

Konferencia Inšpirujme sa 2024



Využitie údajov vesmírneho segmentu

Milan Kalaš, Milica Aleksić – KAJO

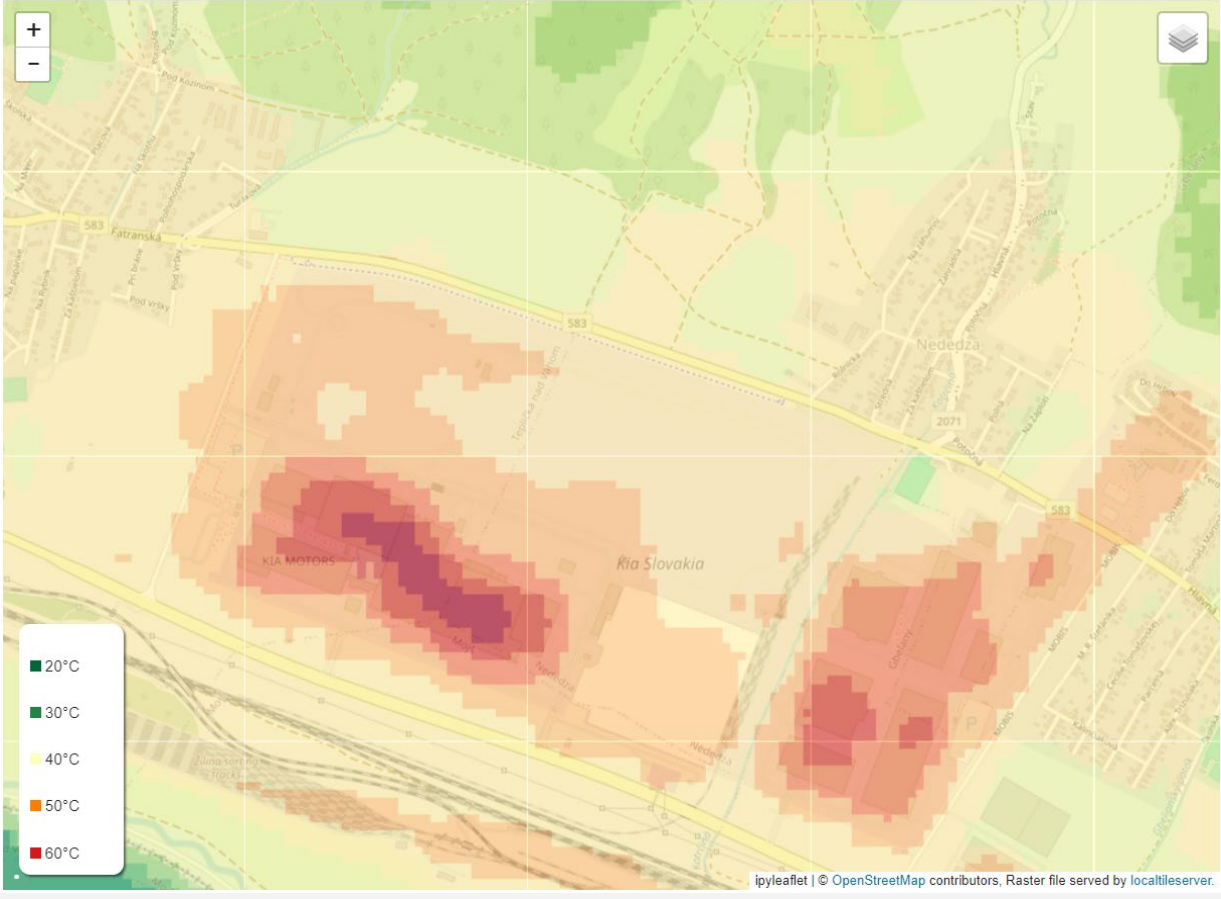
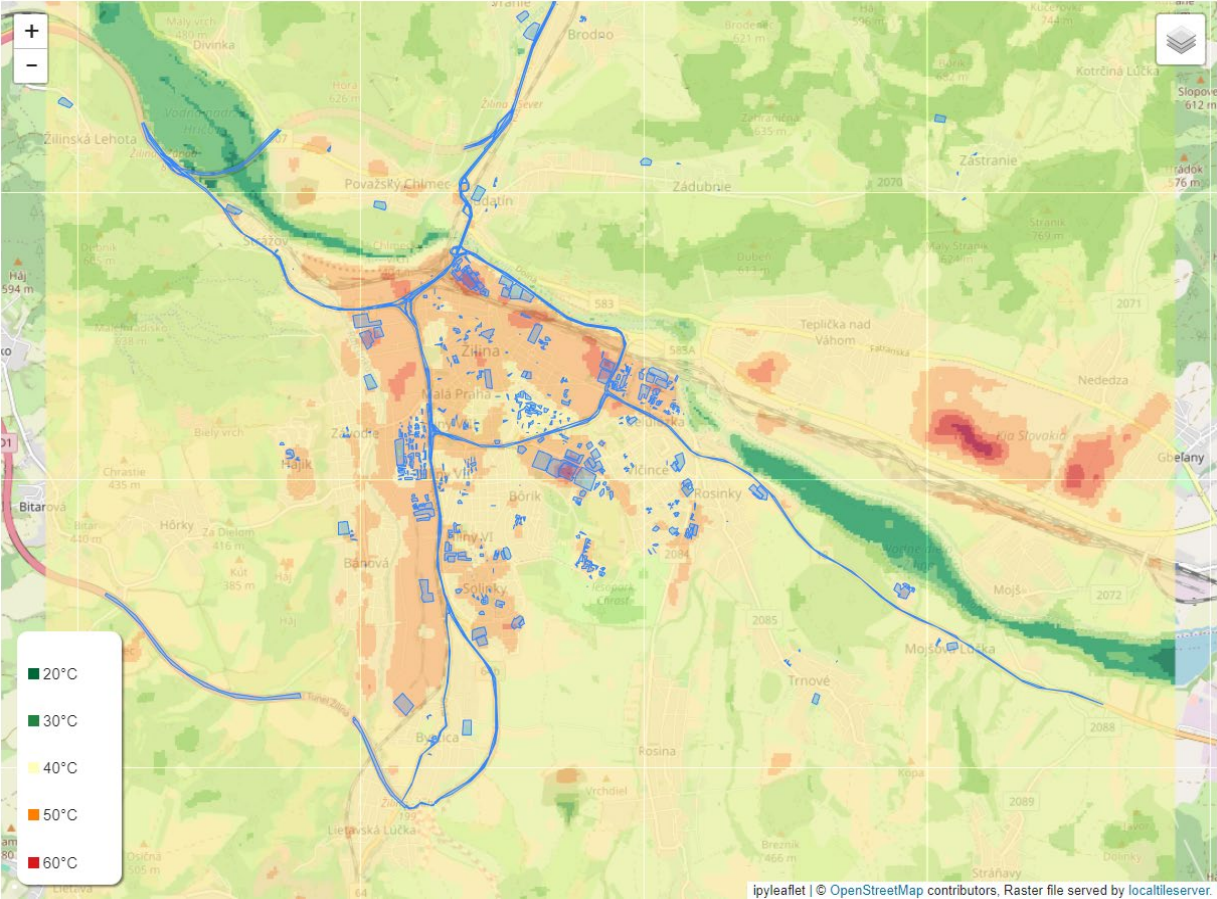
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A word cloud of terms related to climate risk and disaster management. The most prominent words are "Disaster Risk Management" and "Climate Risk". Other significant terms include "Impact-based Forecasting", "Hazard Early warning", "Nature Based Solutions", "Citizen Engagement", "Data management", "Web-design", "Serious Games", "Crowdsourcing", "Decision Support Systems", "Language processing", "Artificial Intelligence", "Machine Learning", "Citizen Science", "Geospatial Processing", "Social media monitoring", "Image classification", "Knowledge platforms", and "Citizen Engagement".

Citizen Engagement
Impact-based Forecasting
Image classification
Data management
Knowledge platforms
Climate Risk
Web-design
Serious Games
Disaster Risk Management
Social media monitoring
Crowdsourcing
Geospatial Processing
Citizen Science
Decision Support Systems
Climate Risk
Machine Learning
Language processing
Hazard Early warning
Nature Based Solutions
Artificial Intelligence



We make climate data more accessible/understandable/actionable for stakeholders



NBS Toolkit – Adaptation recommendation tool for municipalities, developers, industry, ...

The screenshot shows the NBS Toolkit web application interface. At the top, there is a navigation bar with four icons representing different stages: criteria, interventions, future, and co-creation. Below this, the 'Select hazard' section is active, showing 'Urban (pluvial) Flood' as the selected hazard. To the right of this section, the URL <http://www.nbsportal.org> is displayed in red text. The 'Select an area' section is also active, showing a satellite map of Bratislava with a blue rectangular selection box over a large industrial building. The map includes a search bar with 'bratislava' entered and a scale bar at the bottom left. At the bottom of the interface, there are two buttons: 'ANALYSIS' and 'CLEAR', and a help icon on the right.

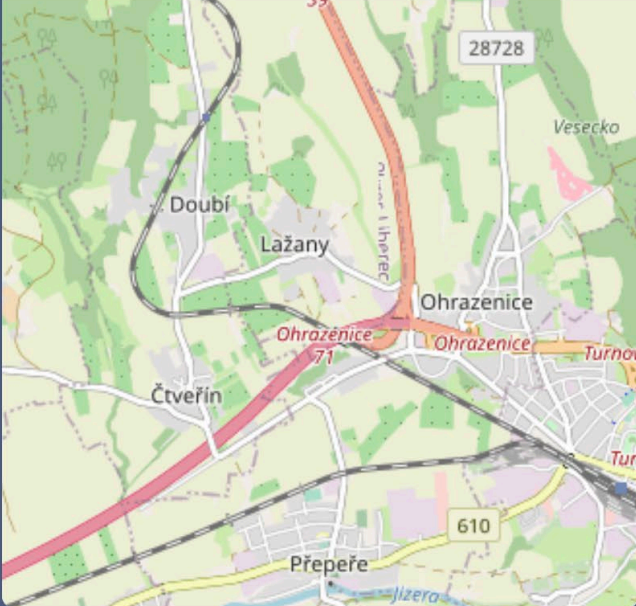
Recommended local adaptation solutions

NBS Toolkit

geoikp.operandum-project.eu/nbs/toolkit/intervention/5

SUMMARY DESIGN

POTENTIAL LOCATION(S)



SUITABILITY MAP

Suitability map for this intervention is not yet available

COSTS

40-45 €/m²


[READ MORE >](#)

BENEFITS & DISBENEFITS

- Biodiversity
- Temperature reduction
- Well-being (humidex & recreational area)
- Carbon Storage
- Air Quality
- Ecosystem Disservices
- Finance & Economy
- Water harvesting

[READ MORE >](#)

SDG(S)



POLICIES


- [EU Biodiversity Strategy \(COM/2011/0244 final\)](#)
- [Green Infrastructure \(GI\) – Enhancing Europe's Natural Capital \(COM/2013/0249\)](#)

FUNDING

European Green Deal
Life +
(Sub-)national funding schemes

GREY SOLUTION

Rooftop rainwater harvesting systems



Basic construction/maintenance guidelines

The screenshot shows a web browser window with the URL `geoikp.operandum-project.eu/nbs/toolkit/intervention/5`. The page is titled "Basic construction/maintenance guidelines" and is part of the "NBS Toolkit". It features a navigation menu with "SUMMARY" and "DESIGN" tabs. The "DESIGN" tab is active, displaying a "MAINTENANCE" section. Below this, there are three columns: "SIZE" (Roofs with 0-35° inclinations), "IMPLEMENTATION TIME" (Days to weeks), and "TIME TILL BENEFITS" (Immediately). A "CAUTIONS" section is also present. The footer includes the GeoIKP logo, social media icons, and a navigation menu with links to HOME, ABOUT, NATURE-BASED SOLUTIONS, and TOOLKIT.

SUMMARY | **DESIGN**

MAINTENANCE

Maintenance includes gardening work and watering of the vegetation. Extensive roofs require less maintenance than intensive green roofs.

SIZE	IMPLEMENTATION TIME	TIME TILL BENEFITS
Roofs with 0-35° inclinations READ MORE >	Days to weeks READ MORE >	Immediately (benefits will increase with vegetation growth)

CAUTIONS

Consider building regulations and local fire regulations but also restrictions for wind (e.g., max 140 mph). Include a protective strip on the sides (between vegetation and roof structure).

GeoIKP

[HOME](#) | [ABOUT](#) | [NATURE-BASED SOLUTIONS](#) | [TOOLKIT](#)

[HOME](#) | [ABOUT THIS PLATFORM](#) | [NBS CATALOGUE](#) | [BEST PRACTICES](#) | [POLICY CATALOGUE](#)

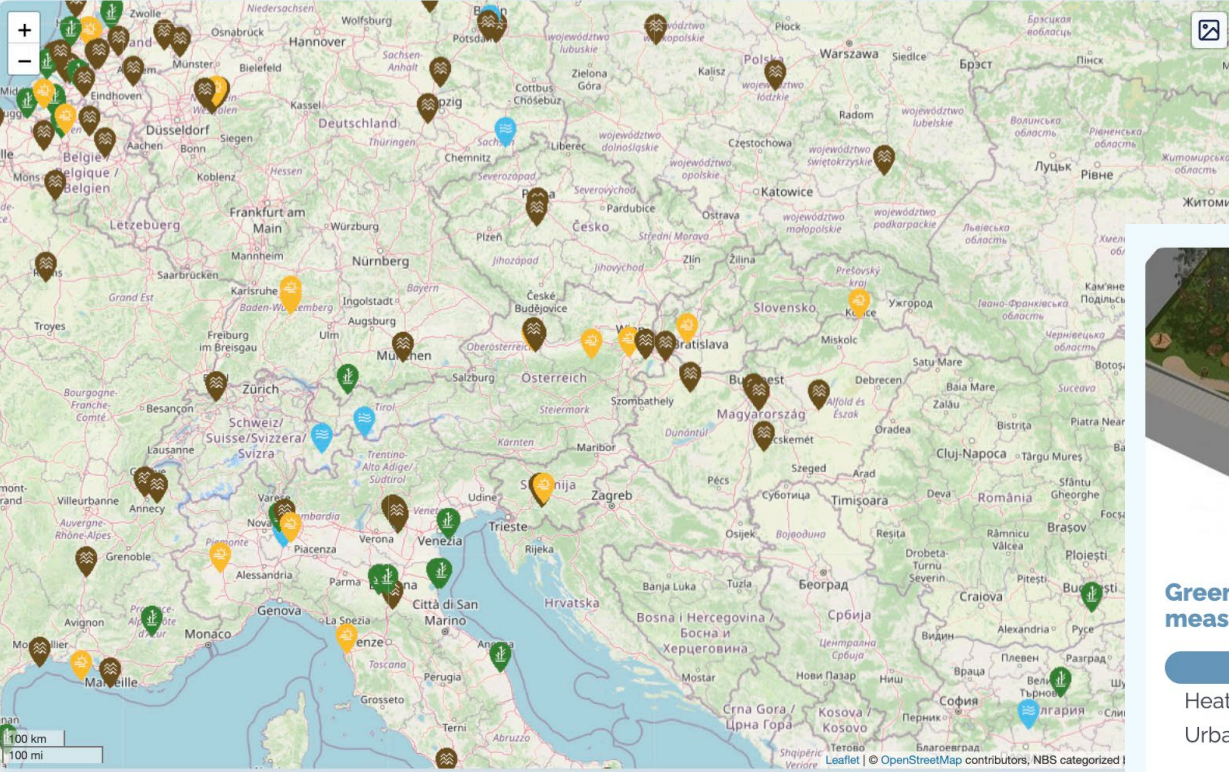
[NBS TOOLKIT](#)

Catalogue of existing adaptation solutions (±2000 and growing)

NBS Explorer

geoikp.operandum-project.eu/nbs/explorer

Explore NBS around the world



Find only NBS within the area displayed on the map

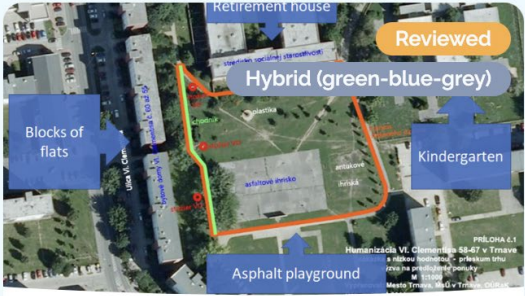
Search NBS... Hazard Intervention type (e.g. green roofs)



Policies reviewed
Hybrid (green-blue-grey)

Greening the city as climate adaptation measurement, Bratislava, Slovakia

Hazard
Heat Wave
Urban (pluvial) Flood



Reviewed
Hybrid (green-blue-grey)

Planning the city to reduce heat wave by hybrid solutions, Trnava, Slovakia

Hazard
Heat Wave

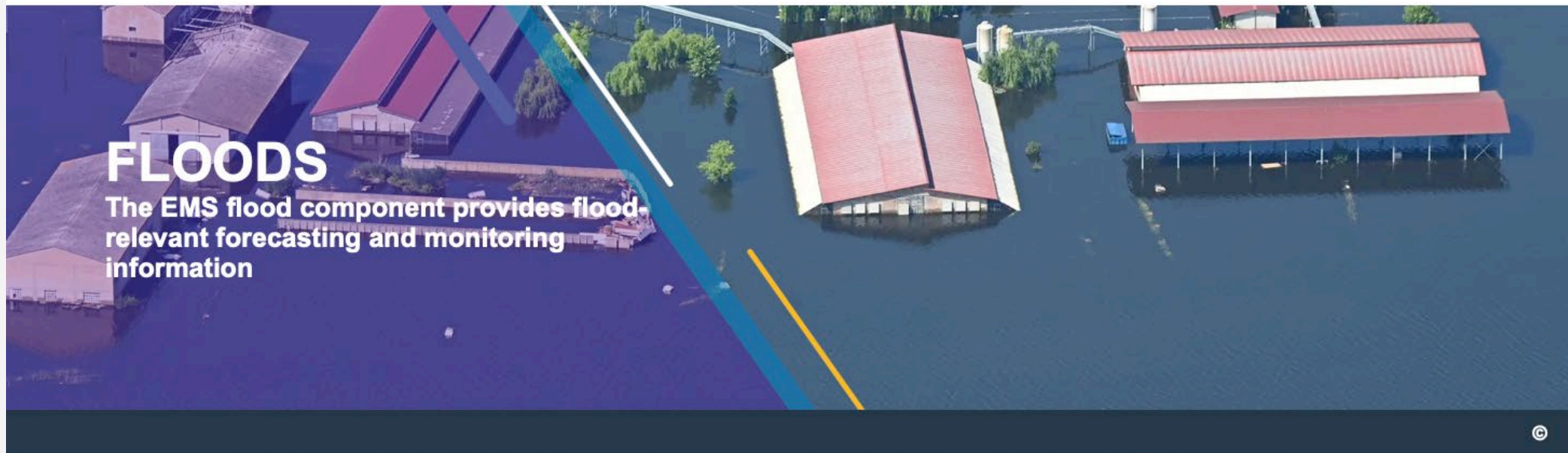




PROGRAMME OF THE
EUROPEAN UNION



[About us](#) [Access to data](#)



COPERNICUS EMERGENCY MANAGEMENT SERVICE



On-Demand Mapping



Wildfires



Floods

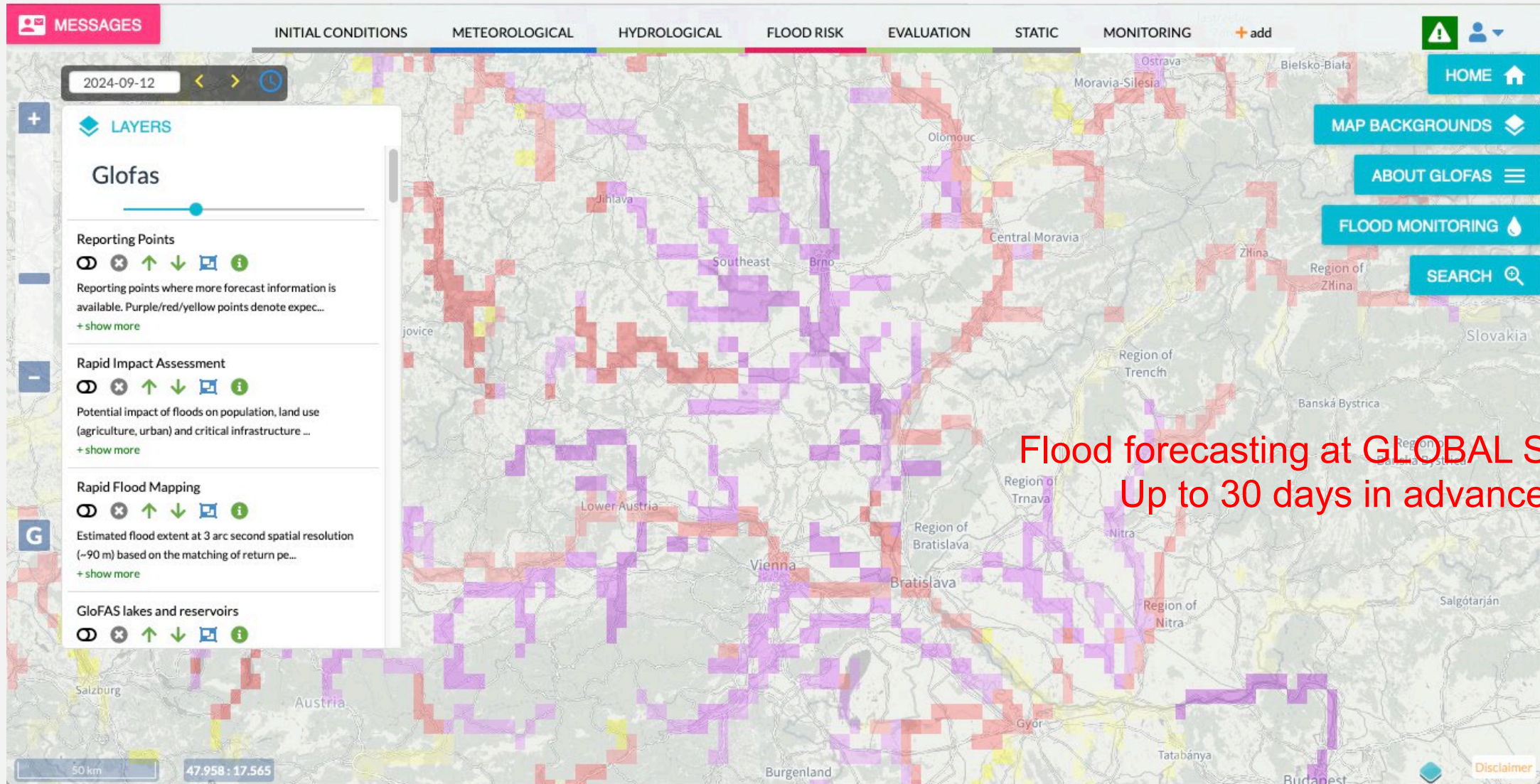


Droughts



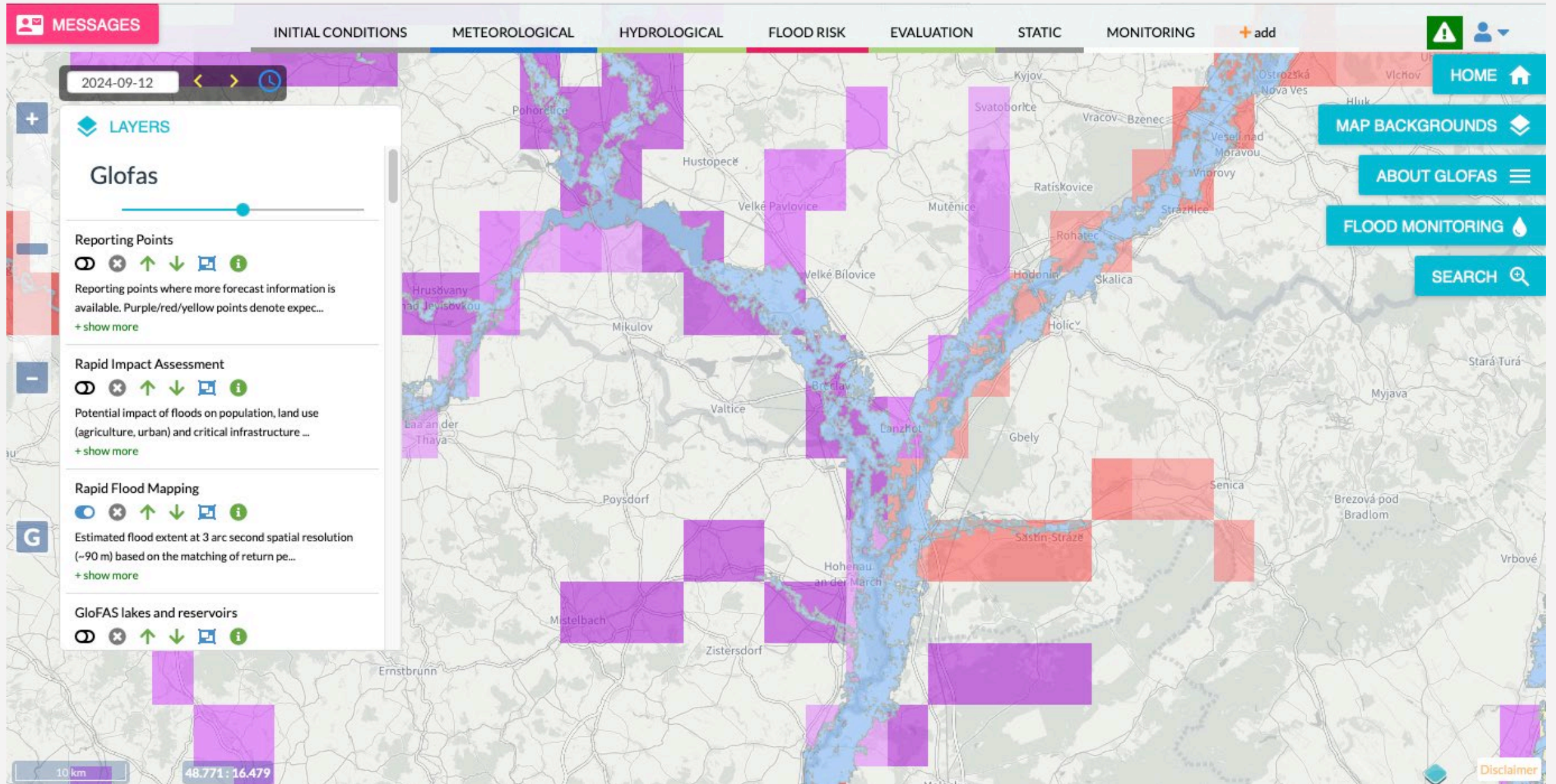
Exposure Mapping

Copenicus Emergency Management Service Global Flood Awareness System



Flood forecasting at GLOBAL SCALE
Up to 30 days in advance

Complementary to national/local systems ...



2024-09-12

LAYERS

Glofas

Reporting Points



Reporting points where more forecast information is available. Purple/red/yellow points denote expect...
+ show more

Rapid Impact Assessment



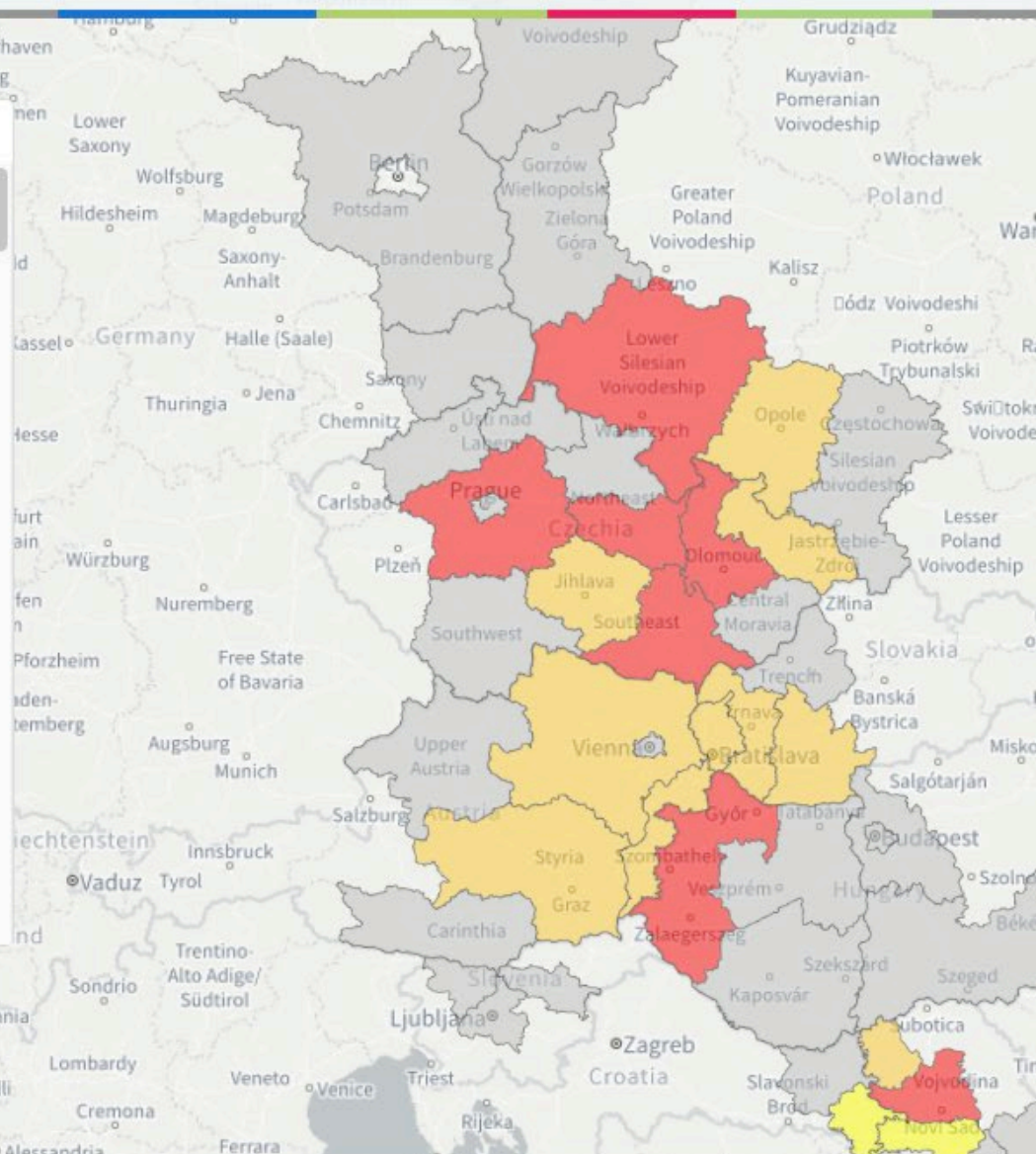
Potential impact of floods on population, land use (agriculture, urban) and critical infrastructure ...
+ show more

Rapid Flood Mapping



Estimated flood extent at 3 arc second spatial resolution (~90 m) based on the matching of return pe...
+ show more

GloFAS lakes and reservoirs



Rapid Impact Assessment

NOTE: This information is EXPERIMENTAL

Czechia, Jihomoravský kraj

	Low Impact <10k (people)	Medium Impact 10k-100k (people)	High Impact >100k (people)
Short Lead time (1-3 days)	Yellow	Red ✓	Red
Medium Lead time (4-10 days)	Yellow	Yellow	Red
Long Lead time (>10 days)	Yellow	Yellow	Yellow

Exposure Information	Protected	Unprotected
Population affected [No. of people]	31300	58300
Population within floodplain affected [%]	NaN	NaN
Cities affected [% area affected]	N/A	N/A
Health facilities affected [No. of facilities]	N/A	N/A
Education facilities affected [No. of facilities]	N/A	N/A
Airport affected [No. of facilities]	N/A	N/A
Powerplant facilities affected [No. of facilities]	N/A	N/A
Artificial surfaces affected [ha]	2610	4653
Agricultural surfaces affected [ha]	15976	36324
Forest and semi-natural surfaces affected [ha]	11125	22033

48.177 : 21.699

100 km

2024-09-20



HOME 🏠

MAP BACKGROUNDS 📄

ABOUT GLOFAS ☰

FLOOD MONITORING 💧

SEARCH 🔍

LAYERS

Glofas

Reporting Points

Reporting points where more forecast information is available. Purple/red/yellow points denote expect...

+ show more

Rapid Impact Assessment

Potential impact of floods on population, land use (agriculture, urban) and critical infrastructure ...

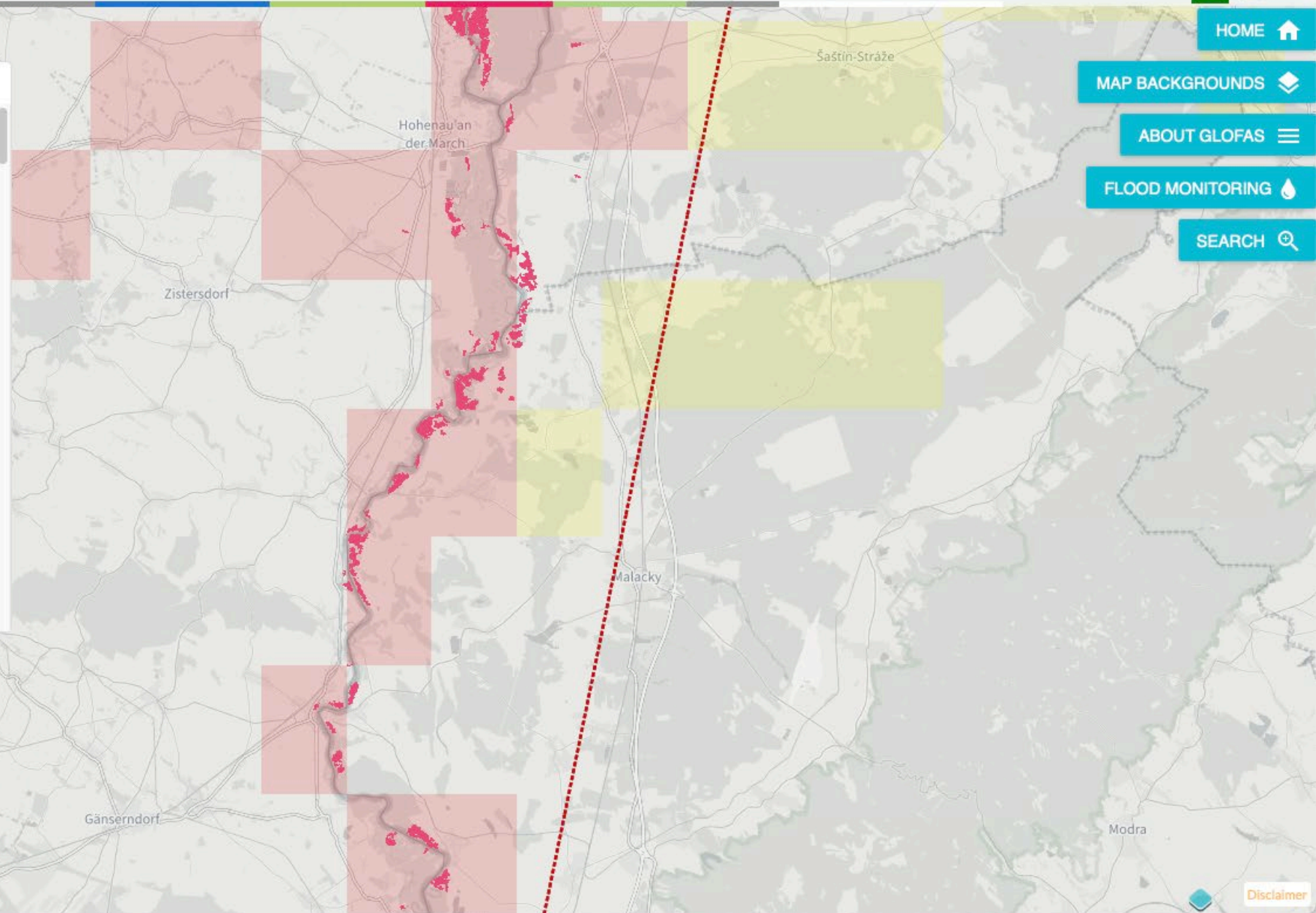
+ show more

Rapid Flood Mapping

Estimated flood extent at 3 arc second spatial resolution (~90 m) based on the matching of return pe...

+ show more

GloFAS lakes and reservoirs



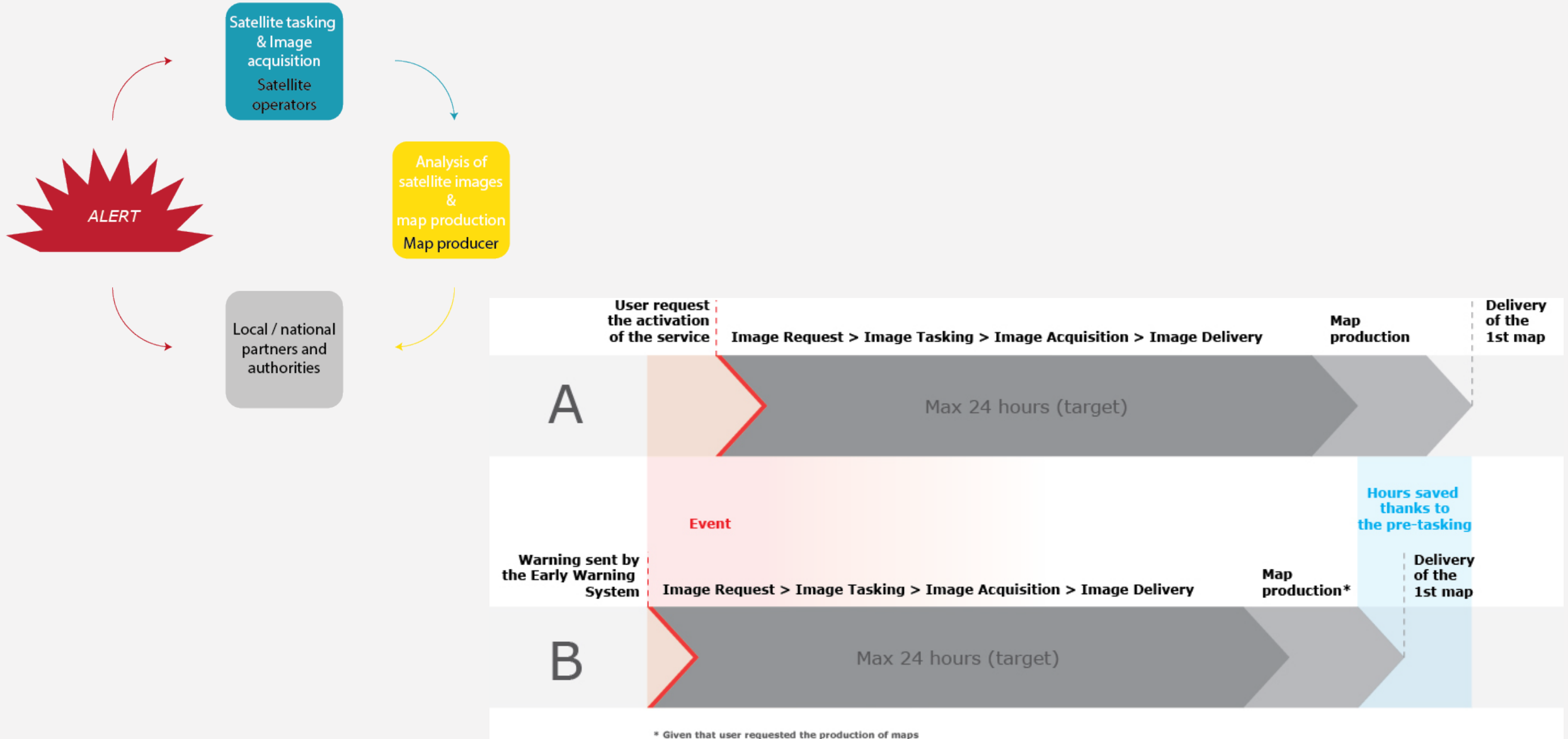
5 km

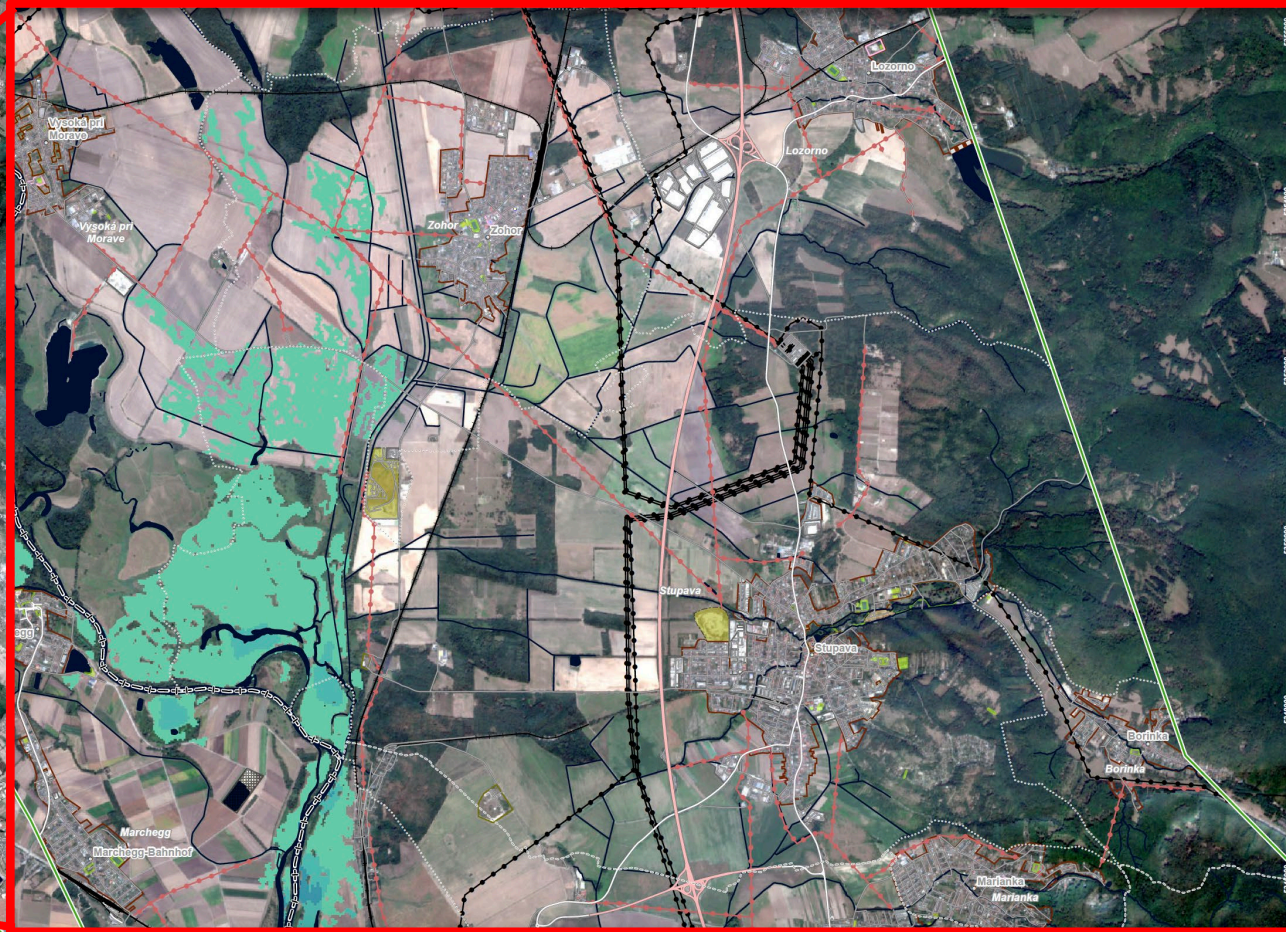
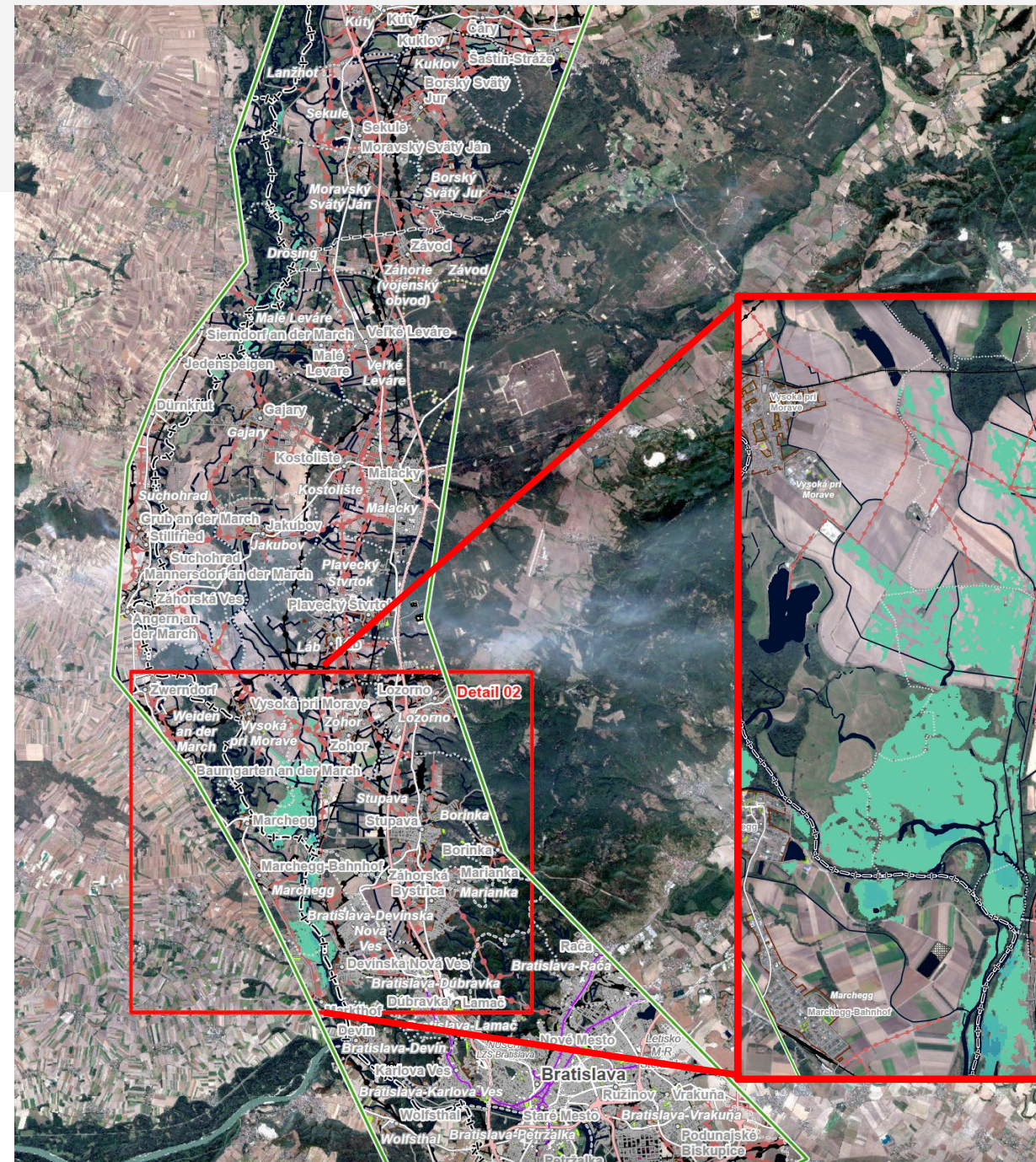
48.379, 17.020


Disclaimer

COPERNICUS Emergency Management Service - Mapping

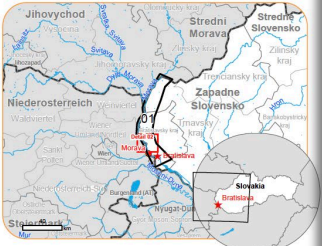
Linking with CEMS Early Warning Systems







Situation as of 15/09/2024 05:02 UTC
 Delineation - Detail map 02



Estimated flood depth (m) <ul style="list-style-type: none"> Below 0.50 0.50 - 1.00 1.00 - 2.00 2.00 - 4.00 4.00 - 6.00 	Hydrography <ul style="list-style-type: none"> Lake, River Facilities Long-distance pipelines or lines Local pipelines or lines Dam Mining or extraction site Sport and recreation constructions Dump Site Water or Aquatic infrastructure Dam
General Information <ul style="list-style-type: none"> Area of Interest 	Administrative Boundaries <ul style="list-style-type: none"> International Boundary Province Municipality
Placenames <ul style="list-style-type: none"> Placename Residential Non residential School, university and research buildings Hospital or institutional care buildings Military 	Transportation <ul style="list-style-type: none"> Highway Main road Local road Railway Tramway Transportation Helpad



Flooded area 1,544.7 ha



Potentially affected population ~ 20

Potentially Affected Built-up and Transportations



Railway 0.02 km



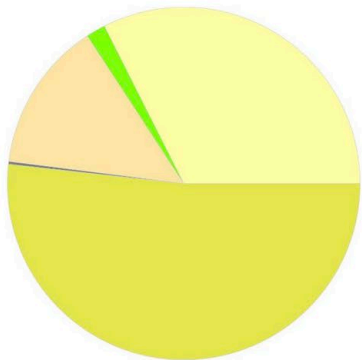
Road 43.7 km



Built-Up 0.1 ha

Damage assessment as of
15/09/2024

Impact on LULC
(in hectares)



- Arable land
- Forests
- Heterogeneous agricultural areas
- Other
- Pastures



Estimated flood depth (m)

- Below 0.50
- 0.50 - 1.00
- 1.00 - 2.00
- 2.00 - 4.00
- 4.00 - 6.00

General Information

- Area of Interest
- Detail map

Administrative Boundaries

- International Boundary
- Region
- Province
- Municipality

Placenames

- Placename

Built-Up Area

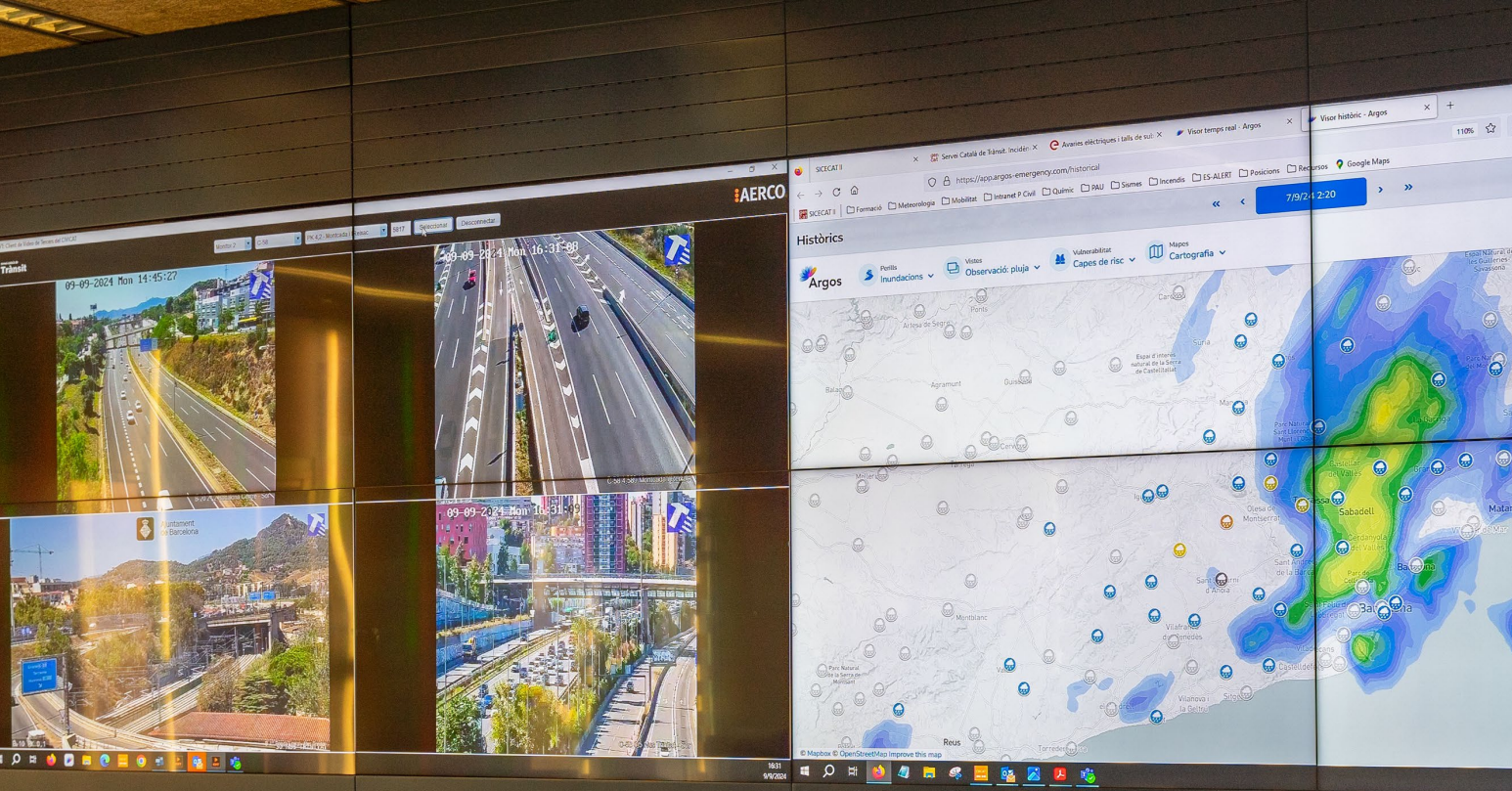
- Residential
- Non residential
- School, university and research buildings
- Hospital or institutional care buildings
- Military

Hydrography

- Lake, River

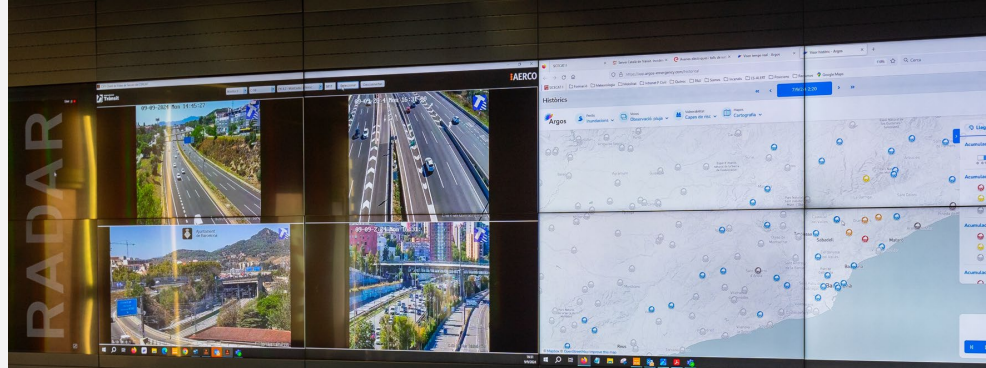
Facilities

- Long-distance pipelines or lines
- Local pipelines or lines
- Water or Aquatic infrastructure
- Dam
- Mining or extraction site
- Oil Gas Well
- Water Well
- Power plant
- Sport and recreation constructions
- Dump Site
- Water or Aquatic infrastructure
- Dam
- Transportation**
- Highway
- Main road
- Local road
- Railway
- Tramway
- Airfield runway
- Transportation**
- Airfield
- Helipad
- Harbour



CECAT

COORDINACIÓ OPERATIVA DE CATALUNYA
DIRECCIÓ GENERAL DE PROTECCIÓ CIVIL

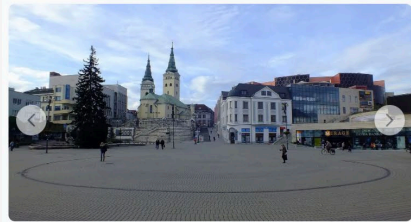


CECAT
CENTRE DE COORDINACIÓ OPERATIVA DE CATALUNYA
DIRECCIÓ GENERAL DE PROTECCIÓ CIVIL



Decision Support System for regional/local civil protection, municipalities, commercial sites

The screenshot displays the Argos City Decision Support System interface. At the top, the navigation bar includes the Argos City logo and several menu items: "Nebezpečenstvá Floods", "Forecast - GFS Precipitation", "Vplyv Incidents", and "Mapy Kartografia". A legend on the right side of the map is titled "Precipitation (NWP models - GFS)" and shows a color scale in mm/h ranging from 0 to 70. The map itself shows a precipitation forecast for Central Europe, with a green circle indicating a specific location in Slovakia. The sidebar on the left contains a photo of a city square, the text "FNsP Žilina", "Active Alerts", and a "Floods" section with a "Výstražné komponenty" (Warning components) and "Akcie" (Actions) section. Below this, it states "No alert generators defined". At the bottom of the sidebar, there is a "Dokumenty" (Documents) section with the text "Nie sú k dispozícii žiadne dokumenty" (No documents are available).



Žilina

Active Alerts



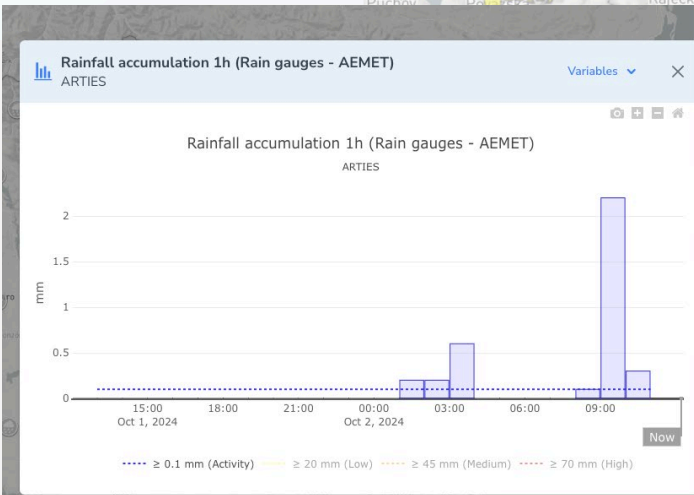
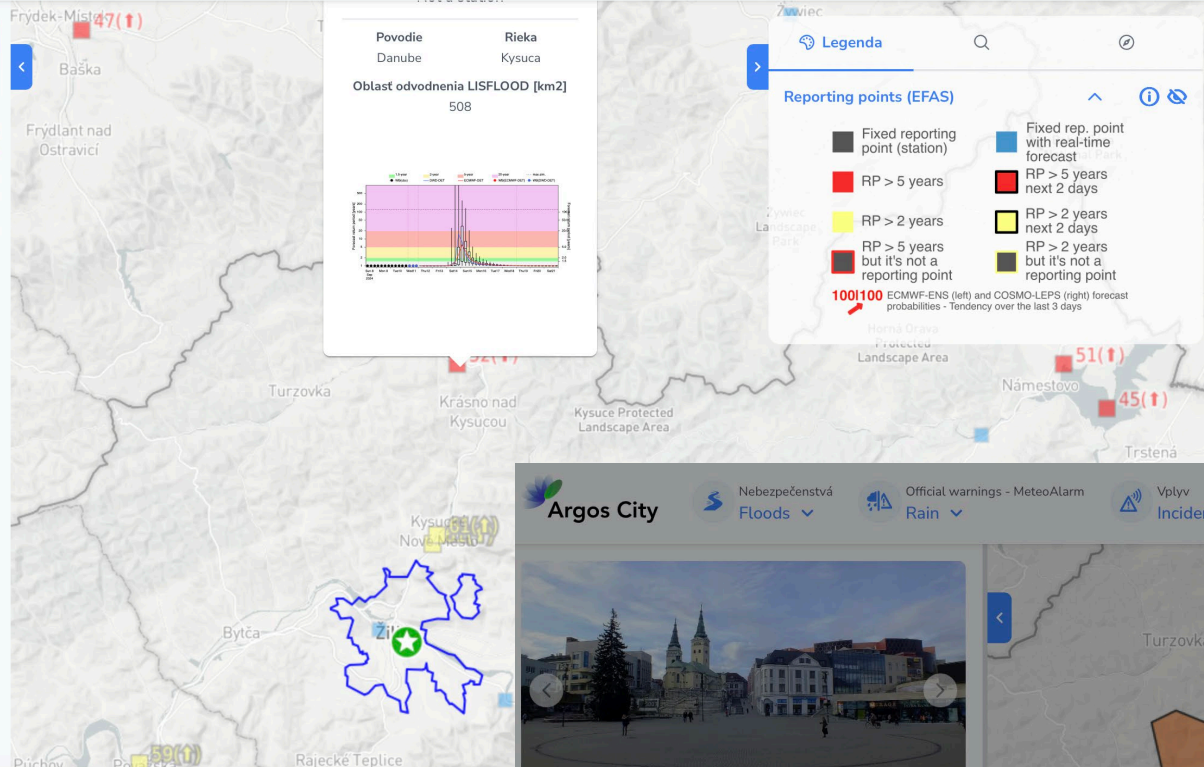
Floods

Výstražné komponenty Akcie

No alert generators defined

Dokumenty

Nie sú k dispozícii žiadne dokumenty



Vidieť všetko
Žilina

Forest fire (Official warning - MeteoAlarm)

Dnes: 0h to 18h
 Zajtra: 0h to 18h
 Pozajtra: 0h to 18h

High temperatures (Official warning - MeteoAlarm)

Dnes: 0h to 18h
 Zajtra: 0h to 18h
 Pozajtra: 0h to 18h

Rain (Official warning - MeteoAlarm)

Dnes: 0h to 18h
 Zajtra: 0h to 18h
 Pozajtra: 0h to 18h

Thunderstorm (Official warning - MeteoAlarm)

Dnes: 0h to 18h
 Zajtra: 0h to 18h
 Pozajtra: 0h to 18h

Wind



Radioactive Institutions

Quinorgan SLU

Links of interest

- [Search in Google](#)
- [Search in Google Maps](#)
- [Go to website](#)

Additional information

Activity
 Mesurador gruix/gramat/humitat

Municipality
 Montcada i Reixac

activity_sector
 Industrial

mobile_equipment
 F



Traffic camera

Traffic camera
A-2 (524.35)

524,35 Cervera 2024-10-02 12:09

Emergency call

Emergency call

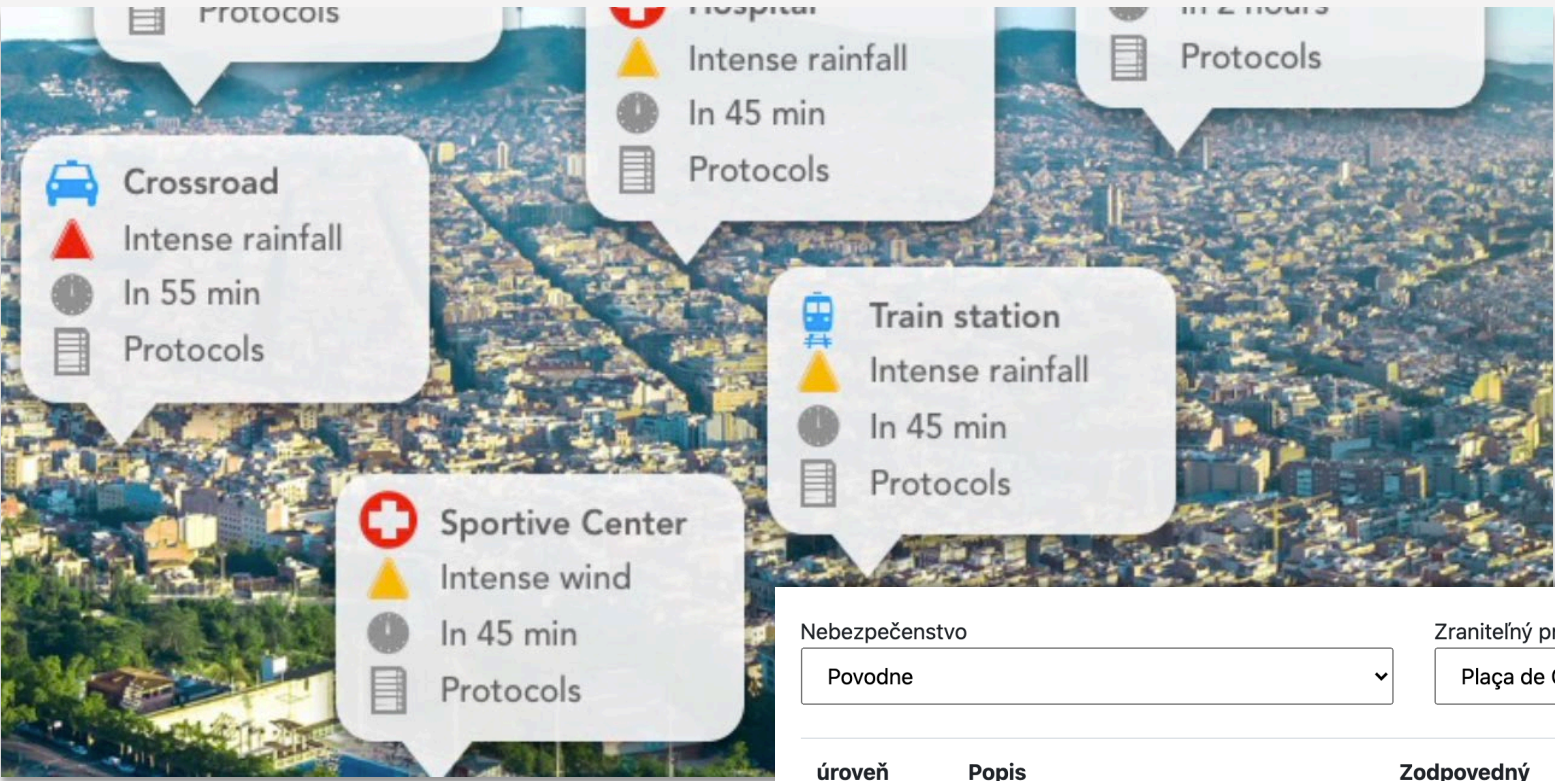
Description
RISC ESTRUCTURAL EXTERIOR

Traffic incident

Traffic incident
C-153 (22 - 35.2)

Direction	Cause
Ambdós sentits	Reforçament de ferm

Description
Calçada restringida



Nebezpečenstvo

Povodne

Zraniteľný prvok

Plaça de Catalunya (Girona)

úroveň	Popis	Zodpovedný	
jeden	Skontrolujte stav námestia	Mestský koordinátor	Upr
dva	Evakuácia hotelových hostí	Hotel Manazer	Upr
dva	Evakuacia reštaurácie	Manazer	Upraviť Odstrániť
dva	Informovať DHZM	Mestský koordinátor	Upraviť Odstrániť
3	Evakuacia skol	Školský úrad	Upraviť Odstrániť

ALEBO

Produkt: Akumulácia dažďa 24 hodín (oficiálne oznámenie - SMC)
 Prvok: Gironès
 Podmienka: ≥ 1

Produkt: Intenzita dažďa (oficiálne oznámenie - SMC)
 Prvok: Gironès
 Podmienka: ≥ 1

Produkt: Zrážky – maximum plochy (numerické modely – ECMWF)
 Prvok: Girona
 Stav: ≥ 30 mm

Nová akcia

Search by location name



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2023





<https://www.sim-on.space>



Thank you!

www.kajoservices.com