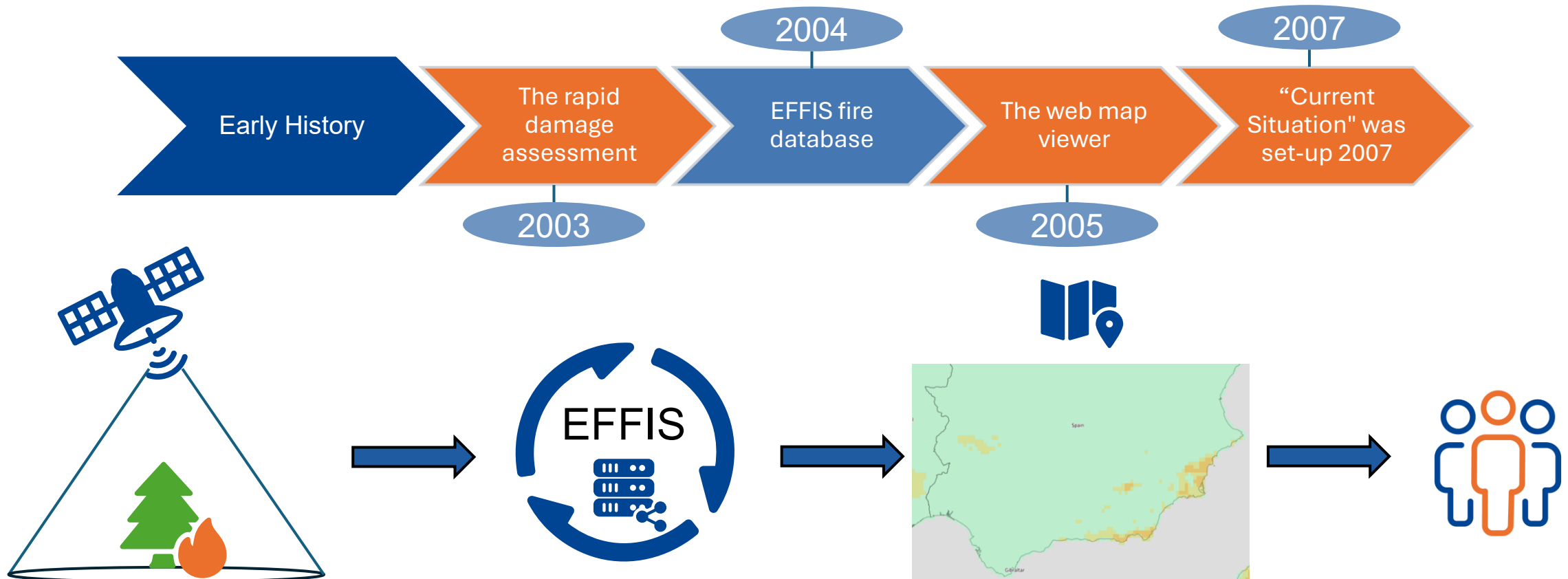
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You will be able to

- 🏠 Know what EFFIS is.
- 🏠 Use different applications of EFFIS.
- 🏠 Identify the way EFFIS supports developing response plans and/or monitoring progress.

What is EFFIS?

EFFIS (European Forest Fire Information System) is a central hub for data and analysis on wildfires, supporting EU and non-EU countries in **protecting forests and natural ecosystems from fire.**



What is EFFIS?



EFFIS Overview



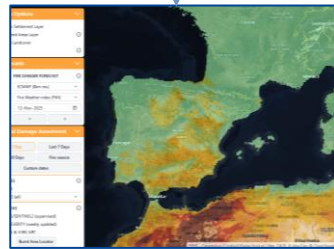
EFFIS - Apps



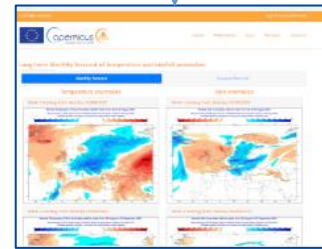
Current Situation Viewer



Current Statistics



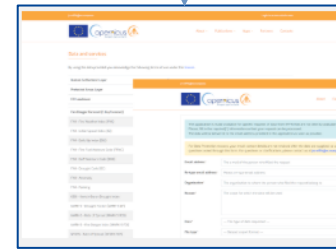
Current Situation Viewer 2.0



Long-term Forecast

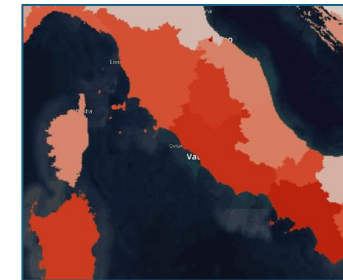
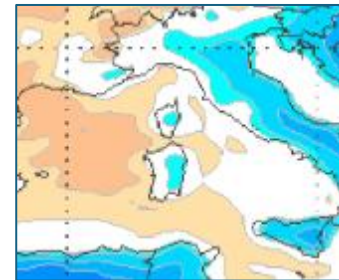
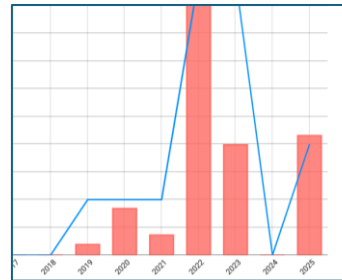


Wildfire Risk Viewer



Data Request

Output



Fire Danger Forecast (1 day forecast)	
FWI - Fire Weather Index (FWI)	
ECMWF (8 km res.)	Meteo France
Download real-time updated Burnt Areas database	
Shapefile	
Spatialite	

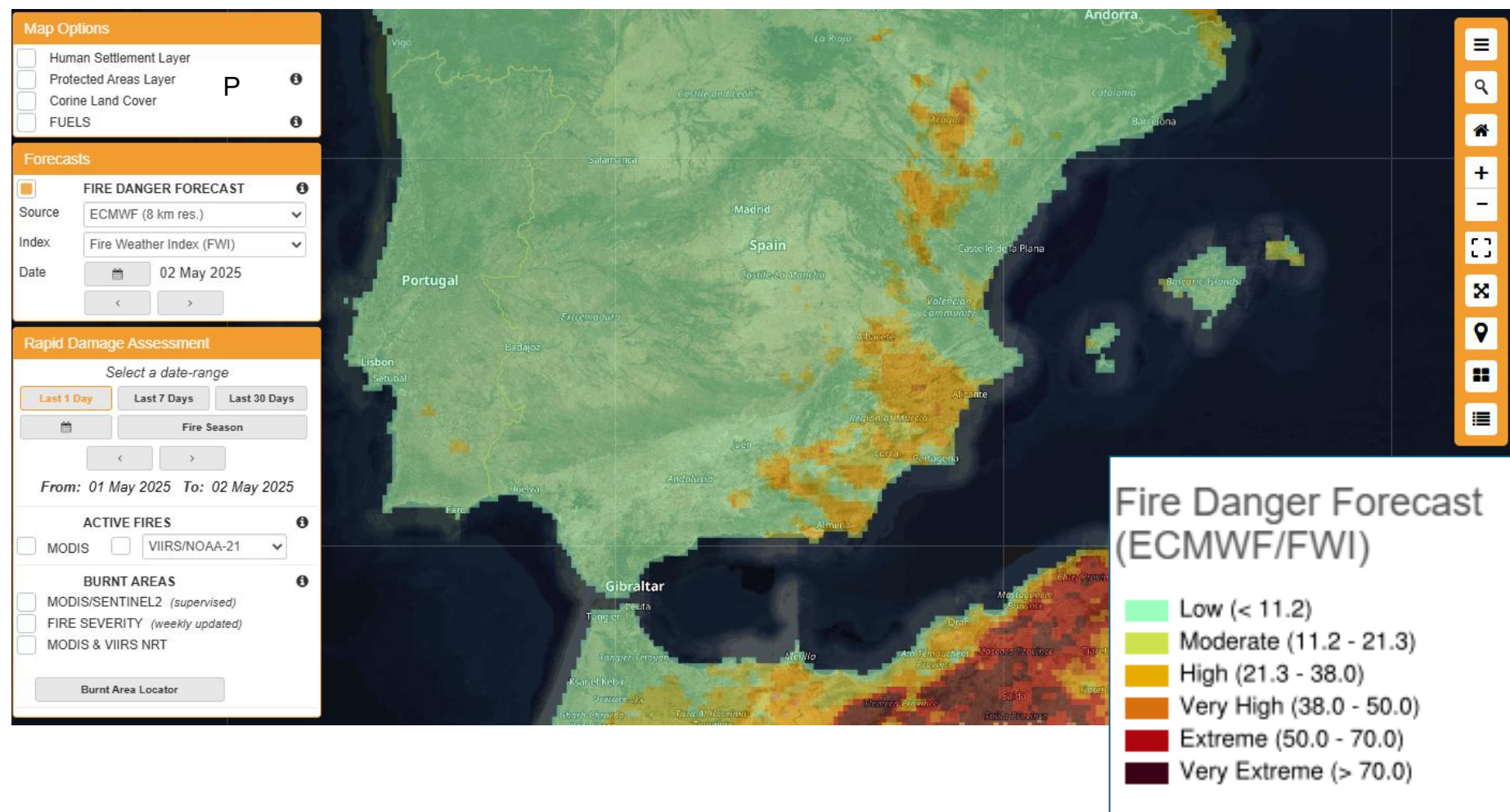
What data sources does EFFIS leverage?

- 🔥 **Satellite Data:** **MODIS** and **VIIRS** to detect active fires and **map** burnt areas.
- 🔥 **National Fire Reports:** Data collected by **national forest fire programs** from participating countries.
- 🔥 **Meteorological Data:** meteorological **models** help assess fire risk up to **10 days in advance**.
- 🔥 **Fuel Maps:** Specialized **fuel maps** that classify vegetation types and their **potential to burn**.



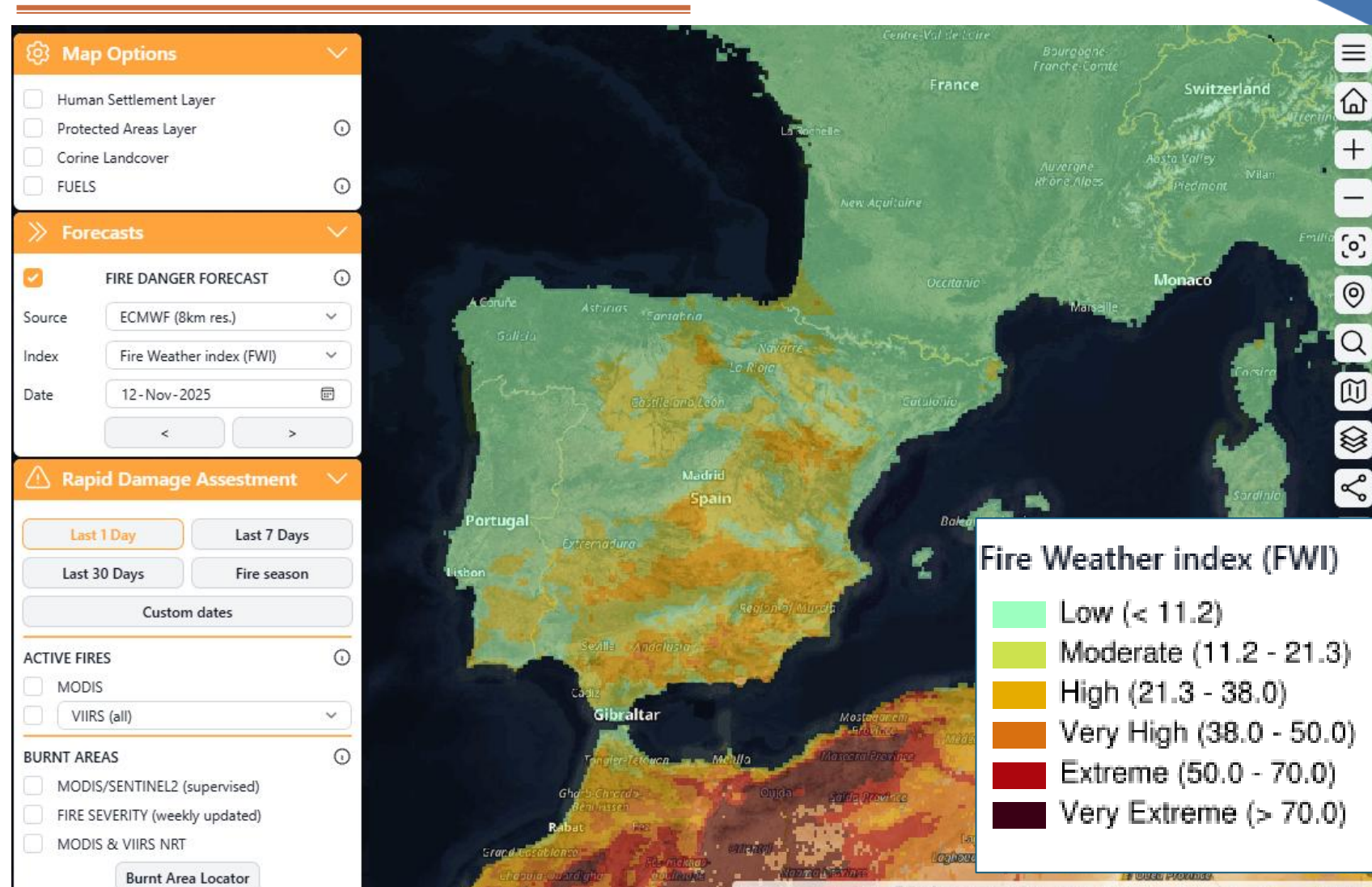
Current Situation Viewer

- ⚠️ Enables the user to **view** and **overlay** the map data layers **without the need for account or registration**.
- ⚠️ Current **fire season** overview of **Europe** and the **Mediterranean** region.
- ⚠️ Fire perimeters, **hot spots** and **forecast up to 9 days**.
- ⚠️ Fire danger forecast panel for **different indices**, default one being the **Fire Weather Index (FWI)**.
- ⚠️ Other views in **Rapid Damage Assessment** include:
 - ⚠️ Active fires.
 - ⚠️ Burnt areas.
 - ⚠️ Burnt area locator.

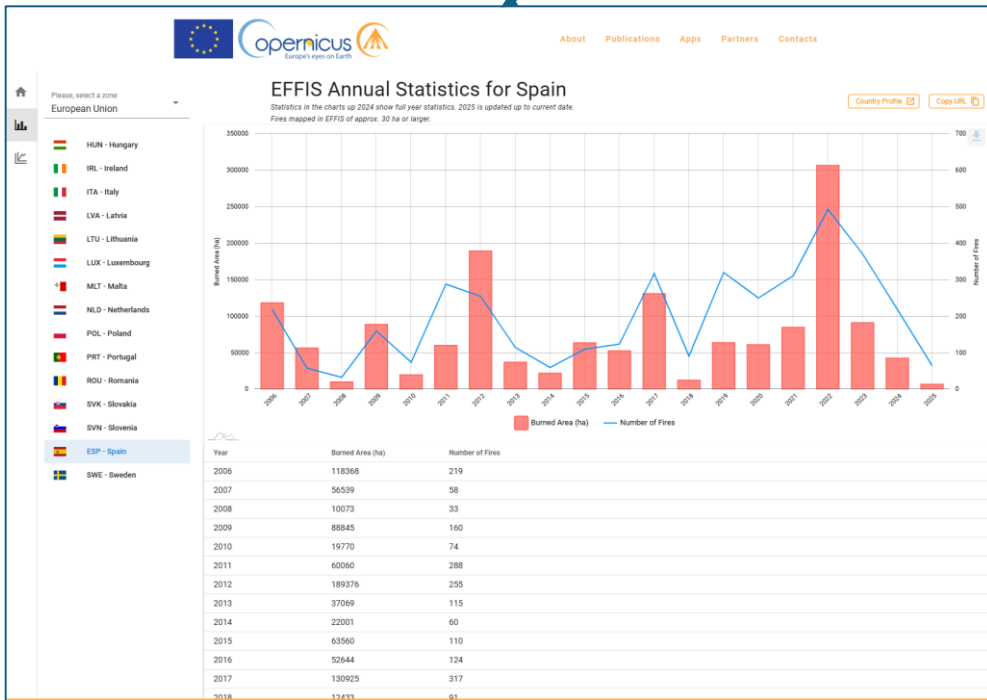


Current Situation Viewer 2.0

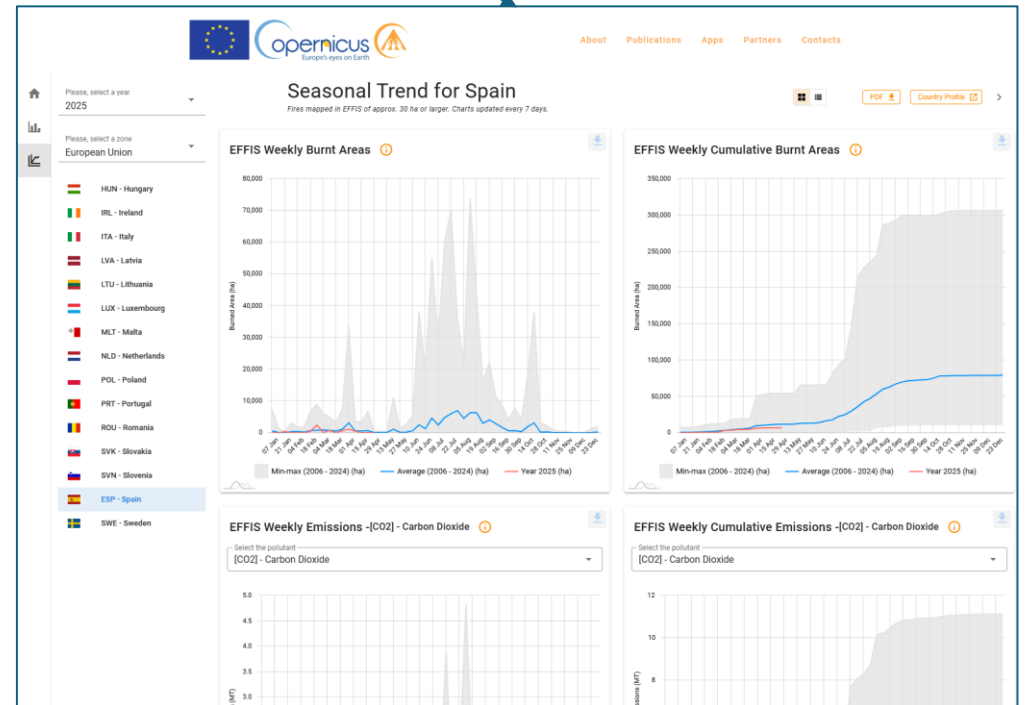
- 🔥 Enhanced **efficiency** and accessibility.
- 🔥 Optimized **performance**, fully **responsive** design supporting **desktop** and **mobile** platforms.
- 🔥 Daily **hotspots** and fire parameters.
- 🔥 Today's meteorological fire danger maps.
- 🔥 Forecast up to 6 days.



Current Statistics



Burnt areas and number of fires.



Different statistics overviews.

Long-term Forecast



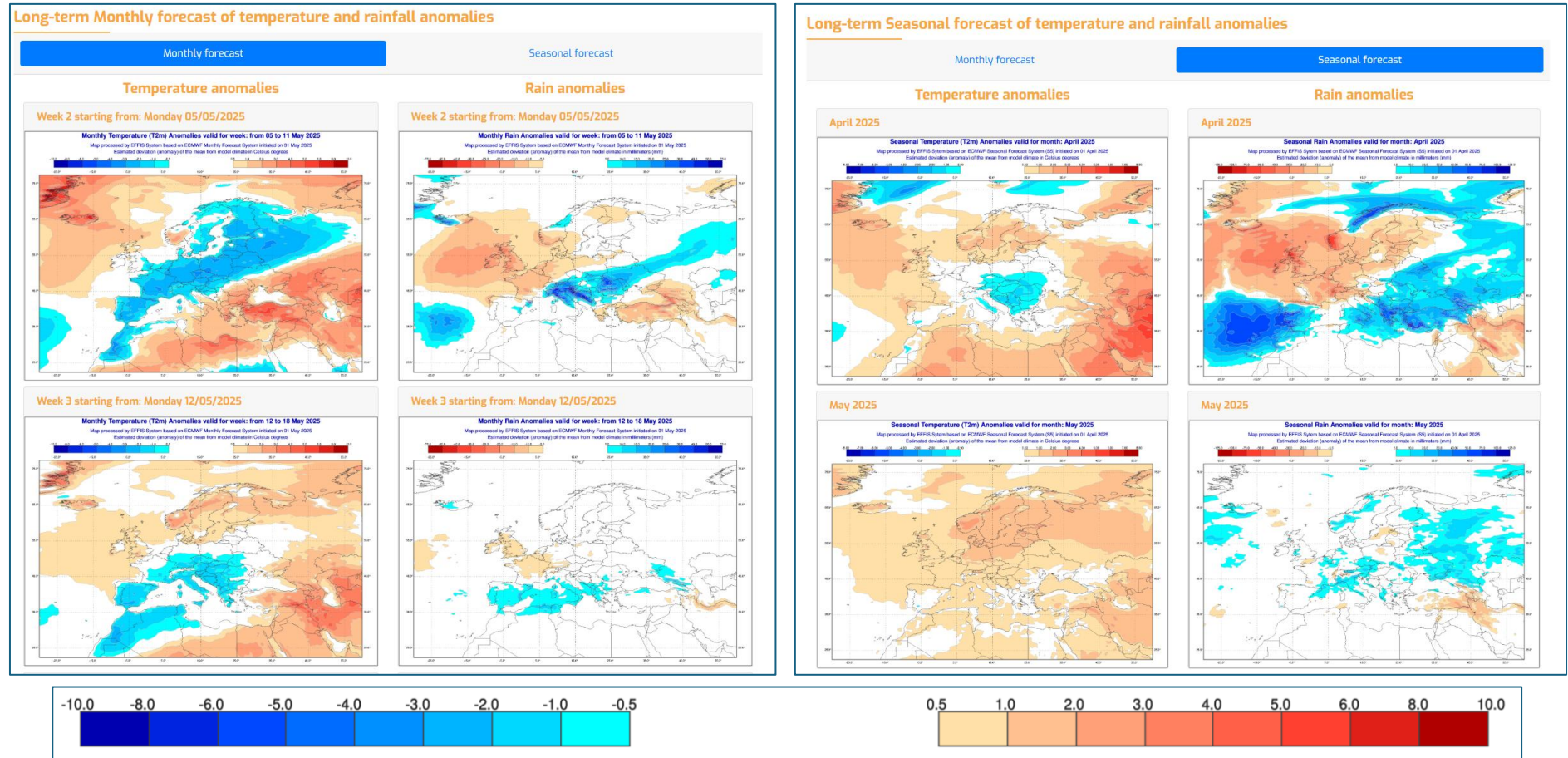
Temperature anomalies:

areas expected to be warmer or cooler than normal.



Rain anomalies:





areas expected to be drier or wetter than normal.

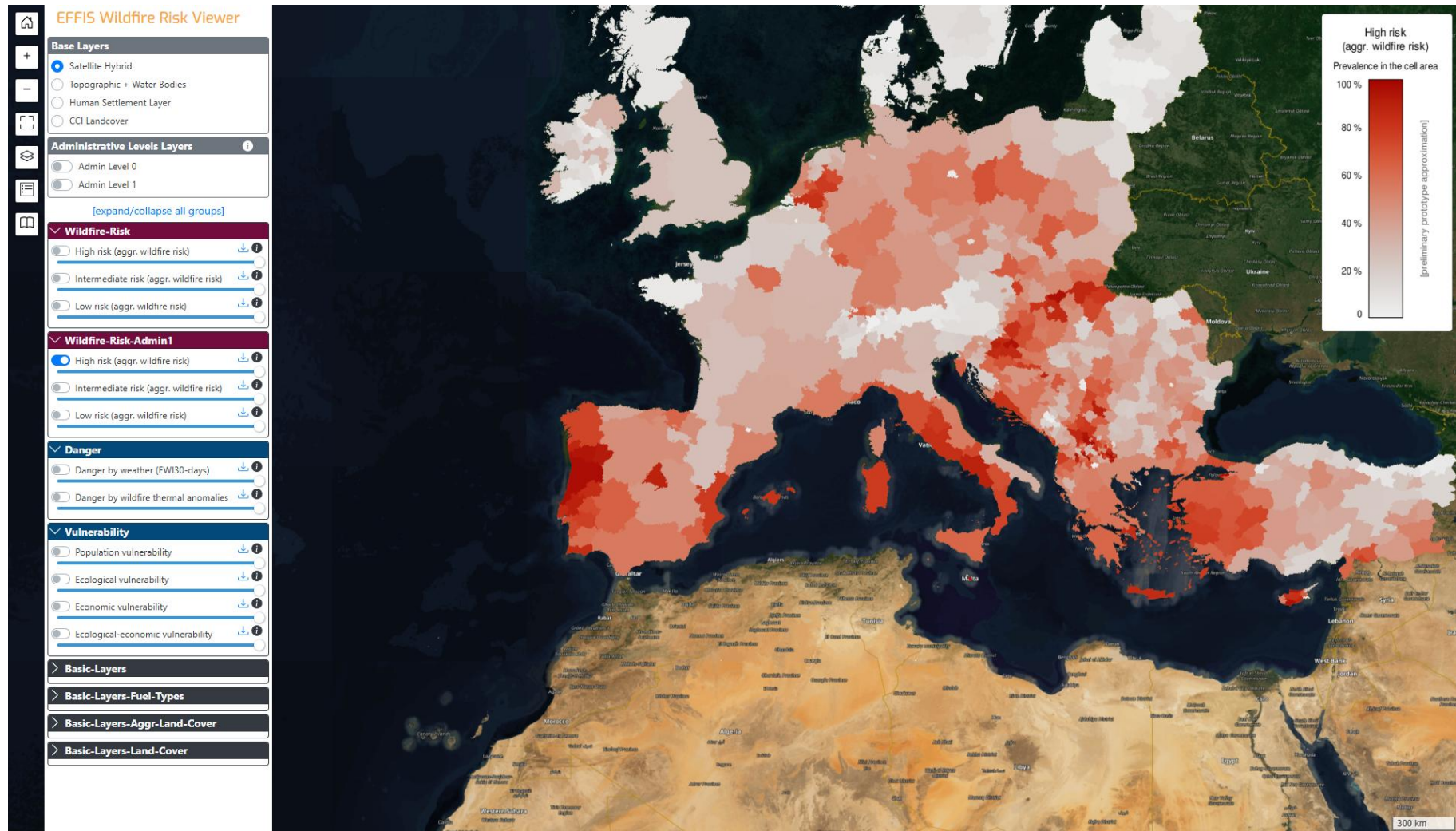


Monthly:
Data from the ECMWF (European Centre for Medium-Range Weather Forecasts) Monthly Forecast System (MFS).


























Seasonal:
Data from the ECMWF (European Centre for Medium-Range Weather Forecasts) Seasonal Forecasting System named S5 (System 5).

Wildfire Risk Viewer

-  Showing wildfire risk per pixel.
-  Wildfire risk per administrative zone.
-  Different fuel types.
-  Different vulnerability parameters.



Data Request

Active Fires	MODIS		VIIRS			
Last 1 day layer						
Last 7 days layer						
Last 30 days layer						
Fire Season layer						
Burnt Areas	MODIS		VIIRS			
Last 1 day layer						
Last 7 days layer						
Last 30 days layer						
Fire Season layer						
Severity	2024	2023	2022	2021	2020	2019
	 	 	 	 	 	 

Ready to download data for different time periods and different data products.

This application is made available for specific requests of data from EFFIS that are not directly available. Please, fill in the required(*) information so that your request can be processed. The data will be delivered to the email address provided in the application as soon as possible. Requests for large volumes of data may not be processed. If your data do not arrive, try requesting either, email us directly at jrc-effis@ec.europa.eu

For Data Protection reasons, your email contact details are not retained after the data are supplied. questions asked through this form. For questions or clarifications, please contact us at jrc-effis@ec.europa.eu

Email address*

Re-type email address*

Organization*

Reason*

Data*

File type*

Start date* The start date of the requested dataset





End date* The end date of the requested dataset

Countries*

Description:

Data request interface.

Resources

-  <https://effis.emergency.copernicus.eu> - The primary gateway to all EFFIS applications and services.
-  <http://www.copernicus.eu/en/european-forest-fire-information-system> - Official Copernicus program page explaining EFFIS as part of EMS.
-  <https://effis-gwis-cms.s3-eu-west-1.amazonaws.com/apps/effis.viewer/userguide.pdf> - Comprehensive EFFIS user guide (Version 2.5.x).
-  <https://forest-fire.emergency.copernicus.eu/reports-and-publications/effis-related-publications> - Central repository containing multiple key documents and publications regarding EFFIS.

Key takeaways

- 📍 Identify what EFFIS does, and who can use it.
- 📍 Recognize EFFIS data sources and how they are integrated into EFFIS.
- 📍 First-look experience with EFFIS Current Situation Viewer and other EFFIS applications.

Thank you for your attention

Any questions?



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EFFIS Workshop








SUNSHINE

An Overview of the Workshop

Introduction & Objective

-  Brief overview of the wildfire (15.09.2024, Aveiro, Portugal)

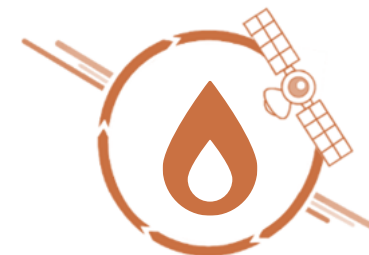
Using the EFFIS Apps: A Case Study, Wildfires Portugal

-  Current Situation Viewer
-  Current Statistical Portal
-  Fire Weather Forecast
-  Wildfire Risk Viewer
-  Data Request

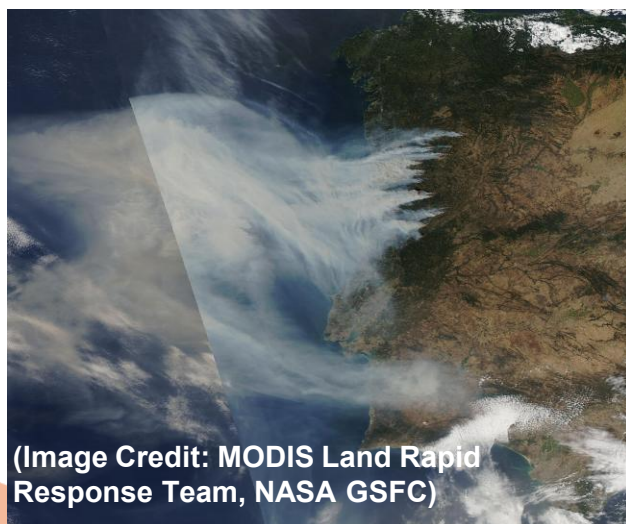
You will be able to

- 🏠 Recognize parameters visualized in the Current Situation viewer.
- 🏠 Navigate to certain event or mitigation preparation.

Overview of the Wildfire



- 🔥 A **wildfire** broke out in **Oliveira de Azeméis, Sever do Vouga, and Albergaria-a-Velha** (Aveiro region, **northern Portugal**) on 15th of September, 2024.
- 🔥 Fire **spread rapidly** due to **high temperatures, strong winds, and dry conditions**.
- 🔥 The **north** of the country was impacted by **multiple large fires**.
- 🔥 **High ignition rates** overwhelmed **emergency response**.
- 🔥 Resulted in **widespread damage to forests and infrastructure**.



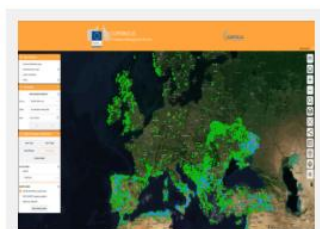
Welcome to EFFIS

EFFIS - European Forest Fire Information System - supports the services in charge of the protection of fires in the EU and neighbor countries and provides the European Commission services and the European Member States with updated and reliable information on wildfires in Europe. The fires mapped in EFFIS may include fires intentionally for the purpose of vegetation management.

Since 1998, EFFIS is supported by a network of experts from the countries in what is called the [Expert Group on Forest Fires](#), which is registered under the Secretariat General of the European Commission. Currently, this group consists on experts from 43 countries in European, Middle East and North Africa. In 2015, EFFIS became one of the components of the [Emergency Management Services](#) in the EU Copernicus.

A number of specific applications are available through EFFIS:

EFFIS applications



Current Situation Viewer 2.0

The new version of the Current Situation Viewer, faster and mobile friendly.

[Read more >](#)



Current Statistics Portal

Statistics are provided at national level and also for 3 groups of countries, EU, European non-EU countries, and Middle East and North Africa countries.

[Read more >](#)



Current Situation Viewer 2.0

The most up to date information on the current fire situation in Europe and in the Mediterranean area.

[Read more >](#)


Access EFFIS now under:

forest-fire.emergency.copernicus.eu/


Going global? – Global Wildfire Information System

- 📍 GWIS includes many similar applications to EFFIS but on global scale.
- 📍 **Lead Agency:**
 - 📍 European Commission
- 📍 **Partner Agency:**
 - 📍 Group on Earth Observations
 - 📍 Copernicus
 - 📍 National Aeronautics and Space Administration (NASA)


GWIS Applications



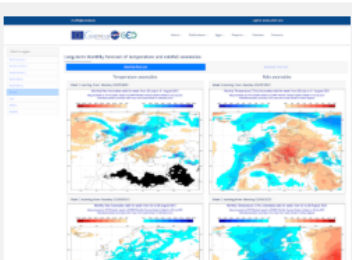
Current Situation Viewer
Provides fire danger forecast up to 10 days in advance, 1-day lightning forecast and near-real time information on active fires...
[Read more >](#)




Current Statistics Portal
Statistics are provided at national level and for regions of interest, such as the "Brazilian Legal Amazon" and the Arctic Monitoring and Assessment Program (AMAP).
[Read more >](#)



Country Profile
Provides historical overviews of fire regimes at country and sub-country level for the period 2002-2019.
[Read more >](#)



Long-term fire weather forecast

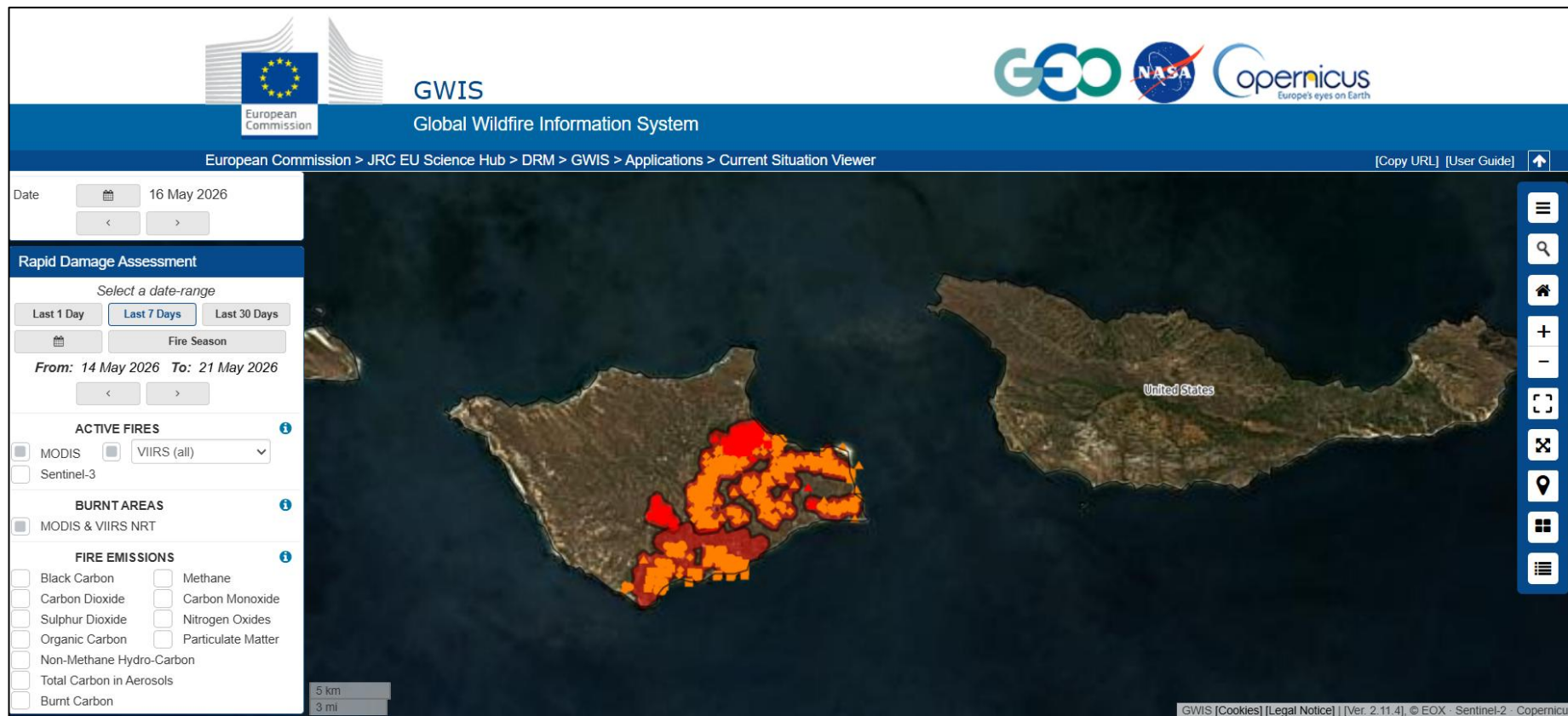


Data & Services

Going global? – Global Wildfire Information System

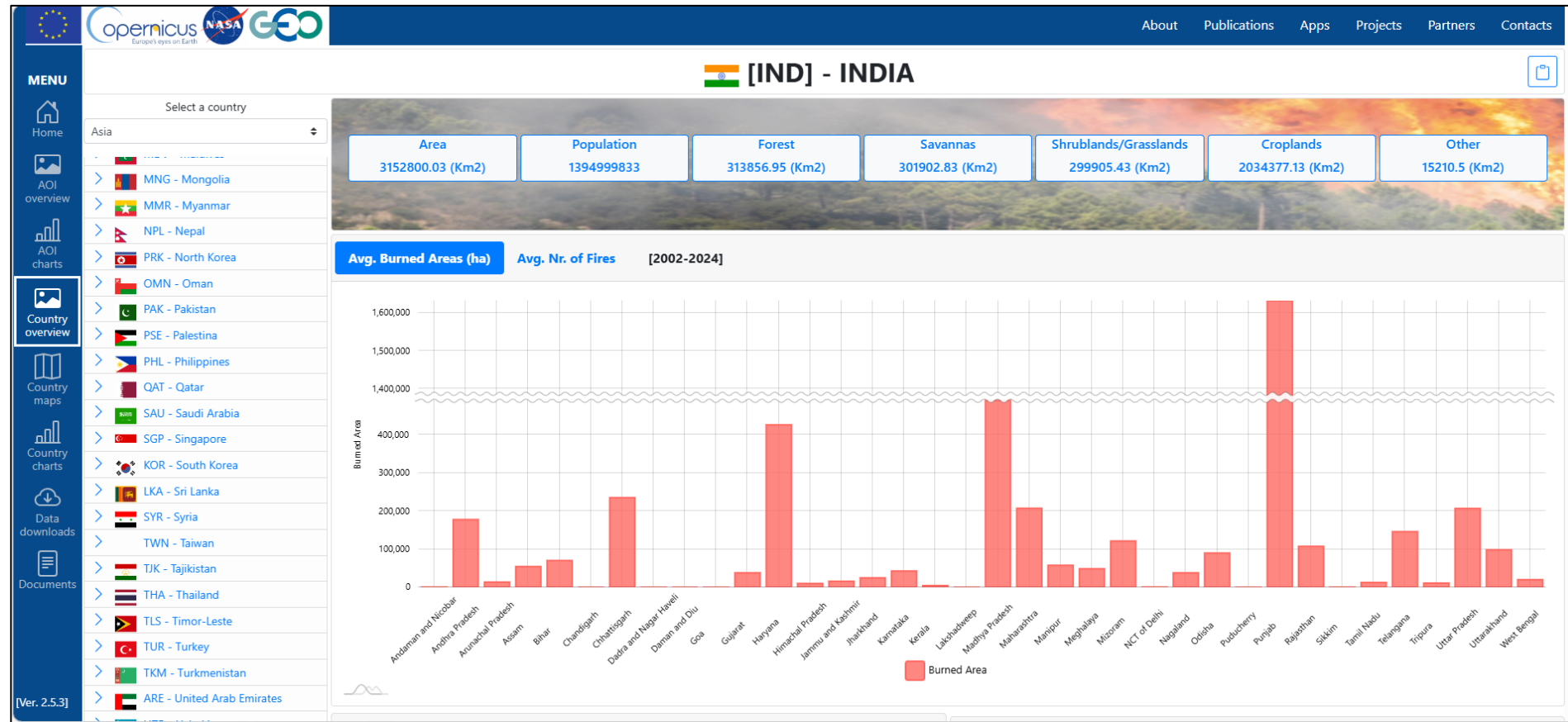
Availability of features and visualization of data vary from EFFIS. (e.g. emissions, Sentinel-2 Supervised Burnt Areas)

Screen capture on the right captures wildfire incidents, in Santa Rosa Island, California, which broke out on 15th of May 2026, biggest blaze recorded in the island's modern history.



Going global? – Global Wildfire Information System

 The **Country Profile** on GWIS is a dedicated application that provides historical overviews of fire regimes at the country and sub-country level.



Resources

- 📍 <https://effis.emergency.copernicus.eu> - The primary gateway to all EFFIS applications and services.
- 📍 <http://www.copernicus.eu/en/european-forest-fire-information-system> - Official Copernicus program page explaining EFFIS as part of EMS.
- 📍 <https://effis-gwis-cms.s3-eu-west-1.amazonaws.com/apps/effis.viewer/userguide.pdf> - Comprehensive EFFIS user guide (Version 2.5.x).
- 📍 <https://forest-fire.emergency.copernicus.eu/reports-and-publications/effis-related-publications> - Central repository containing multiple key documents and publications regarding EFFIS.
- 📍 <https://gwis.jrc.ec.europa.eu/> - The primary gateway to Global Wildfire Information System (GWIS).

Key takeaways

- 📍 Navigate to specific region of interest and visualise the situation.
- 📍 Navigate through the previous events and see damage extents and other parameters.
- 📍 Download and manage the data for specific needs either for pre- or post-event studies.
- 📍 Visualise statistics for different countries on EU scale.

Thank you for your attention

Any questions?



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Now, let's check you were not sleepy ...

Join us in an interactive quiz to challenge your knowledge on EFFIS and RRM!

SCAN ME



Q&A session



*Please use the “**Raise Hand**” function, or write your question directly in the Chat*

What comes next?

Upcoming Training Opportunities

Seminars

- ☀ 23rd to 26th of June 2026 in Zagreb, Croatia

Simulation Exercises

- ☀ 6th to 7th of October 2026 in Brussels, DG DEFIS

REGISTER HERE



Interested to participate? **Scan the QR code** to fill in the Expression of Interest form!

Want to watch the webinar again?

The **recording** of the webinar and **slides** presented will be available on the SUNSHINE page of the Union Civil Protection Knowledge Network platform.

*Follow **this page** for more updates and news from the SUNSHINE project!*



**SUNSHINE page on
UCPKN platform**

Webinar Evaluation

SCAN HERE





SUNSHINE

Contacts

Reach out to us for any further questions!

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For the SUNSHINE Exercises: Simon Taillefer
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General questions on SUNSHINE:
ec-sunshine-seminars@ec.europa.eu
sunshine@telespazio.com



SUNSHINE

Thank you for joining!