



EFFIS overview of the 2017 wildfire season

(up to 28.11.2017)

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& the EFFIS Team**

Joint Research Centre





Outline:

- **Short overview of EFFIS (European Forest Fire Information System)**
- **Overview of the 2017 wildfire season**



Short overview of EFFIS (European Forest Fire Information System)

- **Fire Danger tools**
- **Satellite data – Rapid Damage Assessment**
 - **Active fire mapping**
 - **Burnt area mapping**

EFFIS Current Situation



The screenshot shows the EFFIS website interface. At the top, there is a navigation bar with the European Commission logo on the left and the Copernicus logo on the right. Below the navigation bar, there is a main header with the text "COPERNICUS Emergency Management Service". A breadcrumb trail reads: "European Commission > JRC EU Science Hub > DRM > Copernicus EMS > European Forest Fire Information System (EFFIS)".

The main content area is titled "Welcome to EFFIS" and contains the following text:

The European Forest Fire Information System (EFFIS) supports the services in charge of the protection of forests against fires in the EU countries and provides the European Commission services and the European Parliament with updated and reliable information on wildland fires in Europe.

A number of specific applications are available through EFFIS:

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 40 countries in European, Middle East and North African countries. In 2015, EFFIS became one of the components of the Emergency Management Services in the EU Copernicus program.

The link to some of the most widely used applications is provided below. Additional applications such as the extension of EFFIS to the global level into a Global Wildfire Information System (GWIS) are available through the side "Applications" box.

The interface features several content blocks:

- Current Situation:** Includes a thumbnail of a map and text stating: "The most up to date information on the current fire season in Europe and in the Mediterranean area. This includes today meteorological fire danger maps and forecast up to 6 days, daily updated maps of hot spots and fire perimeters."
- Fire News:** Includes a thumbnail of a news map and text stating: "A selection of news from the press on wildland fires in Europe updated daily by the EFFIS team. News can be browsed for specific countries selected by the user from the news map."
- Visit the brand-new GWIS Current Situation Viewer:** A call-to-action button.
- EFFIS Damage Assessment:** A section with the following data:
 - EFFIS Burned Area (ha)**
 - Total EU28 Countries**
 - Mapped: 56156 (13.3 % Forest)
 - Estimated: 74874.67
 - Total EFFIS Coverage**
 - Mapped: 100025
 - Estimated: 133366.67
 - (Updated daily)
 - [BDA Disclaimers and layer information](#)
- Applications:** A list of available tools:
 - Current Situation Viewer
 - Long-term seasonal fire weather forecast
 - Long-term monthly fire weather forecast
 - Fire History
 - Fire news

EFFIS Current Situation



The screenshot shows the EFFIS website interface. At the top, there are logos for the European Commission and Copernicus. Below the navigation bar, the 'Current Situation Viewer' is highlighted. The 'Welcome to EFFIS' section provides an overview of the system. The 'Current Situation' block features a map of Europe and text describing the fire danger maps and forecasts. The 'Fire News' block includes a news map and a list of recent news items. The 'Applications' block lists various tools available to users.

Welcome to EFFIS

The European Forest Fire Information System (EFFIS) provides information against fires in the EU countries and provides it with updated and reliable information on wildland fires. A number of specific applications are available. Since 1998, EFFIS is supported by a network of experts from 40 countries in European, Middle East and North African countries. In 2015, EFFIS became one of the components of the Emergency Management Services in the EU Copernicus program. The link to some of the most widely used applications is provided below. Additional applications such as the extension of EFFIS to the global level into a Global Wildfire Information System (GWIS) are available through the side "Applications" box.

Current Situation

The most up to date information on the current fire season in Europe and in the Mediterranean area. This includes today meteorological fire danger maps and forecast up to 6 days, daily updated maps of hot spots and fire perimeters.

Fire News

A selection of news from the press on wildland fires in Europe updated daily by the EFFIS team. News can be browsed for specific countries selected by the user from the news map.

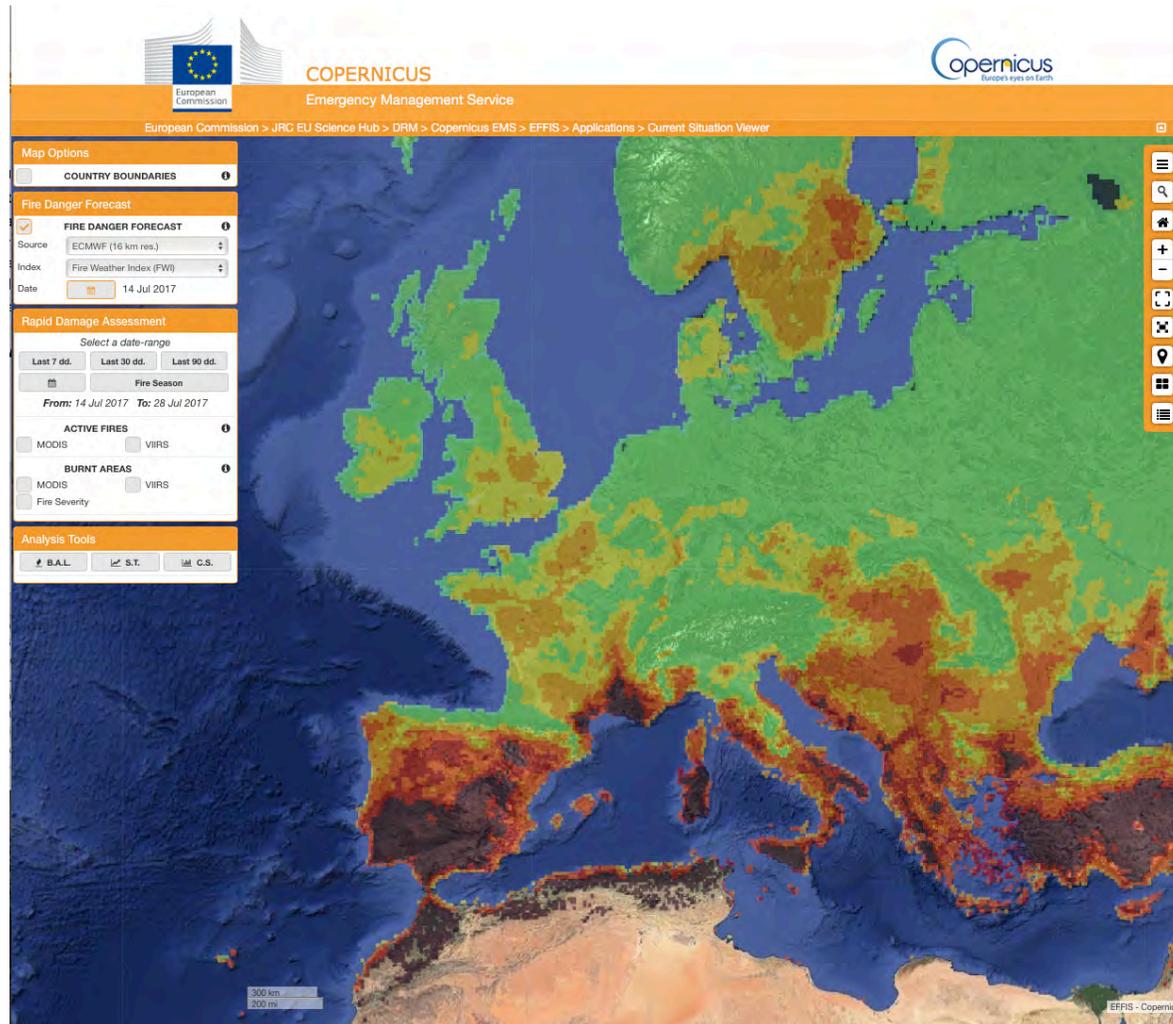
Applications

- Current Situation Viewer
- Long-term seasonal fire weather forecast
- Long-term monthly fire weather forecast
- Fire History
- Fire news

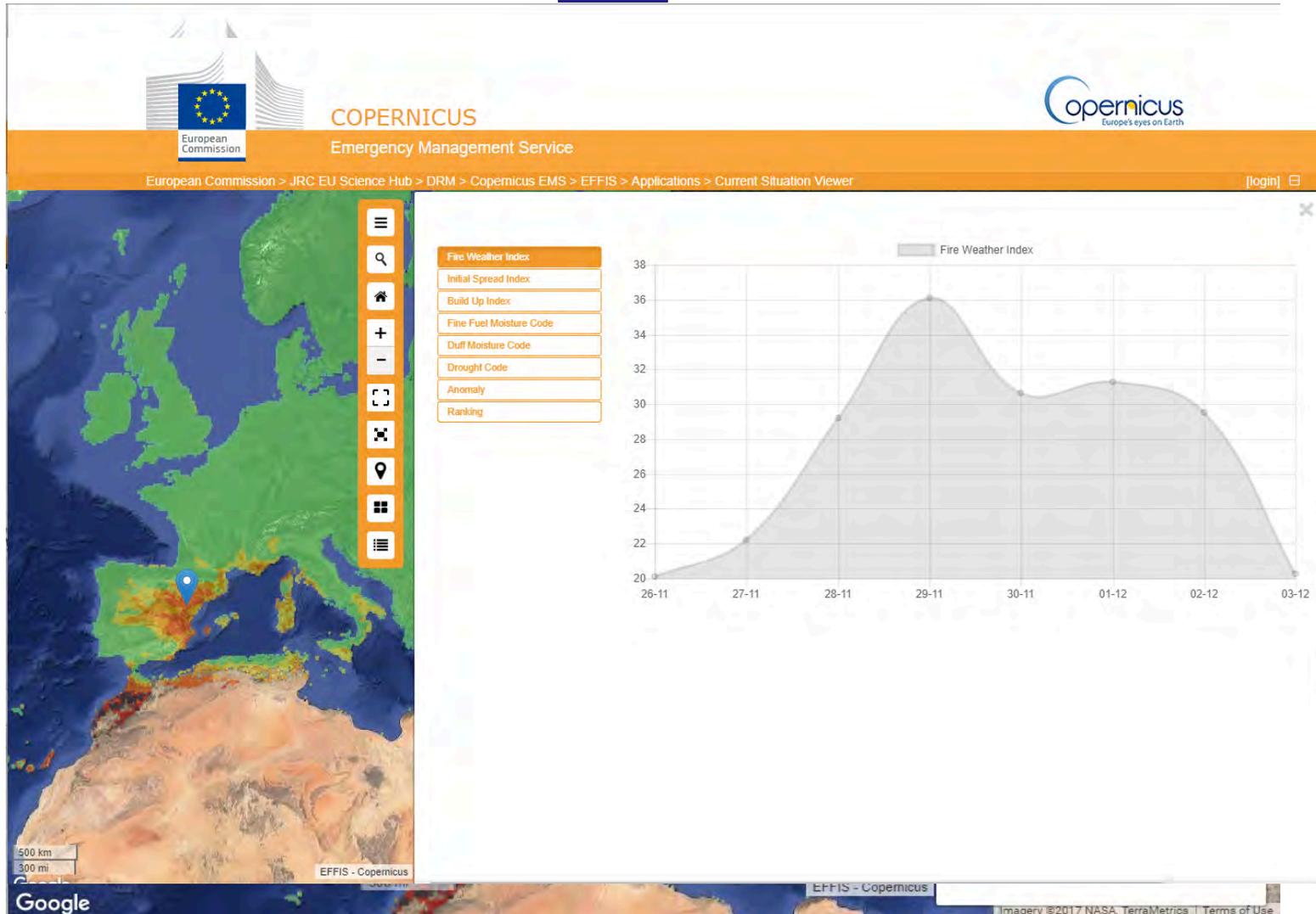
EFFIS Damage Assessment

EFFIS Burned Area (ha)
Total EU28 Countries
Mapped: 56156 (13.3 % Forest)
Estimated: 74874.67
Total EFFIS Coverage
Mapped: 100025
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(Updated daily)
(BDA Disclaimer and layer information)

Fire danger forecast



Fire danger forecast





Active fire and burnt area mapping



Active fire and burnt area mapping

European Commission **COPERNICUS** Emergency Management Service **copernicus** Europe's eyes on Earth

European Commission > JRC EU Science Hub > DRM > Copernicus EMS > EFFIS > Applications > Current Situation Viewer

Map Options

COUNTRY BOUNDARIES ⓘ

Fire Danger Forecast

FIRE DANGER FORECAST ⓘ

Source: ECMWF (16 km res.)

Index: Fire Weather Index (FWI)

Date: 14 Jul 2017

Rapid Damage Assessment

Select a date-range

Last 7 dd. Last 30 dd. **Last 90 dd.**

Fire Season

From: 30 Aug 2017 To: 28 Nov 2017

ACTIVE FIRES ⓘ

MODIS VIIRS

BURNT AREAS ⓘ

MODIS VIIRS

Fire Severity

Analysis Tools

B.A.L. S.T. C.S.

10 km
5 mi

EFFIS - Copernicus
Imagery ©2017 TerraMetrics Terms of Use Report a map error
Imagery ©2017 TerraMetrics Terms of Use Report a map error



European Commission

Global Wildfire Information System

<http://gwis.jrc.ec.europa.eu> & <https://www.earthobservations.org/activity.php?id=126>

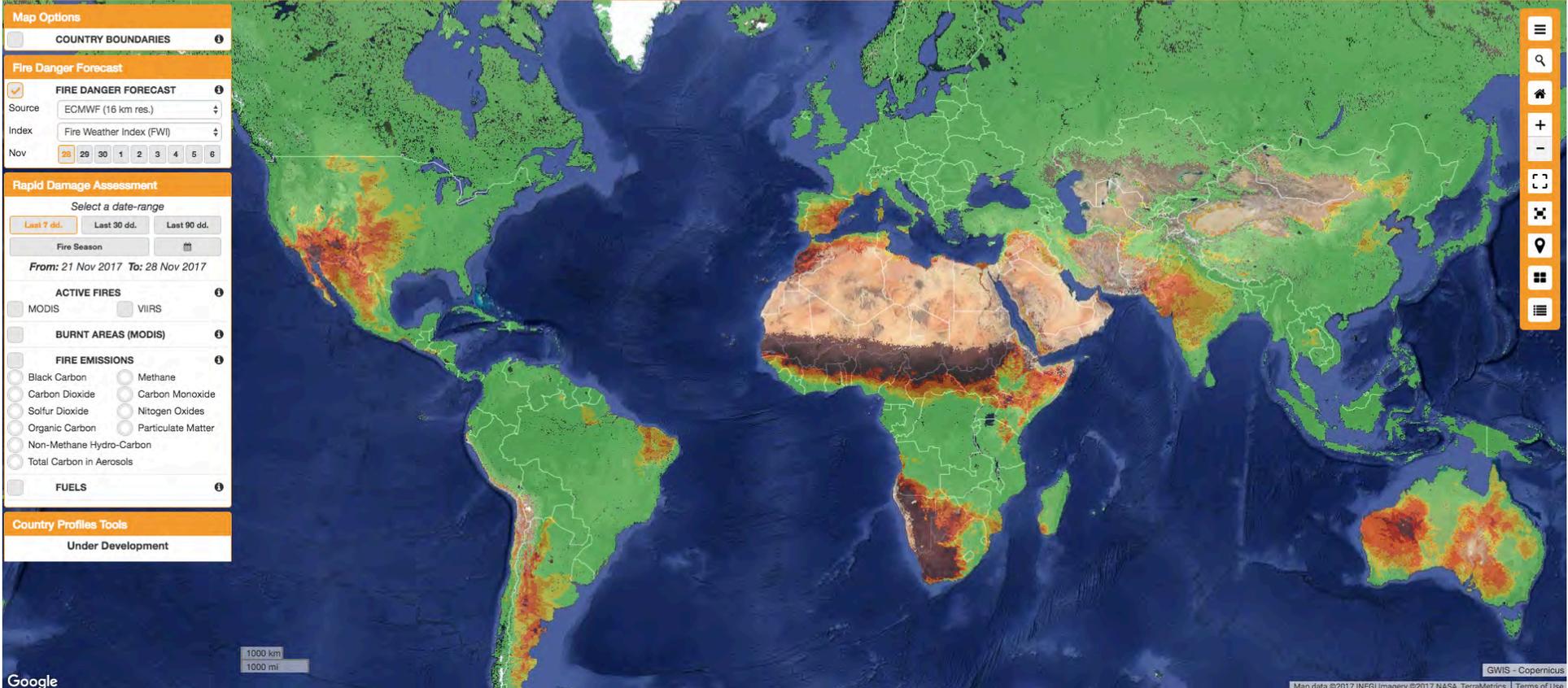


COPERNICUS

Emergency Management Service



European Commission > JRC EU Science Hub > DRM > Copernicus EMS > GWIS > Applications > Current Situation Viewer



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GWIS - Copernicus



**Emergency
Management**

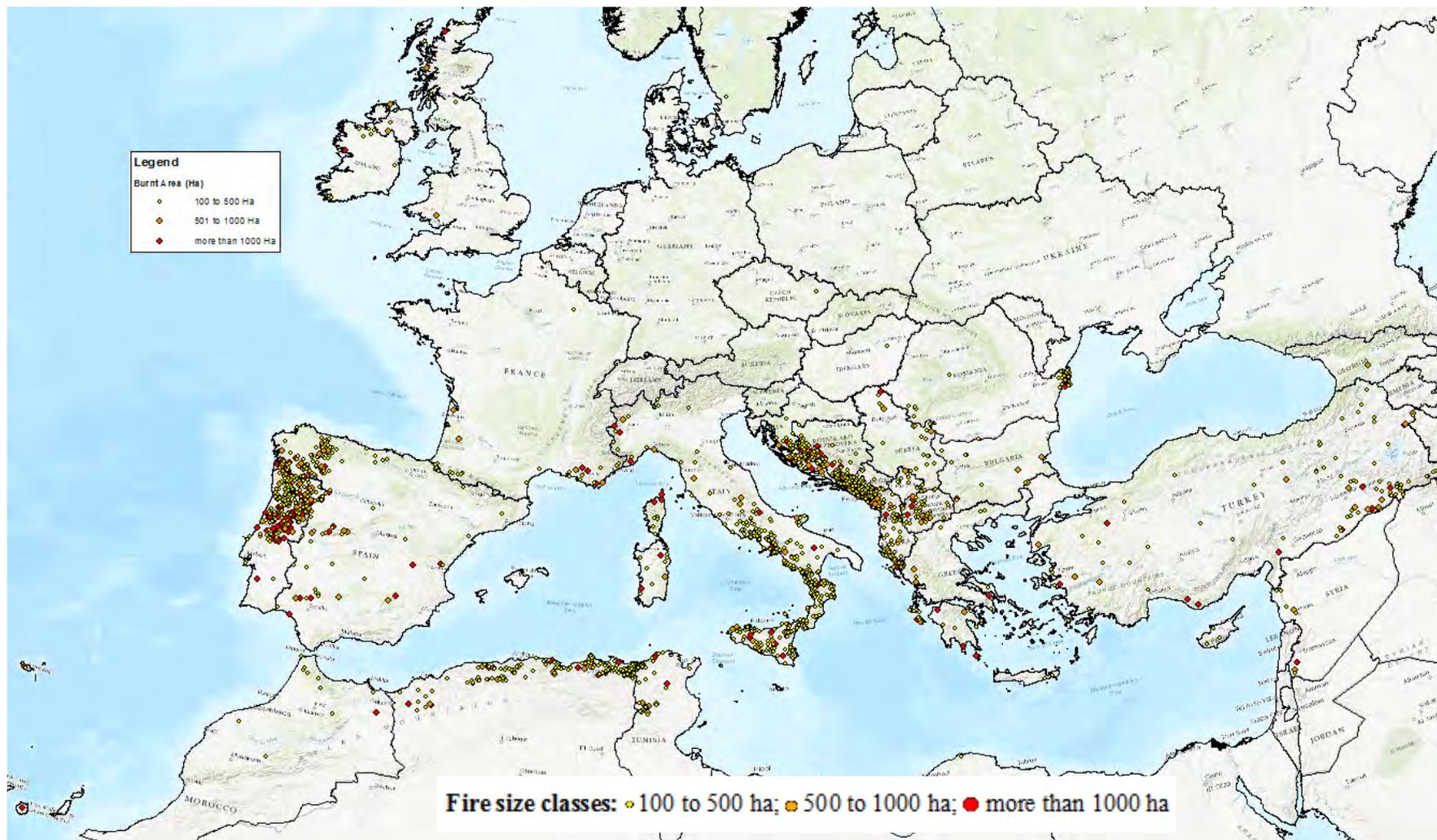


EFFIS overview of the 2017 wildfire season



Space

Spatial distribution of large fires

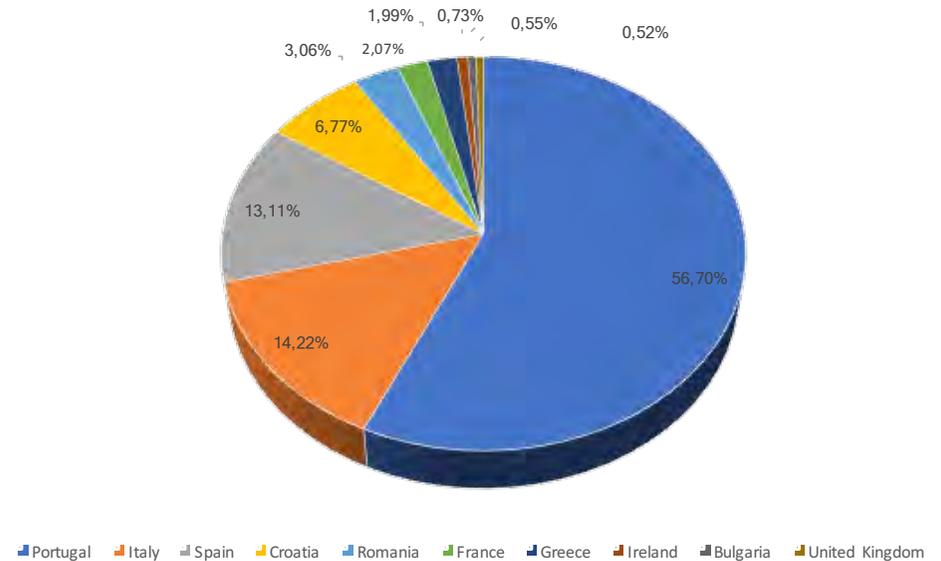


TOTAL burned area mapped in EFFIS: Europe, Middle East and North Africa

Total Burnt Area (ha)		
	Area (ha)	Number of fires (> 30 ha)
European Union:	994,332.5	1,916
Other European countries:	264,252.0	812
Middle East and North Africa:	121,327.6	381
Total:	1,379,912.1	3,109

Burned area by mapped in the EU countries

Country	Area (HA)	%	Number of fires (>30 ha)
Portugal	563,790.30	56.70%	412
Italy	141,425.40	14.22%	788
Spain	130,389.30	13.11%	318
Croatia	67,362.80	6.77%	104
Romania	30,445.80	3.06%	65
France	20,623.70	2.07%	90
Greece	19,779.40	1.99%	57
Ireland	7,241.10	0.73%	18
Bulgaria	5,438.80	0.55%	18
United Kingdom	5,126.70	0.52%	19
Sweden	732.9	0.07%	8
Cyprus	672.4	0.07%	4
Hungary	458.3	0.05%	3
Finland	234	0.02%	4
Slovenia	187.7	0.02%	2
Czech republic	144.9	0.01%	1
Denmark	130.4	0.01%	2
Estonia	57.5	0.01%	1
Germany	56.7	0.01%	1
Latvia	34.5	0.00%	1
Total:	994,332.60	100.00%	2,728



Burned area mapped in the rest of Europe, Middle East and North Africa

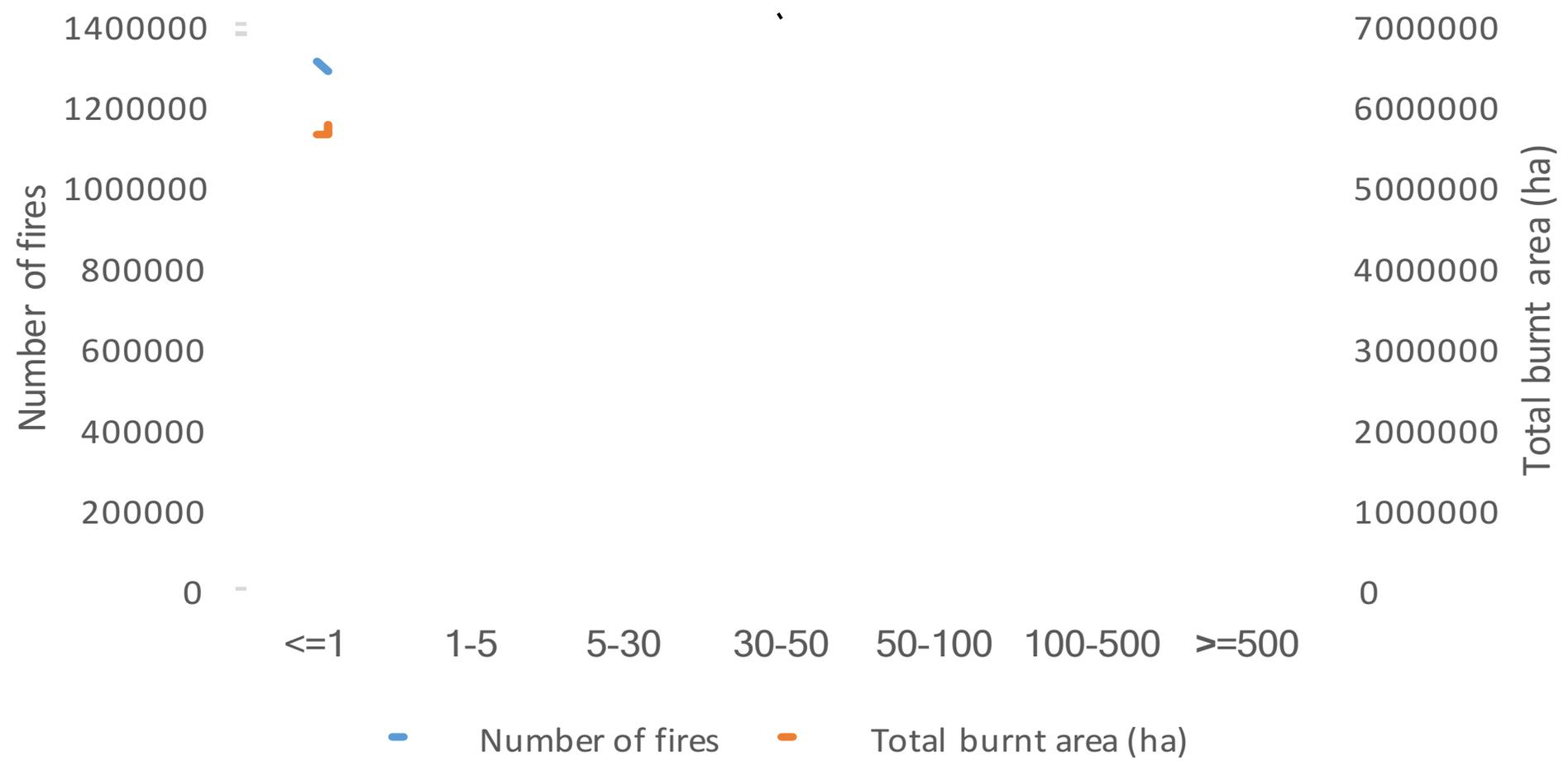
Country	Area (HA)	%	Number of fires > 30 ha
Bosnia and Herzegovina	83,131.70	32.46%	145
Montenegro	51,661.20	20.17%	124
Turkey	48,085.90	18.78%	157
Albania	42,281.00	16.51%	224
The former Yugoslav Repuk	25,751.60	10.06%	88
Kosovo under UNSCR 1244	4,056.30	1.58%	34
Georgia	854	0.33%	1
Norway	260.3	0.10%	2
Total	256,082.00	100.00%	775

21

Middle East and North Africa			
Country	Area (HA)	%	Number of fires >30 ha
Algeria	91,468.8	75.4%	284
Lebanon	45.4	0.0%	1
Libya	234.0	0.2%	3
Morocco	4,771.9	3.9%	24
Syria	5,742.6	4.7%	18
Tunisia	19,065.0	15.7%	51
Total:	121,327.6	100.0%	381



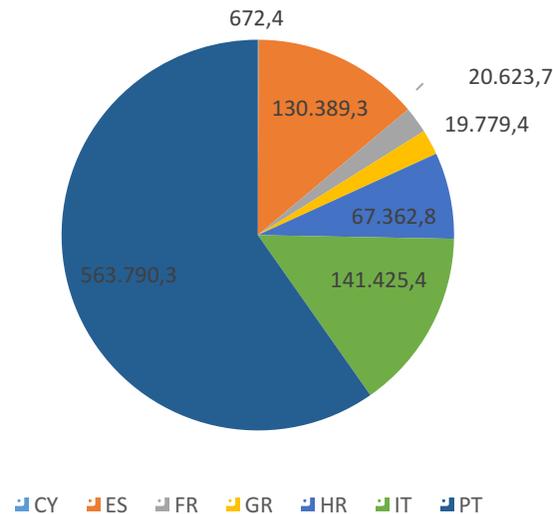
EU28



2:

Burnt areas by fire size class: EU Mediterranean countries

Fire size class	CY	ES	FR	GR	HR	IT	PT	Total:	% of Total:
<100 ha	32.8	9,639.2	2,582.0	1,327.9	1,669.4	25,419.7	10,385.5	51,056.5	5.4%
>=100 and <500 ha	639.6	20,942.0	5,015.3	4,250.6	11,691.4	66,906.0	28,136.6	137,581.5	14.6%
>=500 and < 1000 ha	0.0	16,543.8	2,812.0	2,983.3	12,201.6	15,454.4	30,103.7	80,098.8	8.5%
>=1000 ha	0.0	83,264.3	10,214.4	11,217.6	41,800.3	33,645.3	495,164.6	675,306.5	71.5%
Total:	672.4	130,389.3	20,623.7	19,779.4	67,362.8	141,425.4	563,790.3	944,043.3	100.0%

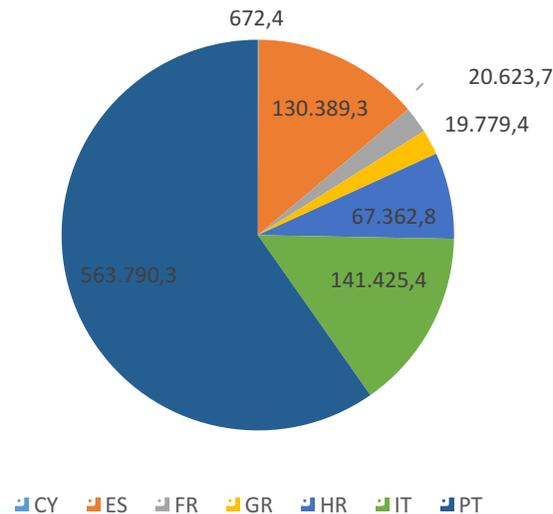


Corresponds to over 95% of total burnt area mapped by EFFIS in the EU in 2017

2:

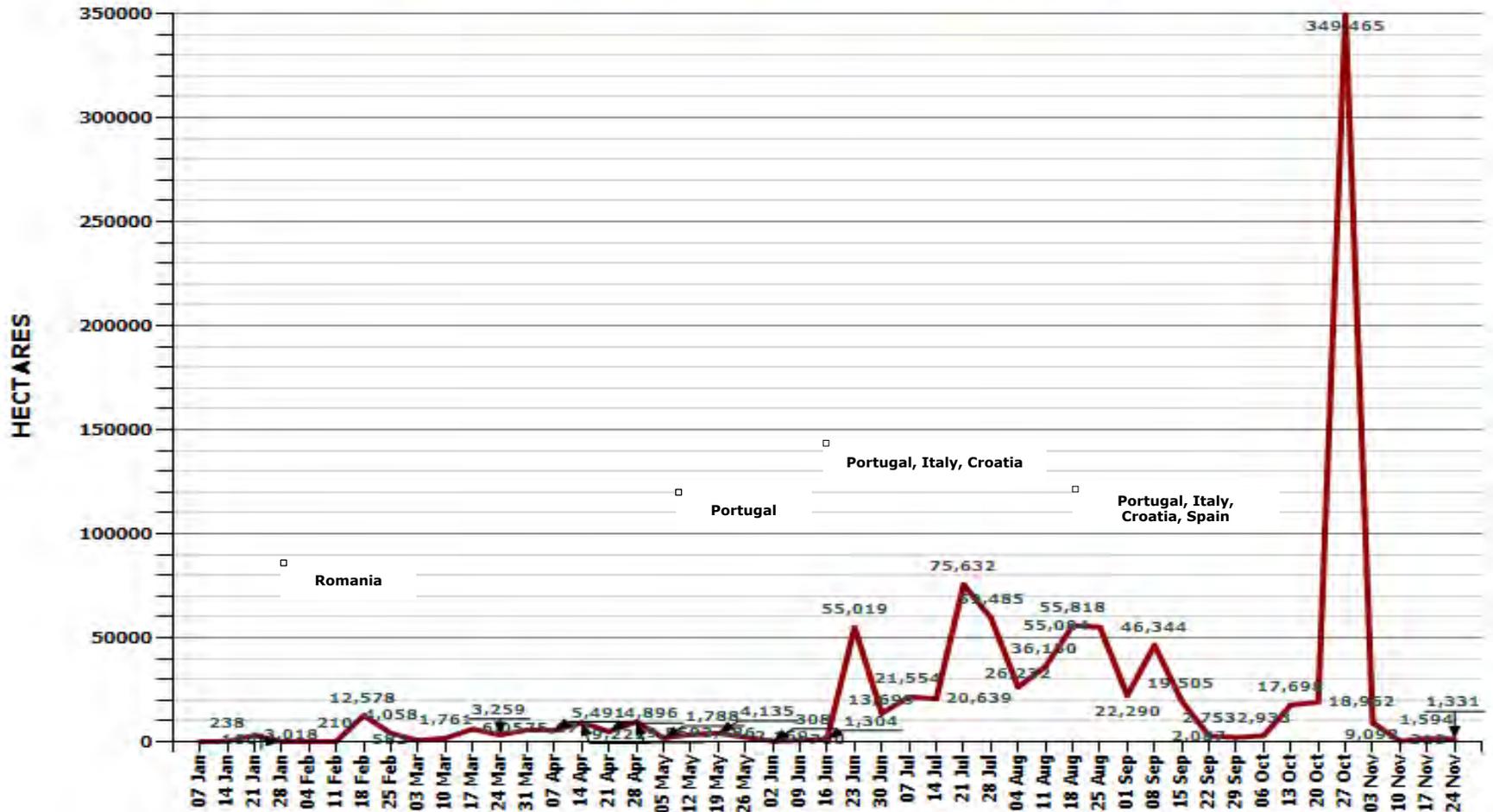
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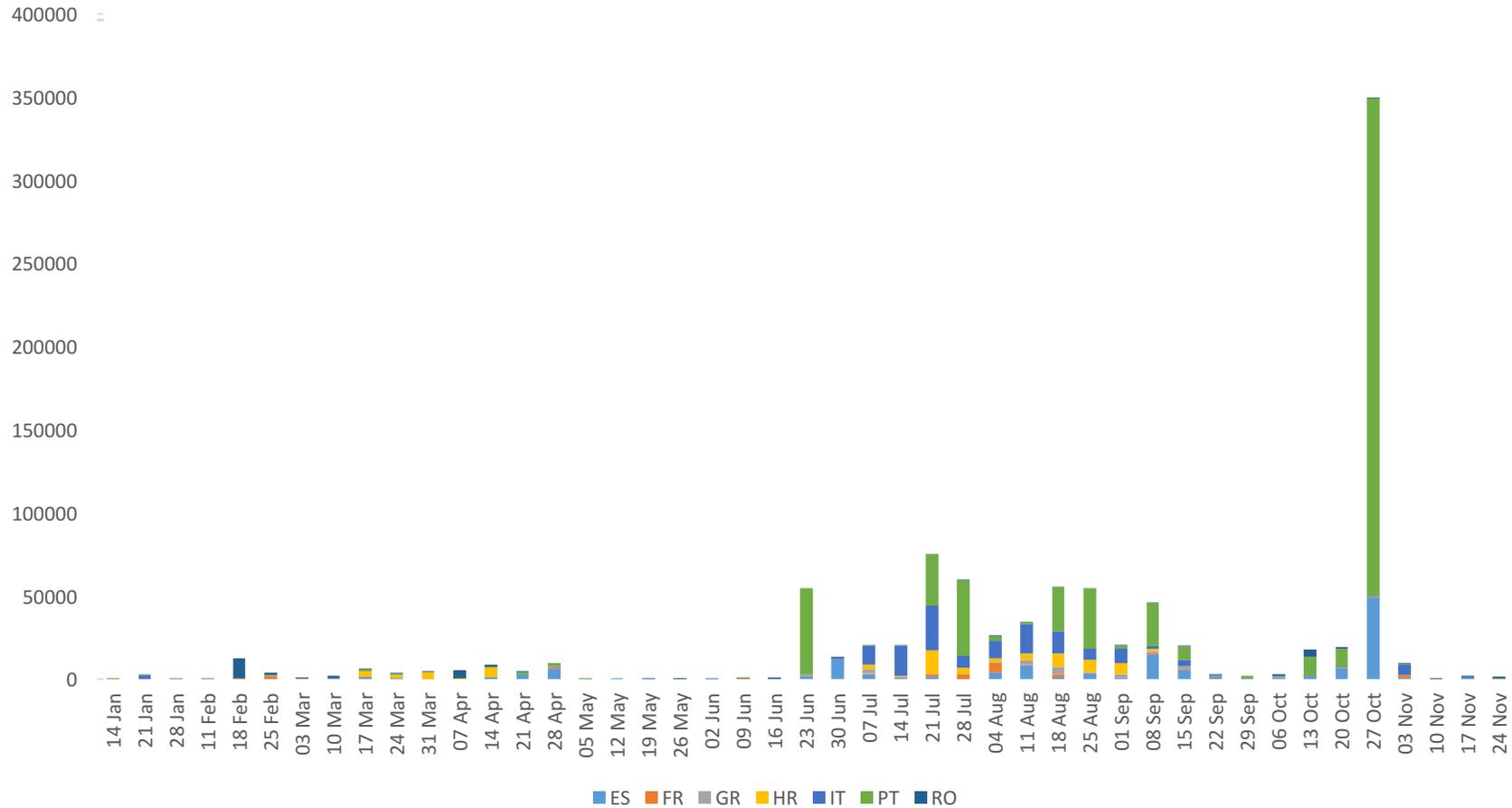


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Total burnt area evolution in EU countries



Weekly burnt area mapped in the most affected European countries

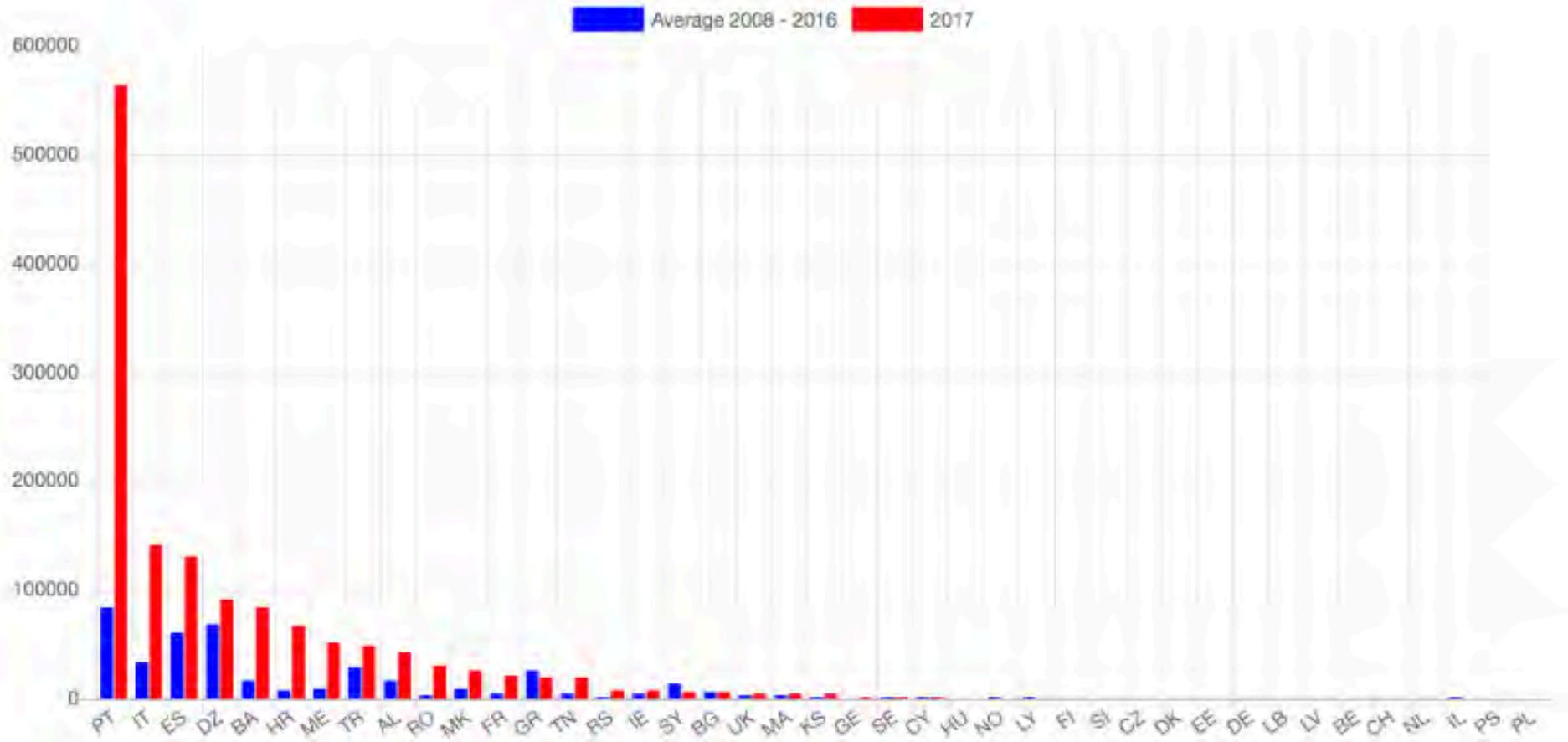


Burnt Areas

Number of Fires

EFFIS ESTIMATES BY COUNTRIES

Burnt Areas mapped in EFFIS (*)

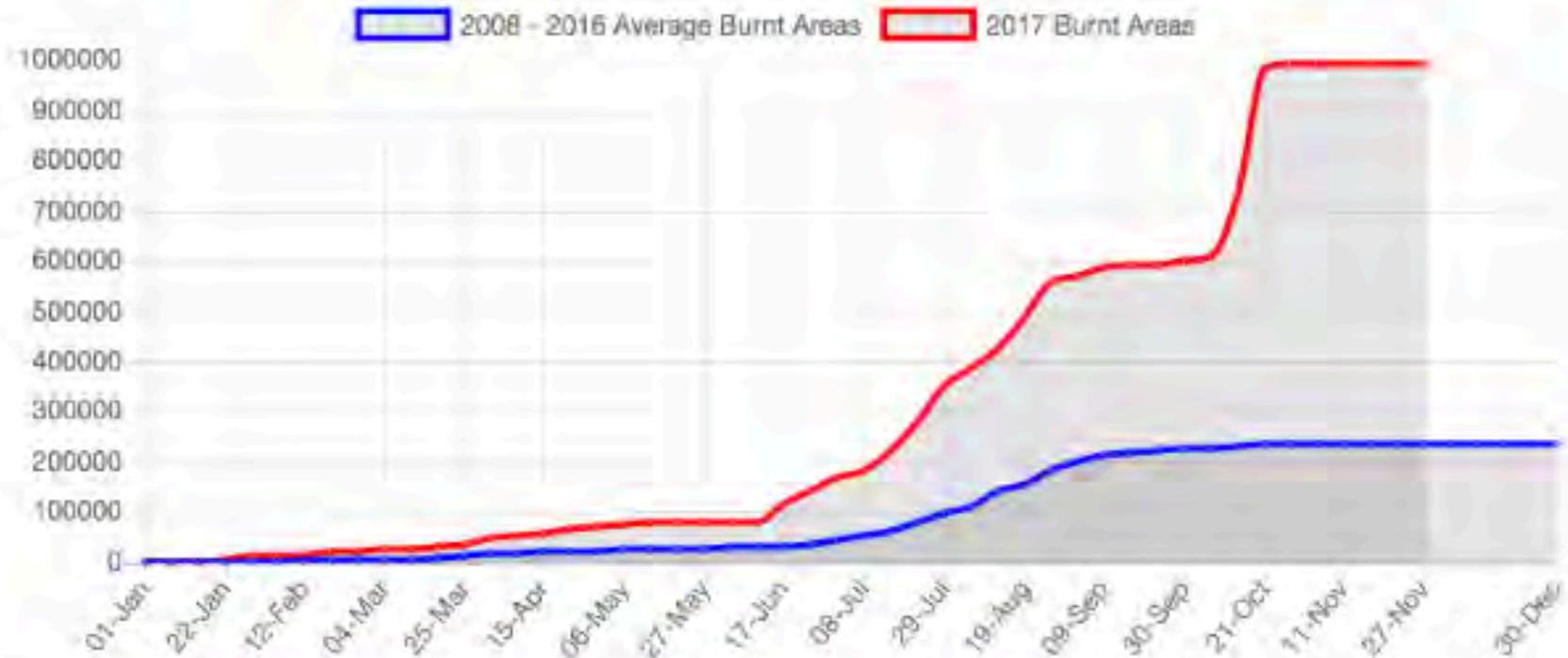


Burnt Areas

Number of Fires

SEASONAL TREND - Total EU

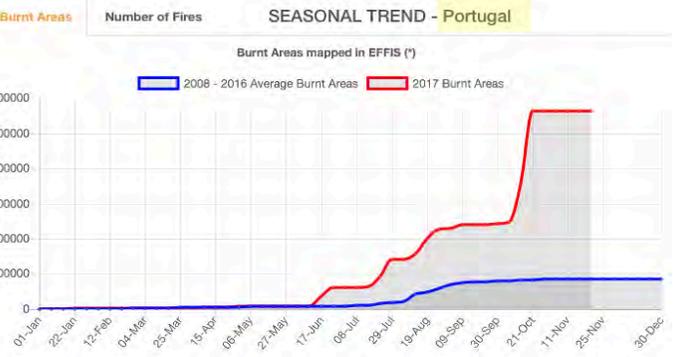
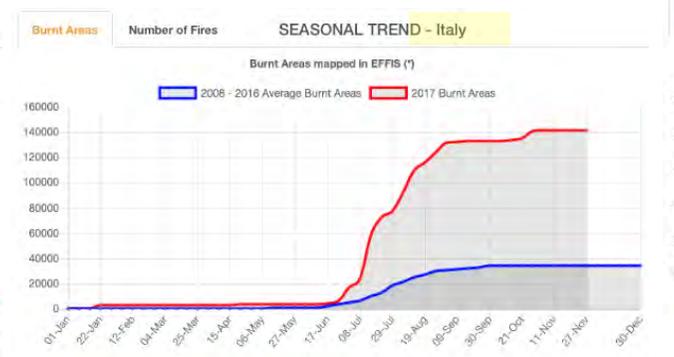
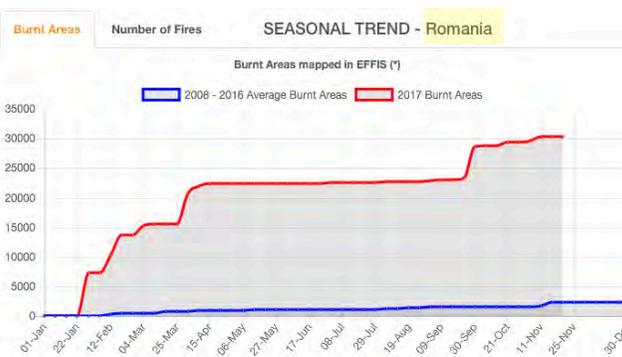
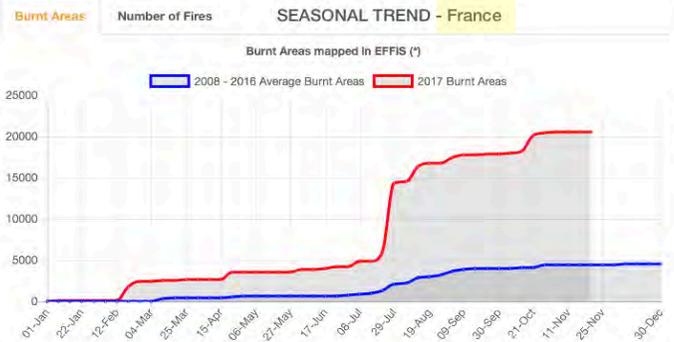
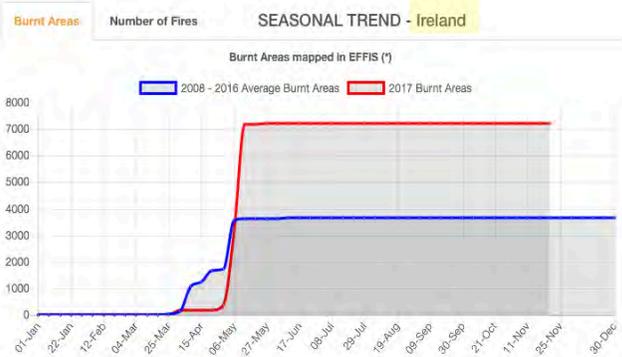
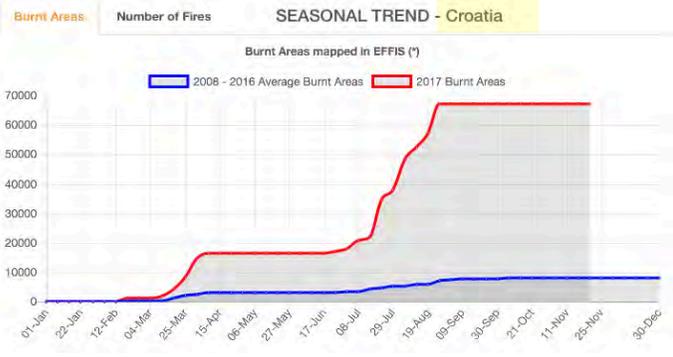
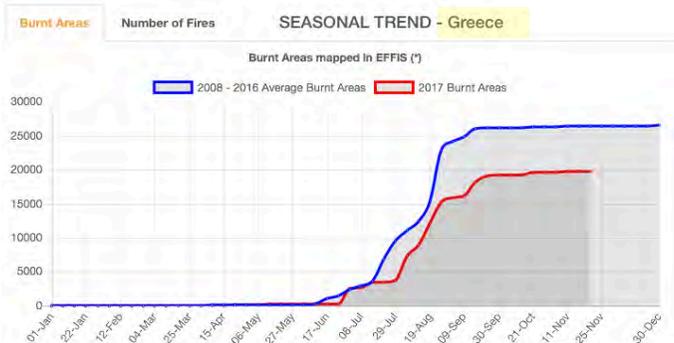
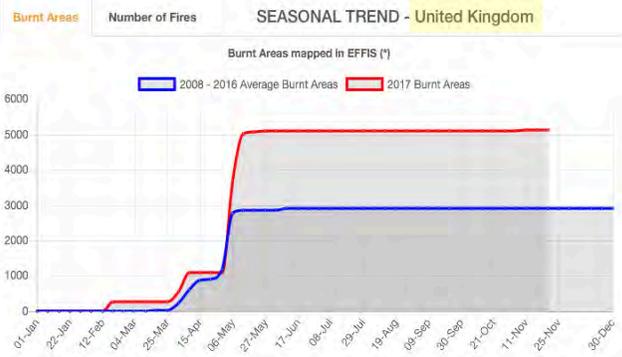
Burnt Areas mapped in EFFIS (*)



(*) The burnt areas mapped in EFFIS represent, on average, about 80% of the total area burned by wildfires, since only fires larger than 30 ha are mapped. The area burnt by fires smaller than 30 ha represent about 20% of the total burnt area in each country, but this area is not mapped in EFFIS.



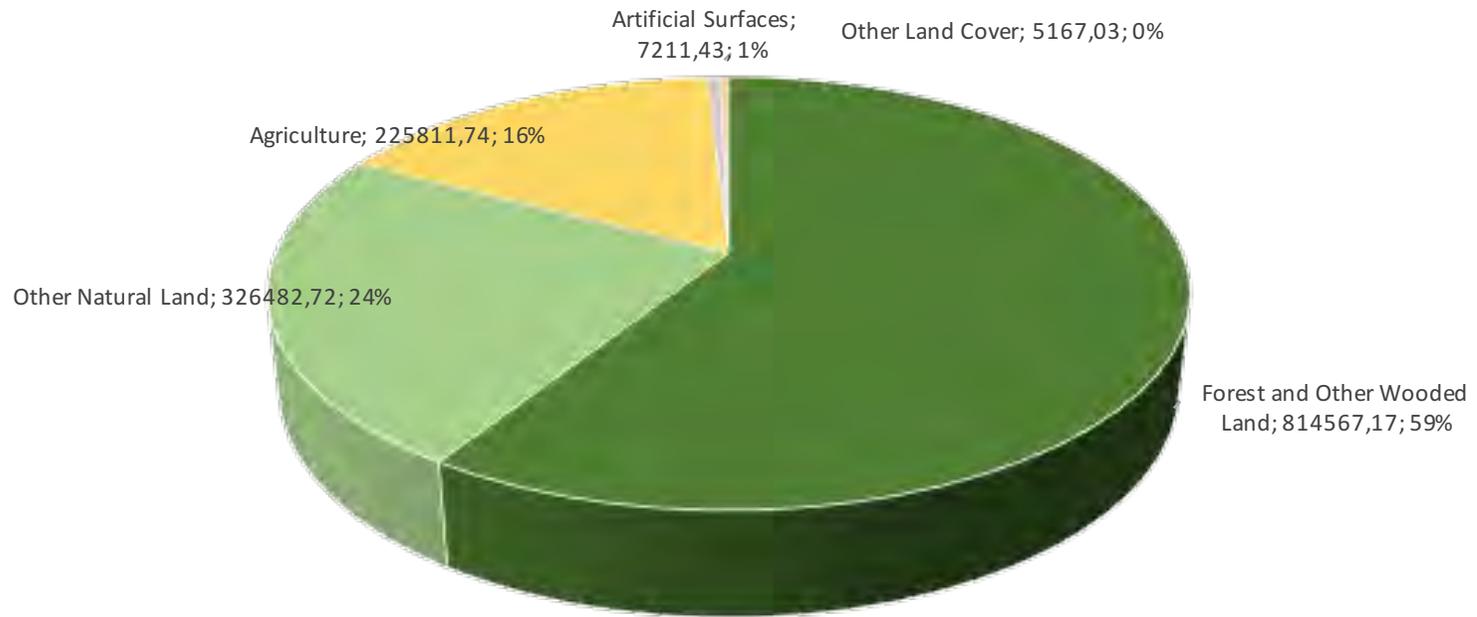
European Commission



Land cover affected by forest fires in European countries

Land Cover affected by forest fires in EU countries (ha)

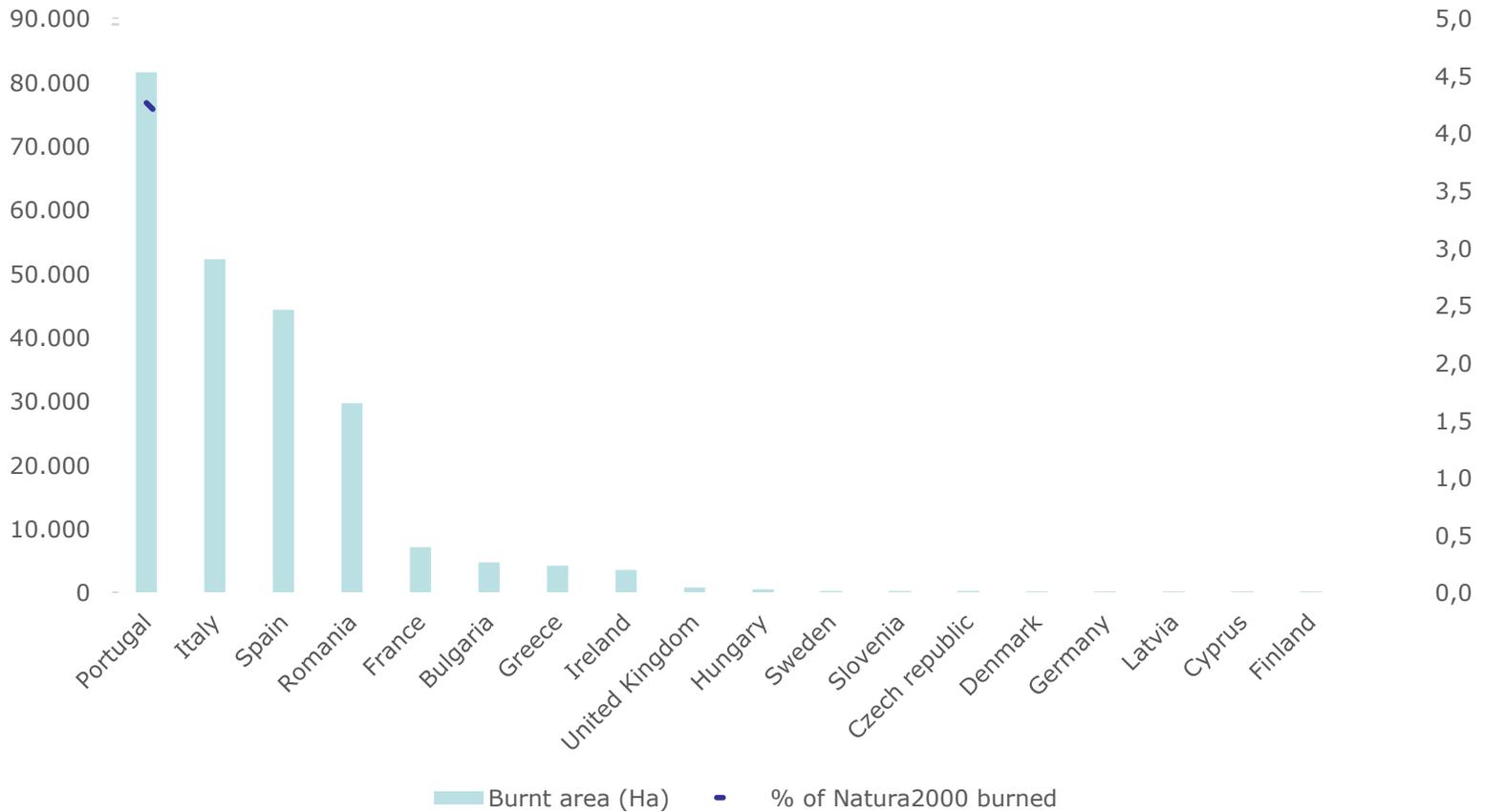
Land Cover affected by forest fires in EU countries (ha; % of total area)



■ Forest and Other Wooded Land
 ■ Other Natural Land
 ■ Agriculture
 ■ Artificial Surfaces
 ■ Other Land Cover

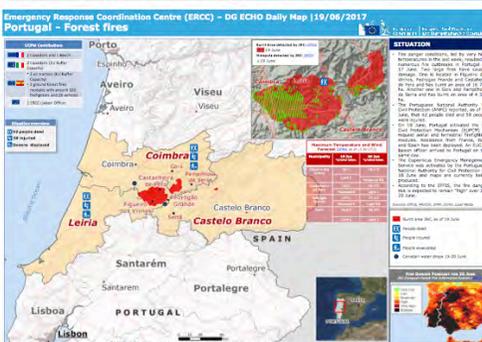
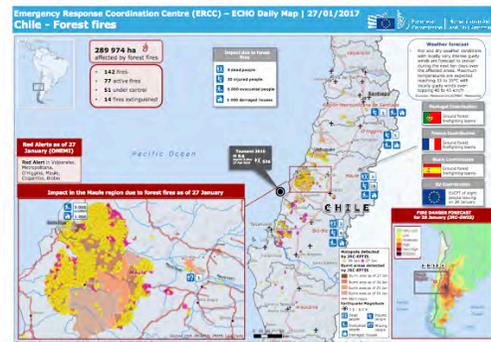
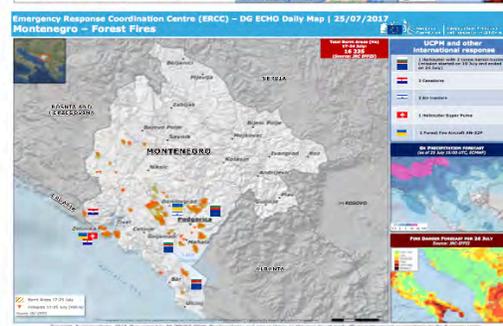
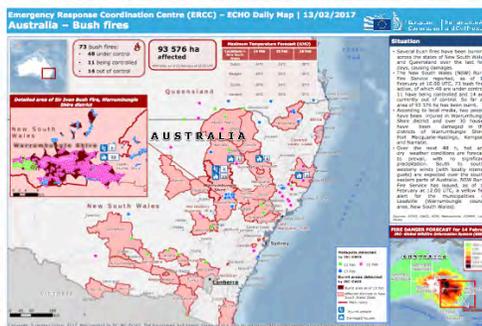
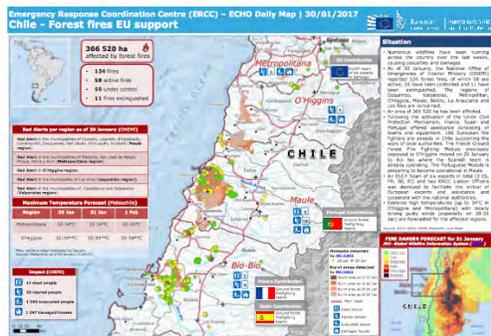
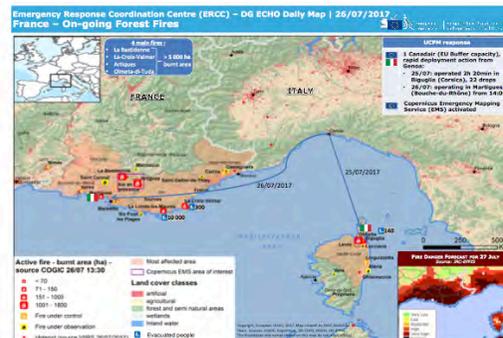
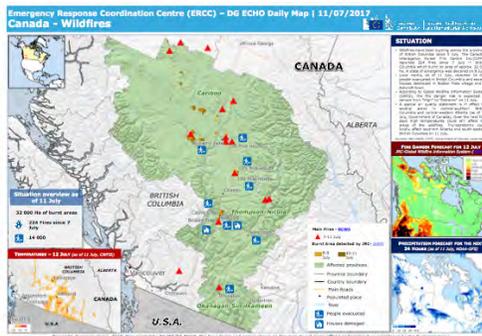
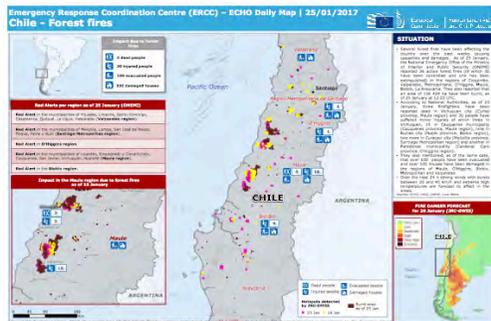
■ Forest and Other Wooded Land
 ■ Other Natural Land
 ■ Agriculture
 ■ Artificial Surfaces
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Burnt area in Natura 2000 sites



Nearly 25% of the total burnt area in the EU occurred in Natura 2000 sites

Use of EFFIS by the Emergency Response Coordination Centre (DG ECHO)





Thank you