

Copernicus Emergency Management Service Annual Conference

11 October 2024 Online

How the EU Response and Coordination Centre uses Copernicus Emergency data

Facilitators:



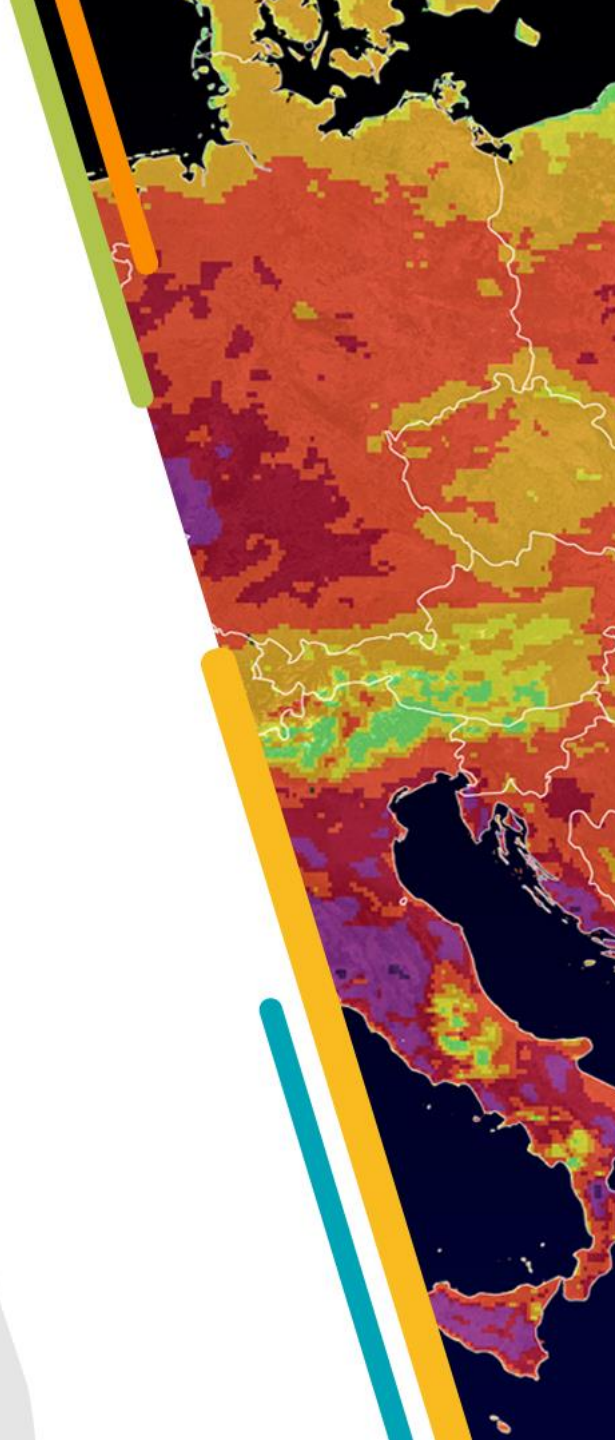
Hector
ALFARO FERNANDEZ
DG ECHO



Alfredo
BRANCO
Copernicus Emergency



Duarte
OOM
Copernicus Emergency



Copernicus Emergency Management Service

Annual Conference

11 October 2024

USING CEMS ERCC Wildfire Support Team PERSPECTIVE

Héctor ALFARO FERNÁNDEZ

Wildfires Focal Point, ERCC Operations

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PROGRAMME OF
THE EUROPEAN UNION



Implemented by



European
Commission

WILDFIRES SUPPORT TEAM - ERCC



- 16 National Experts
- 6 Scientific Experts
- 6 DO
- 1 SNE
- 17 June – 13 September

SITUATIONAL AWARENESS

EUROPE

European Forest Fires Information System (**EFFIS**)

- Current Situation Viewer
- Statistics
- Weather Forecast

WORLDWIDE

Global Wildfire Information System (**GWIS**)

- Current Situation Viewer
- Statistics
- Weather Forecast



European
Commission

Briefing 20 August 2024

Topics:

- North Macedonia
- Albania
- Greece



ERCC Wildfires
Support Team

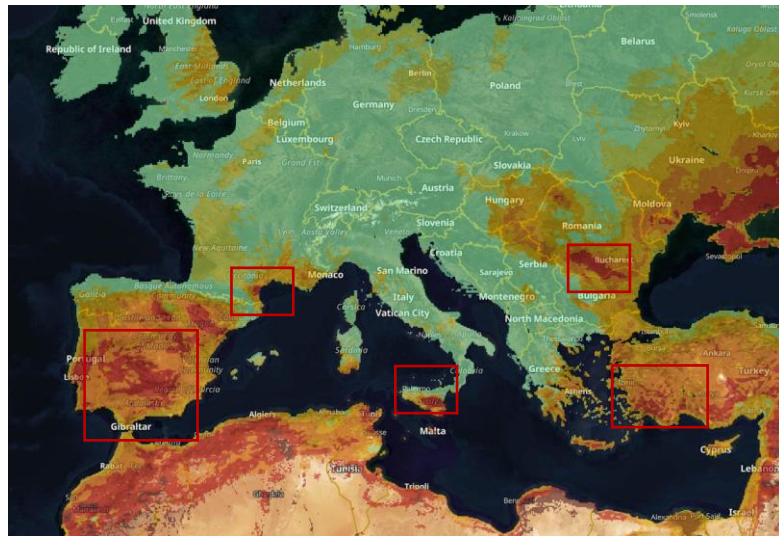


DG ECHO

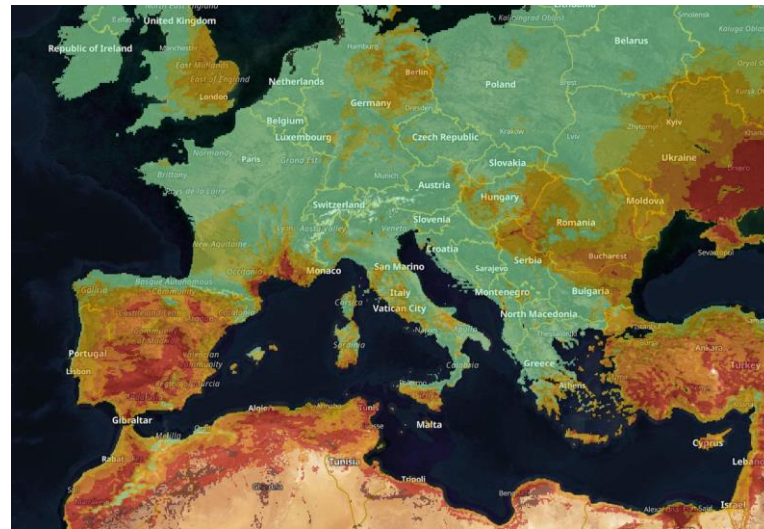


EFFIS Fire Weather Index

19 August



20 August



21 August



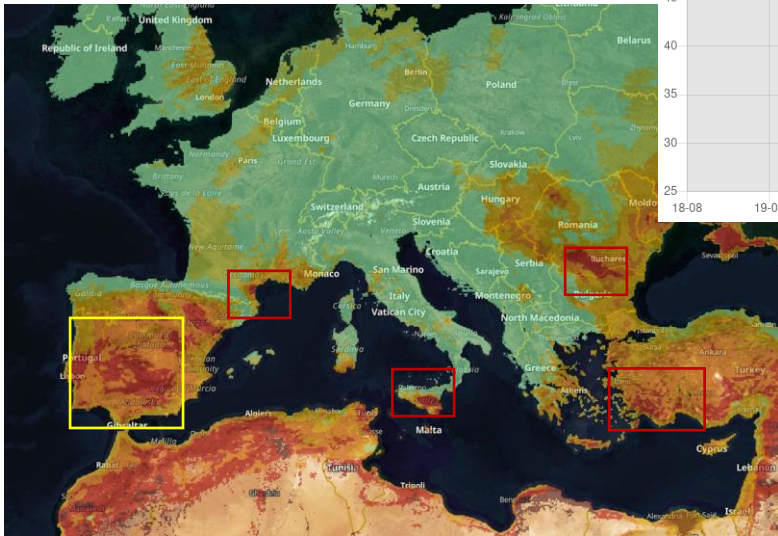
Fire Danger Forecast
(ECMWF/FWI)

- Low Danger
- Moderate Danger
- High Danger
- Very High Danger
- Extreme Danger
- Very Extreme Danger



EFFIS Fire Weather Index

Today



Fire Danger Forecast (ECMWF/FWI)

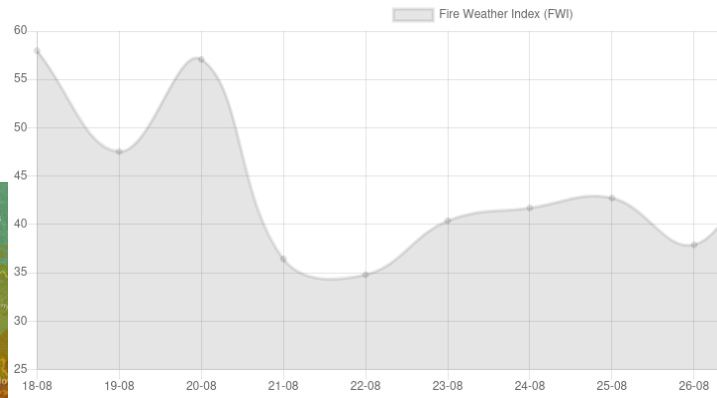
- Low Danger
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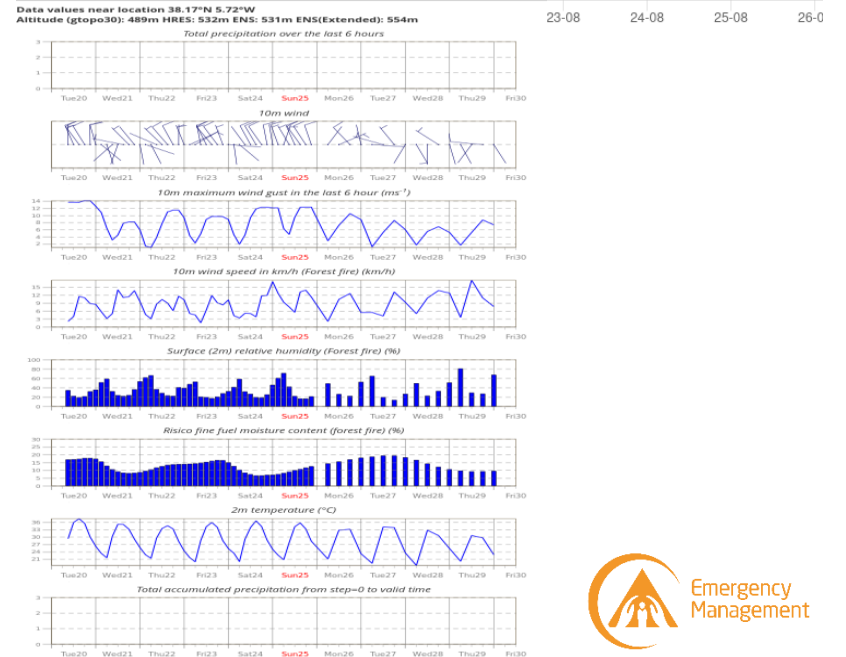
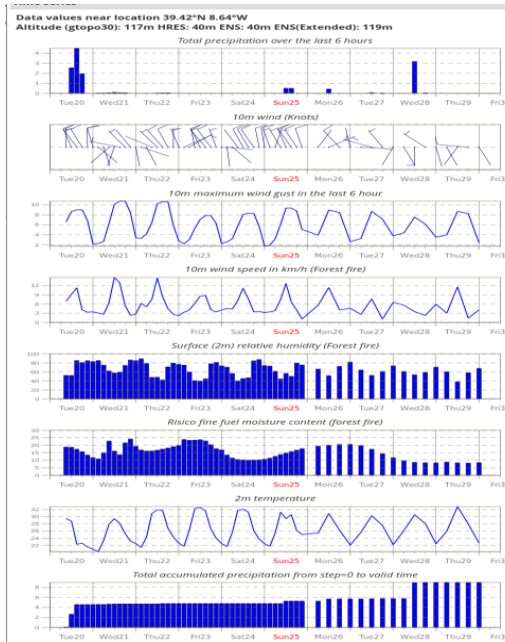
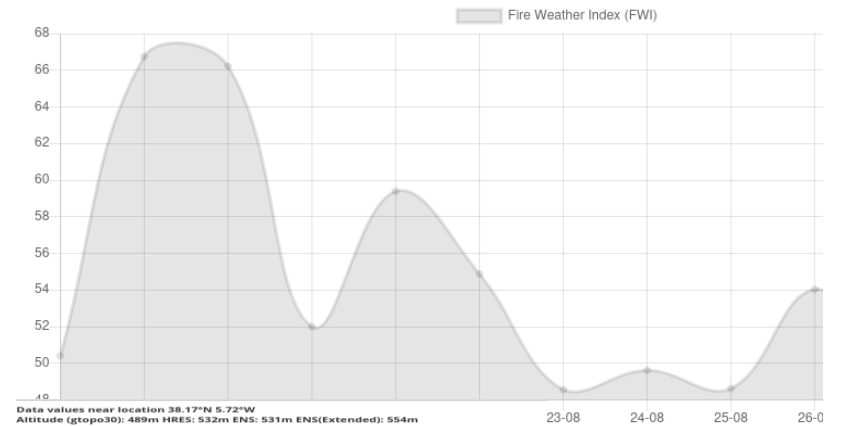
5
COMMISSION OF THE
EUROPEAN UNION

Copernicus
Europe's eyes on Earth

N Lisbon



N Andalusia

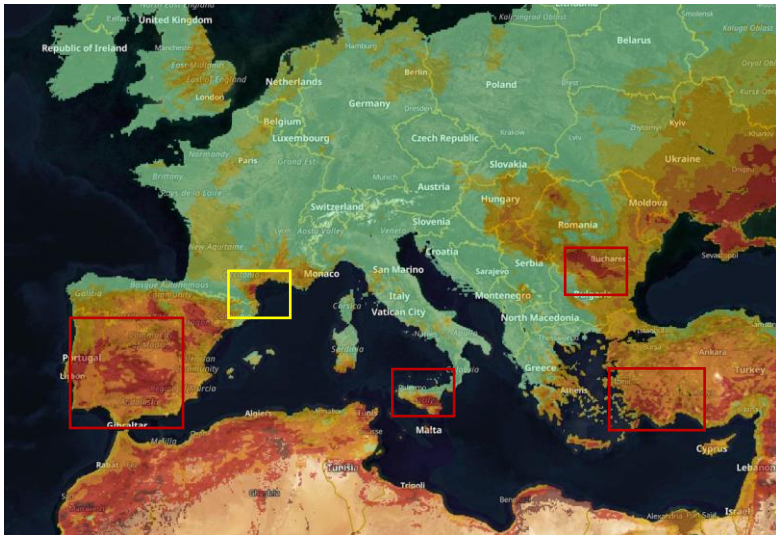




EFFIS Fire Weather Index

Perpiñan

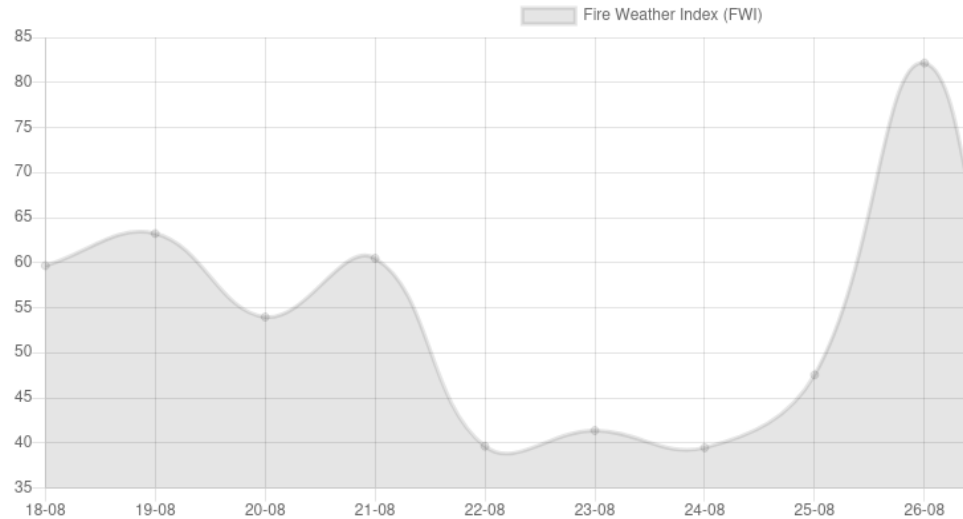
Today



Fire Danger Forecast (ECMWF/FWI)

- Low Danger
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MEMBER OF THE EUROPEAN UNION



Description

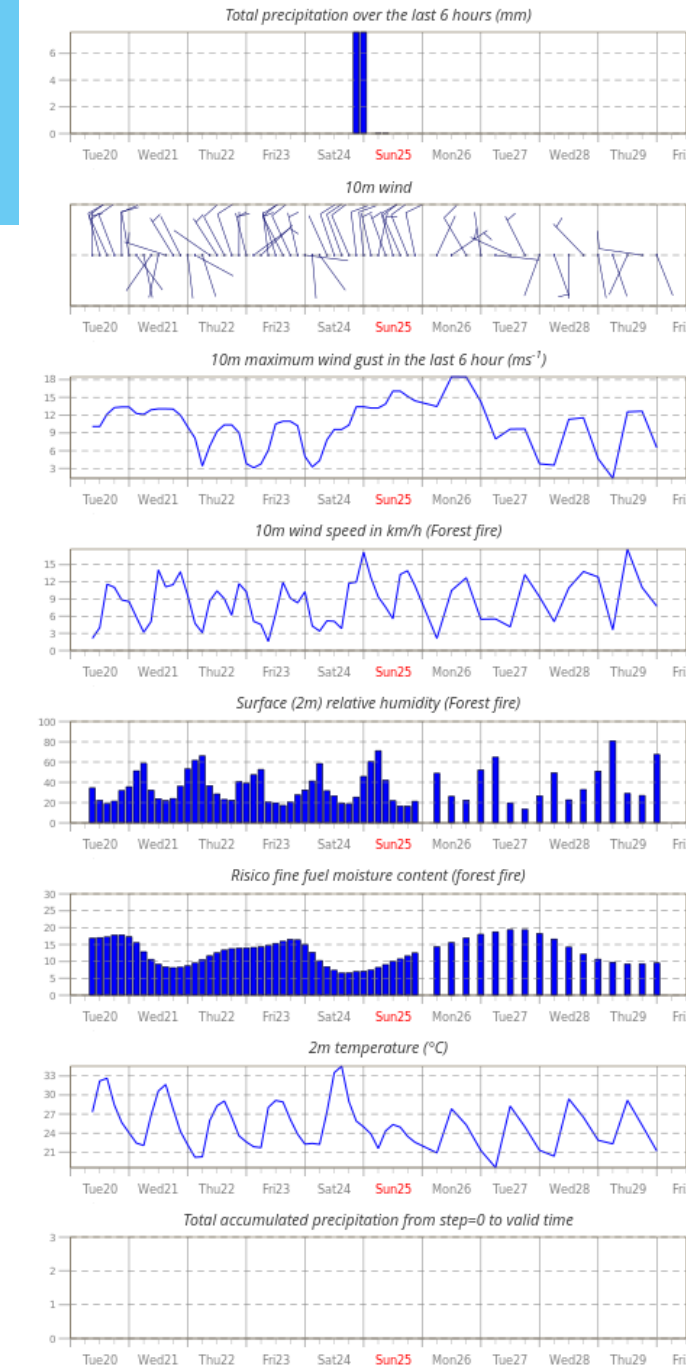
High to Very High Fire danger is expected for today and in the next two days over Southern France (Perpignan, Montpellier, and Avignon: $50 < FWI < 58$, up to 61 in Perpignan). Fire danger patterns are directly linked with potential ignitions due to very high spread conditions ($19 < ISI < 28$) and low fuel moisture patterns ($90 < FFMC < 93$).

For the next two days, maximum temperatures between 30°C to 34°C. Minimum temperatures up to 22°C. Very low daily relative humidity values (30-20%) with nighttime recovery. Very strong northerly gusty winds are expected for today afternoon (up to 70km/h in Montpellier), slightly decreasing in the next two days (up to 60km/h).

Impacts

Live and dead fuel moisture ($700 < DC < 850$) remain very low, which combined with very strong winds and dry and hot weather could result in strong fire behavior in case of ignition.

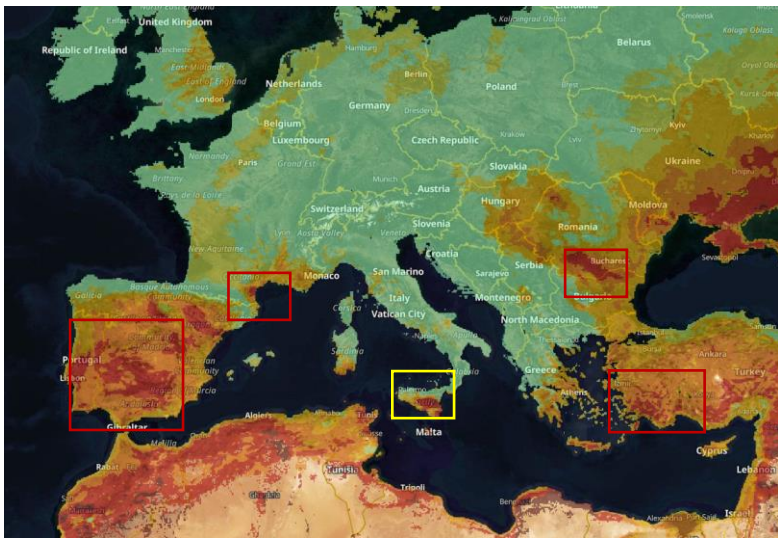
Data values near location 42.7°N 2.9°E, Perpignan, France
Altitude (gtopo30): 45m HRES: -9m ENS: -9m ENS(Extended): 0m





EFFIS Fire Weather Index

Today



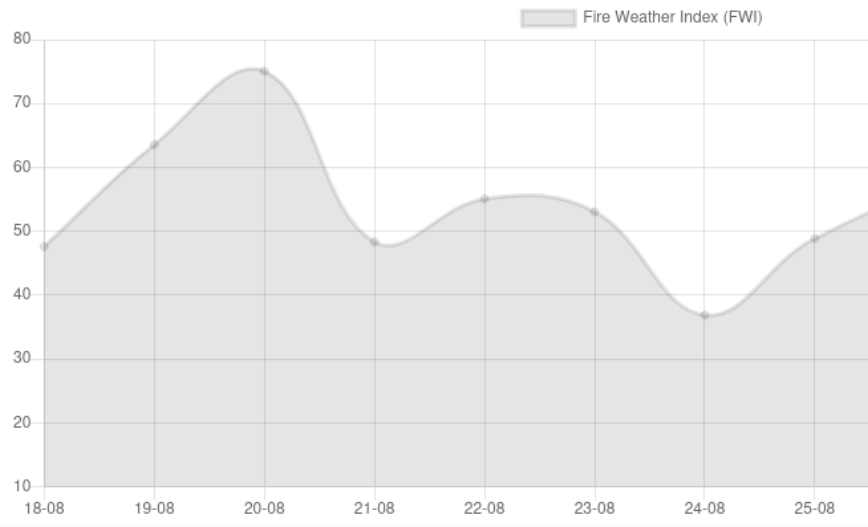
Fire Danger Forecast (ECMWF/FWI)

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ME OF THE UNION

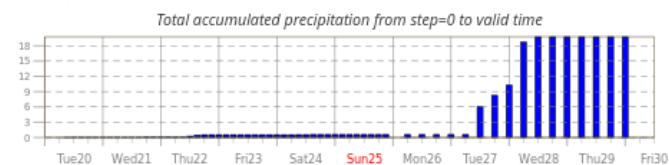
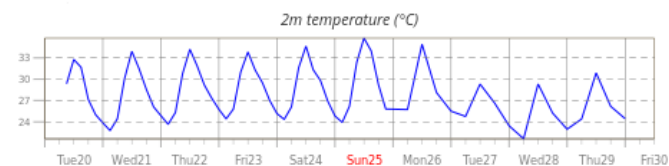
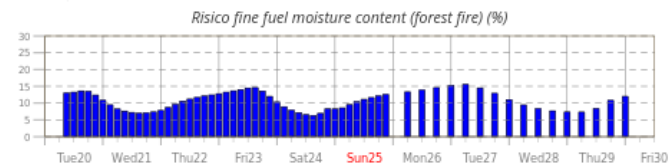
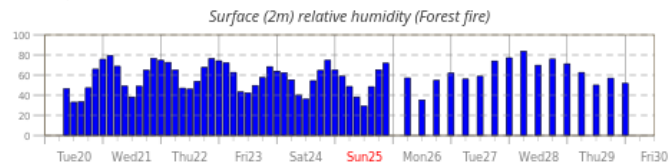
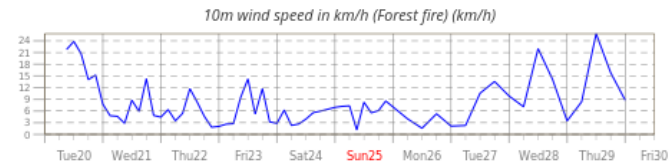
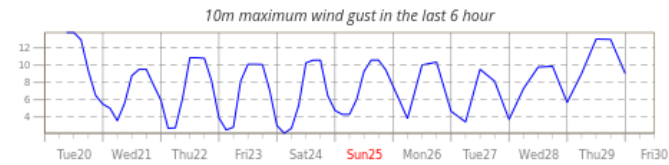
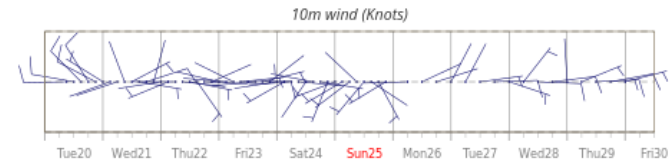
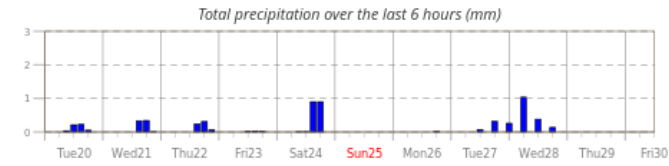


SE Sicily



Data values near location 37.39°N 14.69°E, Ramacca, Italy

Altitude (gtopo30): 235m HRES: 182m ENS: 182m ENS(Extended): 603m

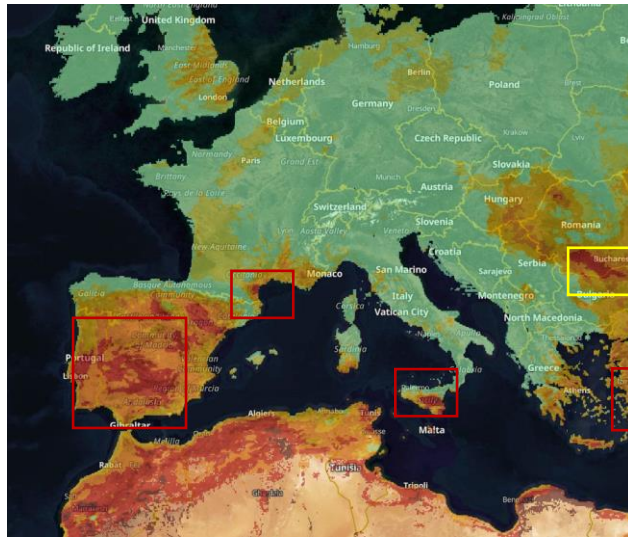




EFFIS Fire Weather Index

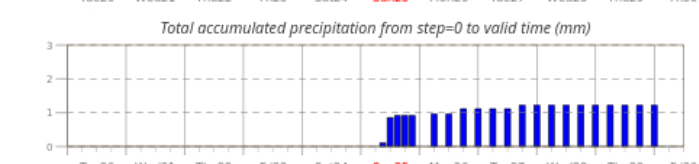
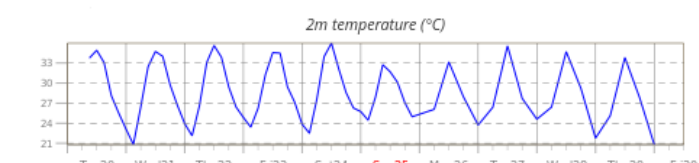
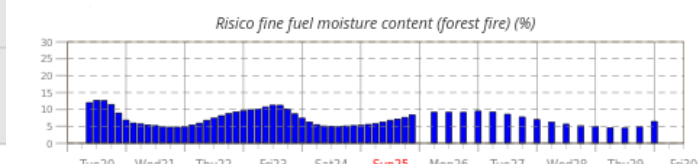
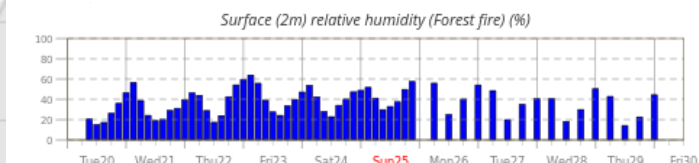
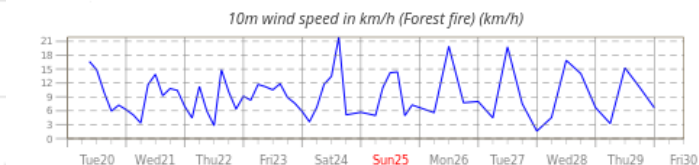
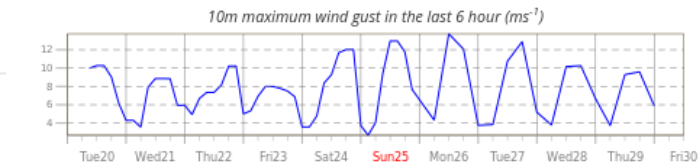
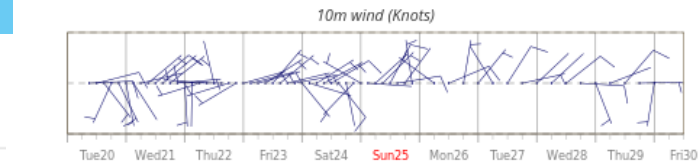
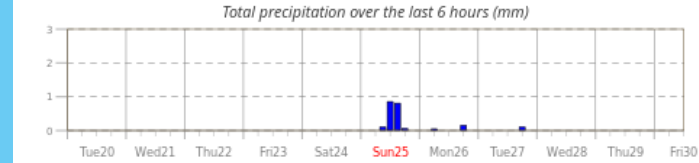
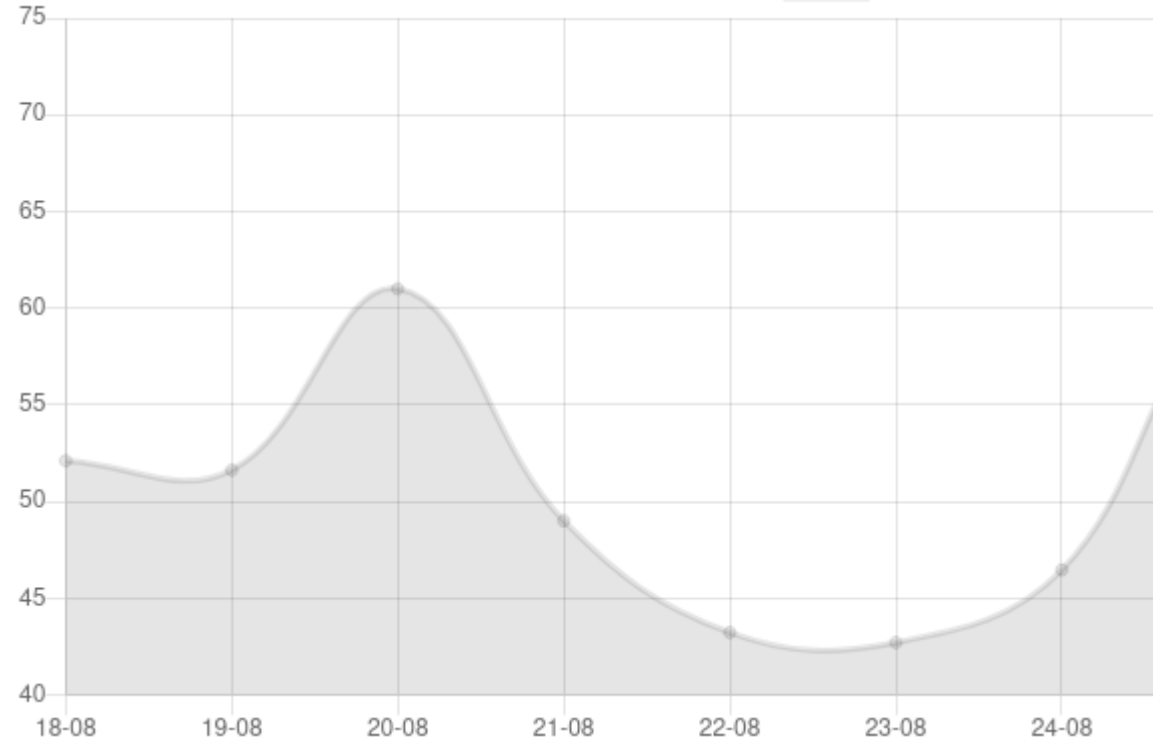
Data values near location 43.86°N 25.97°E, Ruse, Bulgaria
Altitude (gtopo30): 30m HRES: 63m ENS: 63m ENS(Extended): 117m

Today



Bulgaria Romania border

Fire Weather Index (FWI)



Fire Danger Forecast (ECMWF/FWI)

- Low Danger
- Moderate Danger
- High Danger
- Very High Danger
- Extreme Danger
- Very Extreme Danger

EUROPEAN UNION



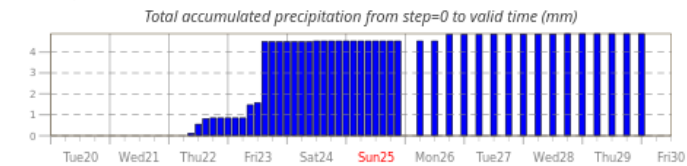
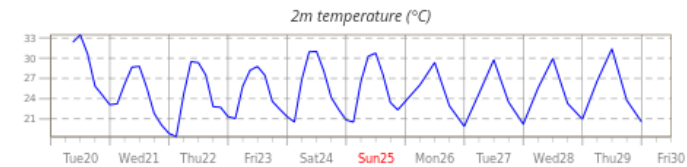
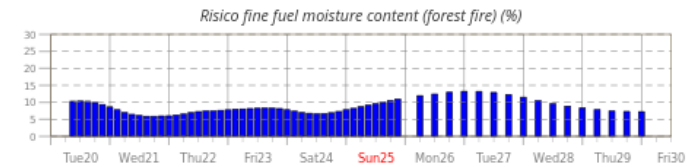
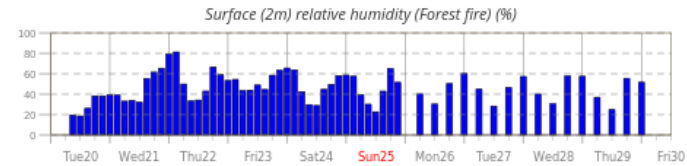
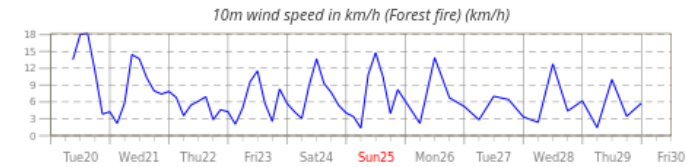
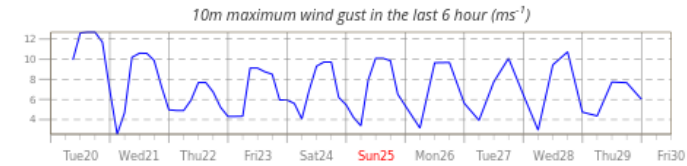
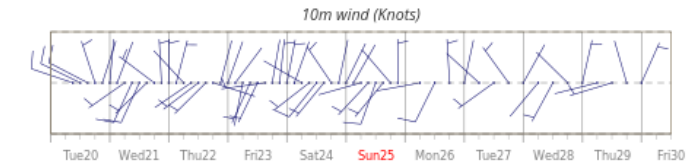
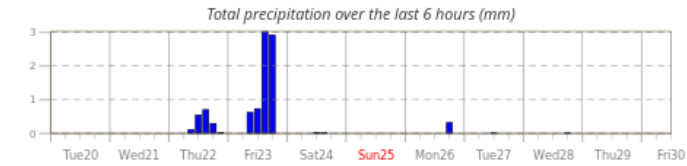
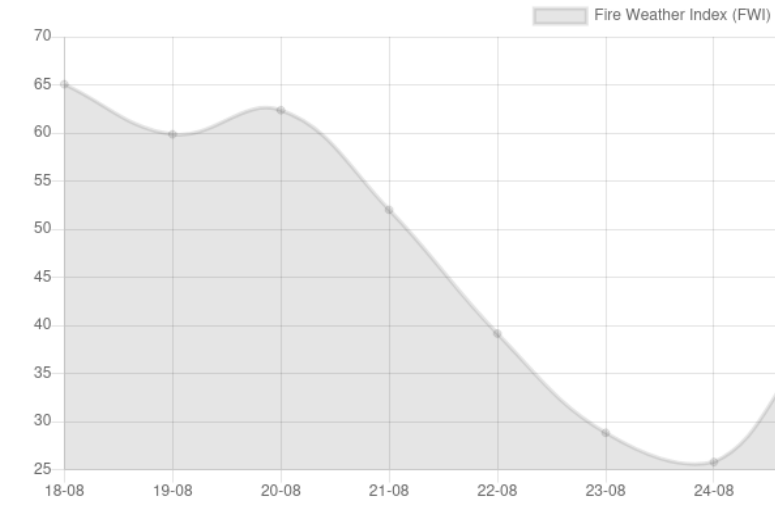
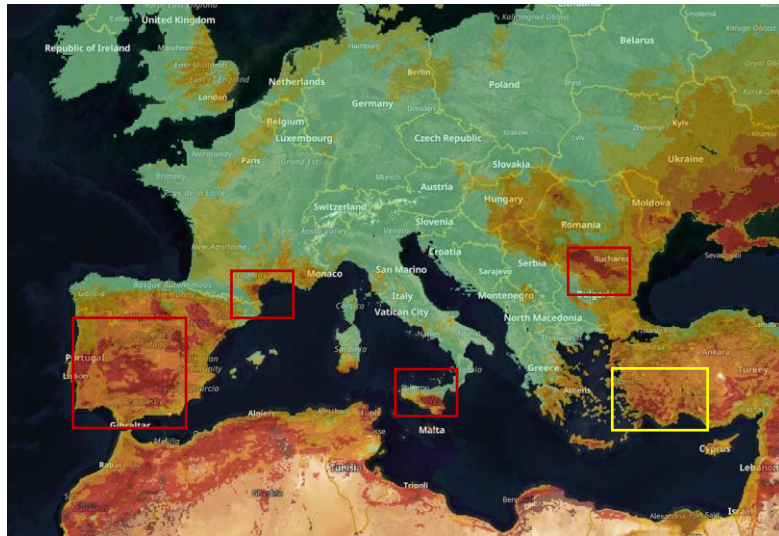


EFFIS Fire Weather Index

Data near location 37.22°N 28.36°E, Muğla, Turkey
Altitude (gtopo30): 644m HRES: 1027m ENS: 1027m ENS(Extended): 771m

SW TR

Today



Fire Danger Forecast (ECMWF/FWI)

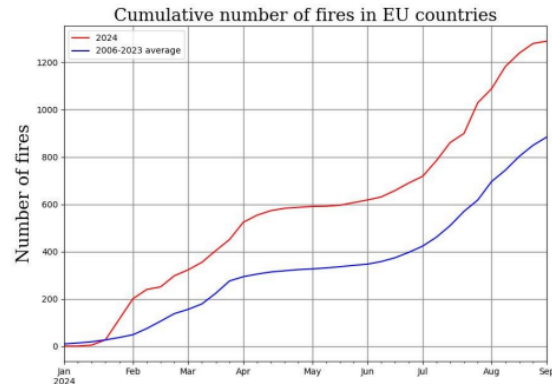
- Low Danger
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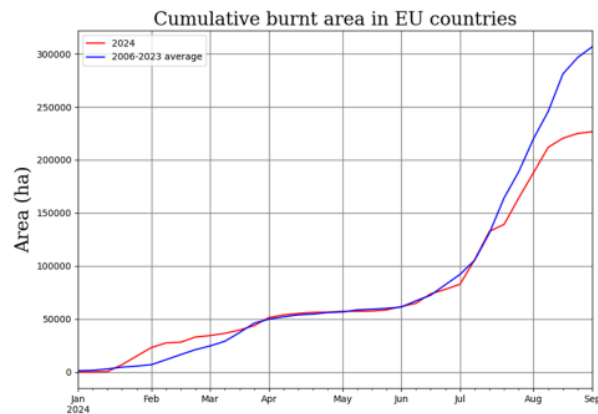


Weekly Bulletin

Cumulative number of fires in EU countries larger than 30 ha from 1 January to 04 September 2024 (Source: EFFIS)



Cumulative burnt area in EU countries larger than 30 ha from 1 January to 04 September 2024 (Source: EFFIS)



ECHO Wildfires Bulletin

05/09/2024

European Civil Protection and Humanitarian Aid Operations

Period covered:
29/08 - 04/09/2024

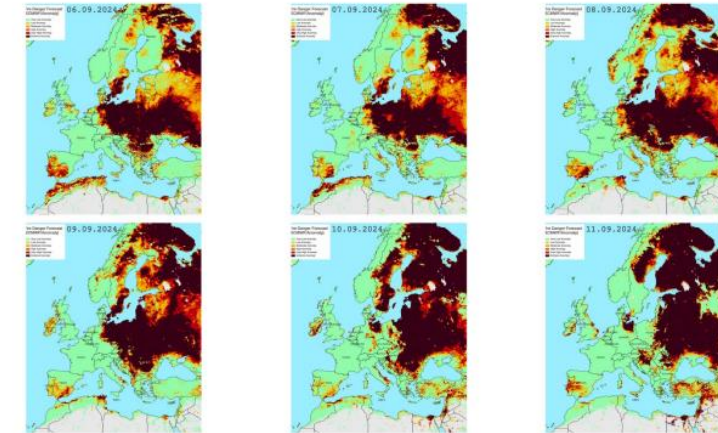
Ongoing emergencies (EU Civil Protection Mechanism)

There were no emergencies requiring UCPM activation during the reporting period.

Fire activity in Europe

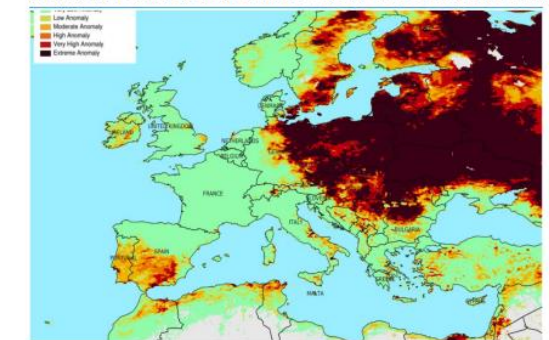
Fire Danger Maps - Europe

Fire Danger Forecast (FWI) for the next 6 days (from 6 September 2024)



Very high or extreme fire danger anomaly values for the next 6 days in Spain, Germany, Sweden, Bulgaria, Poland, Romania, Balkan countries, Cyprus and Ukraine.

Average FWI anomaly map of next 7 days (from 5 September 2024)



Very high or extreme values in Spain, Germany, Sweden, Bulgaria, Romania, Poland, Balkan countries and Ukraine.

MONITORING ACTIVE WILDFIRES

EFFIS / GWIS

- Burnt areas
- Hotspots
- Fire danger chart

COPERNICUS

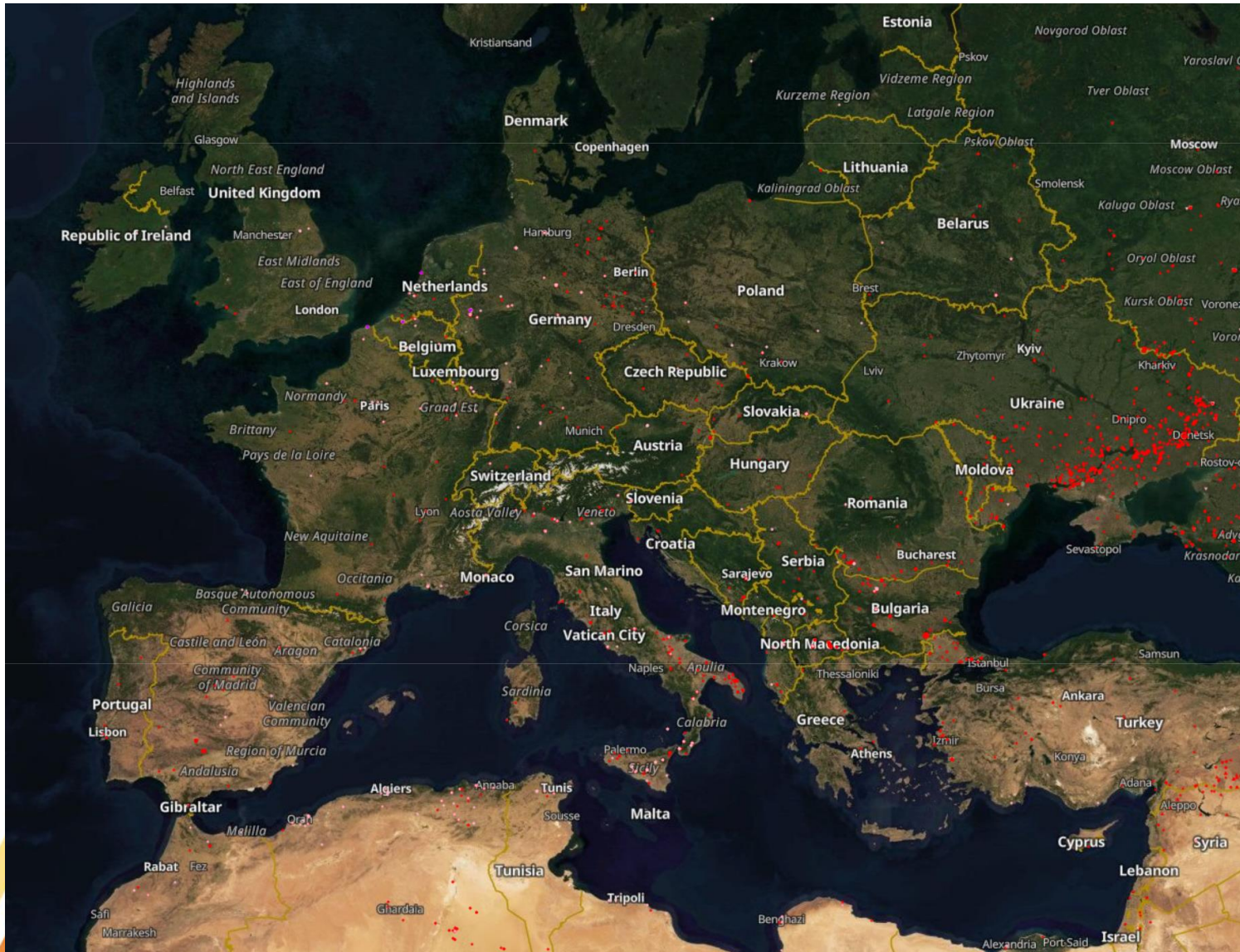
- On-Demand Mapping
- Rapid Mapping
- Request and Recovery

BROWSER

- True color
- False color
- NDVI
- Customized



EFFIS Active Fires



15/07/2024

Active Fires MODIS

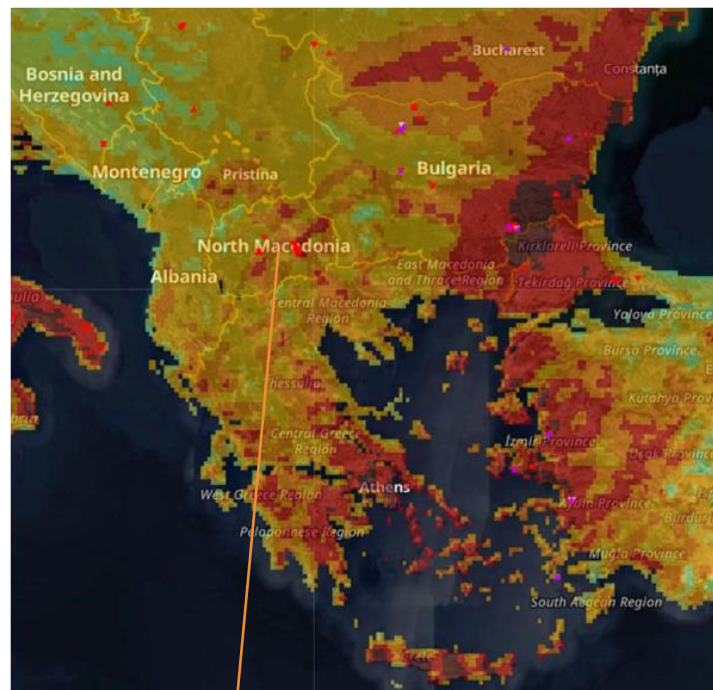
- ▼ ≤6 hours (MODIS Aqua)
- ▽ >6 & ≤12 hours (MODIS Aqua)
- ▼ >12 & ≤24 hours (MODIS Aqua)
- ▼ Last 7 Days (MODIS Aqua)
- ▼ Last 30 Days (MODIS Aqua)
- ▼ Fire Season (MODIS Aqua)
- ▲ ≤6 hours (MODIS Terra)
- ▲ >6 & ≤12 hours (MODIS Terra)
- ▲ >12 & ≤24 hours (MODIS Terra)
- ▲ Last 7 Days (MODIS Terra)
- ▲ Last 30 Days (MODIS Terra)
- ▲ Fire Season (MODIS Terra)

Active Fires VIIRS

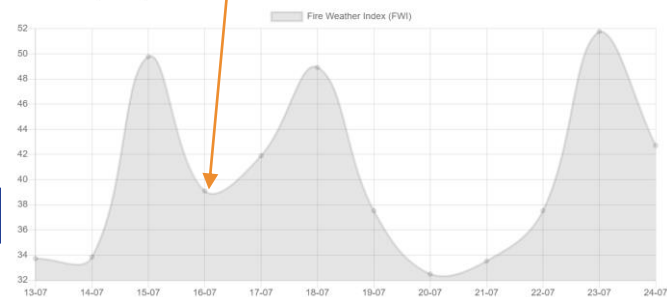
- ≤6 hours (VIIRS Suomi)
- >6 & ≤12 hours (VIIRS Suomi)
- >12 & ≤24 hours (VIIRS Suomi)
- Last 7 Days (VIIRS Suomi)
- Last 30 Days (VIIRS Suomi)
- Fire Season (VIIRS Suomi)
- ◆ ≤6 hours (VIIRS NOAA)
- ◆ >6 & ≤12 hours (VIIRS NOAA)
- ◆ >12 & ≤24 hours (VIIRS NOAA)
- ◆ Last 7 Days (VIIRS NOAA)
- ◆ Last 30 Days (VIIRS NOAA)
- ◆ Fire Season (VIIRS NOAA)

North Macedonia - 15/07/2024

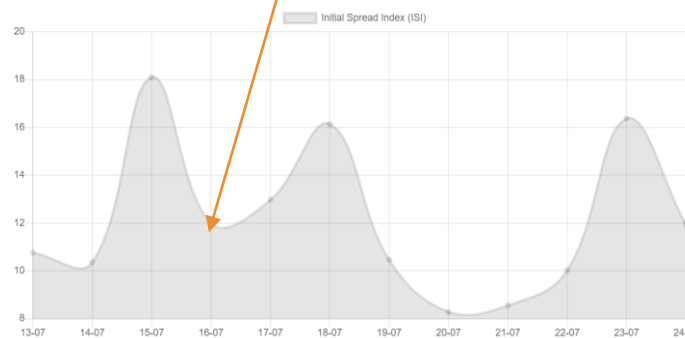
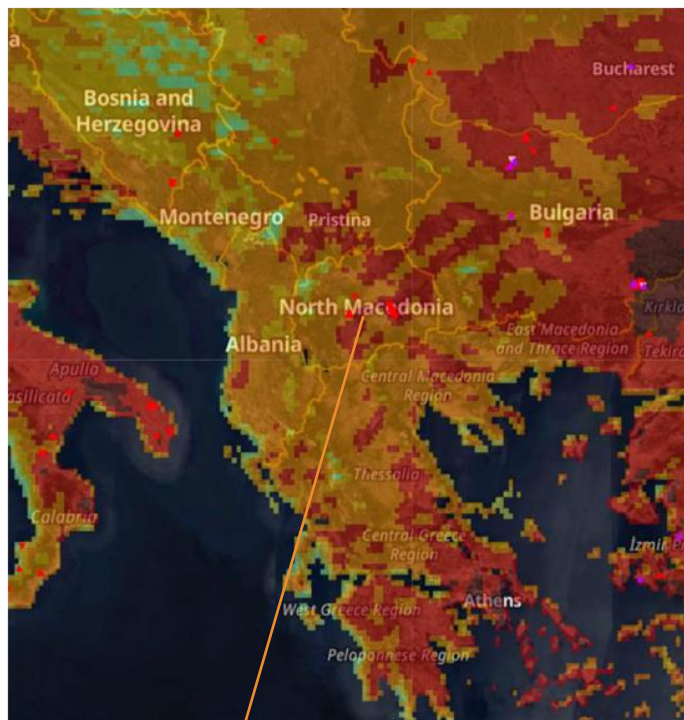
FWI



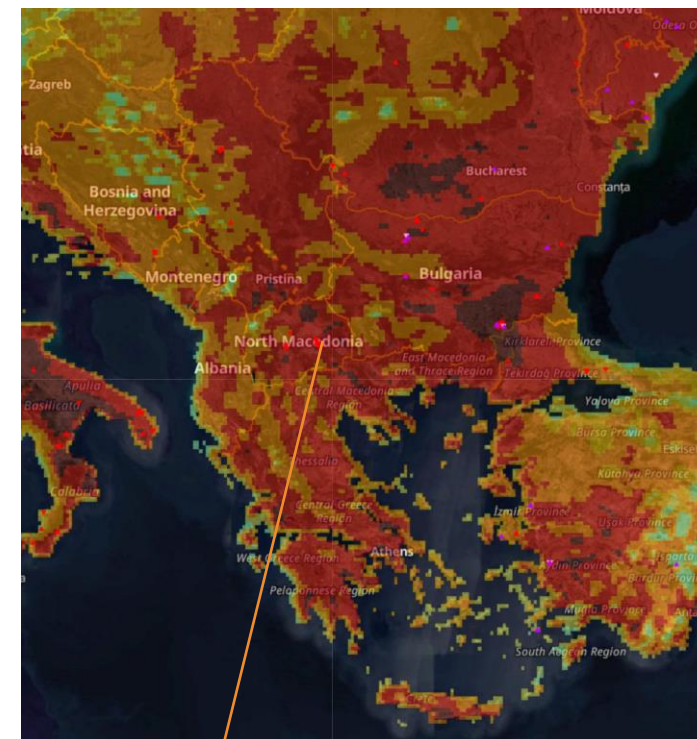
Coordinates [lat-lng]: [41.625708243133568;-2.17041283845902]
Source: :ECMWF (8 km res.)



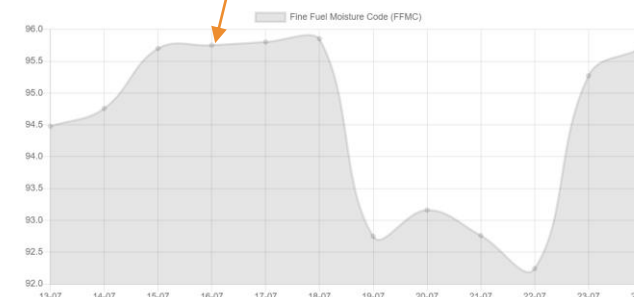
ISI



FFMC



Coordinates [lat-lng]: [41.625708243133568;-2.17041283845902]
Source: :ECMWF (8 km res.)

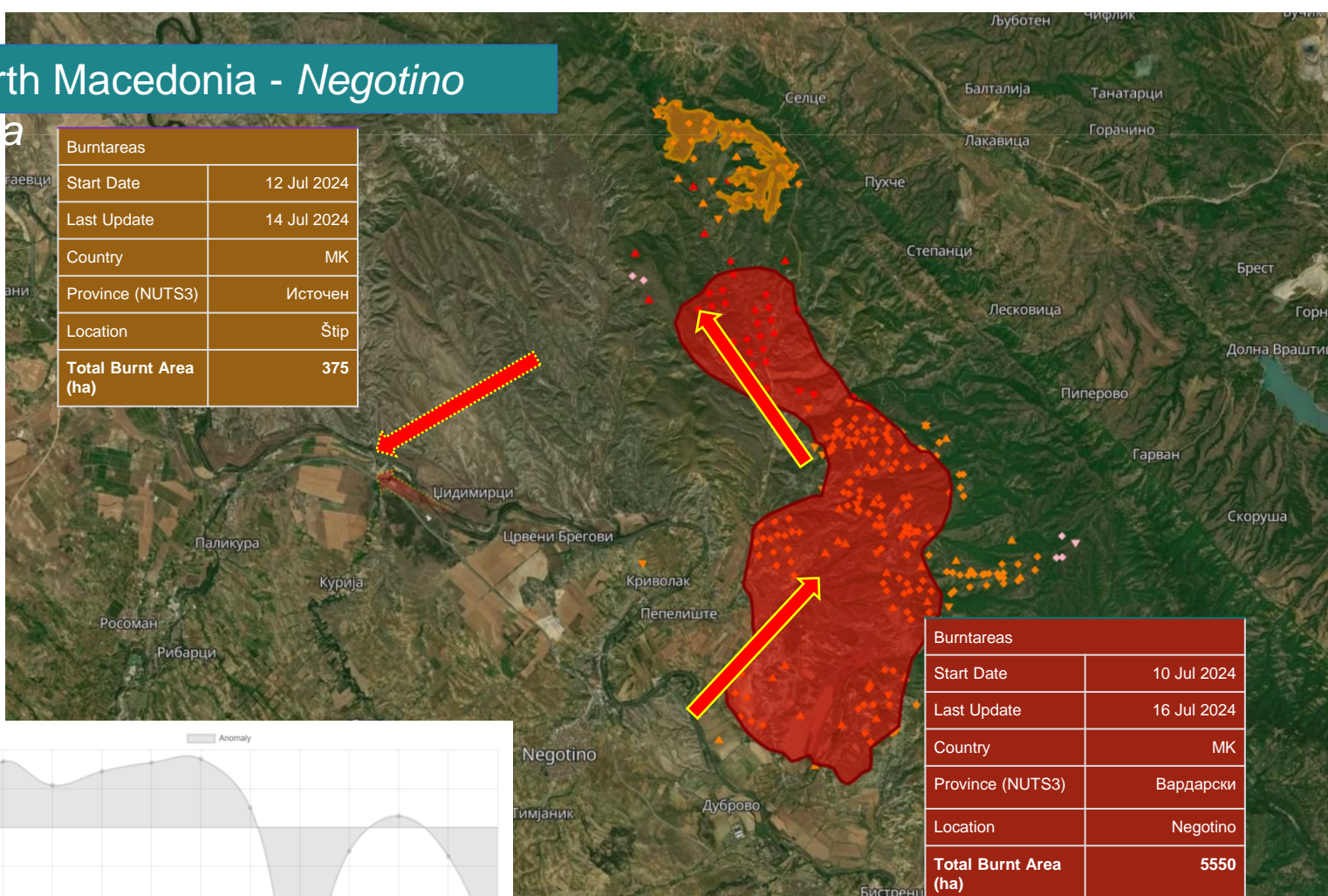




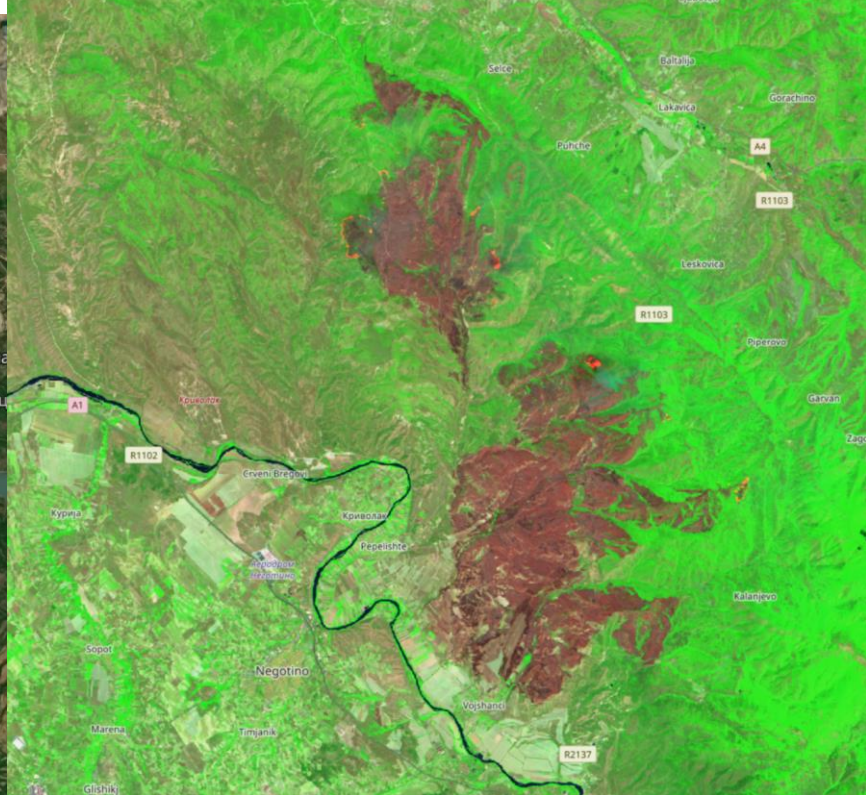
Current situation

North Macedonia - Negotino

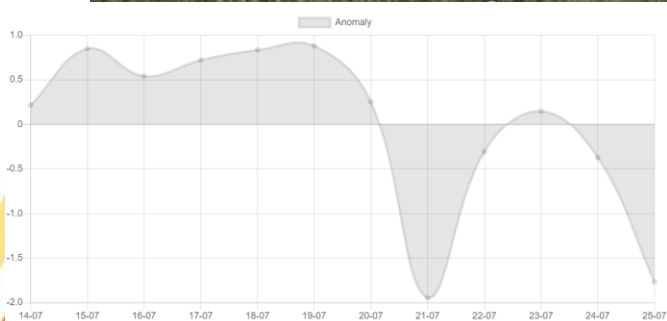
Burntareas	
Start Date	12 Jul 2024
Last Update	14 Jul 2024
Country	MK
Province (NUTS3)	Источен
Location	Štip
Total Burnt Area (ha)	375

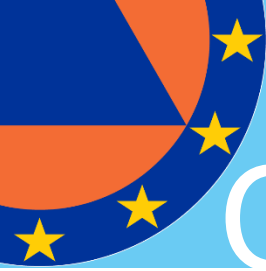


Burntareas	
Start Date	10 Jul 2024
Last Update	16 Jul 2024
Country	MK
Province (NUTS3)	Вардарски
Location	Negotino
Total Burnt Area (ha)	5550



Sentinel 2 image
16/07/2024



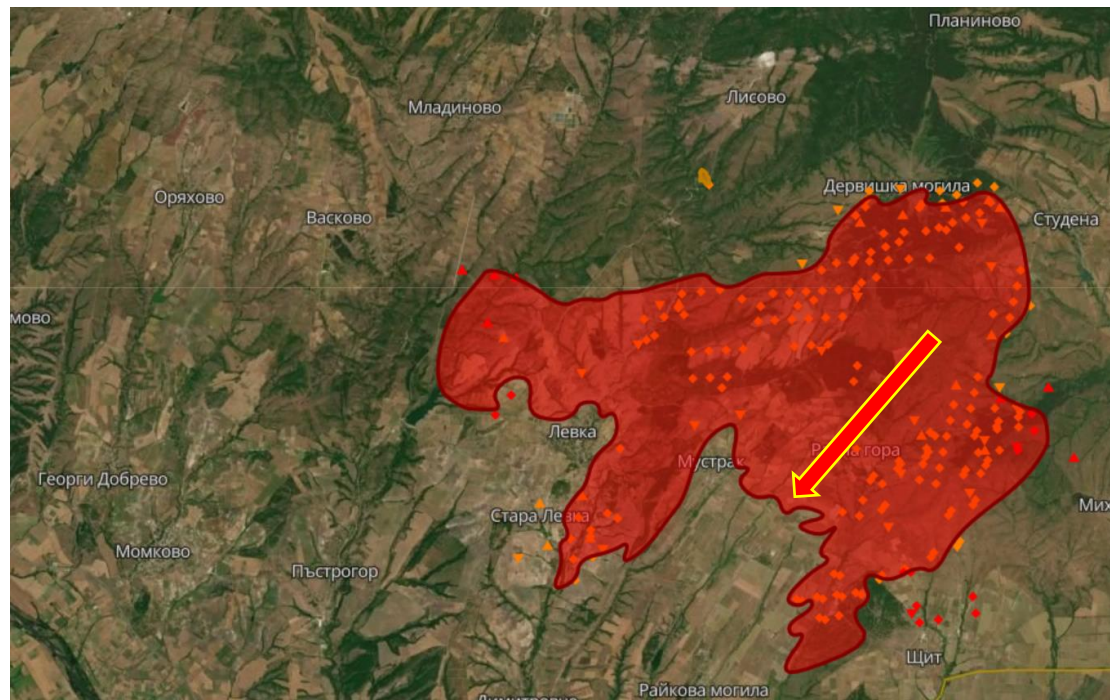


Current situation

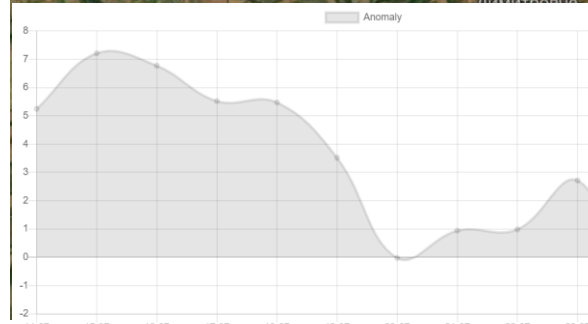
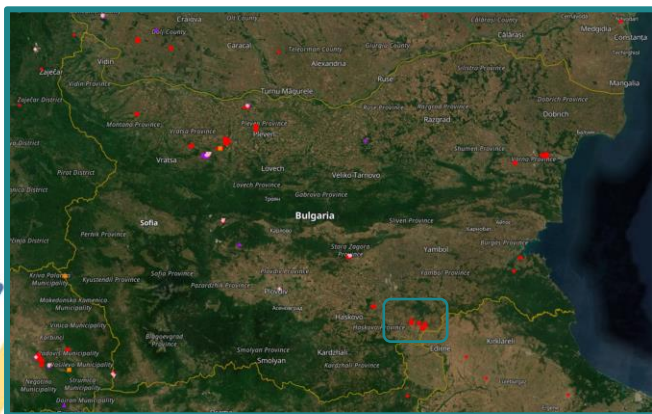


Bulgaria - Svilengrab

Decrease in the growth rate after last night. Roads and croplands stopping the fire.



Sentinel 2
15th July 2024

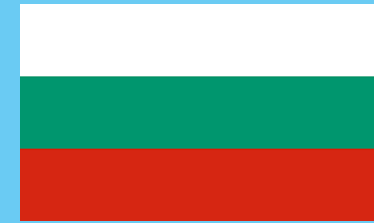


Burntareas	
Start Date	13 Jul 2024
Last Update	16 Jul 2024
Country	BG
Province (NUTS3)	Хасково
Location	Свиленград
Total Burnt Area (ha)	7752



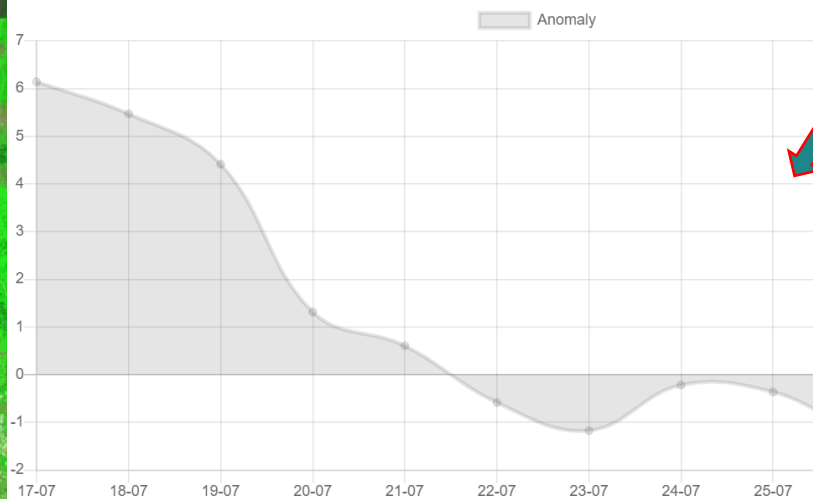
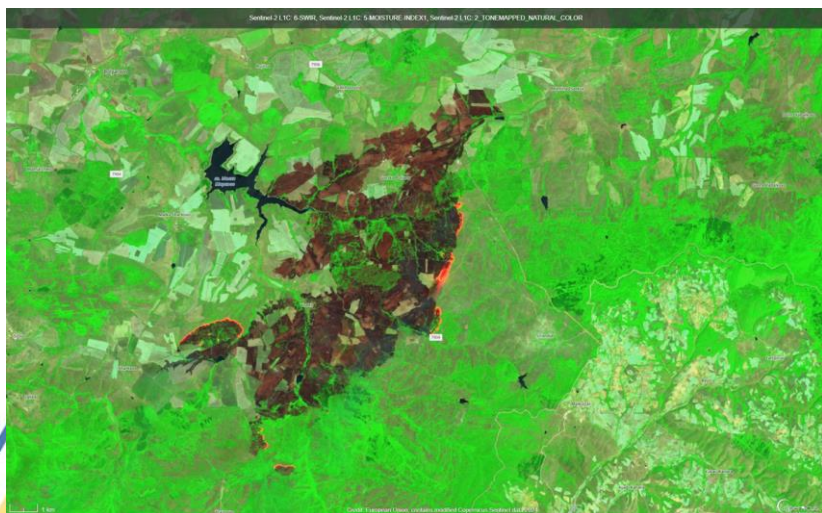
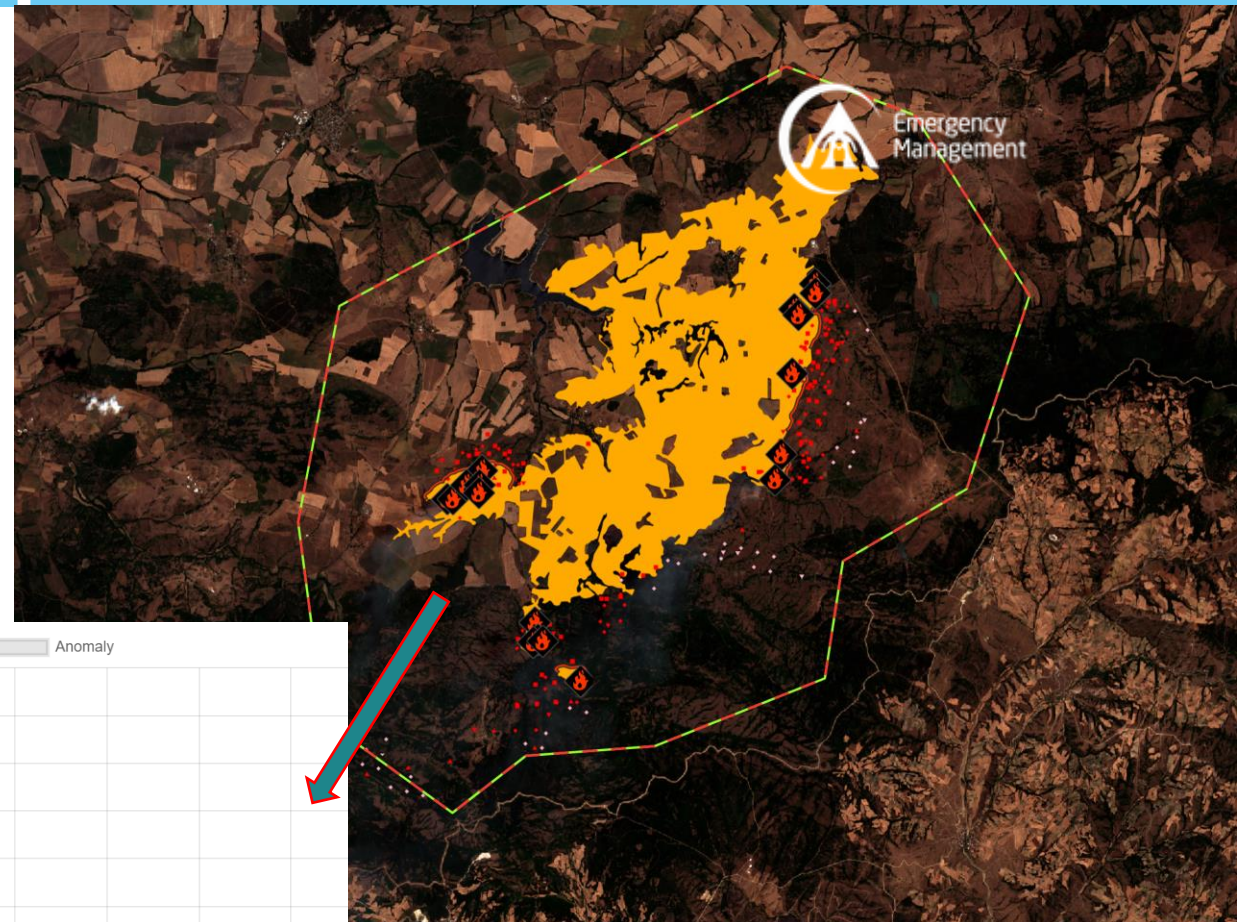


Current situation



EMSR738 - Wildfire in Bulgaria

- 6.000 ha according Sentinel-2 image (18th July)
 - 500 people evacuated / 35 houses affected
- Greenest forests limiting fire spreading. Open forests and grasslands acting as vectors for fire.

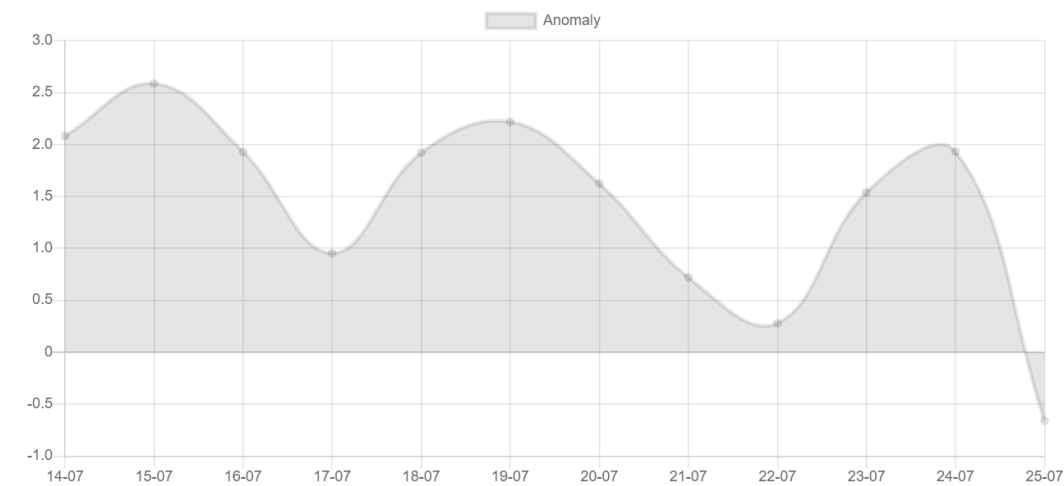




Current known situation



TURKIYE - *Izmir area*

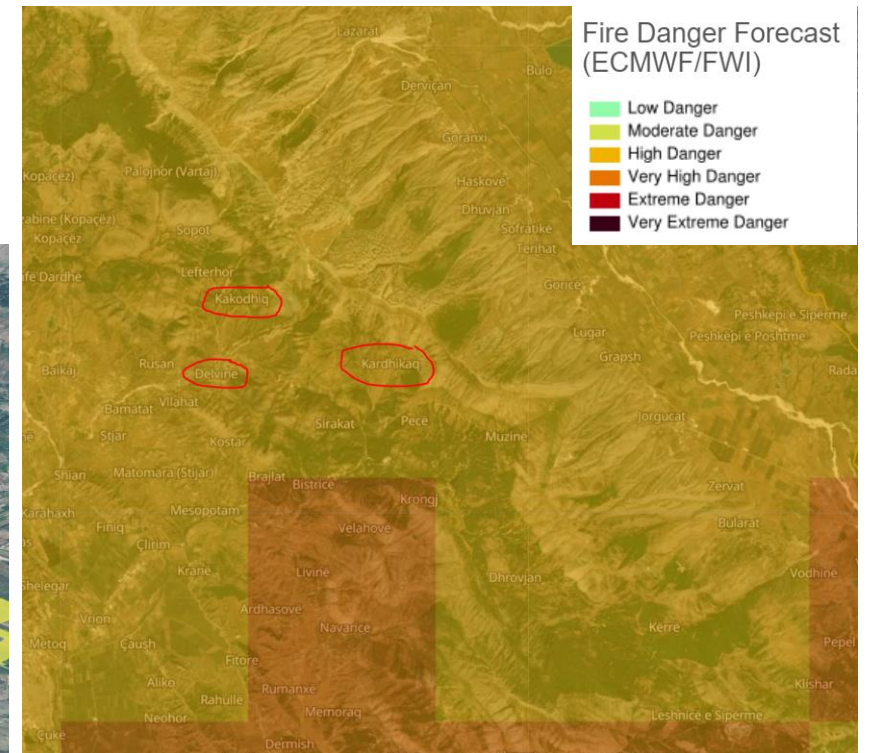
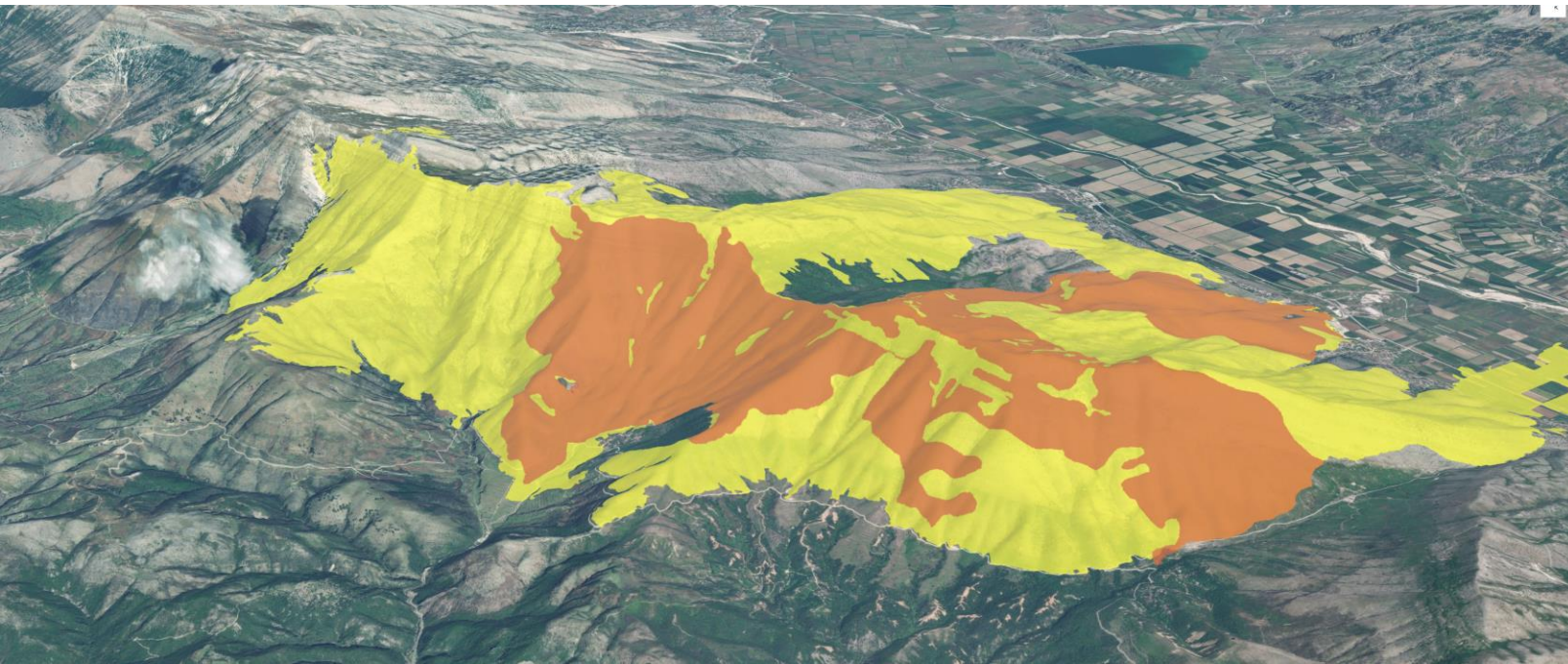


Sentinel 2
15th July 2024

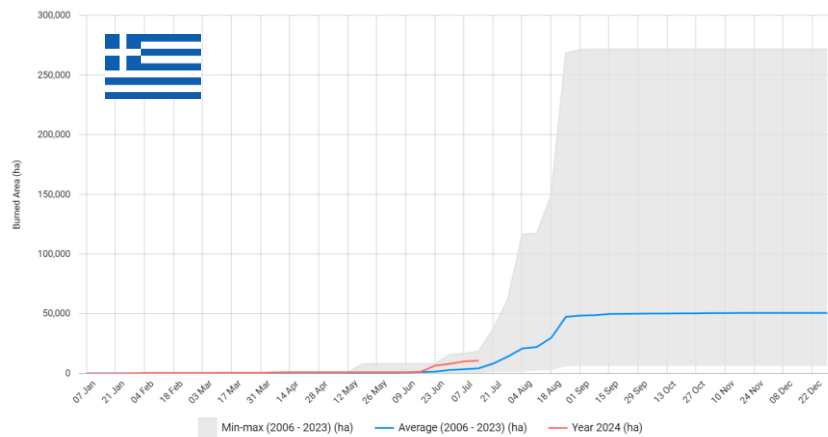
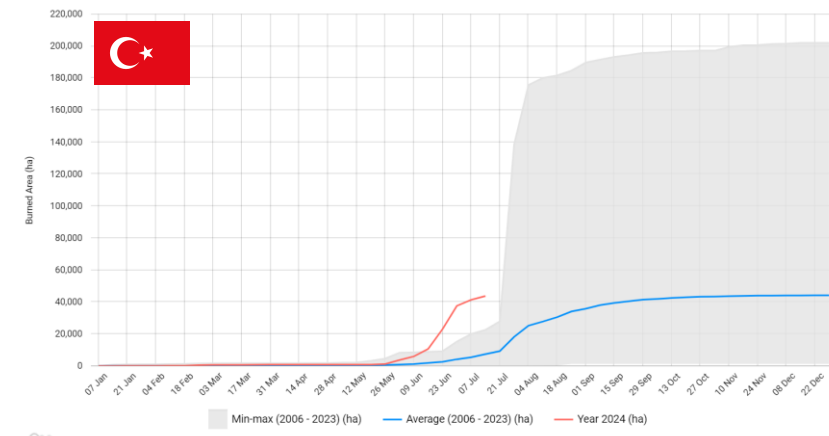
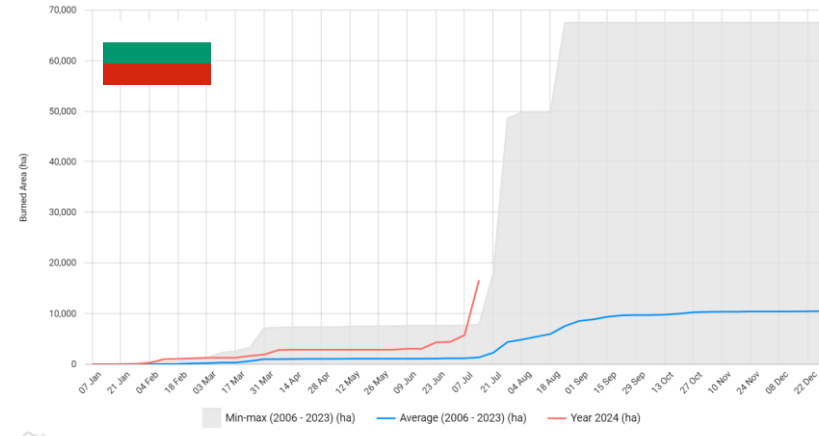
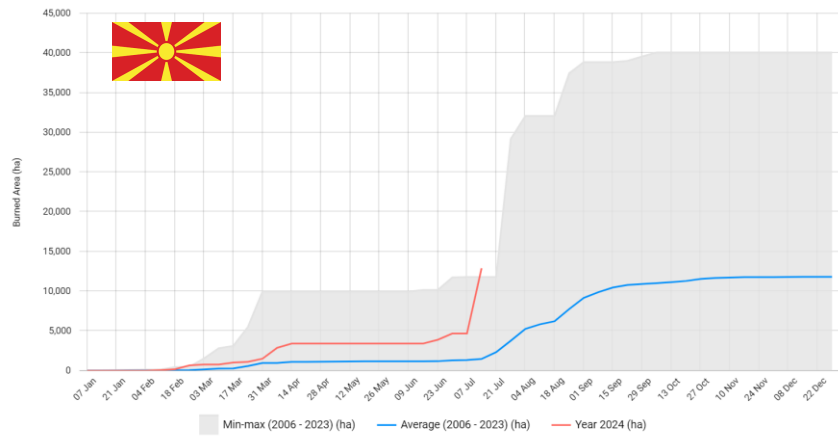


Albania - Overview

- 12/07: Fire was reported to be extinguished in the morning
- 15:15 ERCC was contacted again for aerial support, due to reemerging fires near Delvine
- Fire in inaccessible, remote area



Fire activity



➤ **Eastern** region breaking record in terms of fire activity.

➤ **Western** countries less activity than usual



EMSR748 - 4207
Wildfire in Madeira
EMSR748-4207

Situation as of 26/08/2024 11:52 UTC
Data source: MON755 - Overview map 01

Area: 5,104.1 km²

Estimated population: 490

Crises Information: Wildfire

General Information: Area of Interest, Image Footprint, Not Reported

Administrative Boundaries: Municipality

Place names: Place name, Multiple place names

Buildings: Residential, Non residential

Hydrography: Lake, River

Facilities: Long distance pipeline, Local pipeline or line, Aqueduct, Dam, Mining or extraction site, Water tank, Power plant, Sport and recreation constructions, Other civil engineering works not elsewhere classified, Oil or gas well, Well, Dam, Transportation, Highway, Main road, Local road, Track

Legend:

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EMSR748 ADR: 01 Central Madeira Delineation

Consequences within the ADR		Unit of measurement	Affected	Total in ADR
Burnt area		km ²	~ 490	5,104.1
Estimated population	Number of inhabitants			
Build-up	Residential Buildings	ha	7.8	605.9
	Office buildings	ha	0	0.02
	Industrial buildings	ha	0	3.7
	Military	ha	0	0.1
Transportation	Highways	km	0	3.0
	Primary Road	km	1.5	57.0
	Secondary Road	km	6.3	79.9
	Local Road	km	6.8	210.5
	Cart Track	km	31.1	300.9
Facilities	Dams	ha	0	0.02
	Constructions for mining or extraction	ha	0.1	34.6
	Power plant constructions	ha	0	14.3
	Sport and recreation constructions	ha	0	9.9
	Other civil engineering works not elsewhere classified	ha	0	0.3
	Long-distance pipelines, communication and electricity lines	km	2.6	36.7
	Local pipelines and cables	km	0	0.1
	Aqueducts, irrigation and cultivation waterworks	km	0.1	14.7
	Dams	km	0	1.0
Land use	Shrub and/or herbaceous vegetation association	ha	3,799.4	13,190.1
	Forests	ha	1,105.5	7,942.7
	Heterogeneous agricultural areas	ha	151.1	1,807.8
	Open spaces with little or no vegetation	ha	29.1	74.2
	Other	ha	19.1	1,469.5
	Permanent crops	ha	0	7.4

Disclaimer:
Full disclaimer and other helpful information available in the online manual:
<https://emergency.copernicus.eu/mapping/online-manual-rapid-mapping-products>
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Data Access:
All data displayed on the map(s), as well as the Physiography and Land Use - Land Cover byes, 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), Wikimapia.org, GeoNames 2015, Corine Land Cover (CLC) 2018, EuroBoundaryMap 2017 ©EuroGeographics.
Inset Map: JRC 2013, GISC0 2010 © EuroGeographics, Natural Earth 2012, CCM River DB © EURC 2007, GeoNames 2015.
Digital Elevation Mode: FADDEM (ForestAndBuildingsremovedCopernicusDEM) removes building and tree height biases from the Copernicus GLO 30



[The 2024 Wildfires Season in maps \(europa.eu\)](https://europa.eu)



Keep in touch

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