

Be **AWARE** when every second counts



AW  **RE**

REVOLUTIONISING
PUBLIC WARNING



Funded by
the European Union



The programme



9:30 am



Welcome & introduction



10:00 am



Lights, camera & action - scenarised demo



12:00 am



Lunch – sponsored by  genasys



2:00 pm



Your time to be AWARE – free play demo



5:00 pm



Wrap up & feedbacks



AW!RE

REVOLUTIONISING
PUBLIC WARNING

Welcome!

AWARE Project

AWARE's mission is to develop reliable, resilient and trustworthy solutions for Galileo EWSS and dedicated tool for CPAs allowing its monitoring

A PROJECT BORN OF A CONSORTIUM:



This project has received funding from the European Union Agency for the Space Programme under HORIZON-EUSPA-2021-SPACE grant agreement No 101082555.

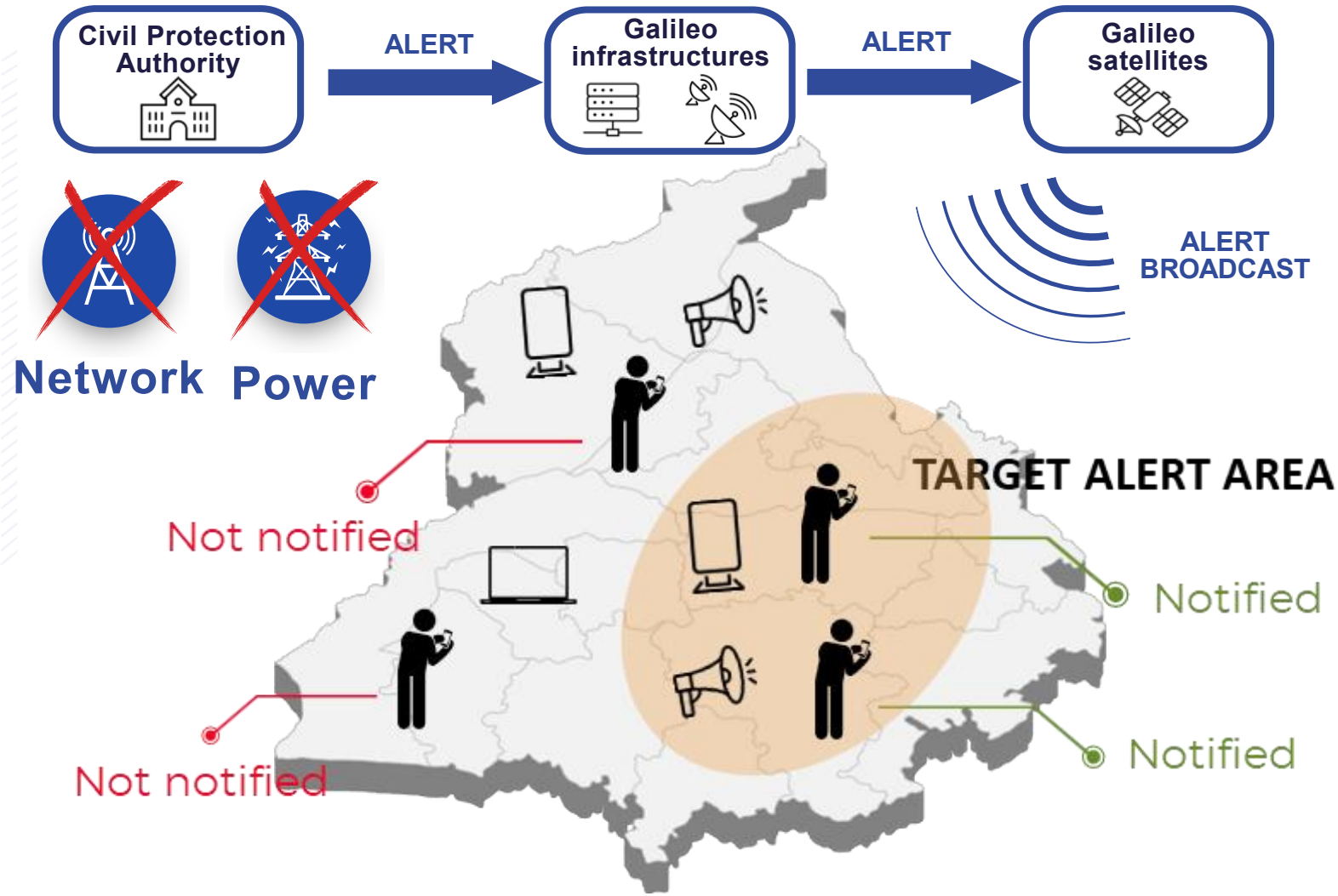
Galileo EWSS



Galileo EWSS

Emergency Warning Satellite Service

The upcoming public service of Galileo to broadcast alert messages from space



Civil Protection Authorities can send alerts directly to affected areas through Galileo



Alerts are transmitted via the Galileo constellation of Medium Earth Orbit satellites



Only the devices located within the defined alert area notify the alert to the population



The only emergency warning system resilient to networks disruption and power outage

AWARE SYSTEM

1

Module

Device integrating satellite receiver to transmit the secured satellite-based message

2

Warning Devices

Display the alert received over different sensory channels

3

Service Centre

Monitor the service and support CPA analysis

Warning Devices



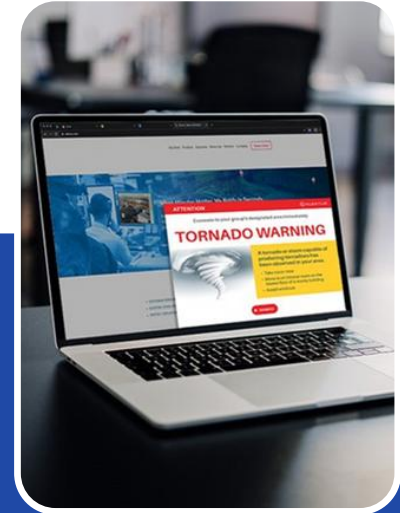
Digital Panel

Real-time priority alerts:
ad interruption



**Long Range
Accoustic Device**

High-power speech alerts



**Indoor Warning
System**

Operates via a rooftop
receiver antenna



4th of November 2025
JCDecaux, Plaisir, France

THIS DEMO



April 2026
Location to be
announced

Service Centre

ENHANCING EXISTING CPA SYSTEMS



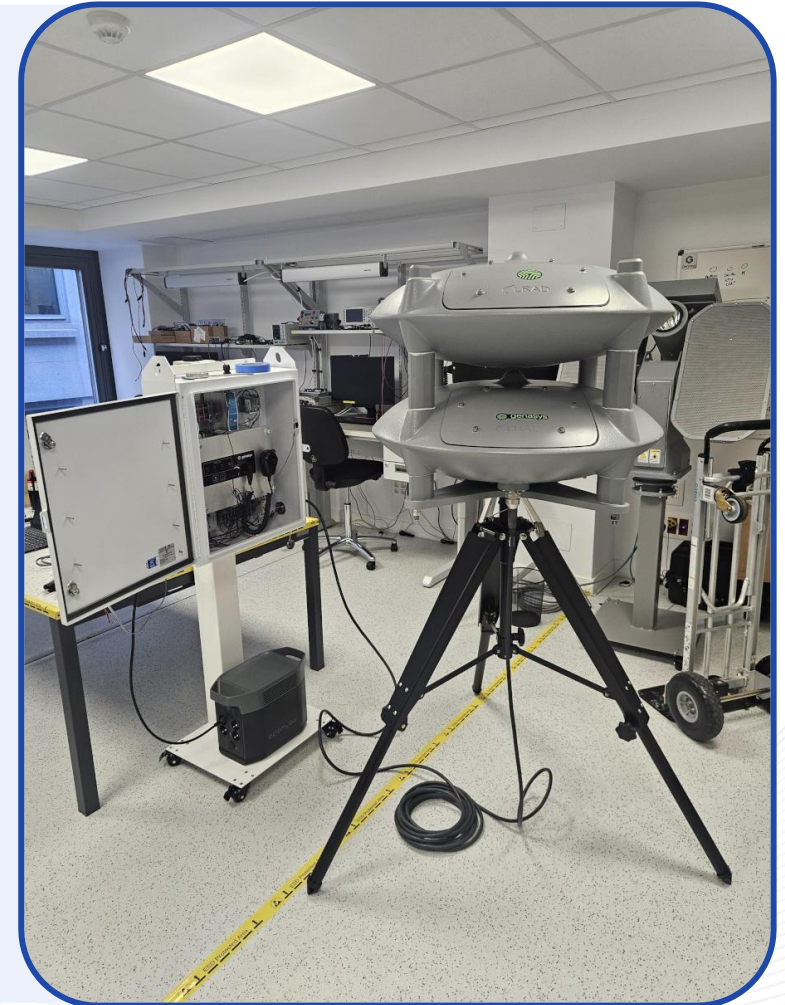


**Give your alerts a strong
voice**

Exploring the LRAD capabilities

Edge 800 + LRAD 360X

- **Up to 7Km** with maximum configuration
Up to 1.7Km with shown configuration
- Speech Transmission Index: 0.95 (in a 0 to 1 scale)
Best in market voice clarity
- **360° coverage**
- **Runs on batteries continually** charged by AC and/or solar chargers
- **Supports text-to-speech** (TTS) for most European languages



LRAD: Long Range Acoustic Device

Customize your alert template

- Template helps to **build clear messages** containing all important information of an alert
- It **can be tuned** on a per- country / region / authority basis.
- It is stored in the LRAD, so customizable to be “**location-specific**”.

This is an alert issued by **Administration of the Republic of Slovenia for Civil Protection and Disaster Relief**. Please, pay attention to the following announcement. **Flood** with **severe** risk to people and property. **You are in the danger zone, leave the area immediately. Listen to radio or media for directions and information.**

Once the message is constructed using the appropriate template,
the LRAD converts it to audio using Text To Speech.



Europe's eyes on Earth

Copernicus EMS

European Union's Earth
observation programme



RM

Rapid Mapping

Satellite imagery & mapping
for emergency response



**Emergency
Management**

EFAS

**European Flood
Awareness System**

Flood monitoring and
forecasting

When Copernicus meets Galileo



This synergy is investigated in the frame of the AWARE project and subject to validation by EU institutions.

CEMS

Copernicus Emergency
Management Service



EWSS

Galileo Emergency
Warning Satellite Service



These exchanges aim to:

- Accelerate disaster response times
- Improve situational awareness
- Strengthen resilience during emergencies



Lights, Camera & Action!

2023 Slovenia Floods



Record floods 'worst natural disaster' in Slovenia in over 30 years

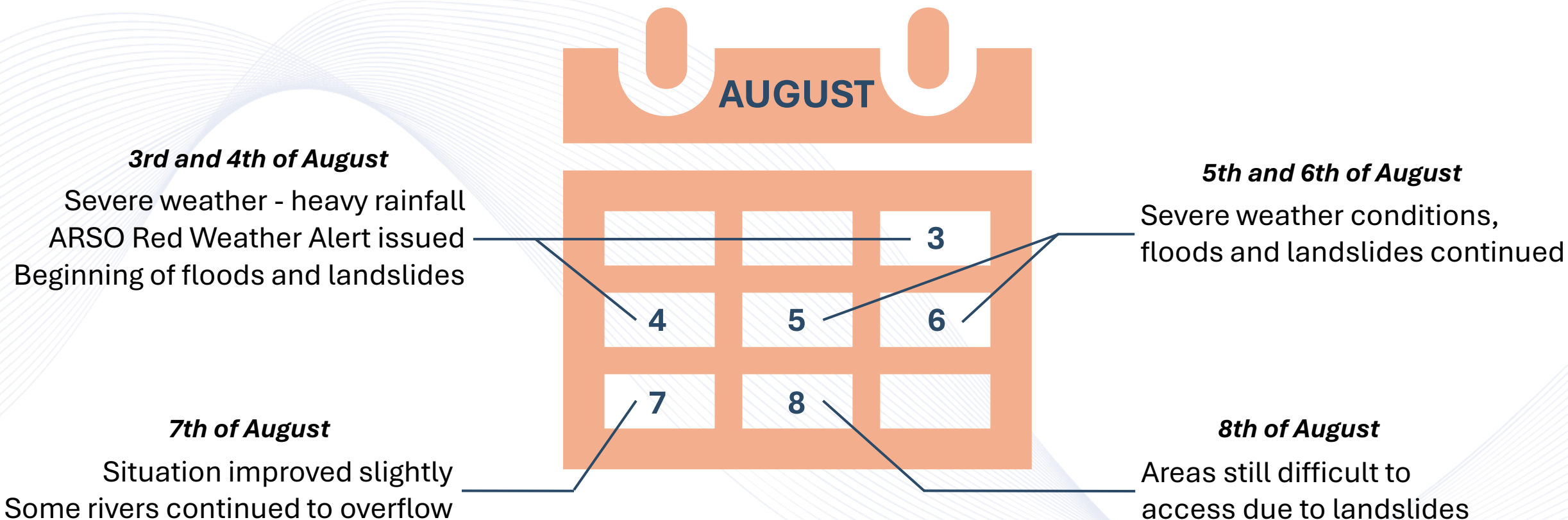
Slovenia floods kill at least six in 'worst natural disaster to ever hit' the country, says Prime Minister



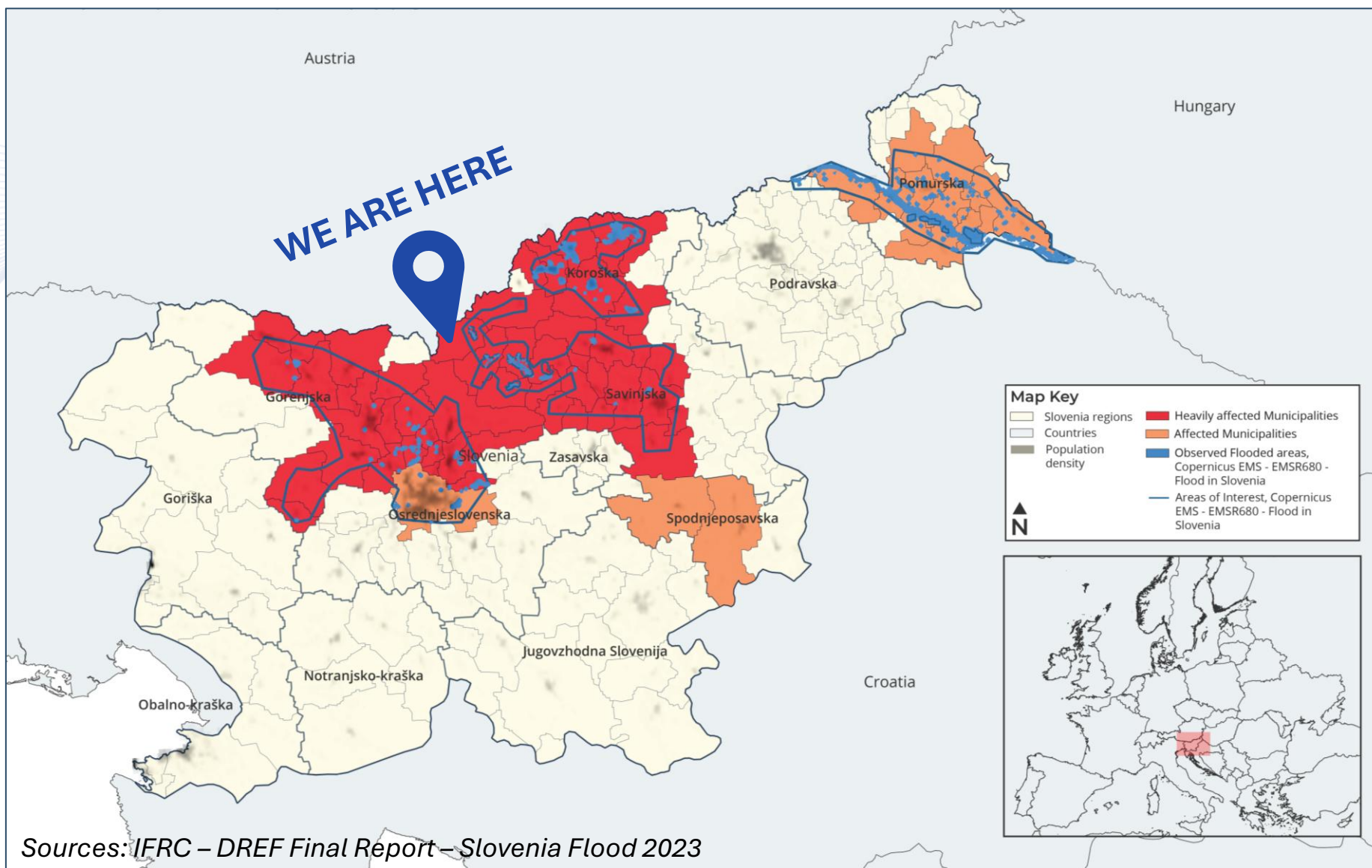
REPUBLIKA SLOVENIJA
GOV.SI

The 2023 floods were not just a natural disaster, they were a turning point

Flashback of August 2023



Affected areas



Consequences



1 500 000
People affected

8 000

People evacuated



6
Fatalities



+750 ha
Flooded zones



Communication and electrical systems disrupted

Our scenario: adapted from 2023 events

Divided in 2 parts:

- **Morning** - Focused on floods with a scripted scenario
- **Afternoon** - Based on landslides with a hands-on experiences

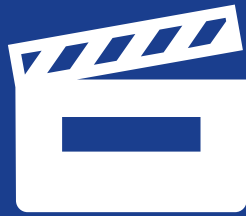


NBC News



REUTERS/Borut Zivulovic

**Now, let's experience
the scenario**



TODAY



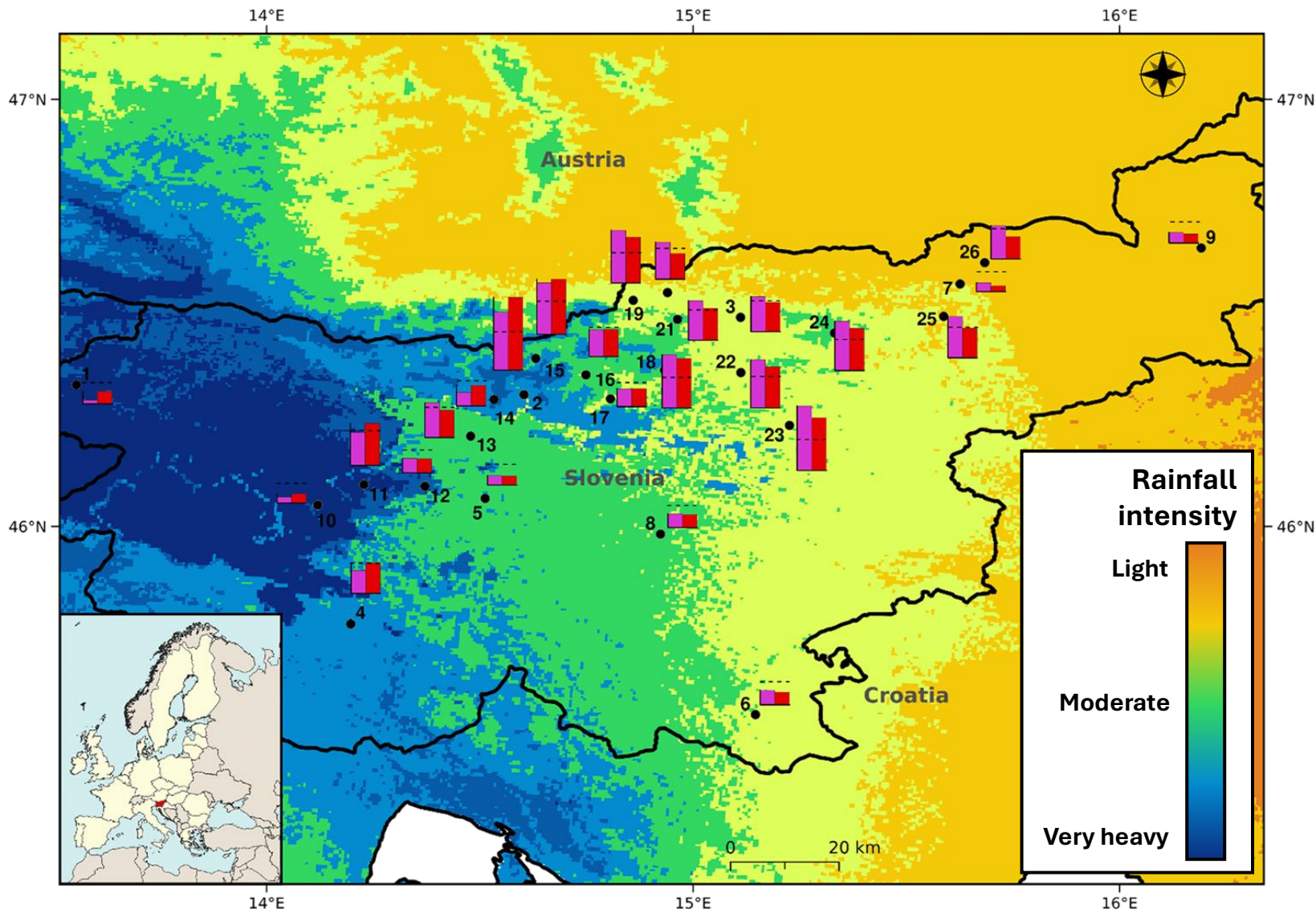
**Thursday 23rd of October
2025**



**Logarska Dolina – Hotel
Plesnik**



National Meteorological Service of Slovenia (ARSO) Weather Forecast for Octobre the 23rd



Expecting
downpours and
heavy rainfall
coming from
Northwest.



National Meteorological Service of Slovenia (ARSO) Weather Forecast for Octobre the 23rd



**Activation of national
emergency response plan for floods**





WEATHER
ALERT



Copernicus
European Flood
Awareness System



15 minutes later

ACPDR consults the red weather alert
and decides to trigger Galileo EWSS to
alert its citizens about risk of floods.

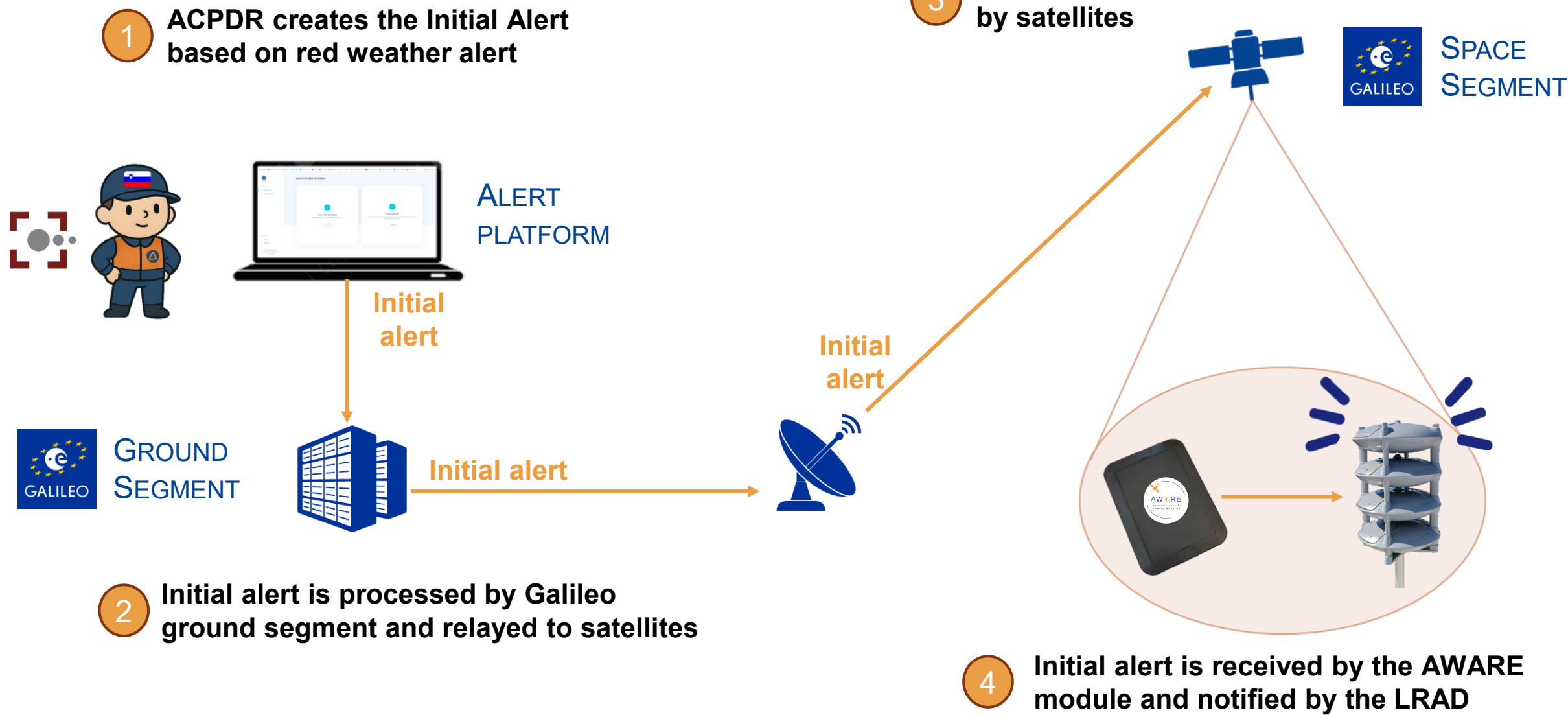
ACPDR: Administration of the Republic of Slovenia for Civil Protection and Disaster Relief

URSZR: Uprava Republike Slovenije za zaščito in reševanje

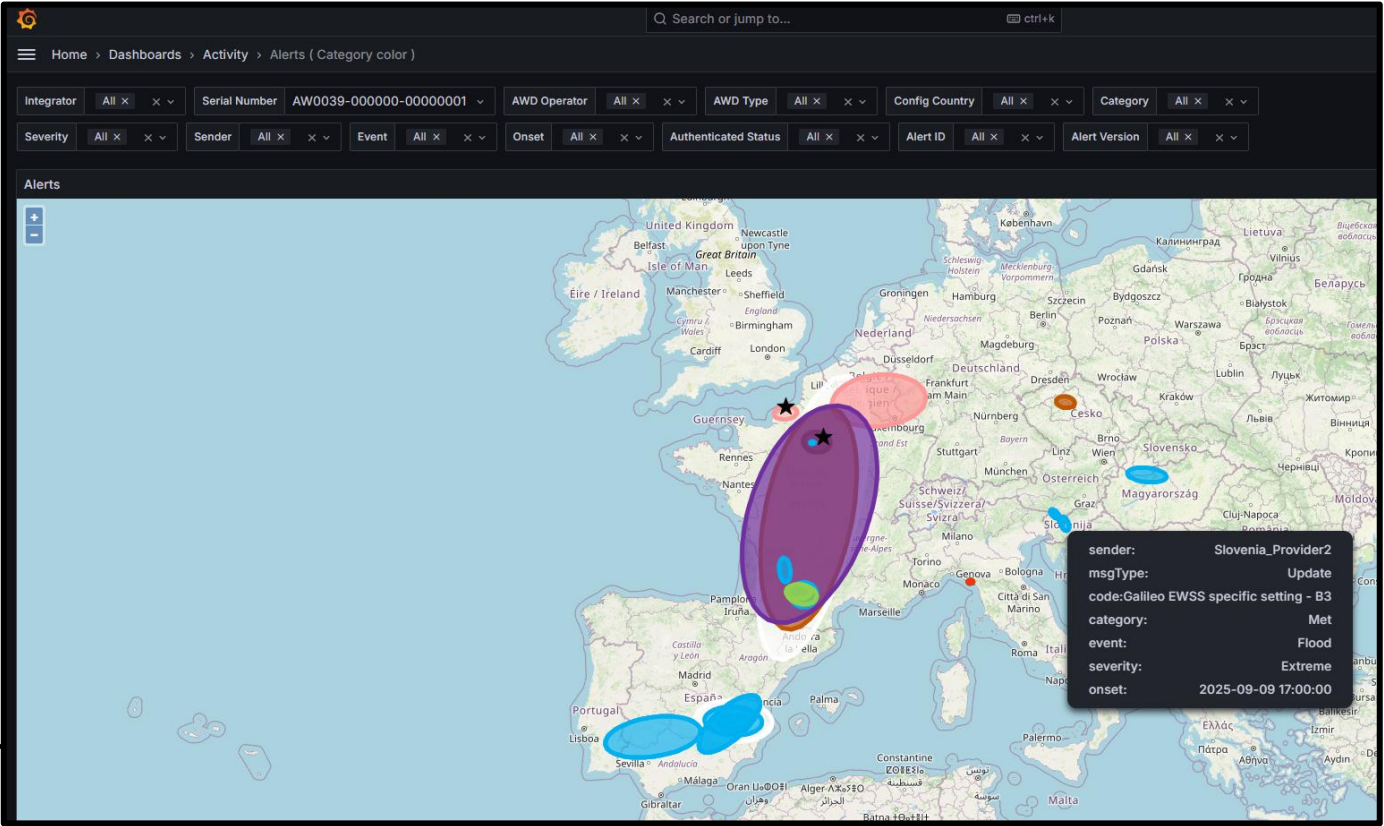
EWSS: Emergency Warning Satellite Service

Ongoing right now for real

!



ACPDR can consult the AWARE Service Centre dashboards



ACPDR: Administration of the Republic of Slovenia for Civil Protection and Disaster Relief
URSZR: Uprava Republike Slovenije za zaščito in reševanje

A possible synergy

Copernicus EFAS alert

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

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: <EMSR680>

Early warning system: <EFAS>

Phenomenon type: <Flood>

Situation description: <Extreme discharges of Save and Savinja rivers>

Expected start of the event: <24/10>

Expected event peak: <24/10 10:00 UTC>

Expected duration: <3>

Recommended image ac

Affected country(s): <Slo

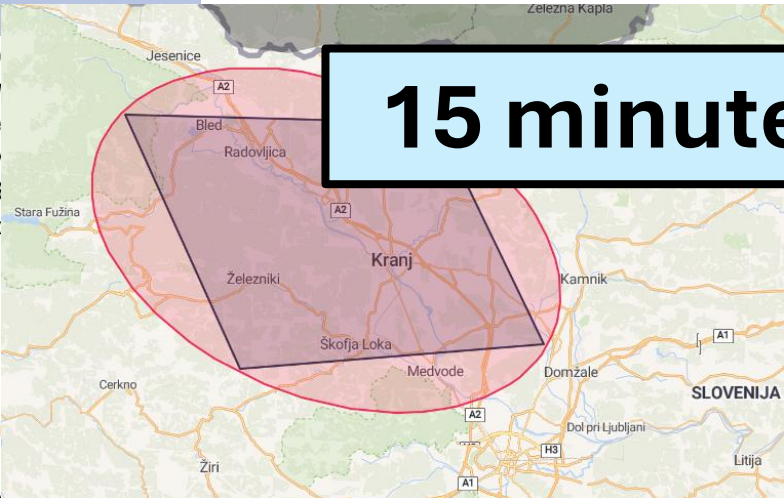
Affected region(s): <Gore

Affected major citie(s): <L

Affected river basin(s): <S

For further information co

EFAS Officer on Duty



15 minutes later

Galileo EWSS alert

Hazard Type

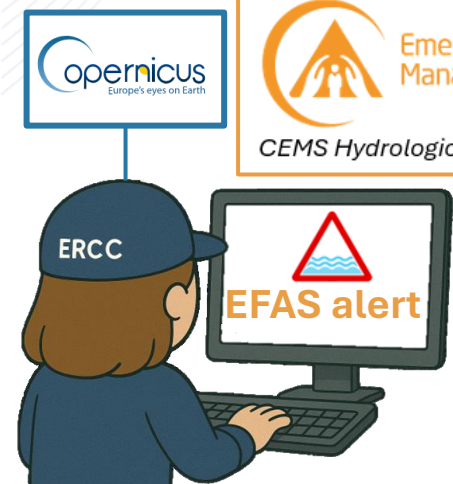
Flood

Event date (local time)

10/24/2025, 10:00

Duration of the event in hour

Not specified





@



Informed of these EFAS data, ACPDR
15 minutes later evacuation order
through an update of the Galileo EWSS
alert.

ACPDR: Administration of the Republic of Slovenia for Civil Protection and Disaster Relief

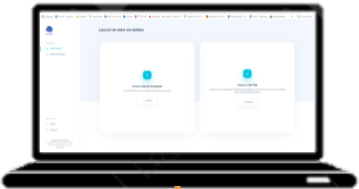
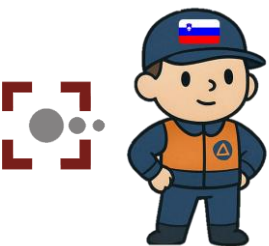
URSZR: Uprava Republike Slovenije za zaščito in reševanje

ERCC: Emergency Response Coordination Centre

EFAS: European Flood Awareness System

Ongoing right now for real !

ACPDR updates the Initial alert based on the EFAS inputs



ALERT
PLATFORM

Update



 GROUND
SEGMENT

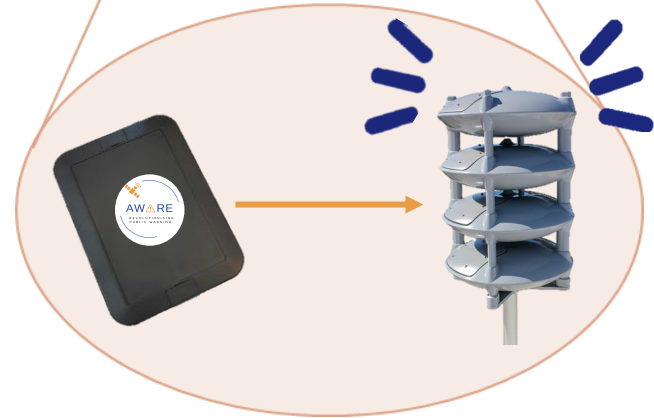
Update



Update

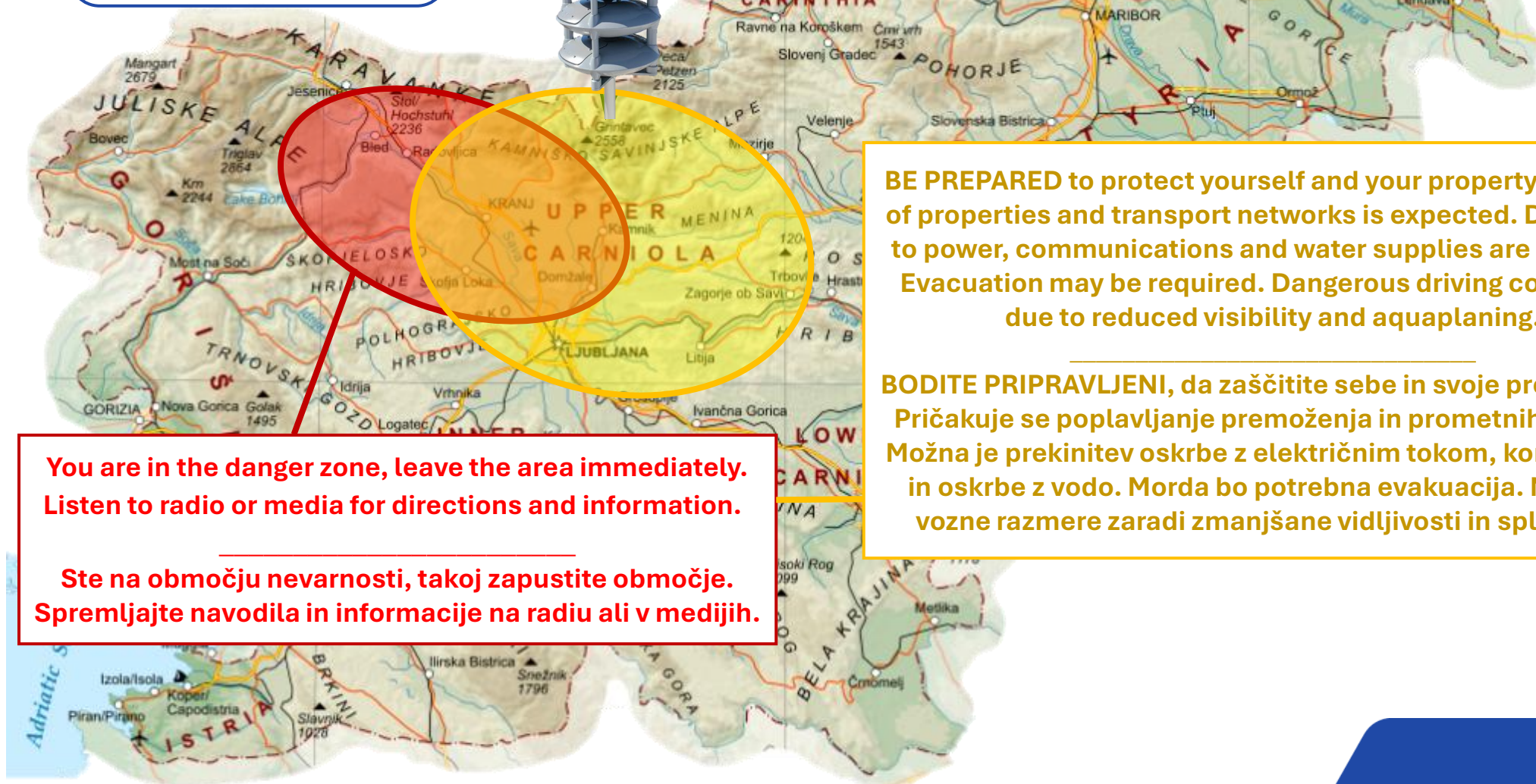


 SPACE
SEGMENT



Update replaces the Initial alert which is then notified by the LRAD

**Update of EWSS
Alert for an
extreme flood**



BE PREPARED to protect yourself and your property. Flooding of properties and transport networks is expected. Disruption to power, communications and water supplies are possible. Evacuation may be required. Dangerous driving conditions due to reduced visibility and aquaplaning.

BODITE PRIPRAVLJENI, da zaščitite sebe in svoje premoženje. Pričakuje se poplavljanje premoženja in prometnih omrežij. Možna je prekinitev oskrbe z električnim tokom, komunikacij in oskrbe z vodo. Morda bo potrebna evakuacija. Nevarne vozne razmere zaradi zmanjšane vidljivosti in splavanja.

You are in the danger zone, leave the area immediately.
Listen to radio or media for directions and information.

Ste na območju nevarnosti, takoj zapustite območje.
Spremljajte navodila in informacije na radiu ali v medijih.

DURING THE NEXT NIGHT



Friday 24th of October 2025

**Logarska Dolina – Hotel
Plesnik**



Let's trigger
Copernicus Rapid
Mapping to acquire
images of these
coming floods.



Rapid Mapping

Product: Processed images acquired by satellites

Time to imagery: between 12 and 24 hours

Time to produce: between 6 and 8 hours



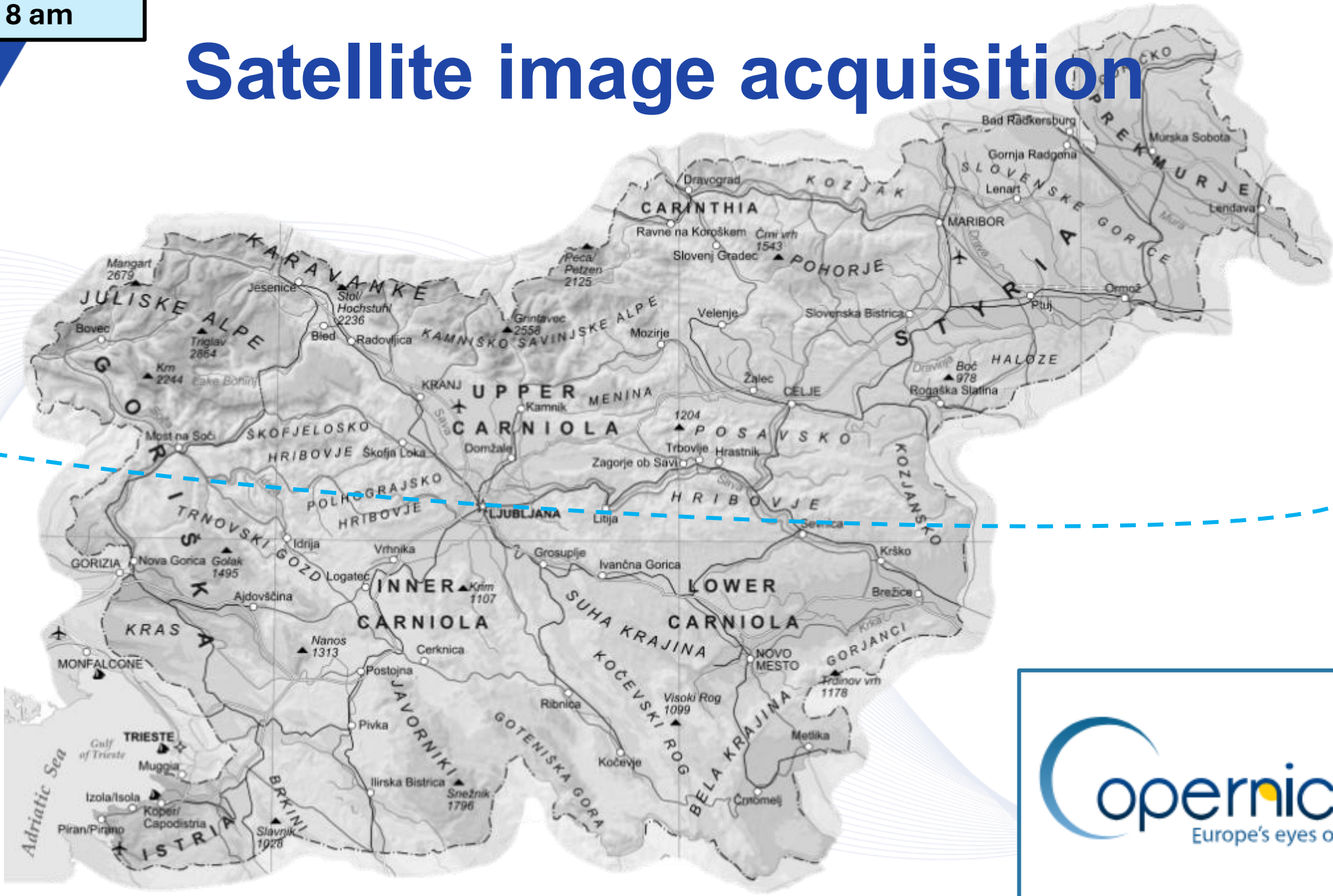
Floods have started...



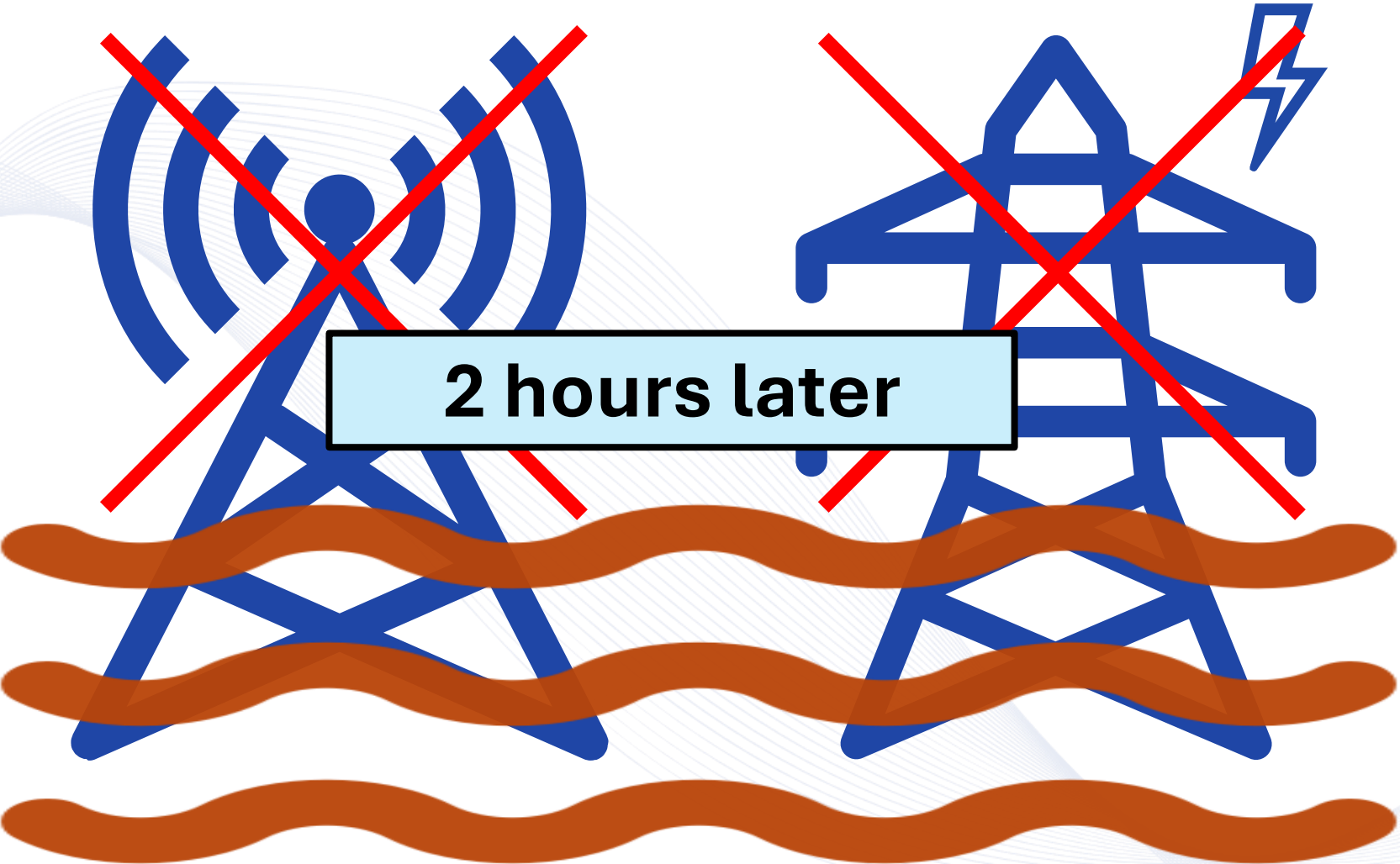
6 hours later

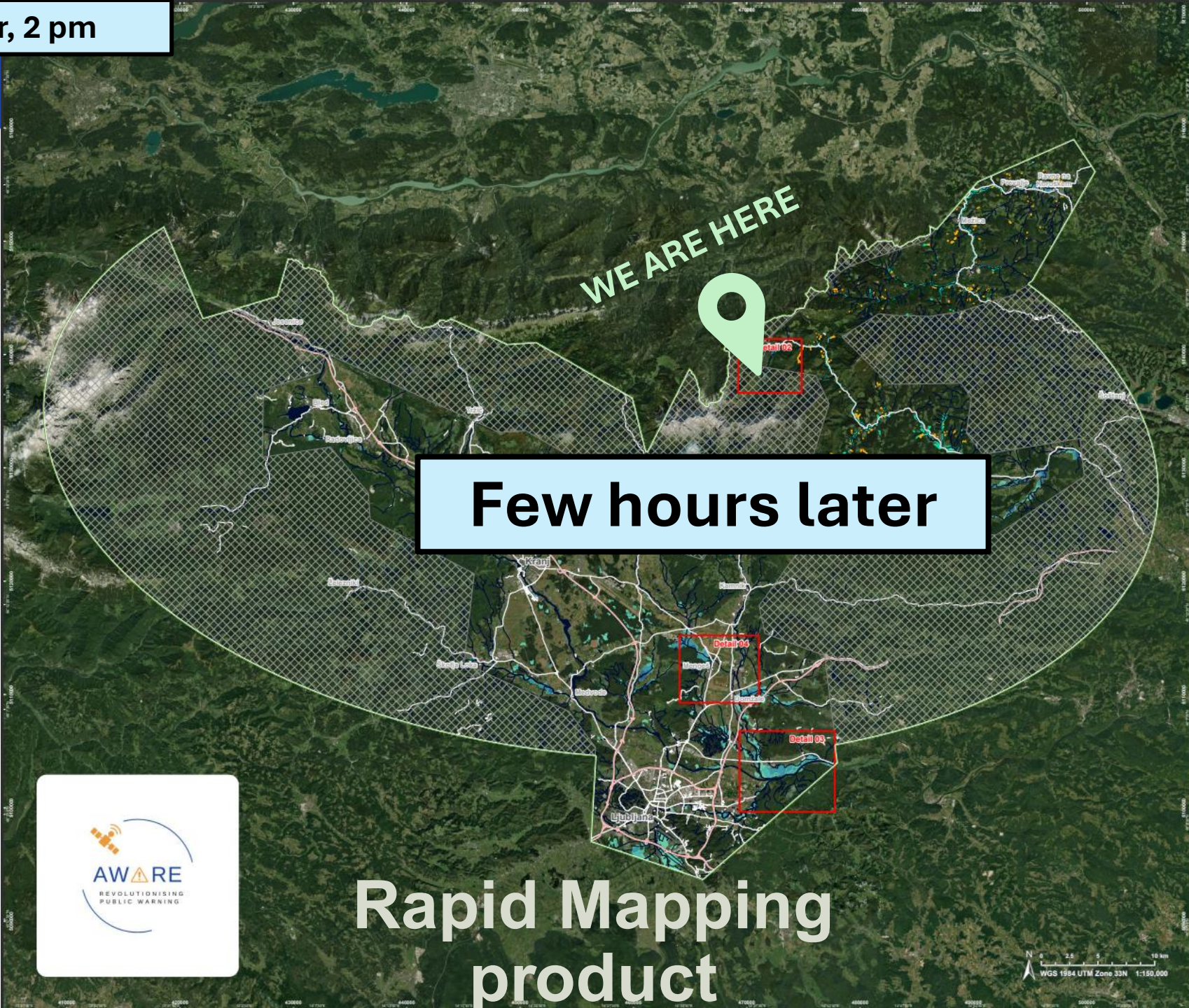


Satellite image acquisition



Networks are now down





Few hours later



Rapid Mapping product

GLIDE number: N/A
Int. Charter Act. ID: N/A
GDACS ID: N/A
Product version: 1

EMSR880 - AOI01
Flood in Slovenia
SLOVENIA

Situation as of 05/08/2023 16:50 UTC
Delineation - Overview map 01

Landslide 59.3 ha
Flooded area
EO-based 236.7 ha
Model-based 5,114.2 ha

Potentially affected population ~68,000

Potentially Affected Built-up and Transportations

Built-Up 489.6 ha
Road 374.4 km

Estimated flood depth (m)

- Below 0.50
- 0.50 to 1.00
- 1.00 to 2.00
- 2.00 to 4.00
- Above 4.00

General Information

- Area of Interest
- Detail map
- Image Footprint
- Not Analysed

Placenames

- Placename

Hydrography

- Lake, River
- Transportation
- Highway
- Main road

Crisis Information

- Flood trace
- Landslide

Event: The Slovenian Environment Agency (ARSO) has issued a red weather alert on 4 August at 02:00 due to severe weather characterized by heavy rain has been affecting western, northern, eastern and central parts of the country, causing severe flooding and landslides. Some areas are inaccessible, necessary evacuations of residents are taking place along Drava, Sava and Sora rivers. The situation is forecast to improve as of tomorrow afternoon. Copernicus EMS Rapid Mapping is requested to provide initial rough estimation, flood extent, monitoring of the event and damage assessment for the emergency mapping.

Data sources and analysis:
Pre-event image: Sentinel-2A (2022) (acquired on 19/07/2022 at 09:55 UTC, resolution 10.0 m).
Post-event image: Sentinel-2B (2023) (acquired on 05/08/2023 at 16:50 UTC, resolution 20.0 m).
All images are provided under COPERNICUS by the European Union and ESA, all rights reserved.

The thematic layer has been derived from post-event satellite image using a semi-automatic approach.

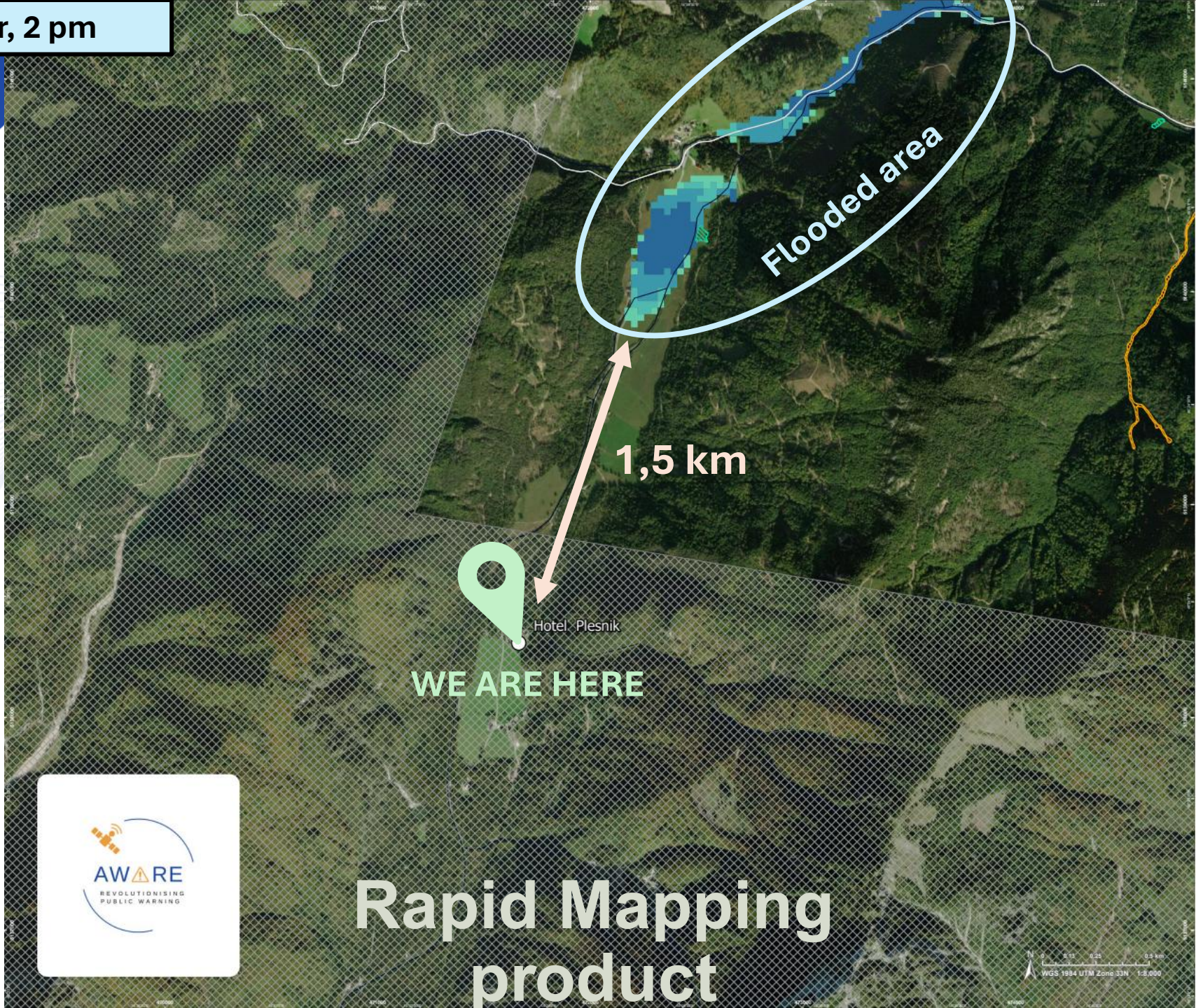
The flooded area corresponds to the water observed in the most recent satellite imagery, excluding the permanent water.

An extrapolated flood extent is generated by integrating observed flood areas with a Digital Terrain Model (DTM). The model's accuracy and spatial coverage depend on DTM resolution and quality, enabling the prediction of potentially flooded areas in regions with limited visibility in imagery, such as urban and forested zones. This flood modelling approach is powered by EXPLOS (EXtrapolated FLOod Surface).

Map produced by SERTIT released by SERTIT on the 06/10/2023.

Details on this activation and service conditions available through the CH code or at the link: <https://emergency.copernicus.eu/en/actions/EMSR880>

EUROPEAN UNION
PROGRAMME OF THE
EUROPEAN UNION



GUIDE number: NIA
Int. Charter Act. ID: NIA
GDACS ID: NIA
Product version: 1

 EMSR680 - AOI01
Flood in Slovenia
SLOVENIA

Situation as of 05/08/2023 16:50 UTC
Delineation - Detail map 02



Estimated flood depth (m)

- Below 0.50
- 0.50 to 1.00
- 1.00 to 2.00
- 2.00 to 4.00
- Above 4.00

Crisis Information

-  Flood trace
-  Landslide

Image Footprint

-  Not Analysed

Transportation

-  Main road

Source: The Slovenian Environment Agency (ARSO) has issued a red weather alert on 4 August at 02:00 due to severe weather characterized by heavy rain has been affecting western, northern, eastern and central parts of the country, causing severe flooding and landslides. Some areas are particularly, increasingly susceptible of residents are taking place along Drava, Sava and Sora rivers. The situation is foreseen to improve as of tomorrow afternoon. Copernicus EMS Rapid Mapping is requested to provide initial rough estimation, flood extent, monitoring of the event and damage assessment for the emergency mapping.

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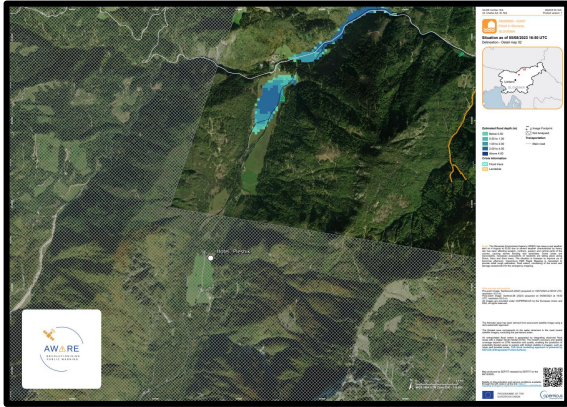
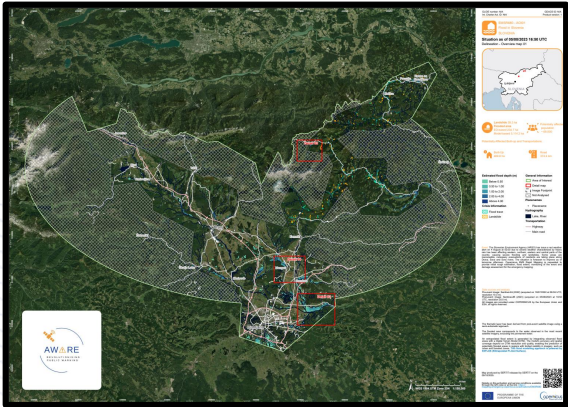
Map produced by SERTIT released by SERTIT on the 08/10/2023.

Details on this activation and service conditions available through the QR code or at the link: <https://ec.europa.eu/emergency/copernicus.eu/en/actions/EMSR680>



 PROGRAMME OF THE EUROPEAN UNION





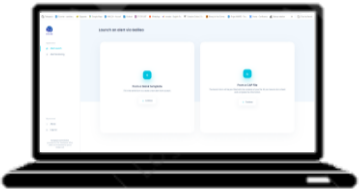
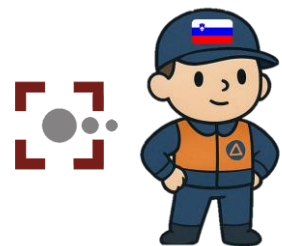
...



ACPDR uses Copernicus Rapid Mapping cartography to update the alert areas.

Ongoing right now for real !

ACPDR updates again the alert based on the Rapid Mapping products



ALERT
PLATFORM

Update



 GROUND
SEGMENT

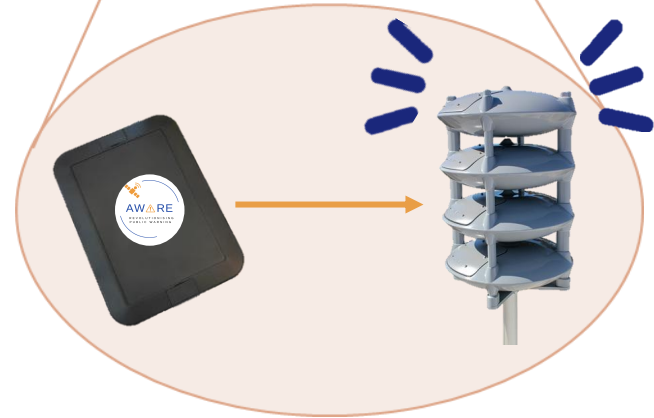
Update



Update

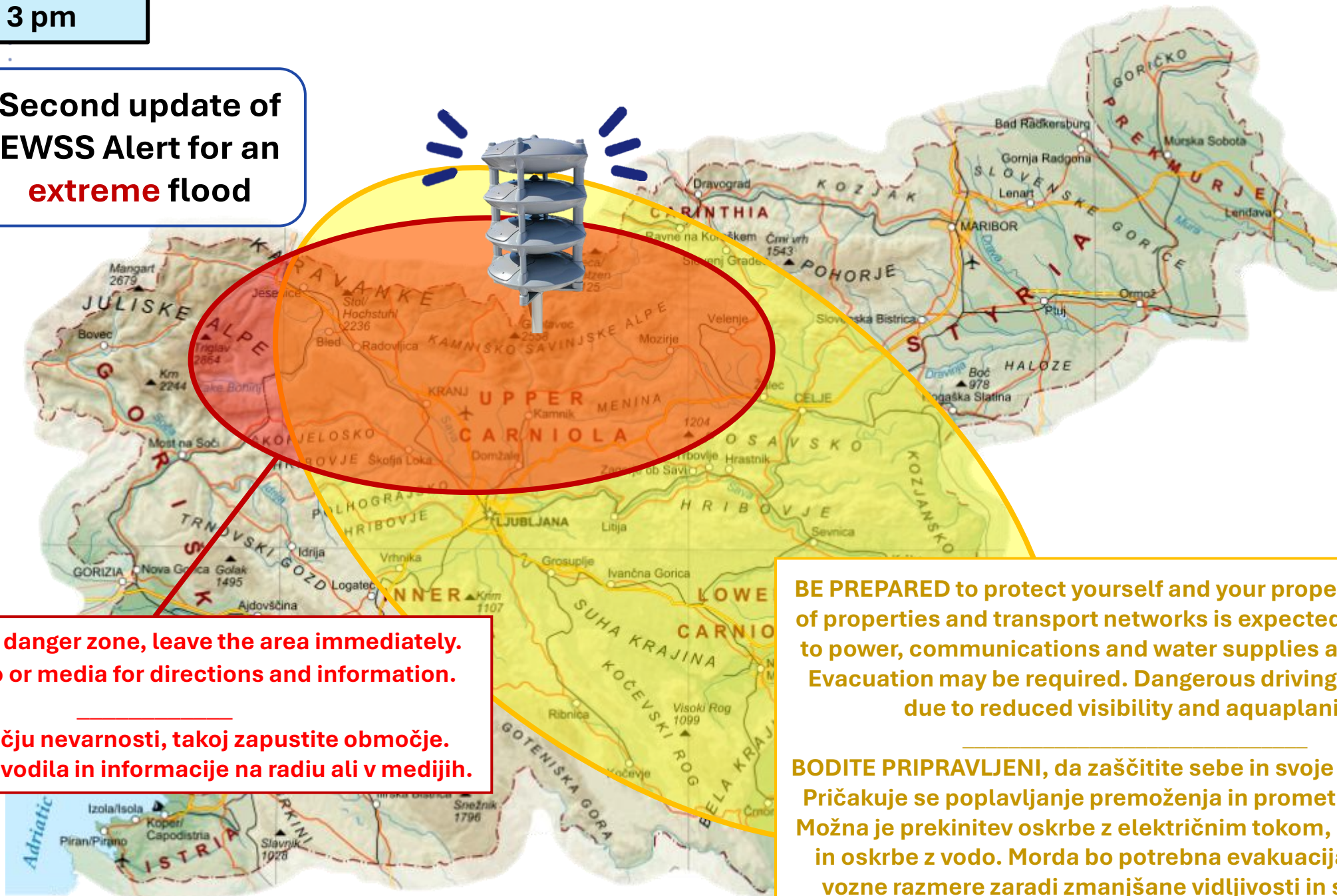


 SPACE
SEGMENT



Update replaces again the previous alert which is then notified by the LRAD

Second update of
EWSS Alert for an
extreme flood



**You are in the danger zone, leave the area immediately.
Listen to radio or media for directions and information.**

**Ste na območju nevarnosti, takoj zapustite območje.
Spremljajte navodila in informacije na radiu ali v medijih.**

BE PREPARED to protect yourself and your property. Flooding of properties and transport networks is expected. Disruption to power, communications and water supplies are possible. Evacuation may be required. Dangerous driving conditions due to reduced visibility and aquaplaning

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24th October, 7 pm



4 hours later

But some zones are still flooded and inaccessible..

Rain is over!



FEW DAYS LATER



**Sunday 26th of October
2025**

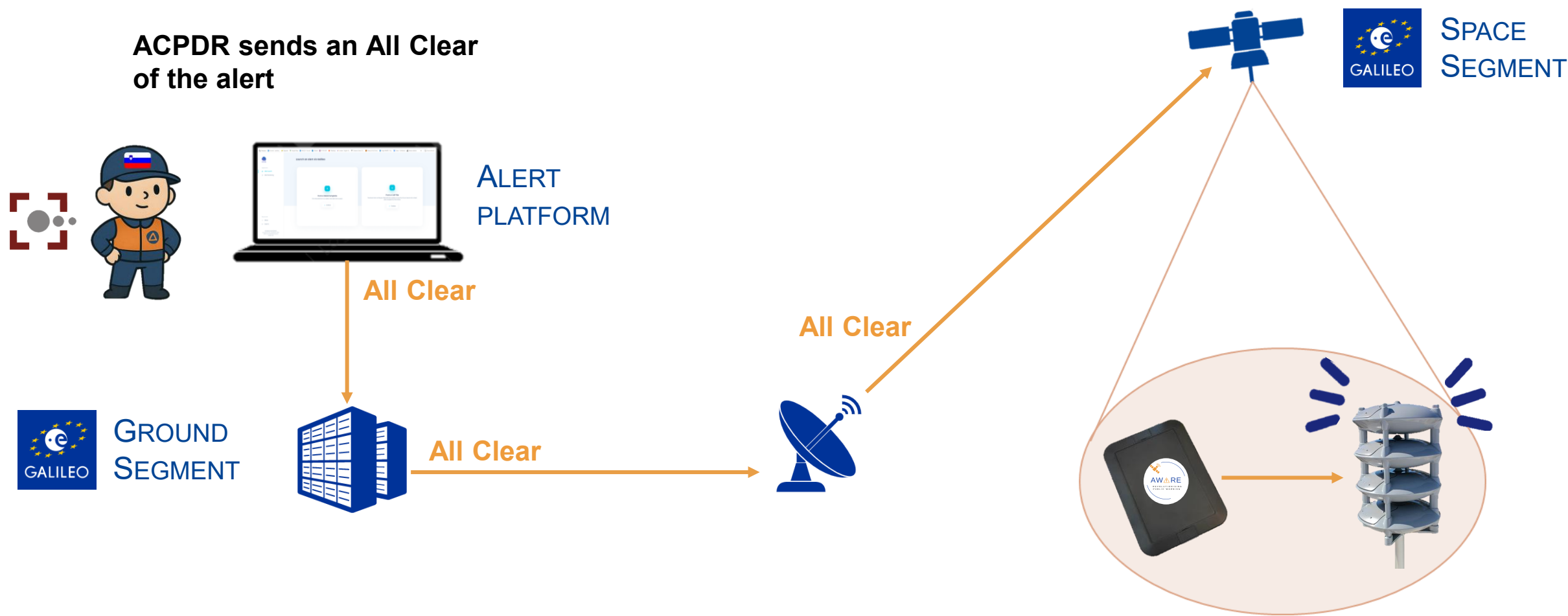


**Logarska Dolina – Hotel
Plesnik**



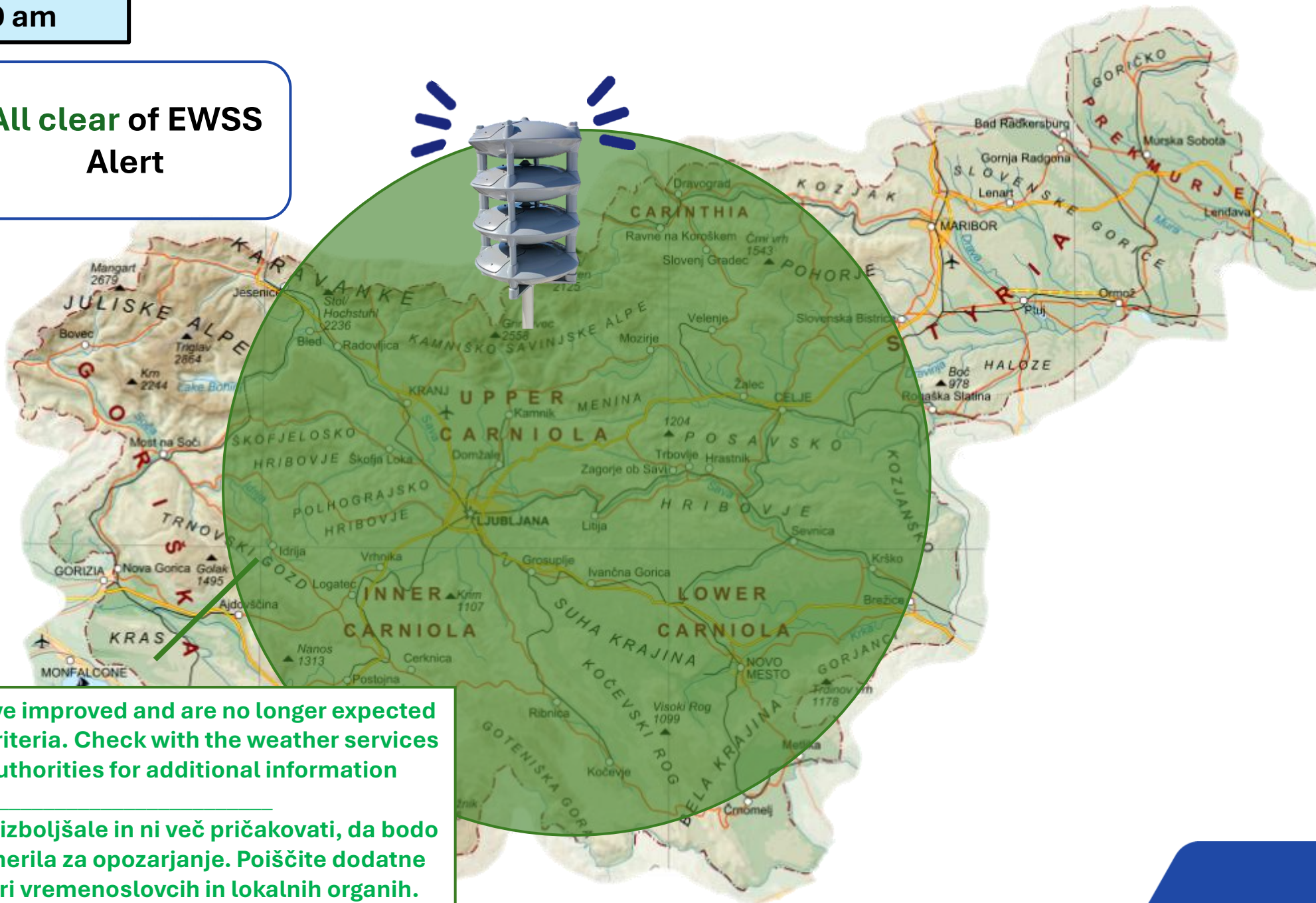
**Situation is back to normal.
ACPDR will inform the citizens with
an All Clear Galileo message.**

Ongoing right now for real !



All Clear replaces the previous alert which is then notified by the LRAD

**All clear of EWSS
Alert**



Conditions have improved and are no longer expected to meet alert criteria. Check with the weather services and local authorities for additional information

Razmere so se izboljšale in ni več pričakovati, da bodo izpolnjevale merila za opozarjanje. Poiščite dodatne informacije pri vremenoslovcih in lokalnih organih.



**Any
questions?**

THE END
**Demonstration
completed**
Thank you!



Thank you again!

Now it's time for lunch



REMINDER

Afternoon here



**Multiple stands
& a short briefing**



**Your time to be
AWARE**

Your feedback is
very important to
us!

Please fill our **Feedback survey** notify



Galileo EWSS alerts

This project has received funding from the European Union Agency for the Space Programme under HORIZON-EUSPA-2021-SPACE grant agreement No 101082555.

SCAN ME



READY TO ENHANCE YOUR ALERT SYSTEM? LET'S TALK!



<https://euproject-aware.eu/>



aware@telespazio.com

SCAN ME



OPTIONS TO GO FURTHER:

- > Dedicated demo with your existing Public Warning Devices
- > Feasibility study adapted to your country
- > Leveraging existing EU Frameworks contracts
- > Dedicated pilot projects in 2026
- > EU offers support to 10 countries for EWSS integration – SUNSHINE



AW!RE

REVOLUTIONISING
PUBLIC WARNING