AN EARLY WARNING SYSTEM OF METEOROLOGICAL FIRE DANGER OVER EUROPE

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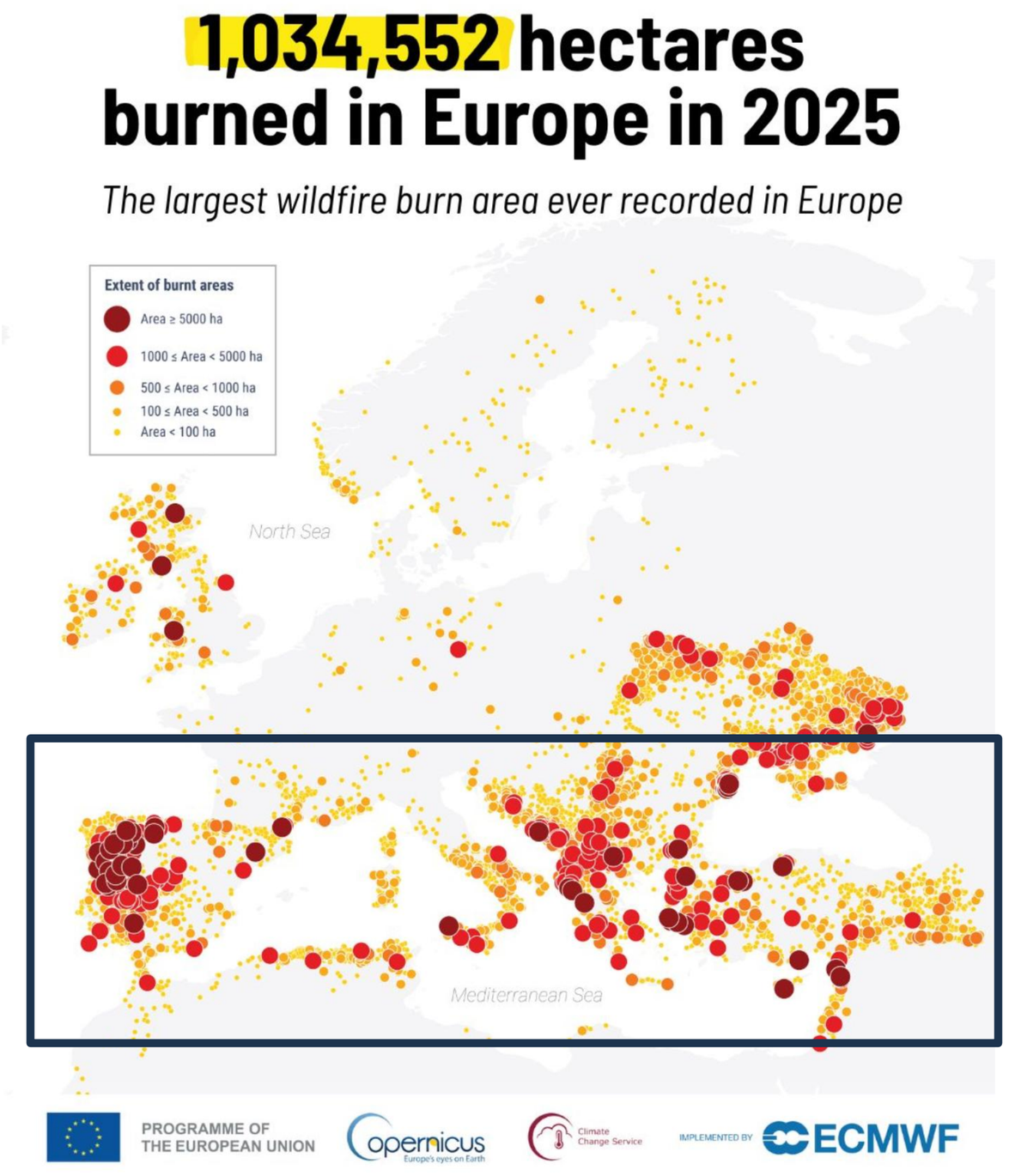
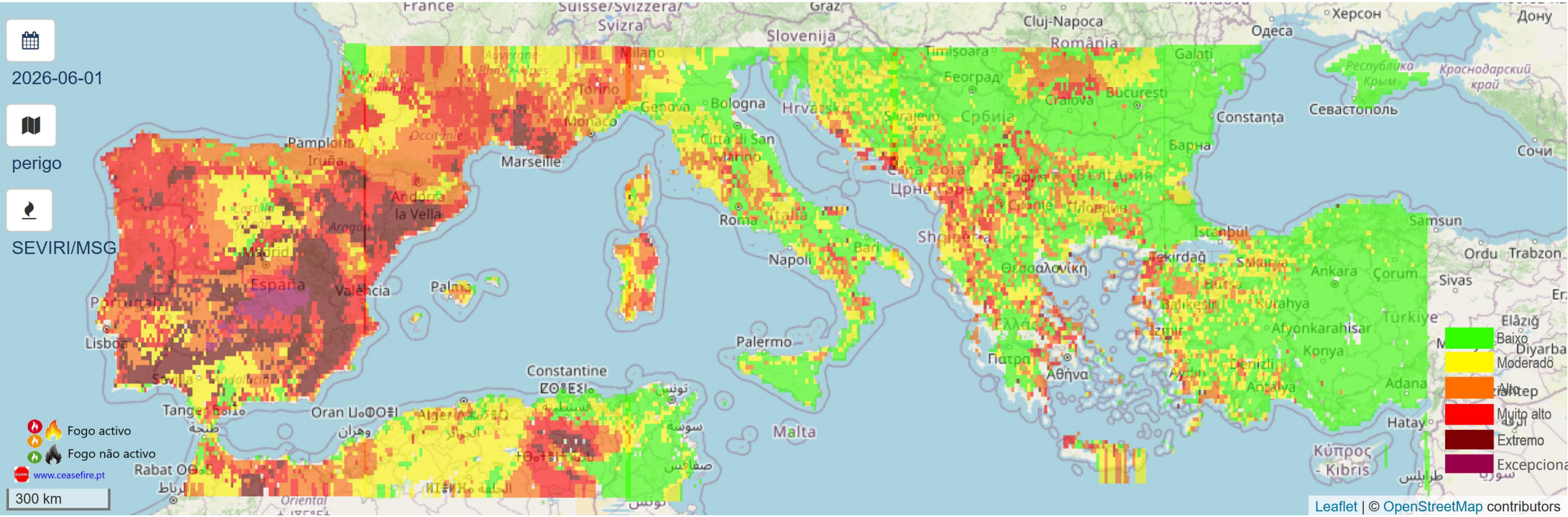
EUMETRAIN

Forest Fire Event Week – June 1-3, 2026

1. Wildfires are becoming more and more serious in Europe

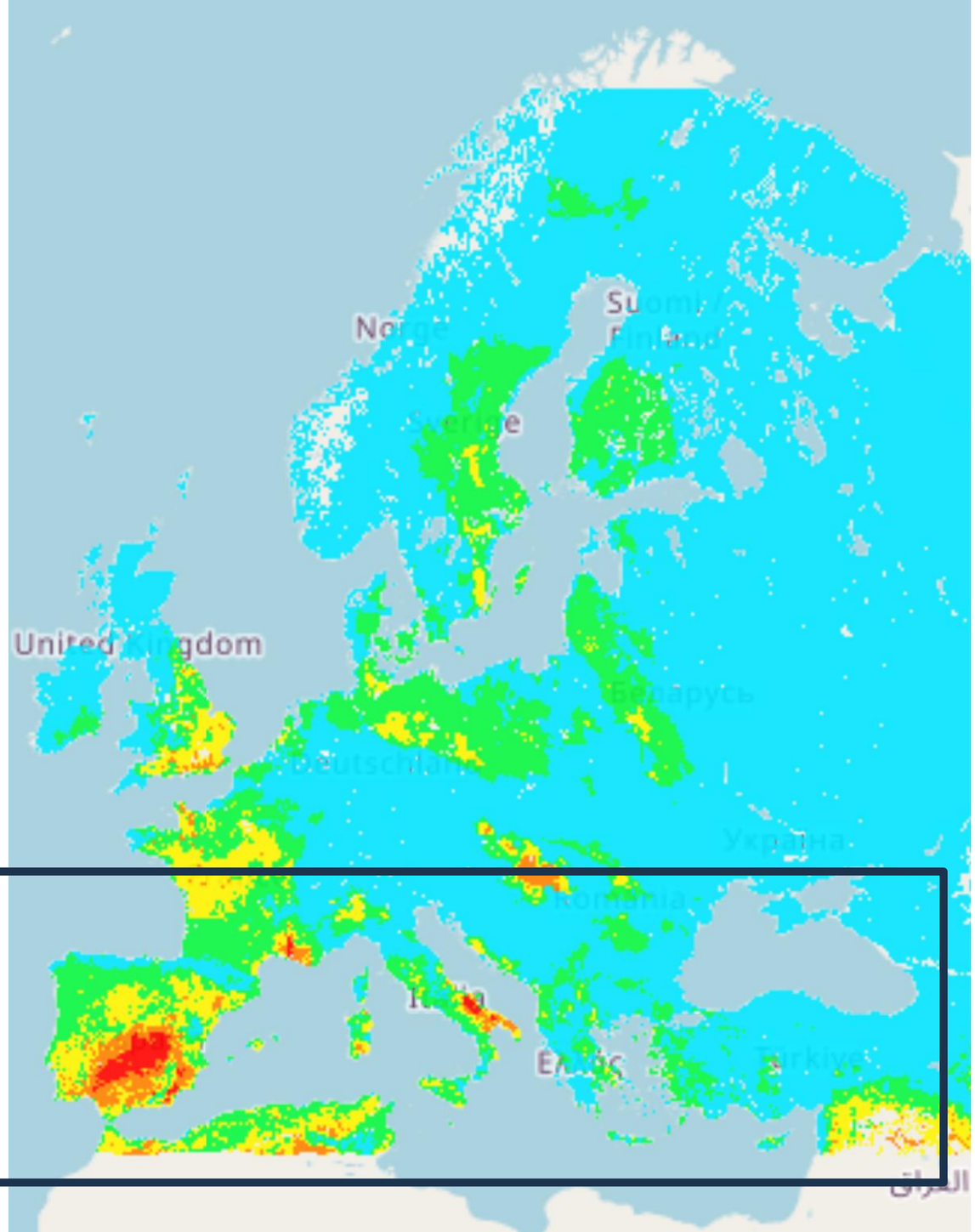


2. Early warning systems of fire danger are an essential tool



EUMETSAT LSA SAF

Fire Risk Mapping (FRM) product – operational forecast for 01/06/2026

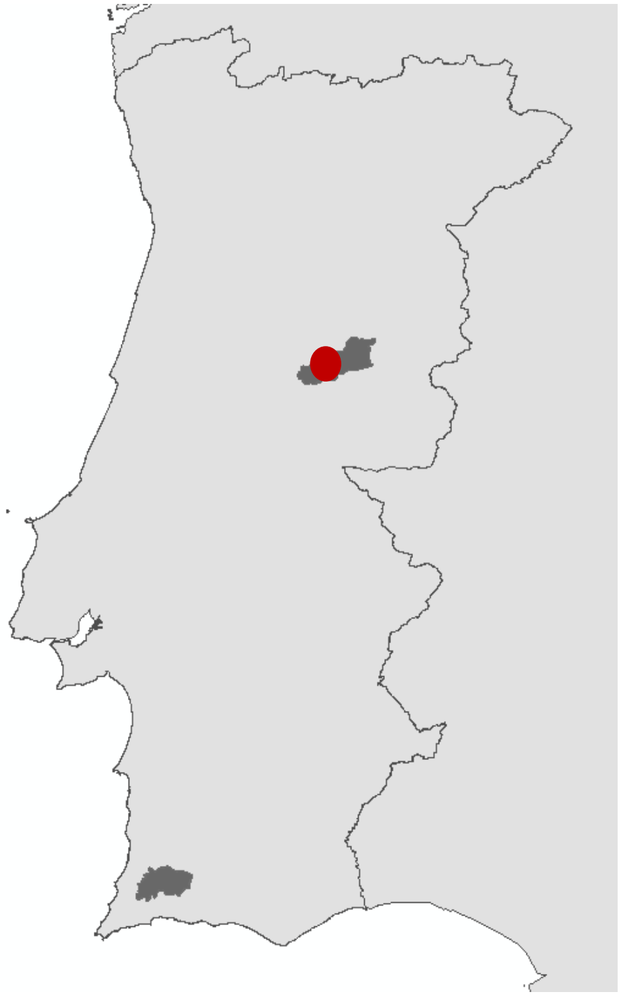


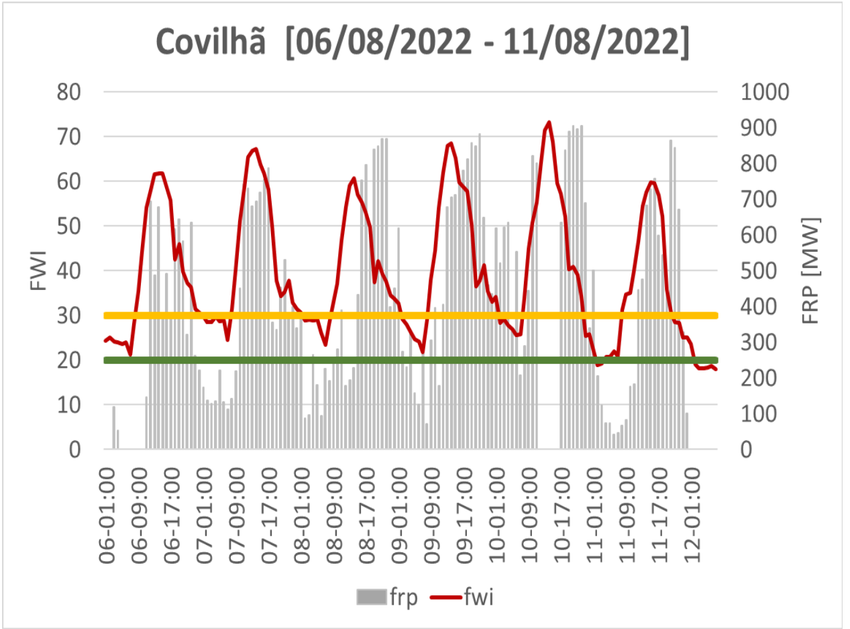
EUMETSAT LSA SAF

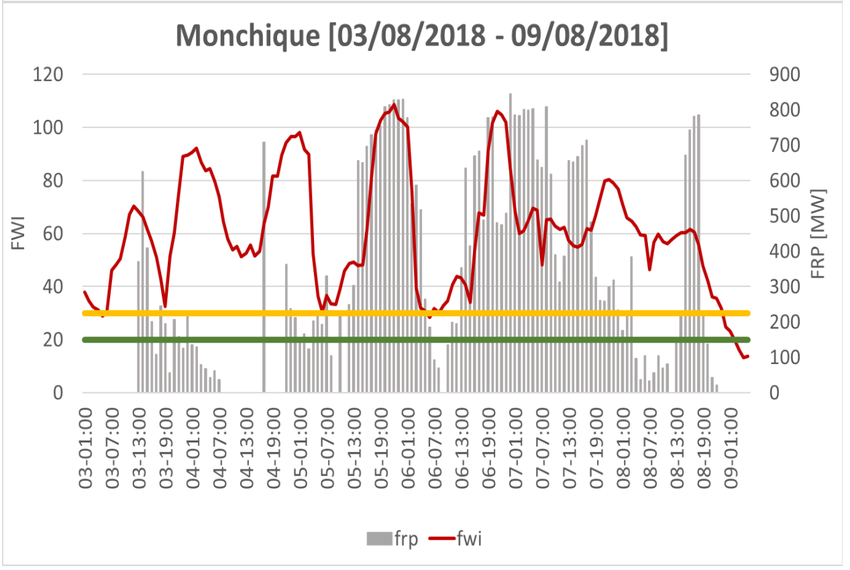
Fire Risk Mapping (FRM) product – demonstration

forecast for 01/06/2026

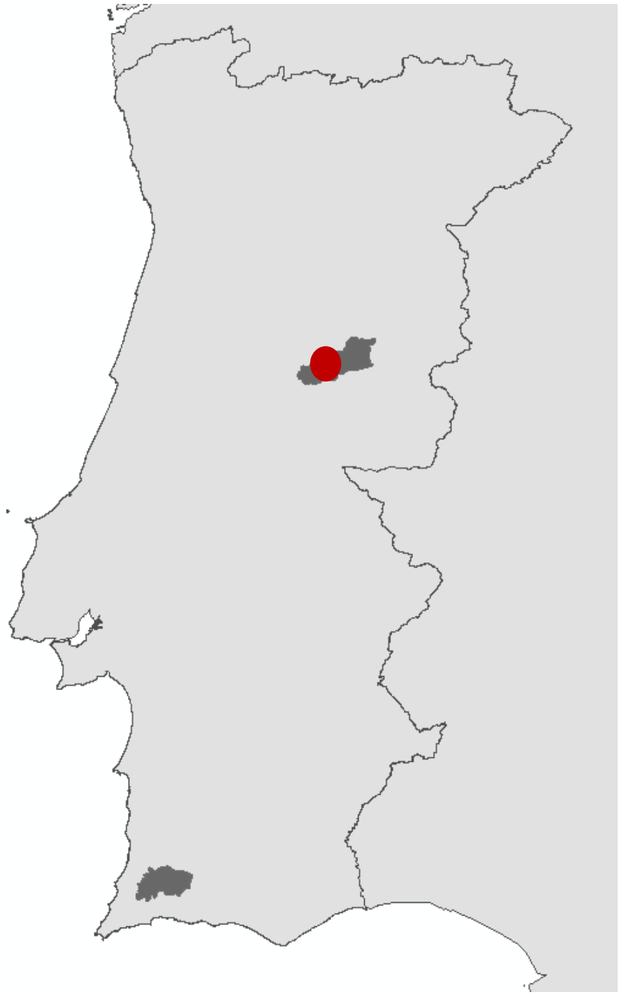
3. Fire Radiative Power (FRP) is a good measure of fire severity

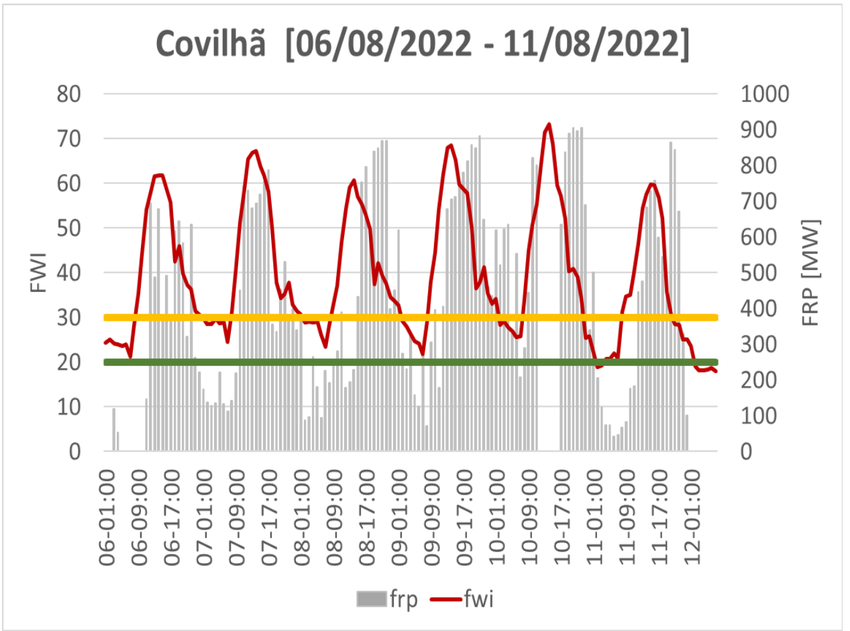


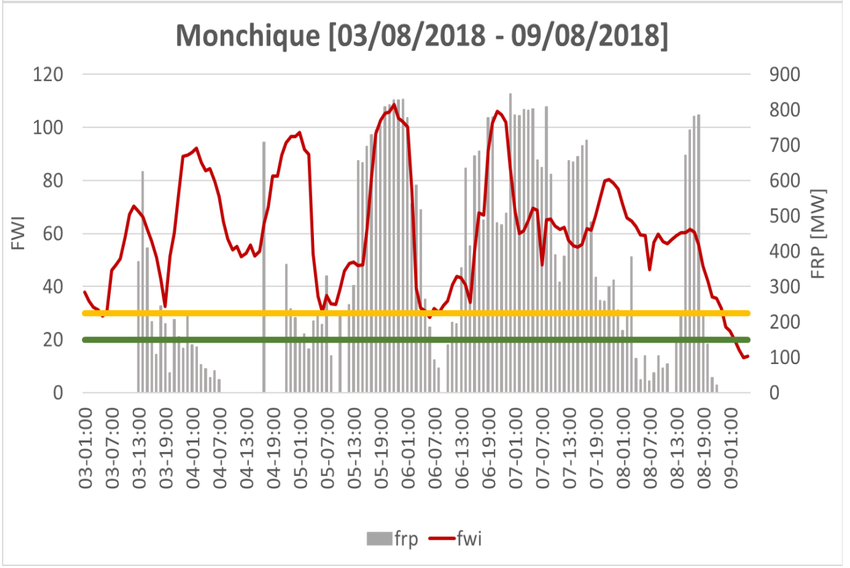




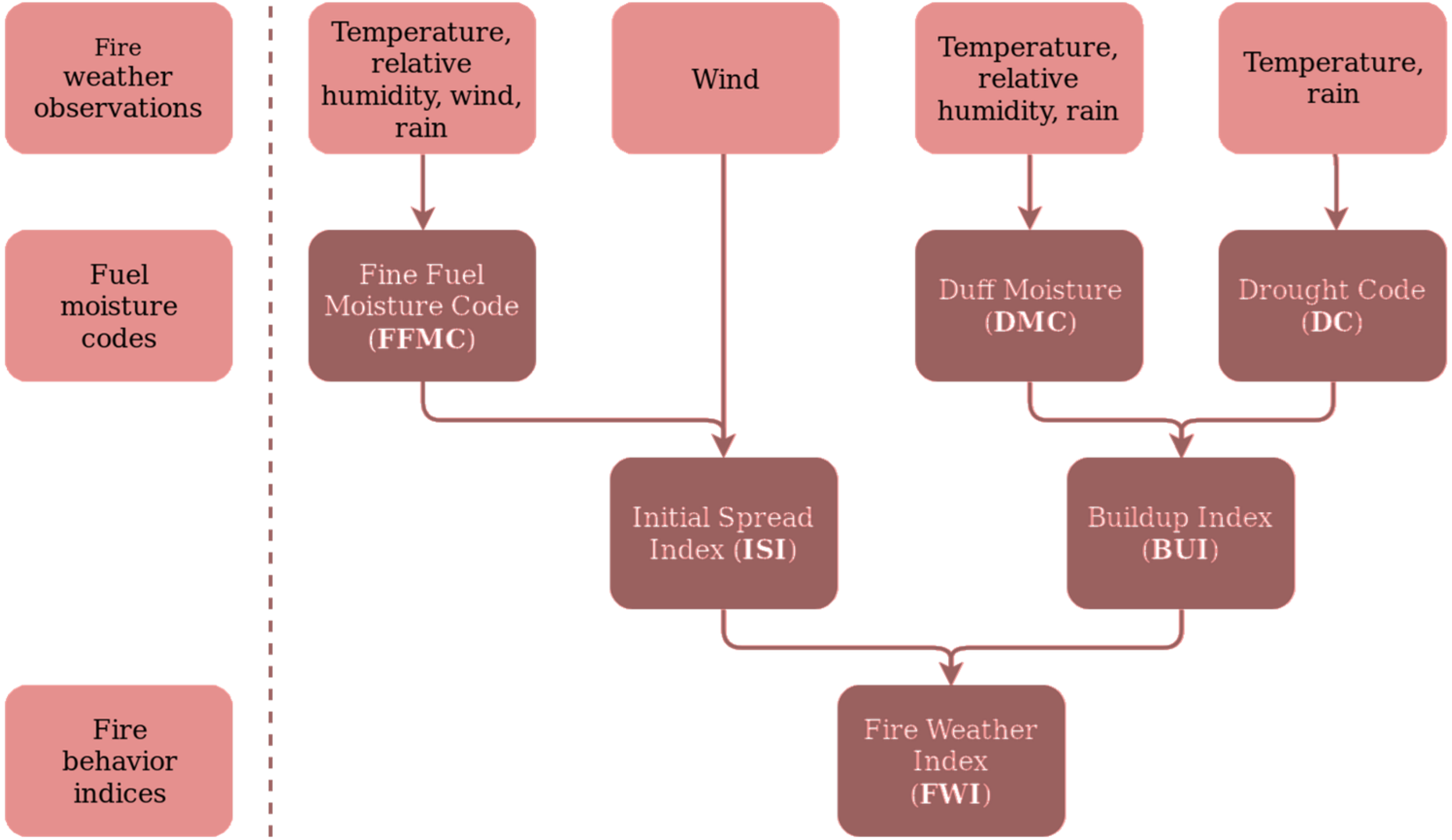
4. Fire Radiative Power (FRP) follows “fire weather”



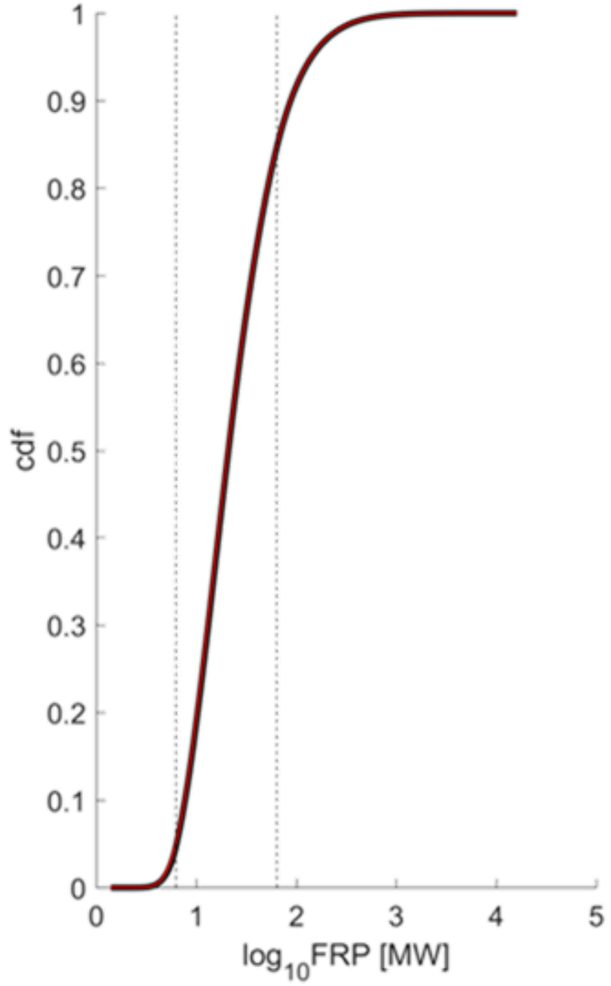


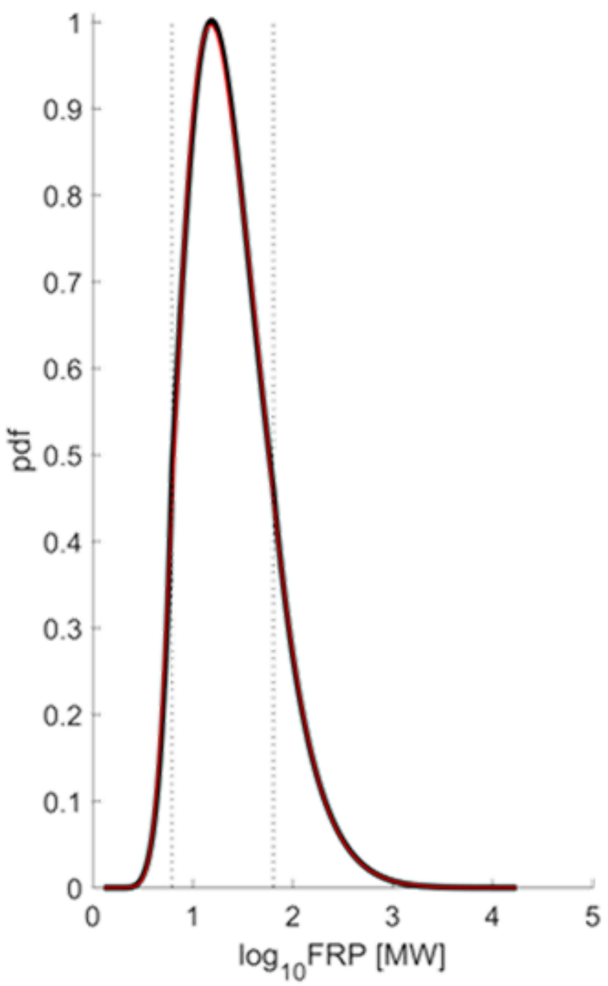


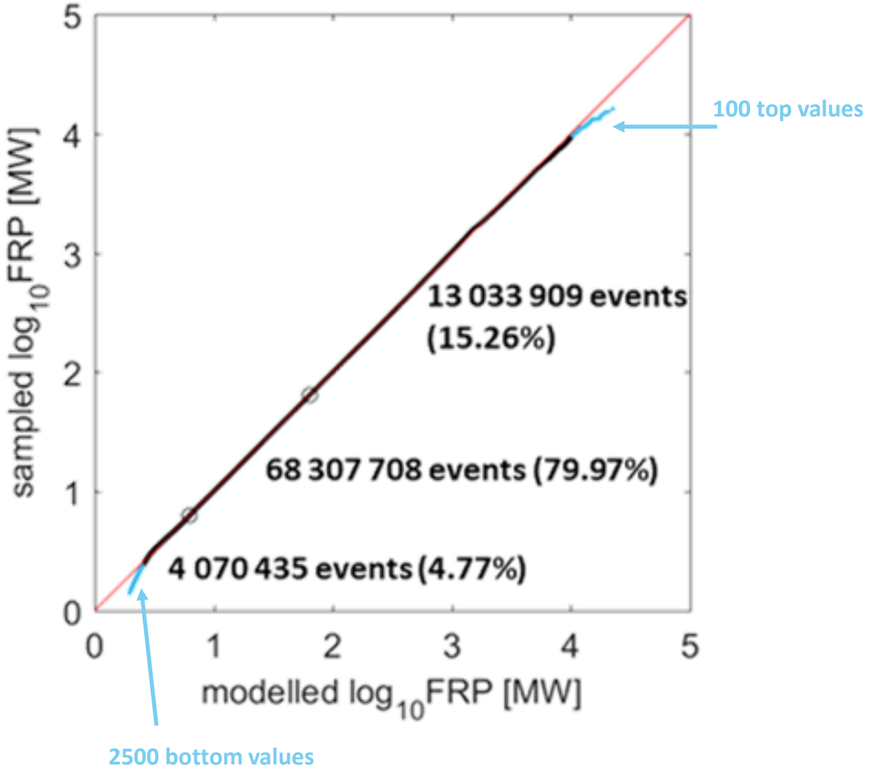
5. How is “fire weather” rated?



6. Are wildfires globally organized?

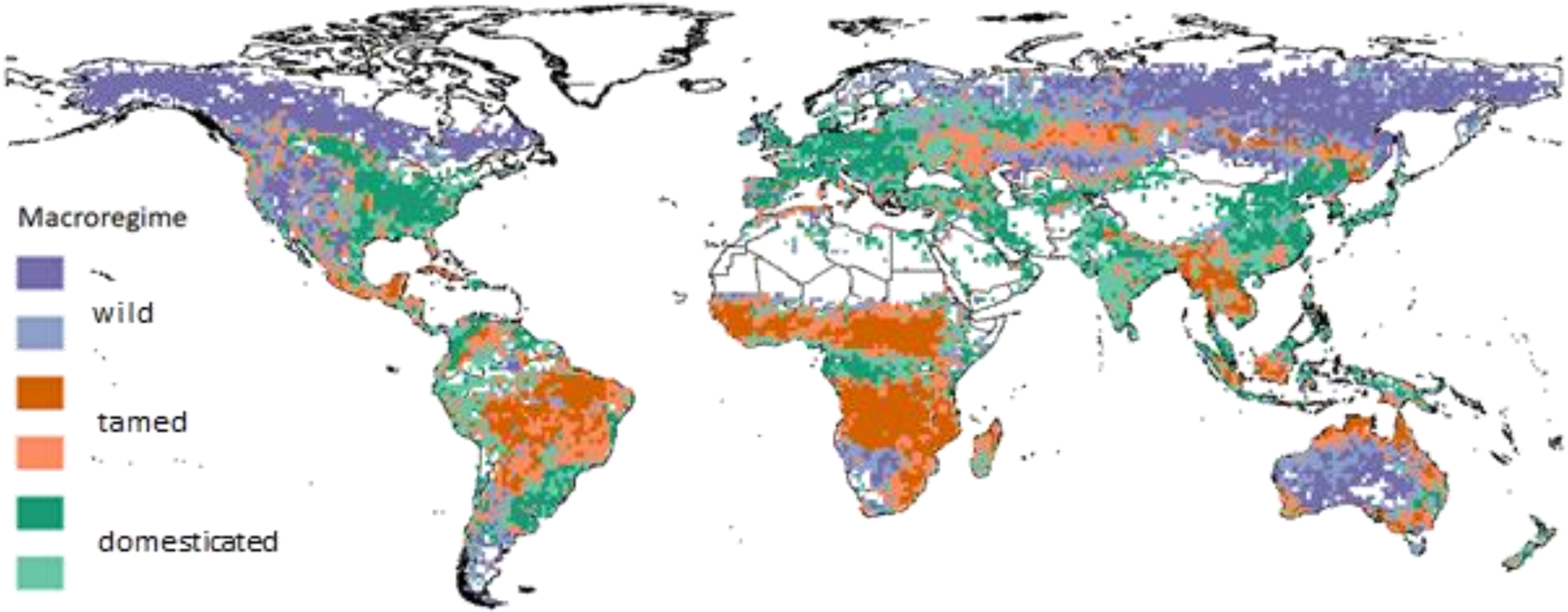






85 412 052 events
(2002-2021)

7. Do wildfires present different macroregimes?



8 319 647 events

67 324 278 events

9 768 127 events

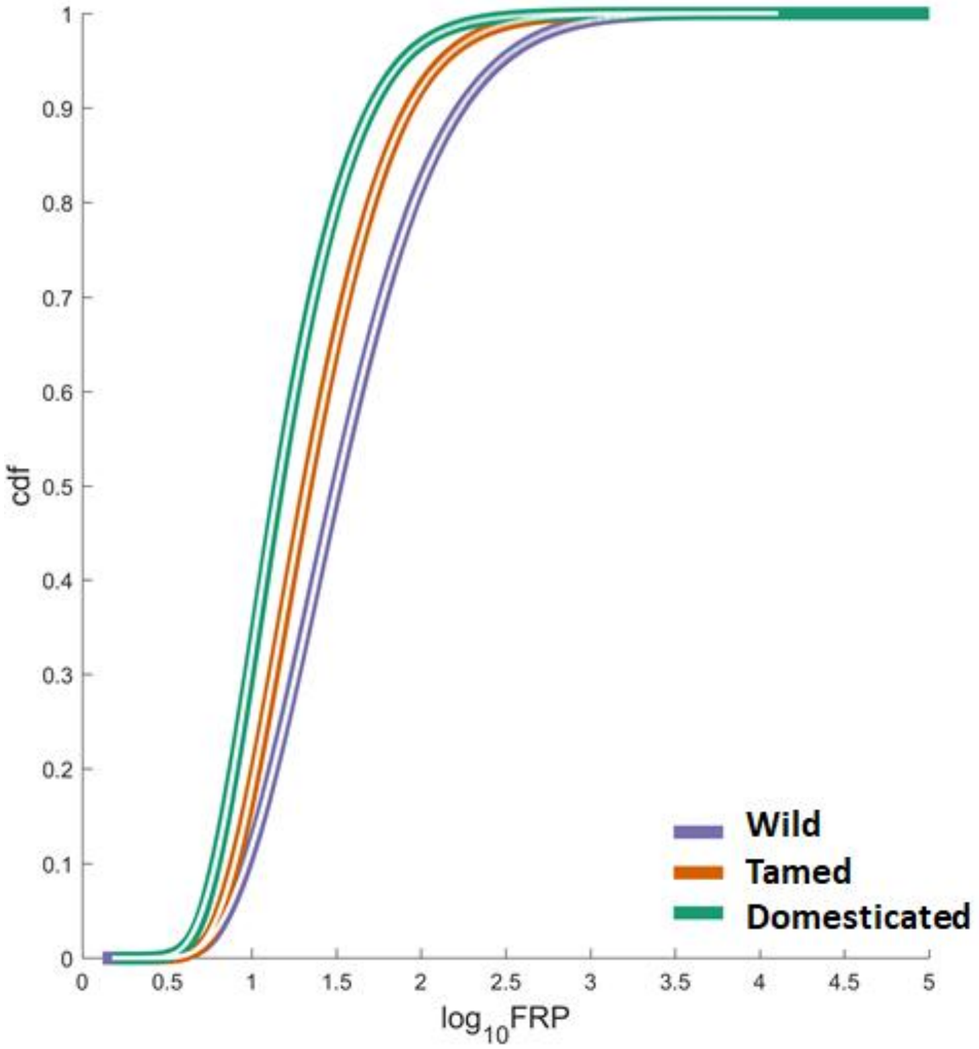
85 412 052 events

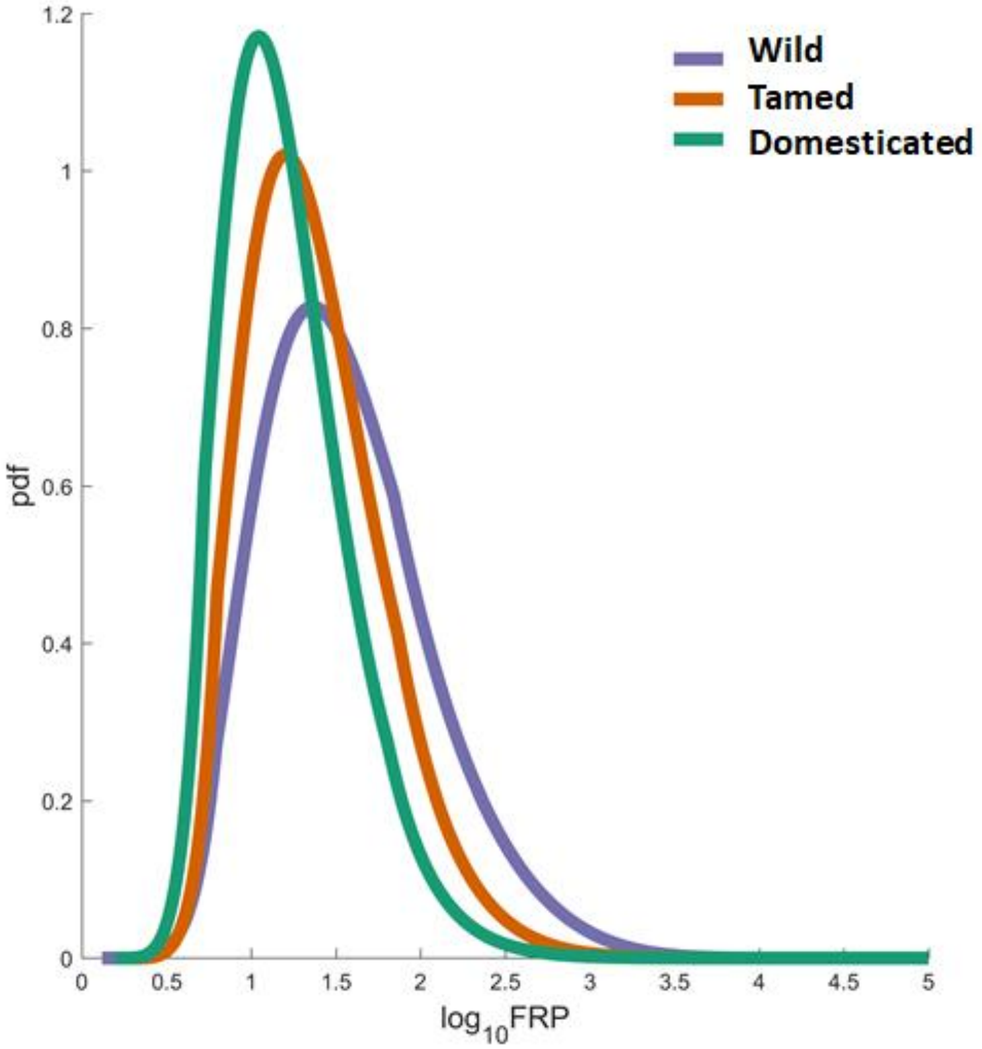
The Wild fire macroregime predominates in cold wildlands, and is characterized by sporadic burning and short fire seasons.

The Tamed fire macroregime mostly occurs in rangeland and croplands of dry tropical climate and is characterized by high fire incidence.

The Domesticated fire macroregime is characteristic of croplands and villages in humid, warm temperate and tropical climates and is characterized by low fire incidence.

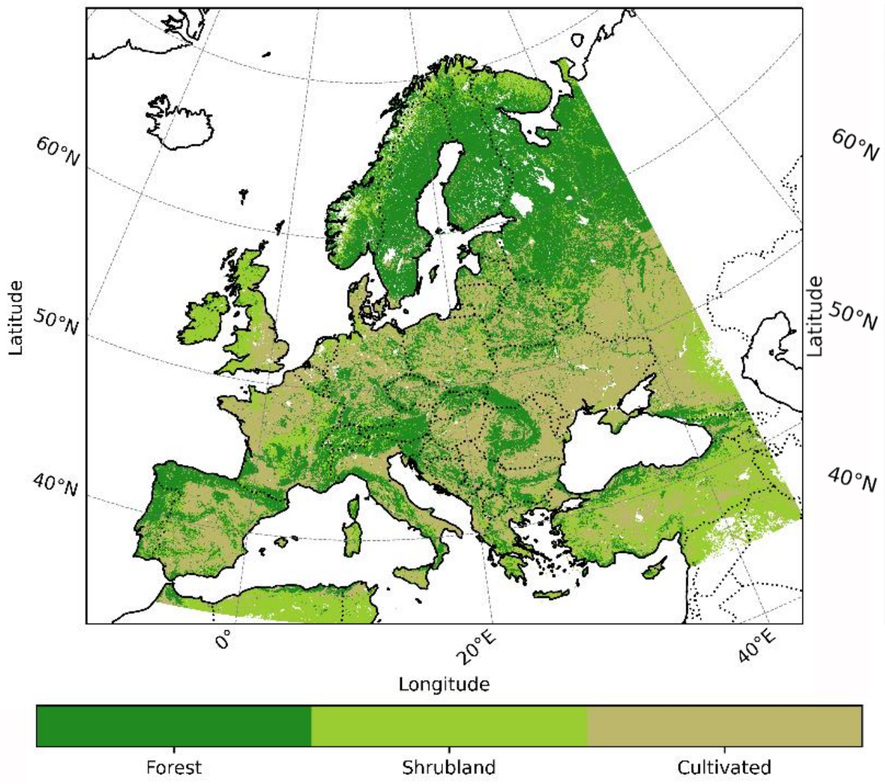
7. Do wildfires present different macroregimes?



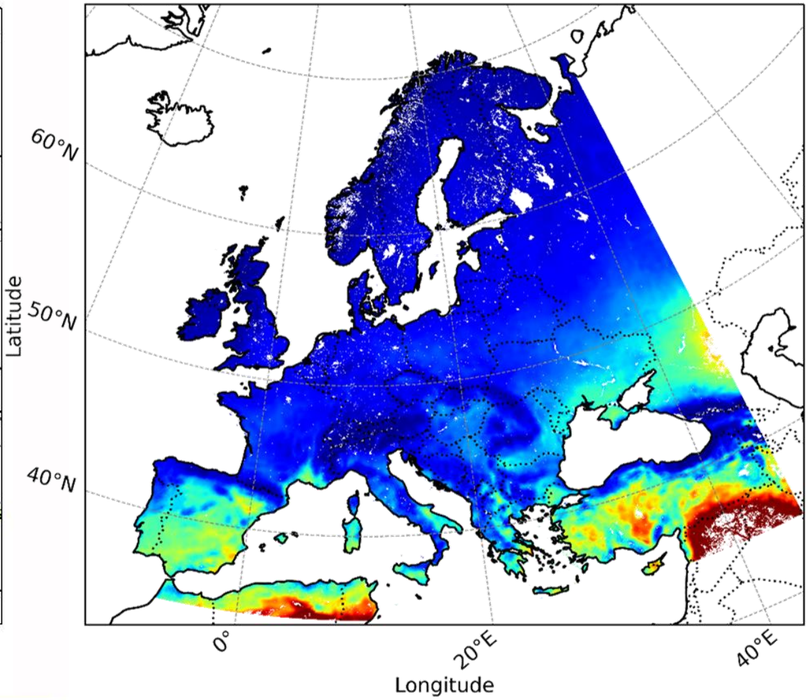


8. The fire triangle

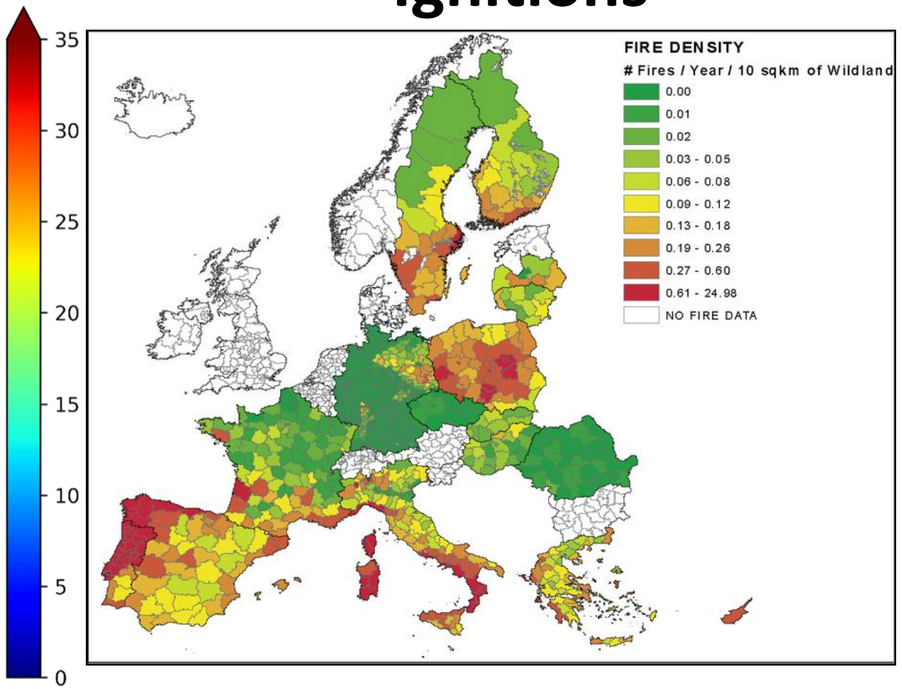
Vegetation



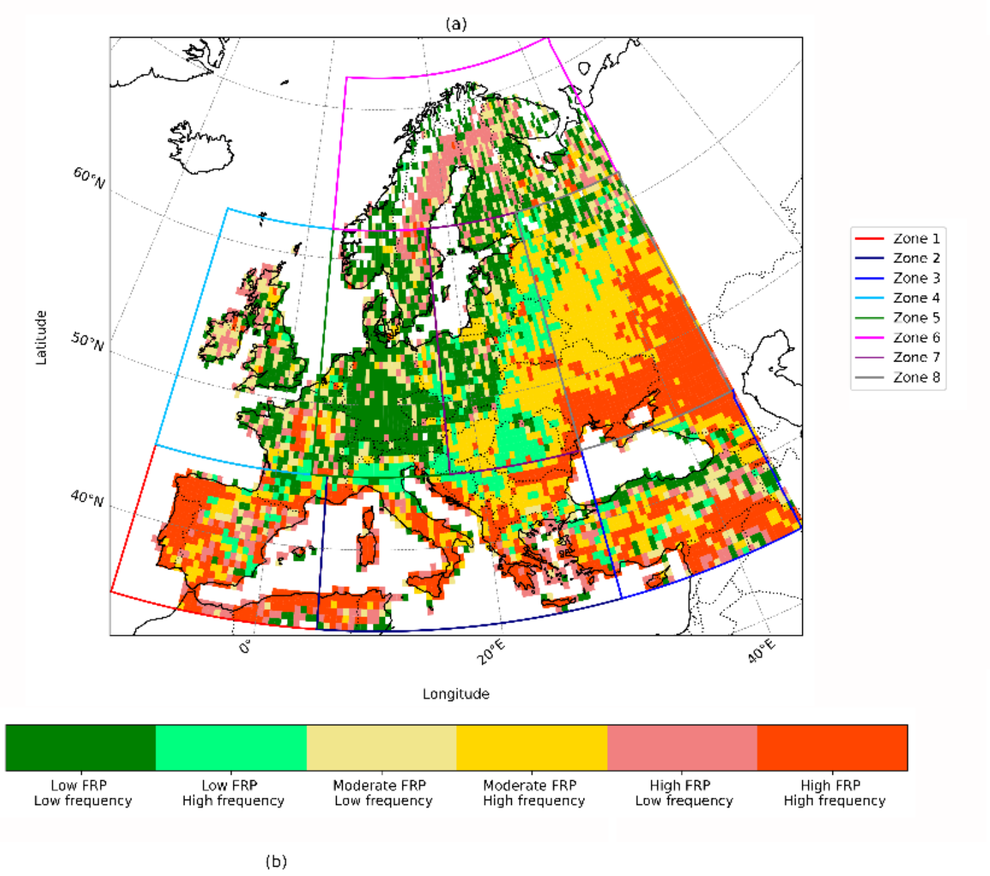
Weather

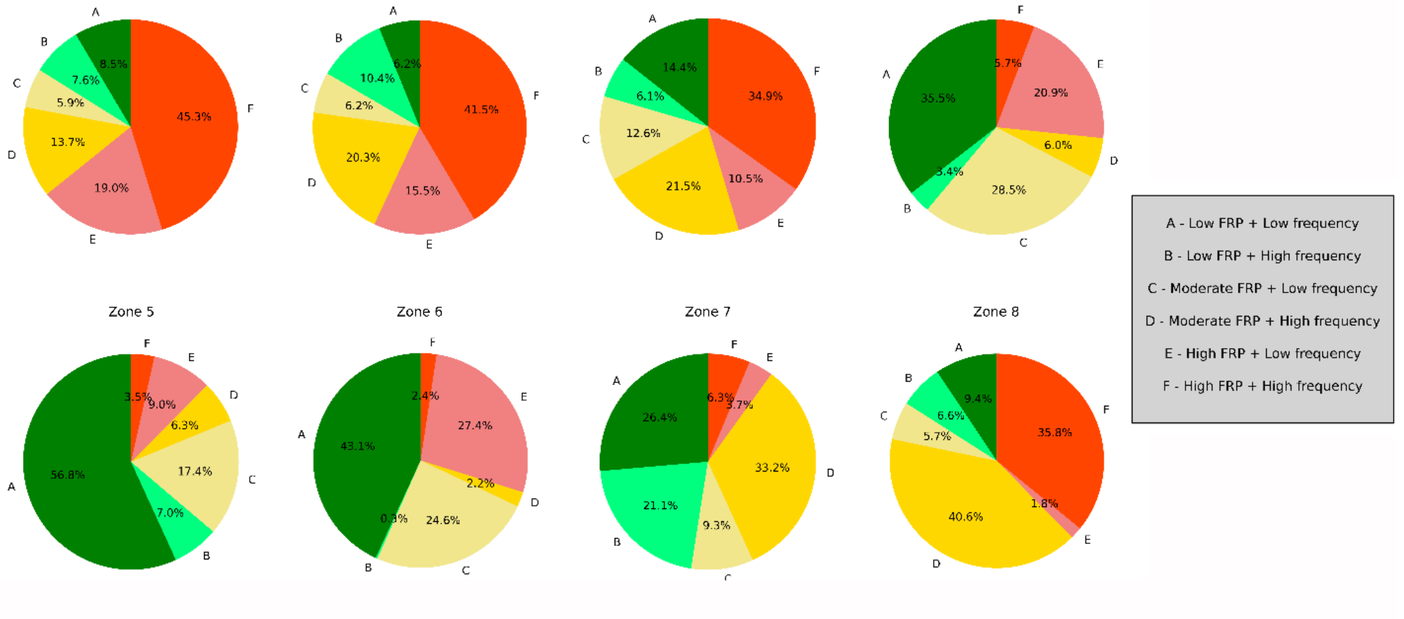


Ignitions

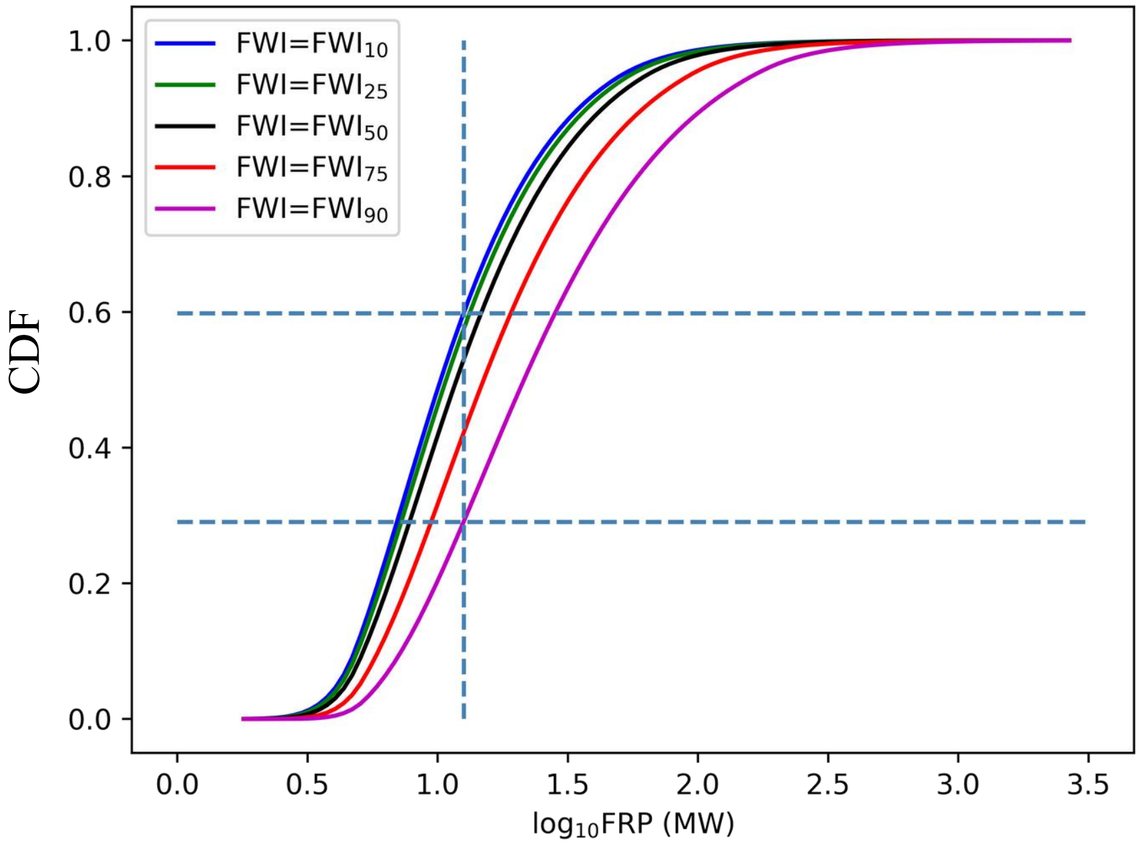


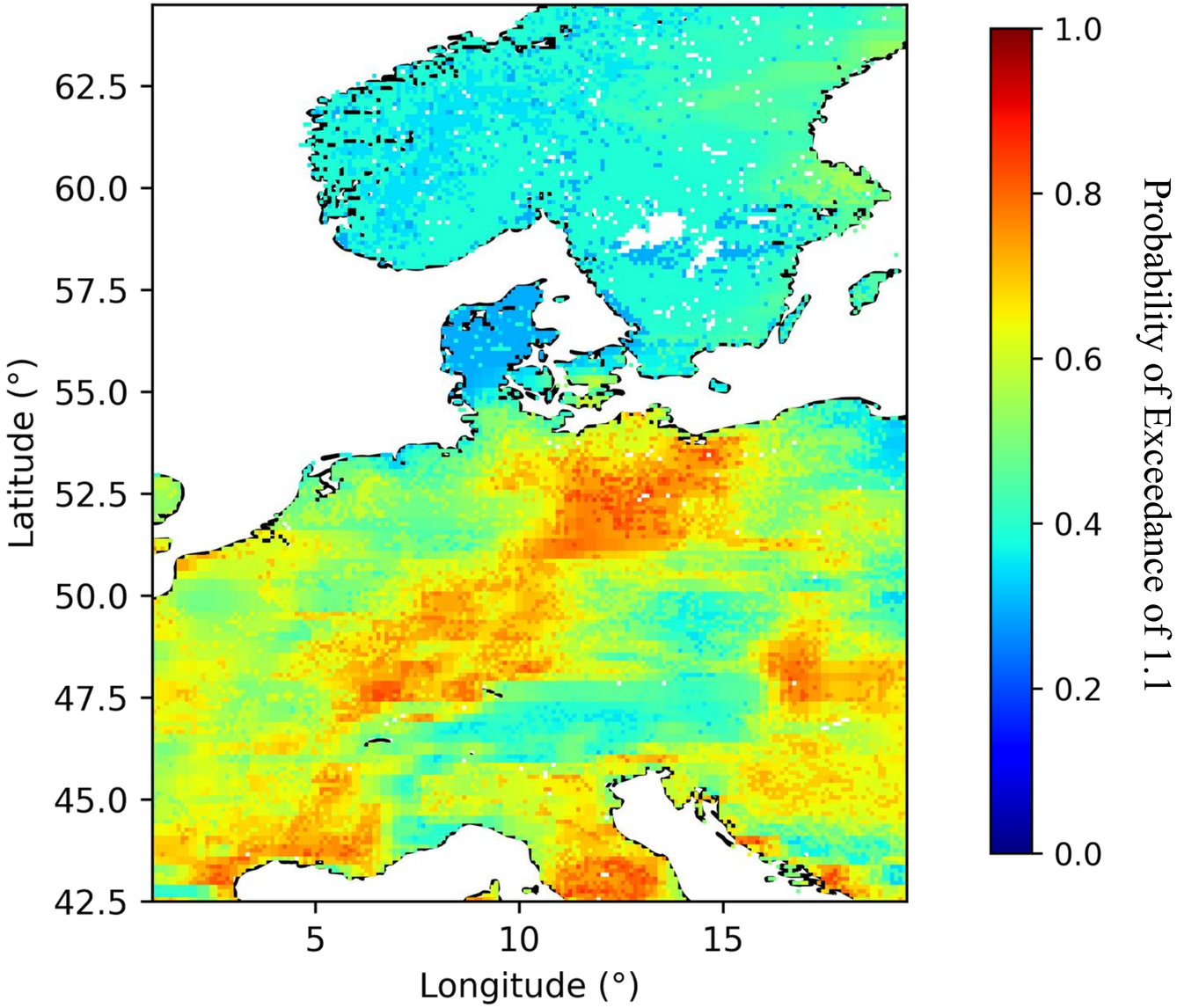
9. Regions


(a)
60°N
50°N
40°N
0°
20°E
40°E
Latitude
Longitude
Zone 1
Zone 2
Zone 3
Zone 4
Zone 5
Zone 6
Zone 7
Zone 8
Low FRP
Low frequency
Low FRP
High frequency
Moderate FRP
Low frequency
Moderate FRP
High frequency
High FRP
Low frequency
High FRP
High frequency
(b)


A
B
C
D
E
F
8.5%
7.6%
5.9%
13.7%
19.0%
45.3%
6.2%
10.4%
6.2%
20.3%
15.5%
41.5%
14.4%
6.1%
12.6%
21.5%
10.5%
34.9%
5.7%
20.9%
35.5%
3.4%
28.5%
6.0%
Zone 5
3.5%
9.0%
6.3%
17.4%
7.0%
56.8%
Zone 6
2.4%
27.4%
2.2%
0.3%
24.6%
43.1%
Zone 7
6.3%
3.7%
33.2%
9.3%
21.1%
26.4%
Zone 8
9.4%
6.6%
5.7%
35.8%
1.8%
40.6%
A - Low FRP + Low frequency
B - Low FRP + High frequency
C - Moderate FRP + Low frequency
D - Moderate FRP + High frequency
E - High FRP + Low frequency
F - High FRP + High frequency

10. Probability of exceedance of FRP



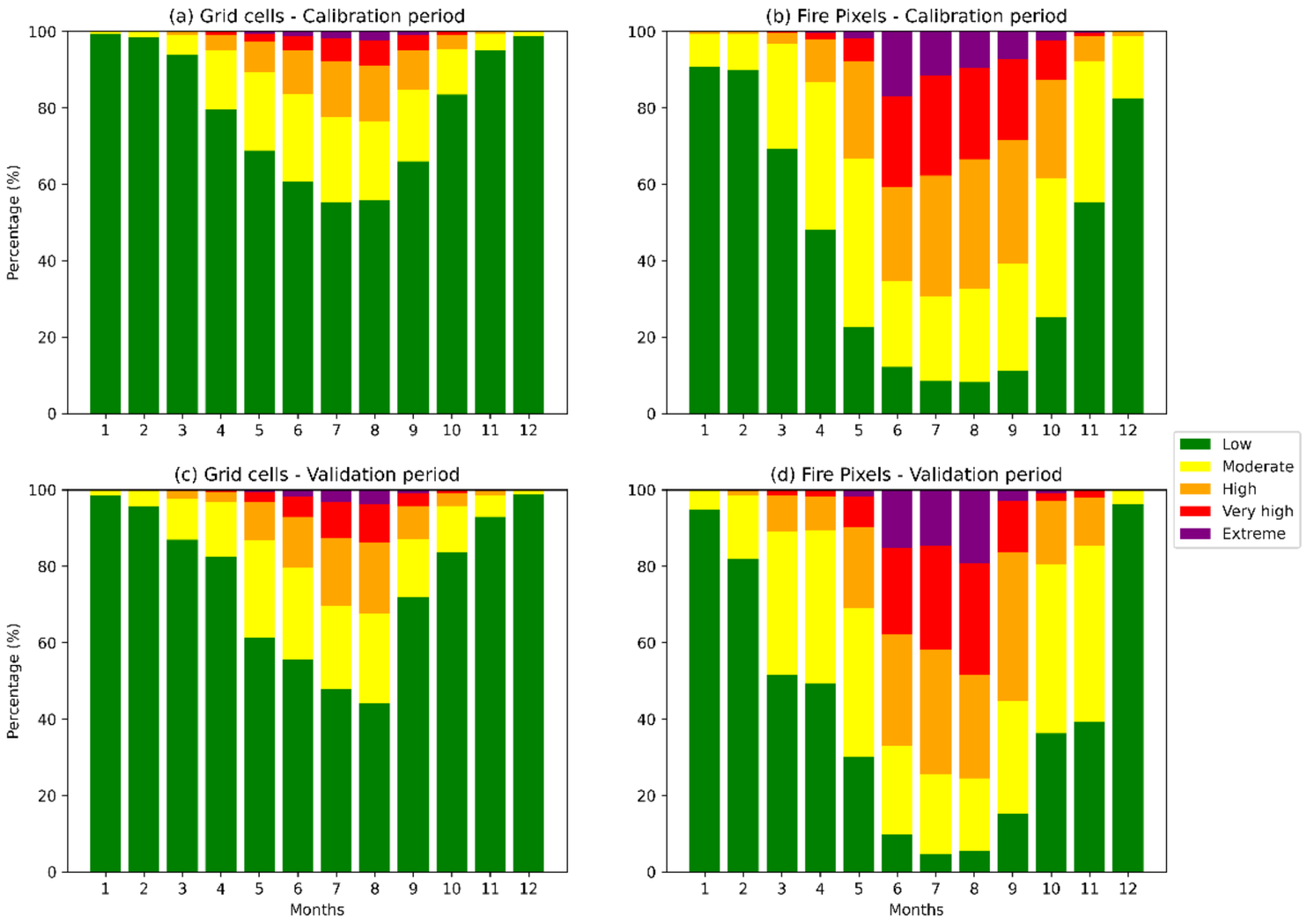


11. Classes of fire danger

Intensity level / Classes	Low	Moderate	High	Very high	Extreme
Low intensity fires (<P50)	**34** (**38**)	**32** (**33**)	20 (17)	10 (9)	4 (4)
Moderate fires (P50 – P95)	23 (**25**)	**28** (**27**)	**26** (23)	16 (16)	7 (9)
Intense fires (P95 – P99)	15 (15)	**23** (20)	**27** (**25**)	**23** (**23**)	12 (18)
Very intense fires (≥P99)	9 (8)	18 (15)	**28** (**25**)	**27** (**27**)	18 (**25**)

Calibration: 2001-2021
Validation: (2022)

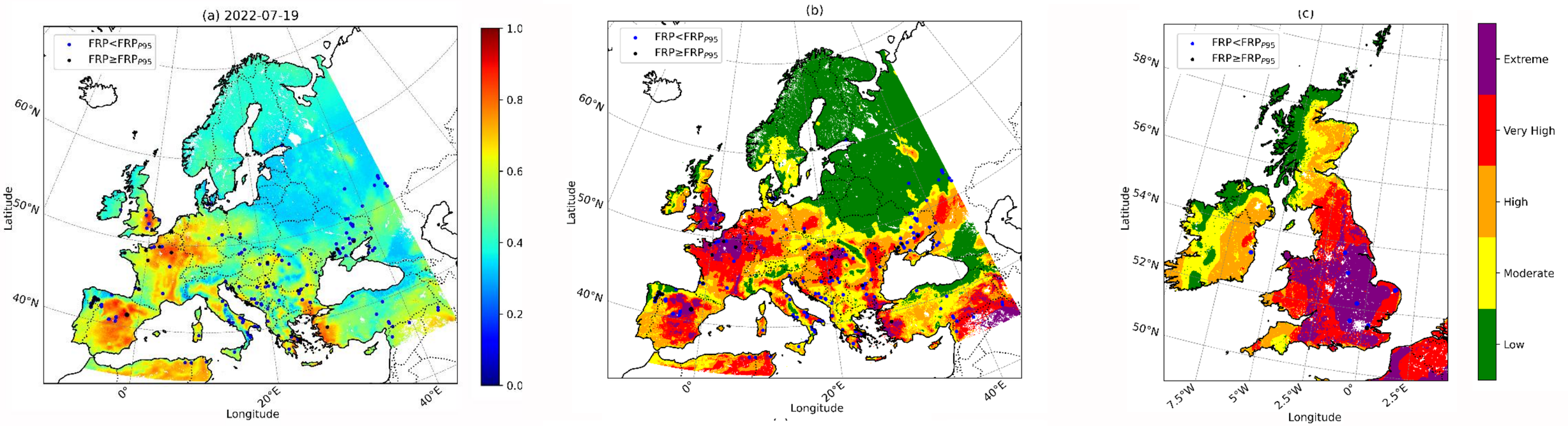
11. Classes of fire danger



2001-2021

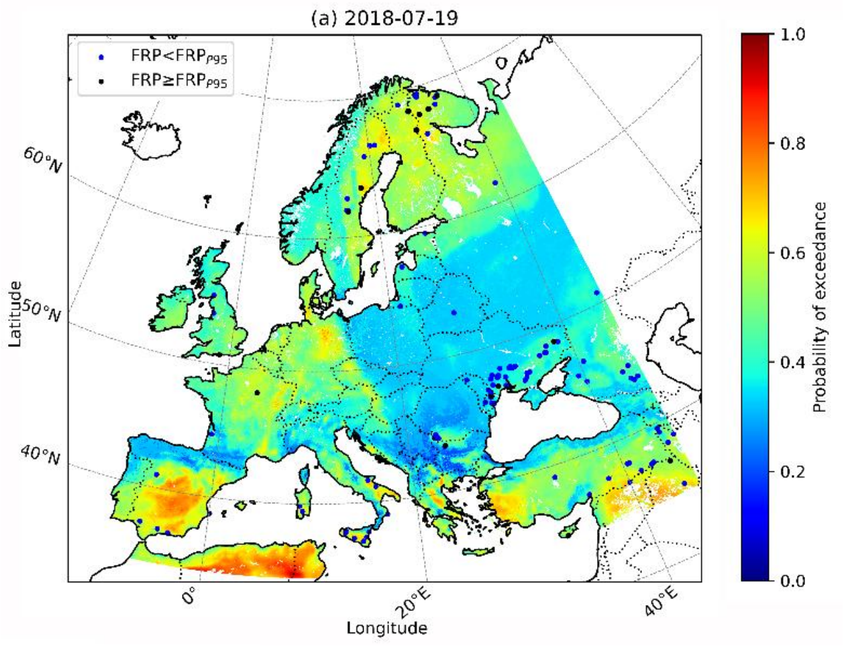
2022

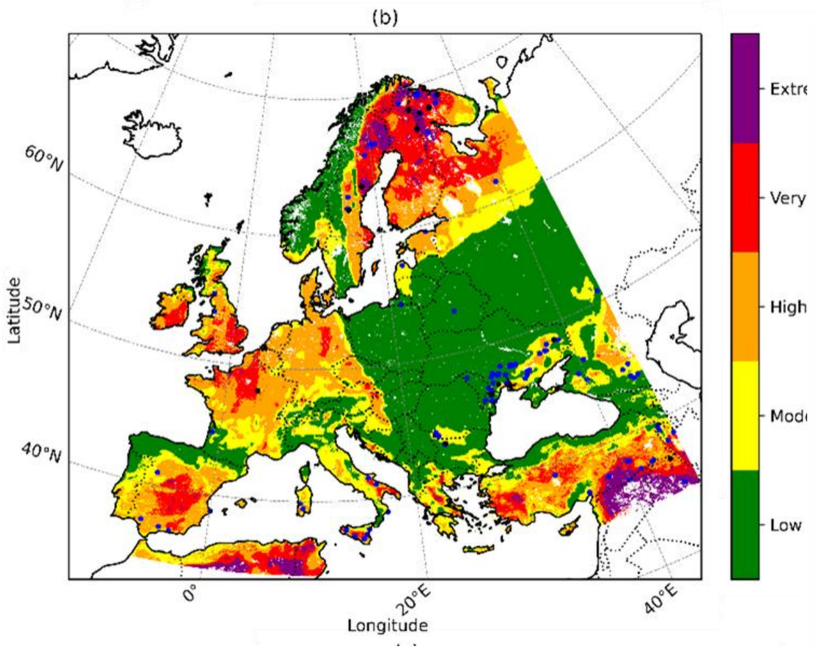
12. Case studies

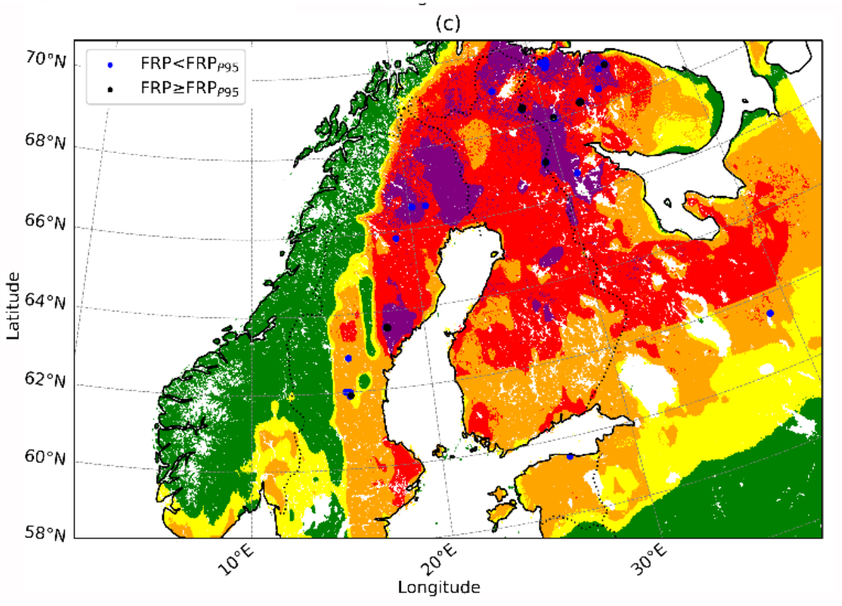


ENGLAND – 19 July 2018

12. Case studies

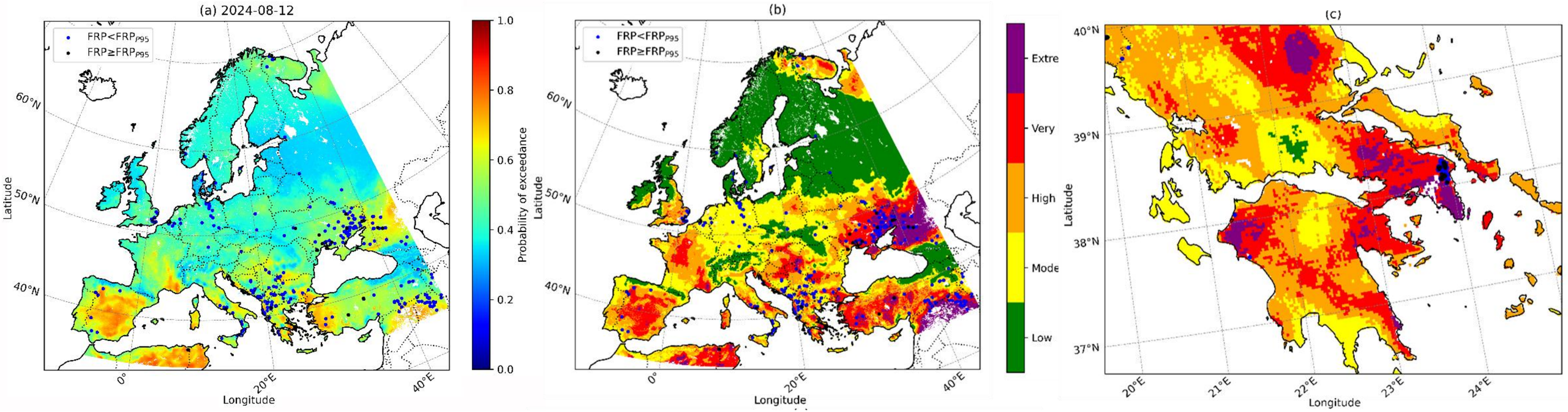






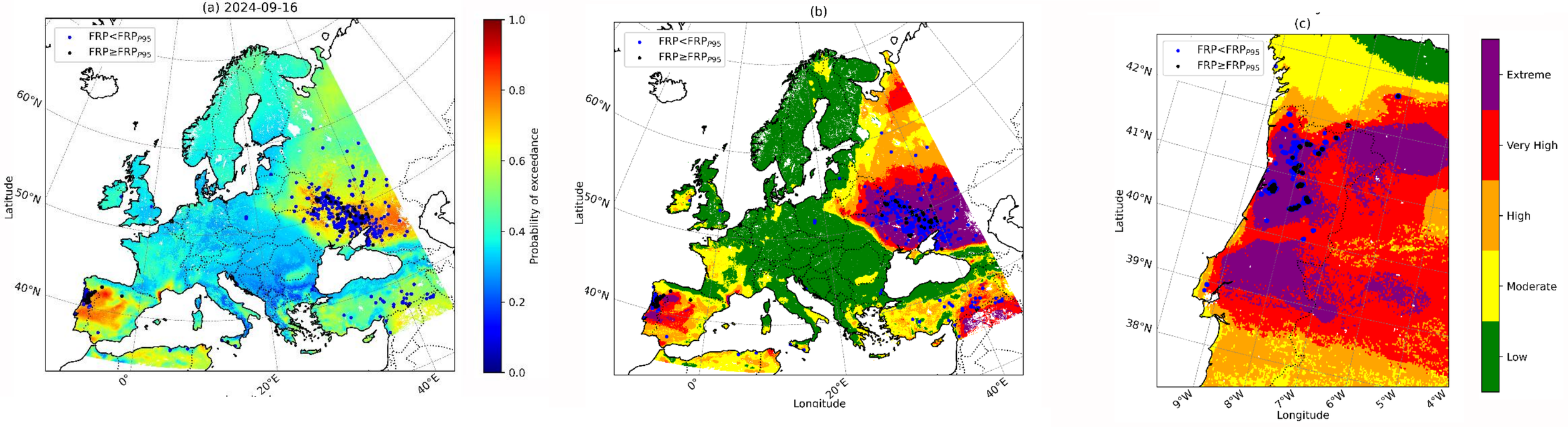
SWEDEN – 19 July 2022

12. Case studies



GREECE – 12 August 2024

12. Case studies



PORTUGAL – 16 September 2024

lsa-saf.eumetsat.int/en/data/map-service/

80%

EUMETSAT LSA SAF LAND SURFACE ANALYSIS

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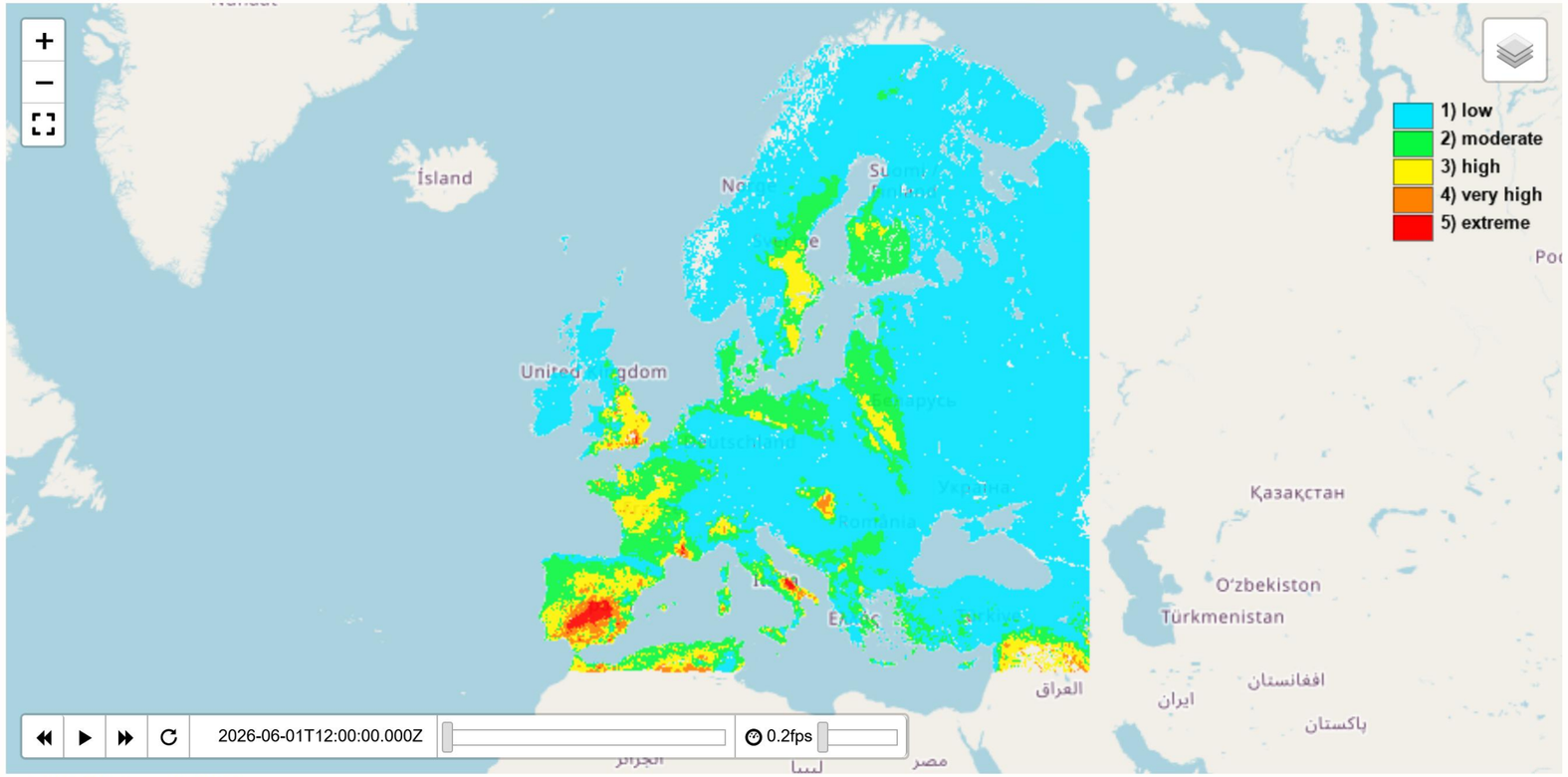
Forecast of Fire Risk - FRM



Lat: 70.9706, Lon: -48.2651

FRMv3 – Fire Risk Map v3 Forecast (Demonstration)