



Global Wildfire Information System (GWIS)

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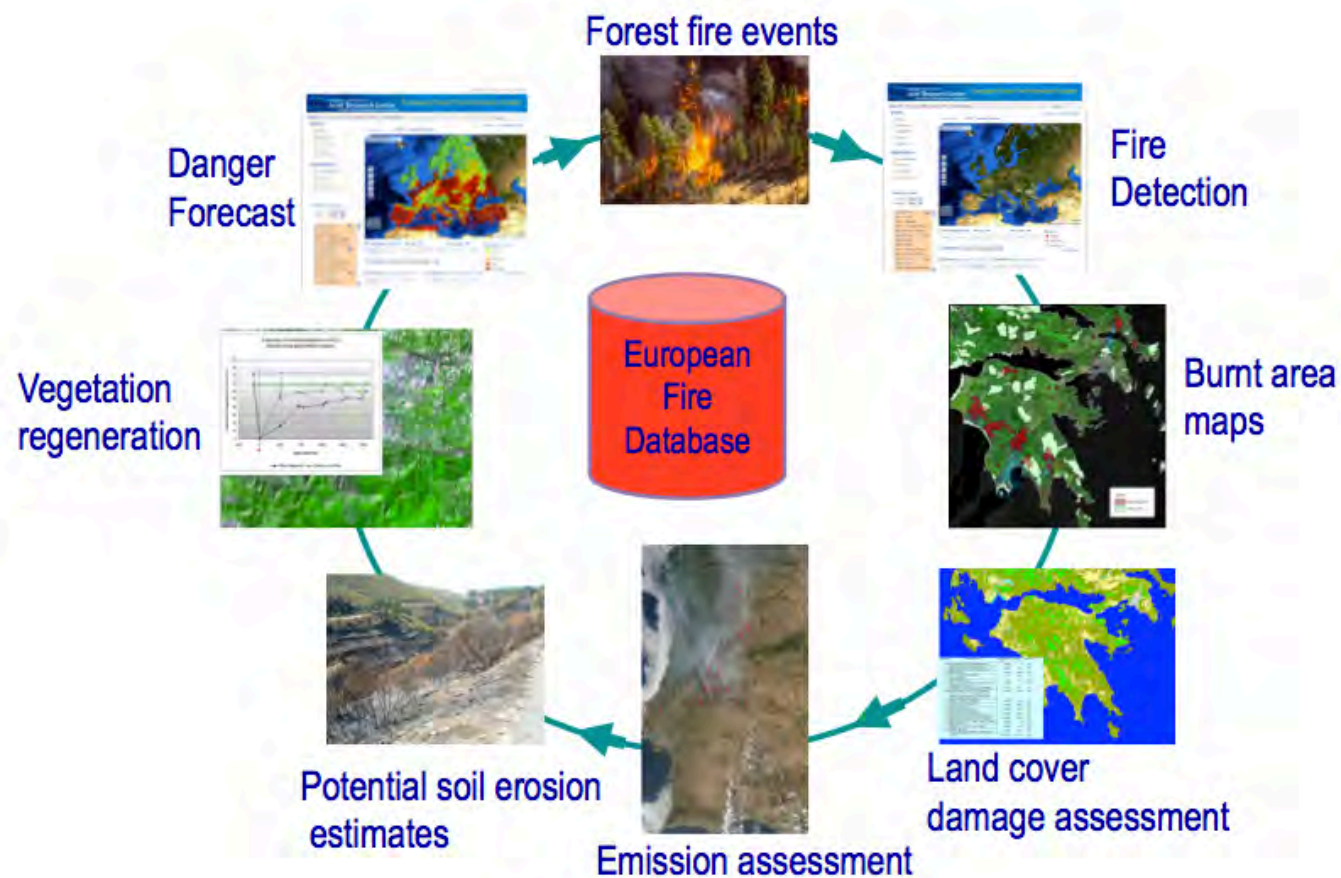
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Disaster Risk Management Unit
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Space

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European Forest Fire Information System (EFFIS)



European Forest Fire Information System EFFIS

[Current Situation Viewer](#)

[Firenews](#)

[Long-term fire weather
forecast](#)

[Data Request Form](#)

[Data and services](#)

Welcome to EFFIS

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

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 43 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.

A number of specific applications are available through EFFIS:

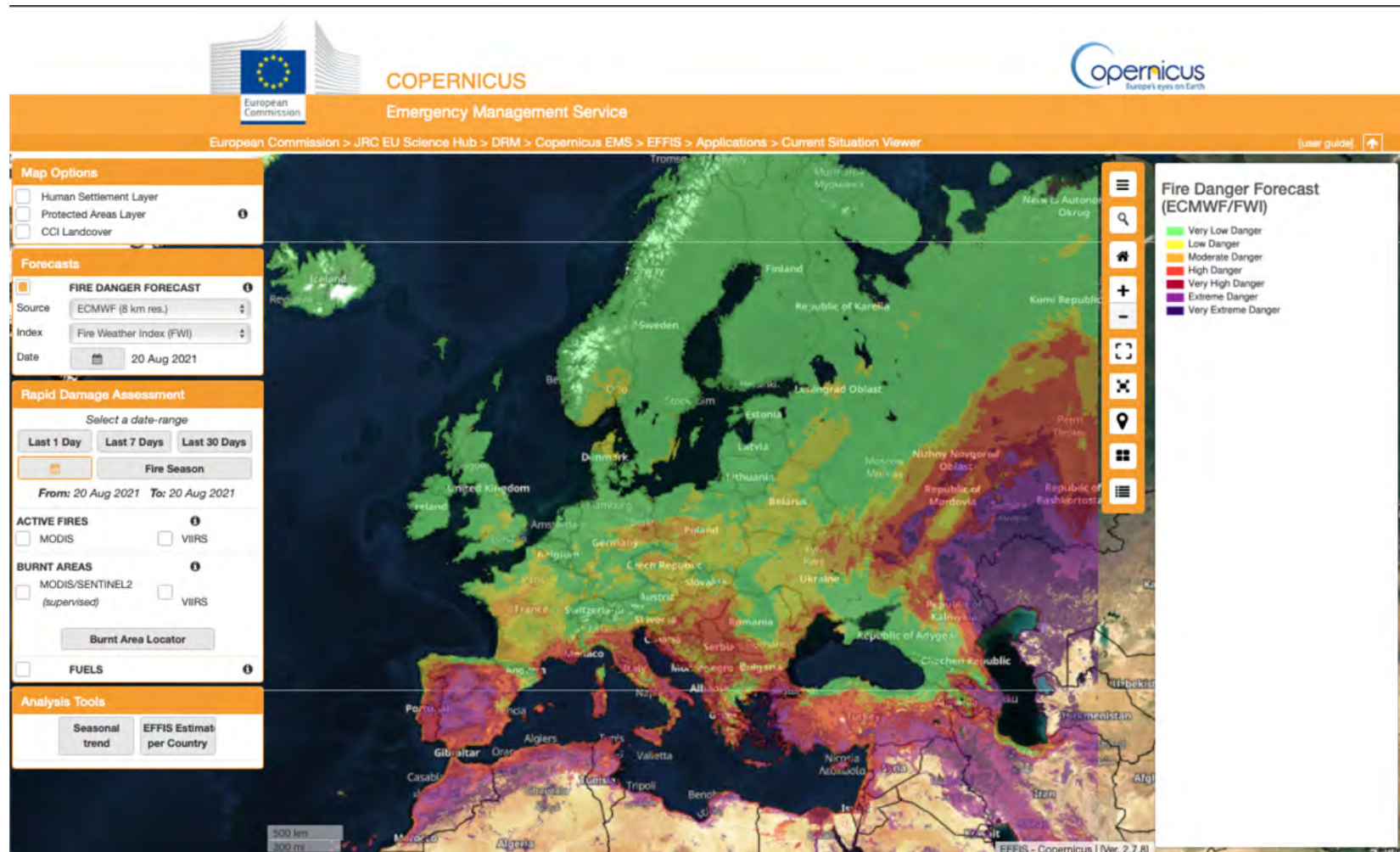
New feature

Make your specific requests of data by the new [Data Request Form](#)

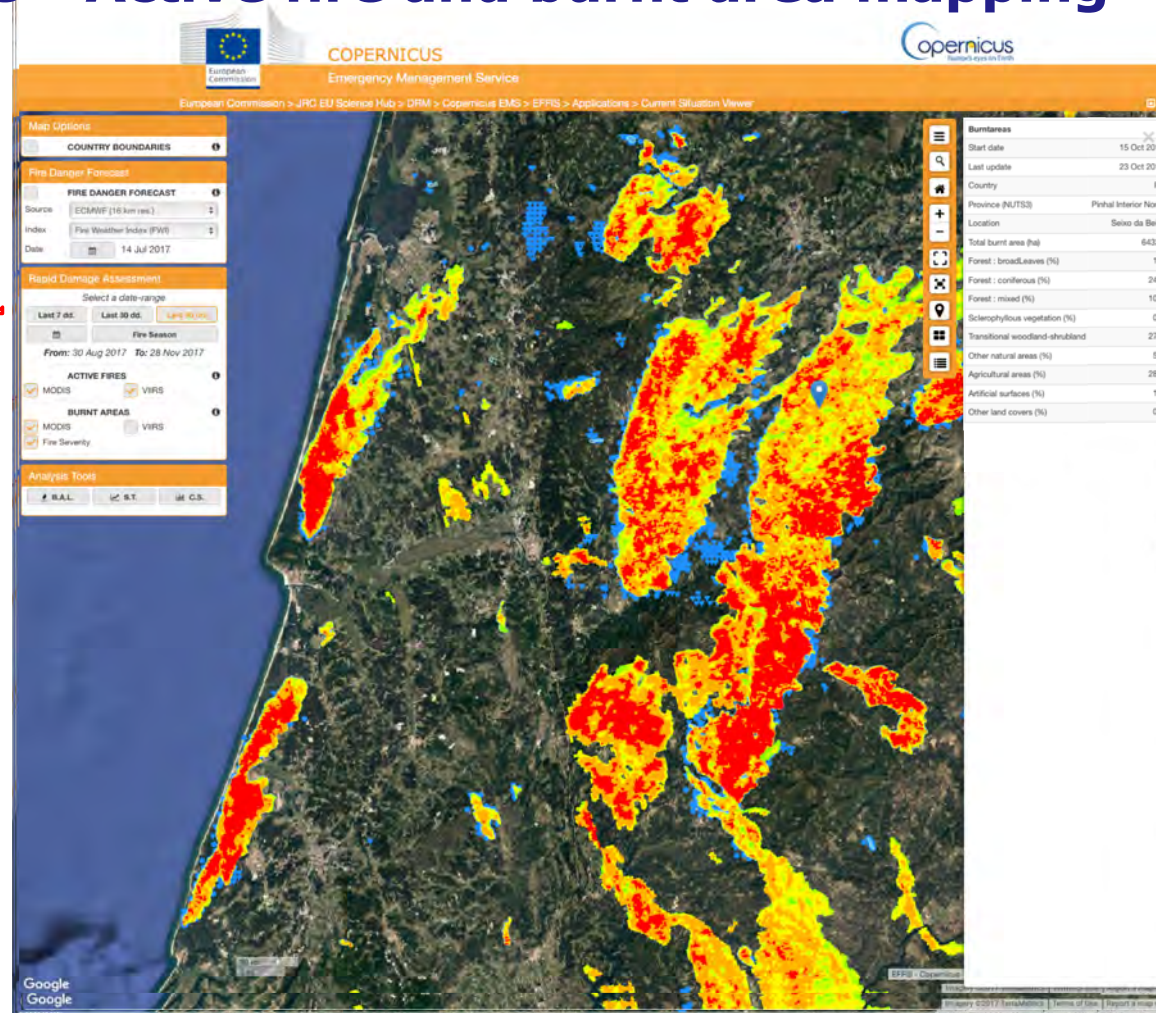
Visit our

[Global Wildfire Information System Viewer](#)

EFFIS - Fire danger forecast

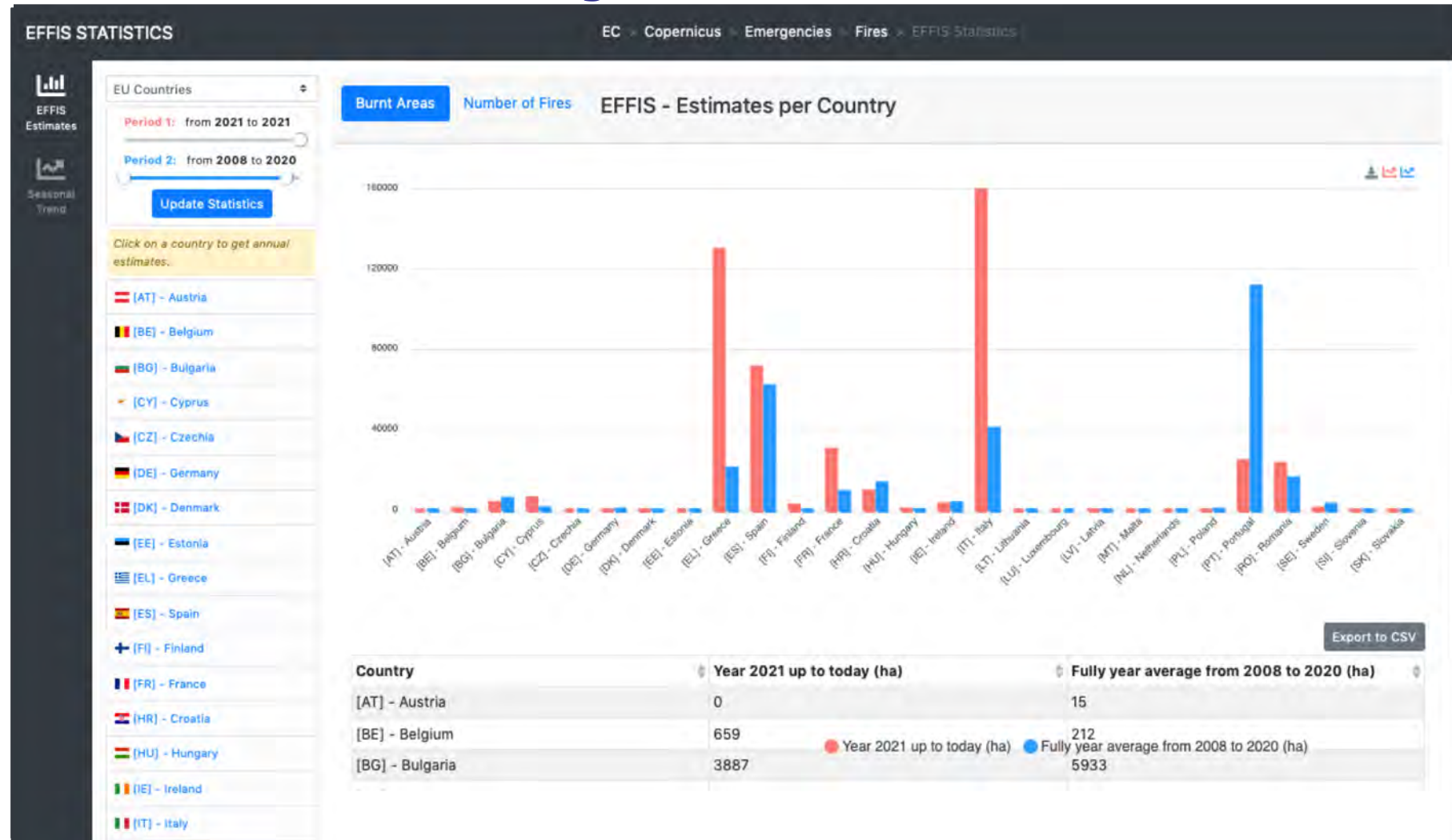


EFFIS - Active fire and burnt area mapping





EFFIS seasonal trend monitoring





EFFIS Fire News



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From

To

Country

All countries

Search

Search

Reset

<< < 1 2 3 4 >

Showing 1 to 10 of 141 records

2021-10-07 - 2021-10-07

(IT) - Italy / Villaputzu

0 ha

2021-10-06 - 2021-10-06

(EL) - Greece / Astereika

15 ha

2021-10-06 - 2021-10-06

(IT) - Italy / Tempio Pausania

5 ha

2021-10-01 - 2021-10-01

(IT) - Italy / Bornova

8 ha

2021-10-01 - 2021-10-01

(TR) - Turkey / Karaburun, Izmir

0 ha

2021-09-30 - 2021-09-30

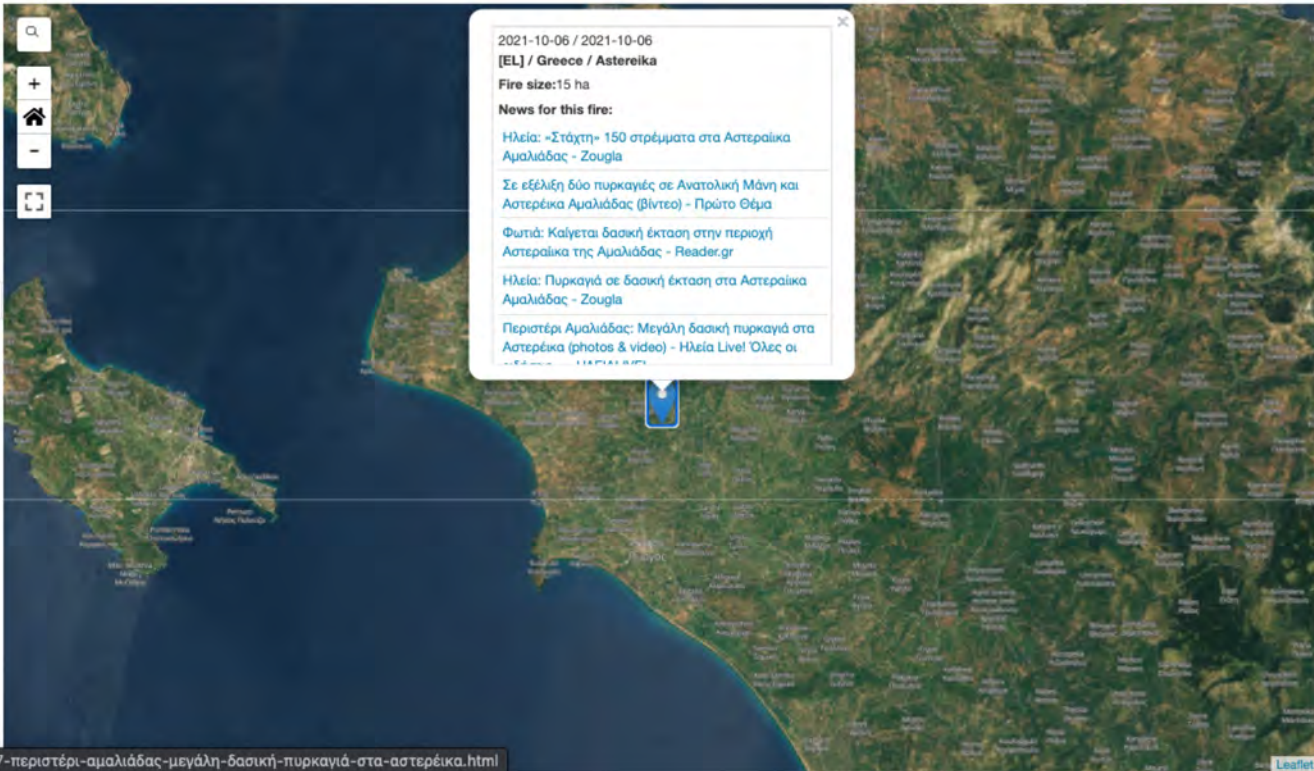
(EL) - Greece / Marathon

0 ha

2021-09-30 - 2021-09-30

(IT) - Italy / Nuraminis

40 ha



2021-10-06 / 2021-10-06

(EL) / Greece / Astereika

Fire size: 15 ha

News for this fire:

Ηλεία: «Στόχη» 150 στρέμματα στα Αστερικά Αμαλιάδας - Zougia

Σε εξέλιξη δύο πυρκαγιές σε Ανατολική Μάνη και Αστερέικα Αμαλιάδας (βίντεο) - Πρώτο Θέμα

Φωτιά: Καίγεται δασική έκταση στην περιοχή Αστερικά της Αμαλιάδας - Reader.gr

Ηλεία: Πυρκαγιά σε δασική έκταση στα Αστερικά Αμαλιάδας - Zougia

Περιστέρι Αμαλιάδας: Μεγάλη δασική πυρκαγιά στα Αστερέικα (photos & video) - Ηλεία Live! Όλες οι...

www.ilialive.gr/live/επικαιρότητα/81447-περιστέρι-αμαλιάδας-μεγάλη-δασική-πυρκαγιά-στα-αστερέικα.html



EFFIS Data access and download

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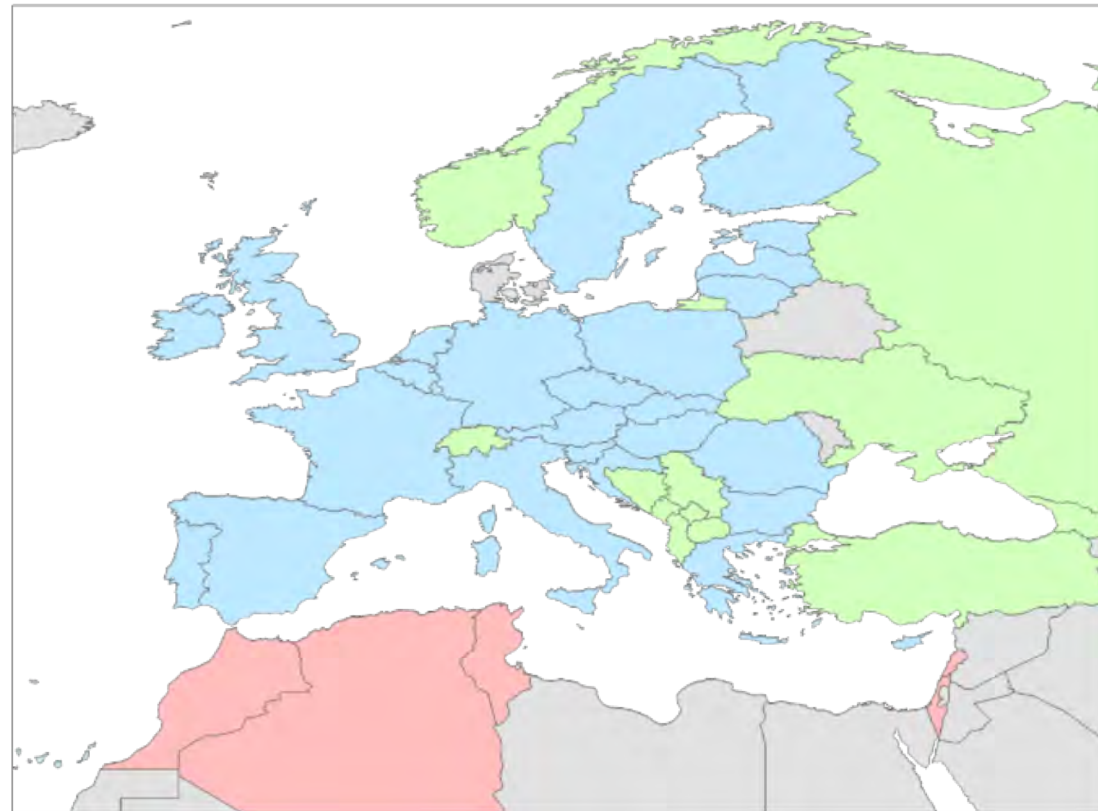


Current EFFIS Network of 43 Countries

Extension to MENA countries in collaboration with FAO

EFFIS Network

-  EU Countries
-  European non-EU countries
-  North Africa & Middle East



https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1995



Global Wildfire Information System (GWIS)



GWIS approach towards wildfire monitoring at a the global scale aims to:

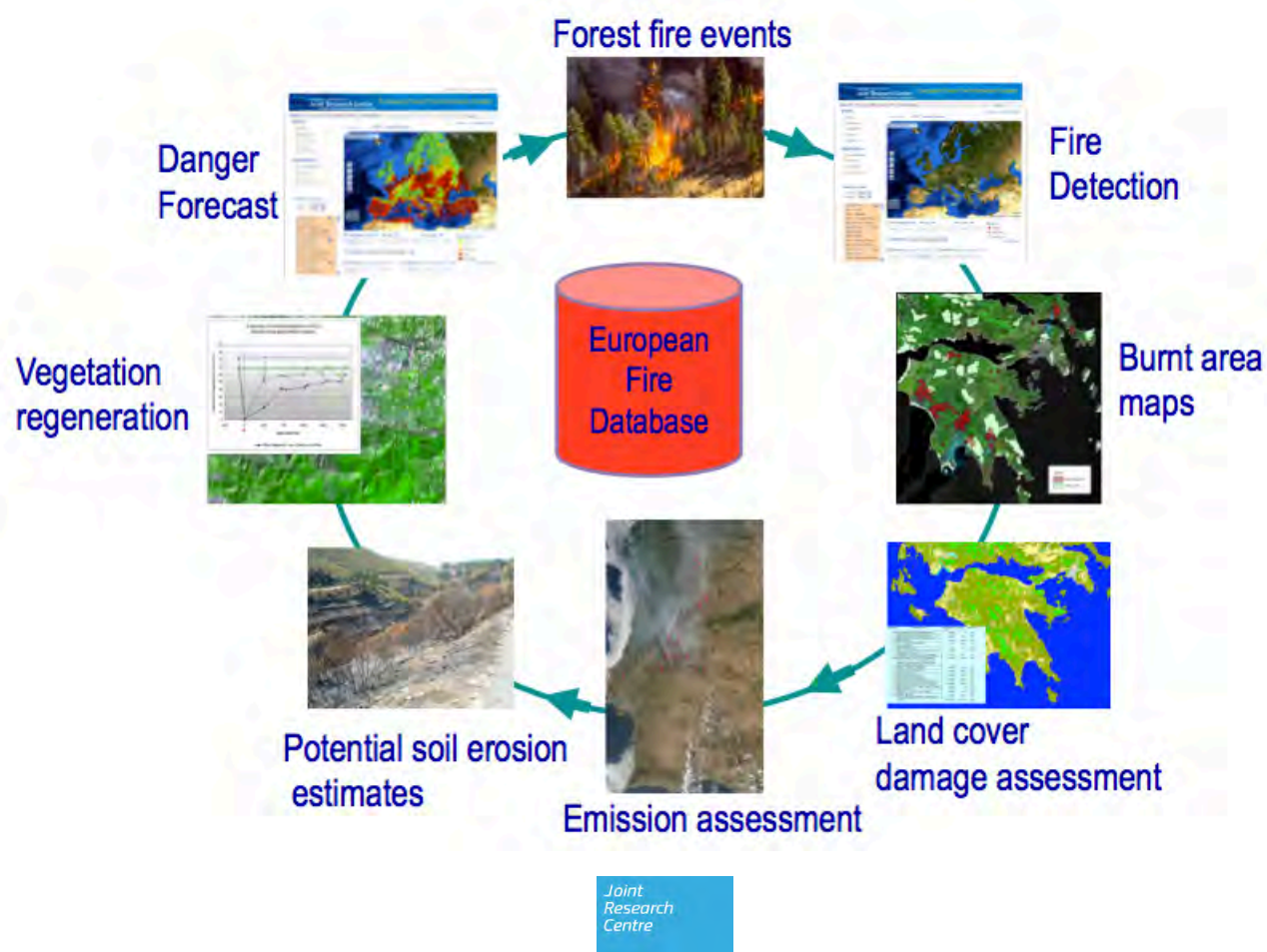
- Build on existing tools/knowledge
- Seek synergies from existing initiatives
- Seek both technical and institutional support & development
- Establish and maintain a global partnership





GWIS concept:

follows the EFFIS (European Forest Fire Information System) fire cycle:





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Global Wildfire Information System (GWIS)



The Global Wildfire Information System is a joint initiative of the GEO and the Copernicus Work Programs. The Global Wildfire Information System (GWIS) aims at bringing together existing information sources at regional and national level in order to provide a comprehensive view and evaluation of fire regimes and fire effects at global level.

GWIS builds on the ongoing activities of the European Forest Fire Information System (EFFIS), the Global Terrestrial Observing System (GTOS) Global Observation of Forest Cover- Global Observation of Land Dynamics (GOFC-GOLD) Fire Implementation Team (GOFC Fire IT), and the associated Regional Networks, complementing existing activities that are on-going around the world with respect to wildfire information gathering. The development of GWIS is supported by the partner organizations and space agencies. Support to GWIS was just launched by NASA through its ROSES program

Access to worldwide information on wildfires is available through the GWIS viewer at http://gwis.jrc.ec.europa.eu/static/gwis_current_situation/public/index.html

Applications

Current Situation Viewer
Data Download



Joint
Research
Centre



Global Wildfire Information System (GWIS)

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Welcome to GWIS

The Global Wildfire Information System (GWIS) is a joint initiative of the [GEO](#) and the [Copernicus](#) Work Programs. In the [new GEO GWIS work program for the years 2020-2022](#), the Global Wildfire Information System (GWIS) aims at bringing together existing information sources at regional and national level in order to provide a comprehensive view and evaluation of fire regimes and fire effects at global level and to provide tools to support operational wildfire management from national to global scales.

GWIS builds on the ongoing activities of the European Forest Fire Information System ([EFFIS](#)), the Global Terrestrial Observing System (GTOSS) Global Observation of Forest Cover- Global Observation of Land Dynamics (GOFC-GOLD) Fire Implementation Team ([GOFC Fire IT](#)), and the associated Regional Networks, complementing existing activities that are on-going around the world with respect to wildfire information gathering. The development of GWIS is supported by the partner organizations and space agencies. Support to GWIS is provided by NASA through its [GEO-GWIS activities in the ROSES program](#).

Currently, GWIS is made of three applications:

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[Current Situation Viewer](#)

[Country Profile](#)

[Long-term fire weather forecast](#)

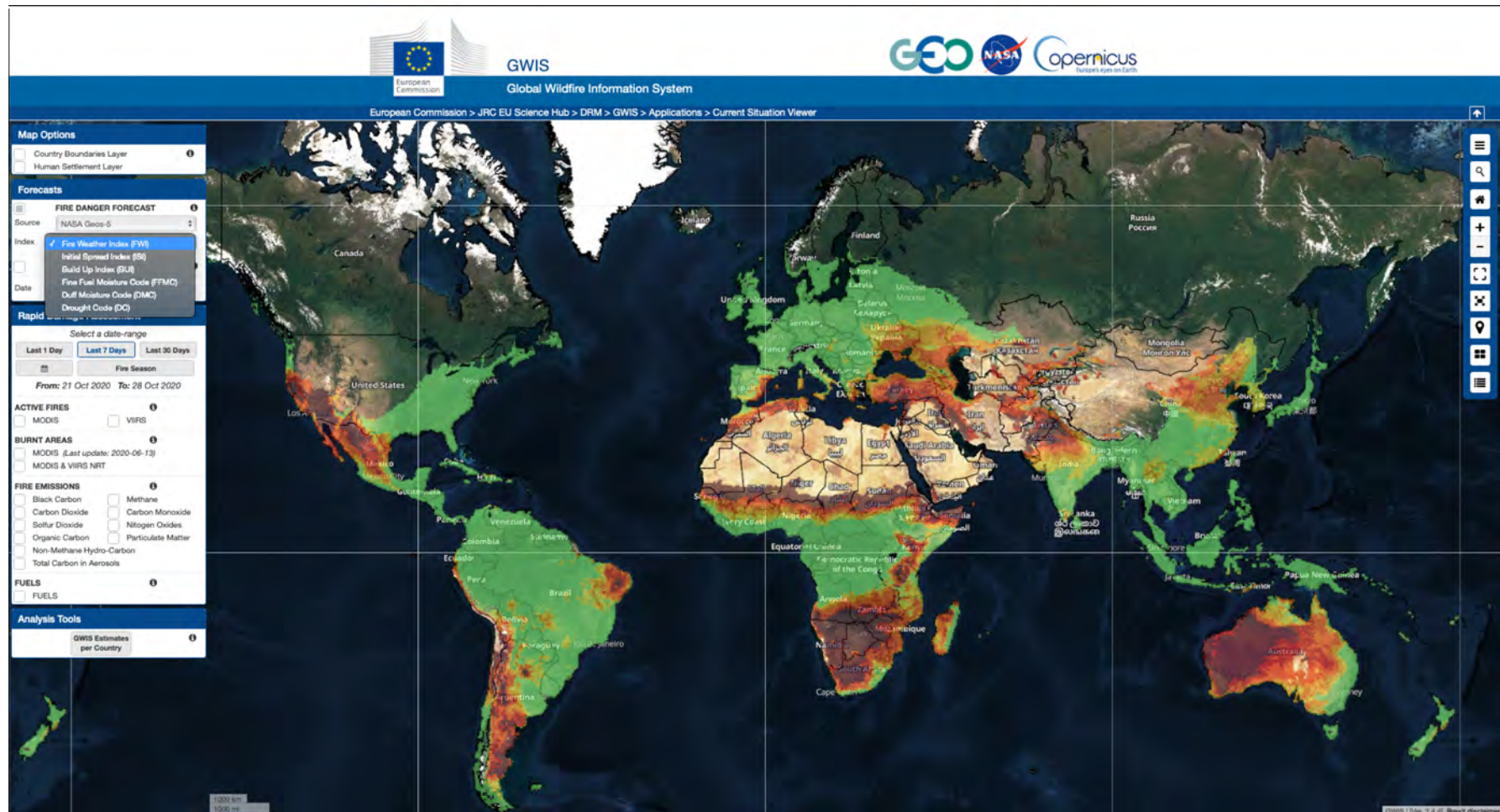
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<https://gwis.jrc.ec.europa.eu>

Global Wildfire Information System, developed by JRC under the Group on Earth Observations (GEO) and EU Copernicus programs

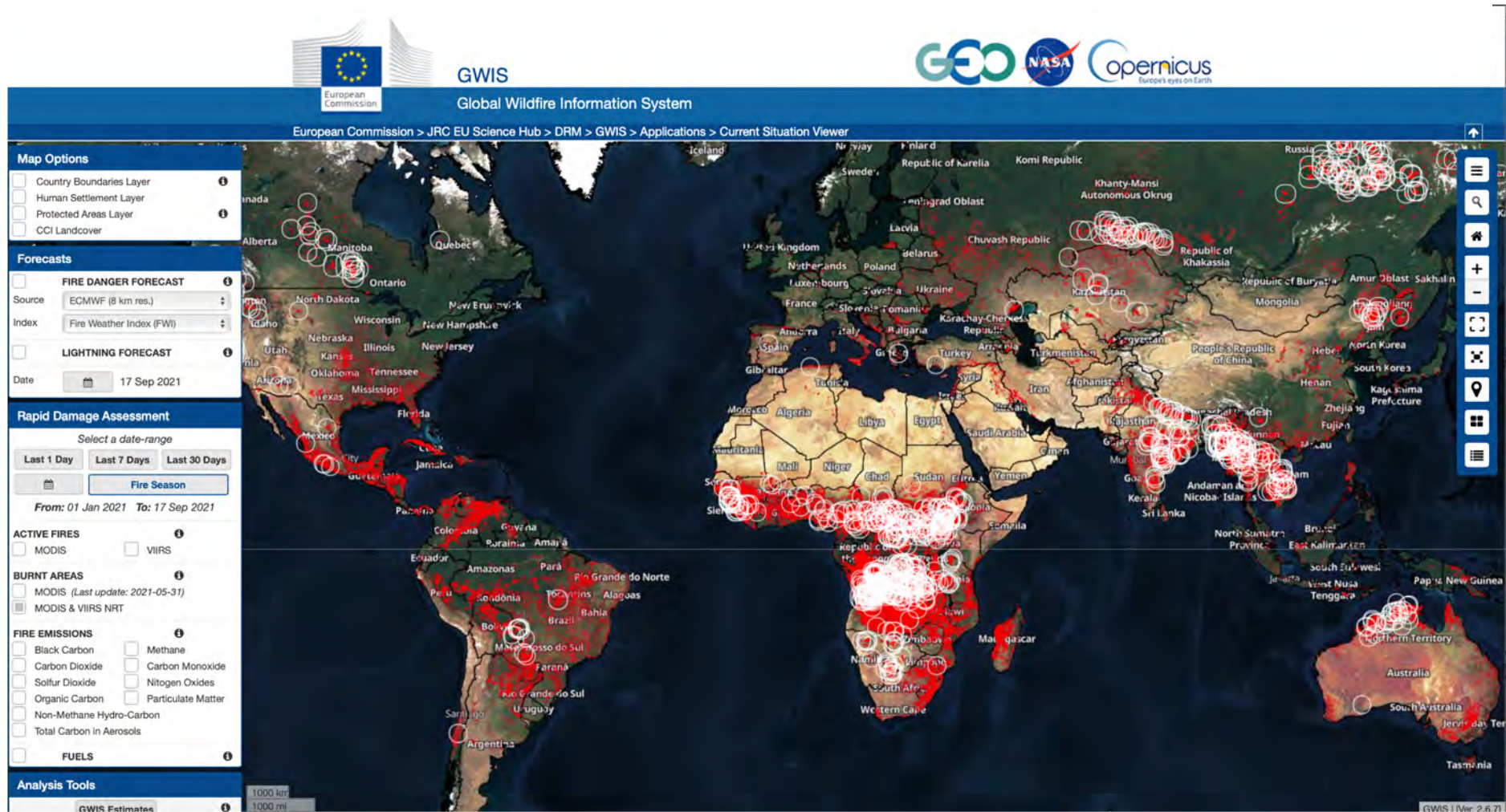


GWIS applications – fire danger forecast



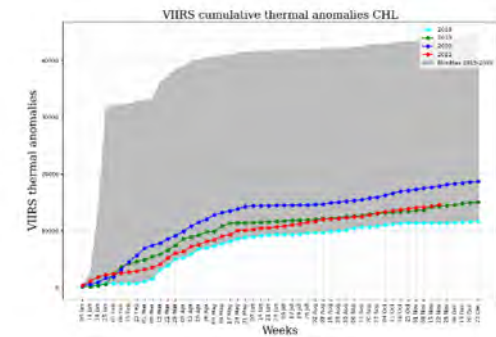
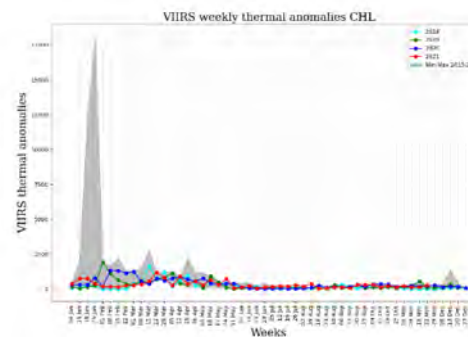
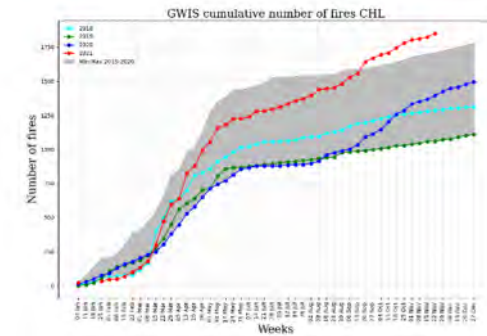
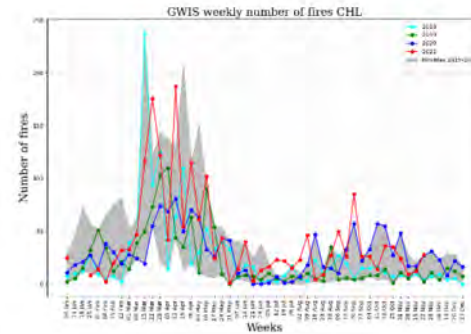
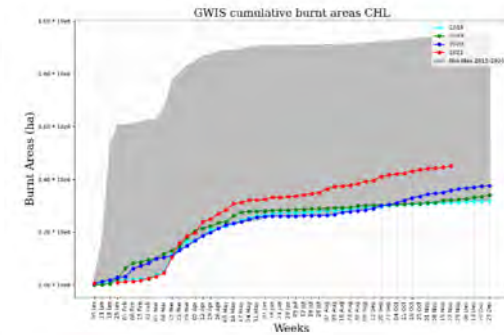
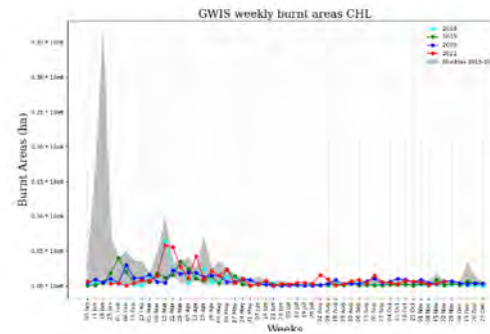


GWIS applications – active fire and burnt area mapping





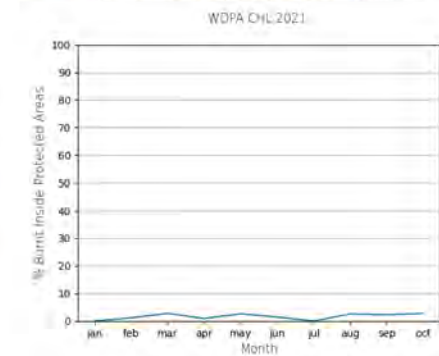
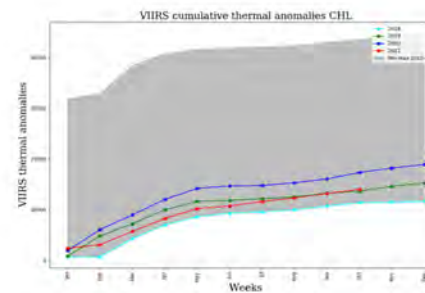
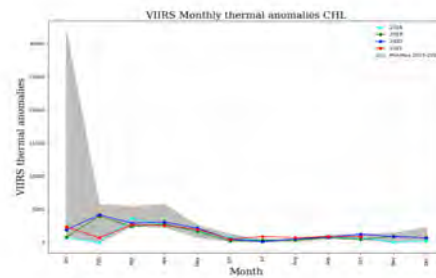
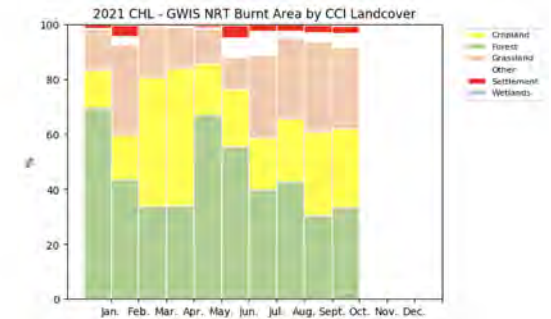
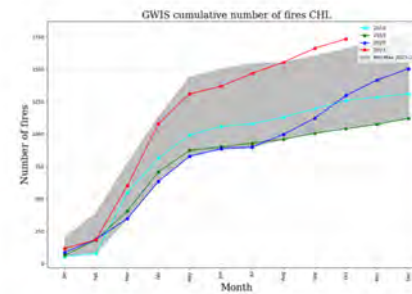
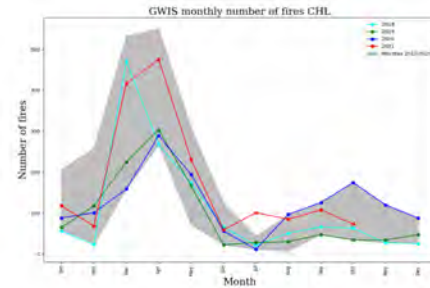
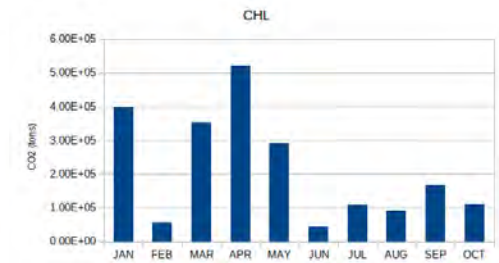
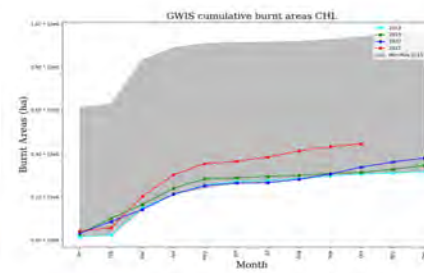
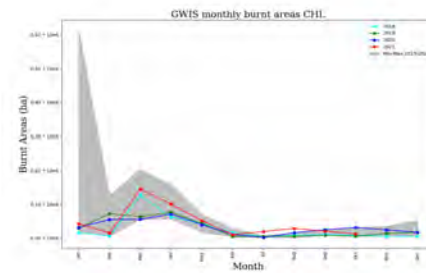
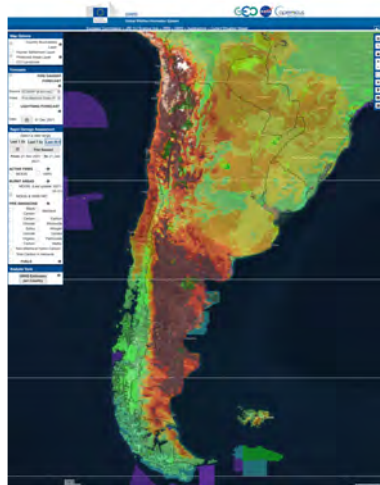
Seasonal Trends - Chile :Weekly analysis of: damage to landcover, protected areas. burnt areas. active fires.. fire danger, fire emissions



<https://gwis.jrc.ec.europa.eu/reports-and-publications/2021-amazon-and-south-america-weekly-reports>



Near-Real time wildfire monitoring: Fire danger forecast, mapping of active fires & burnt areas, damage to protected areas, fire emissions, land cover damage, fire danger severity rating; e.g. Chile





GWIS applications – Country Profiles

GWIS: Historical analysis of wildfire regimes and impact: Analysis of burnt areas, number of fires, fire size, seasonality, fire emissions, damage to protected areas, land cover damage (e.g. Australia)

GWIS

Global Wildfire Information System (GWIS) > COUNTRY PROFILE

MENU

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Country overview

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Country charts

Data downloads

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COUNTRY PROFILE

North America

-- Please select a country --

Europe

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Asia

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South America

-- Please select a country --

Africa

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Oceania

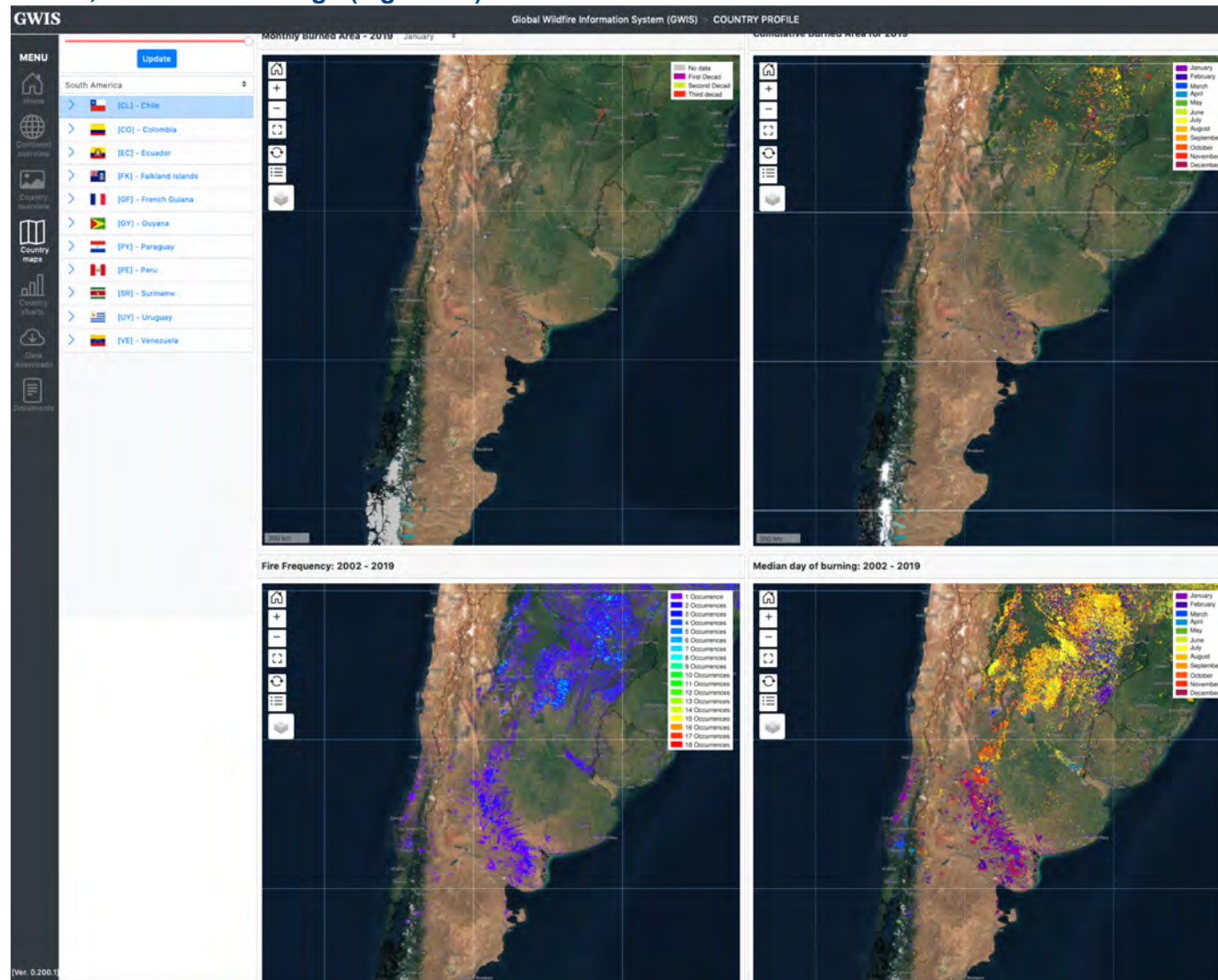
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Copernicus

[Ver. 0.106.0]

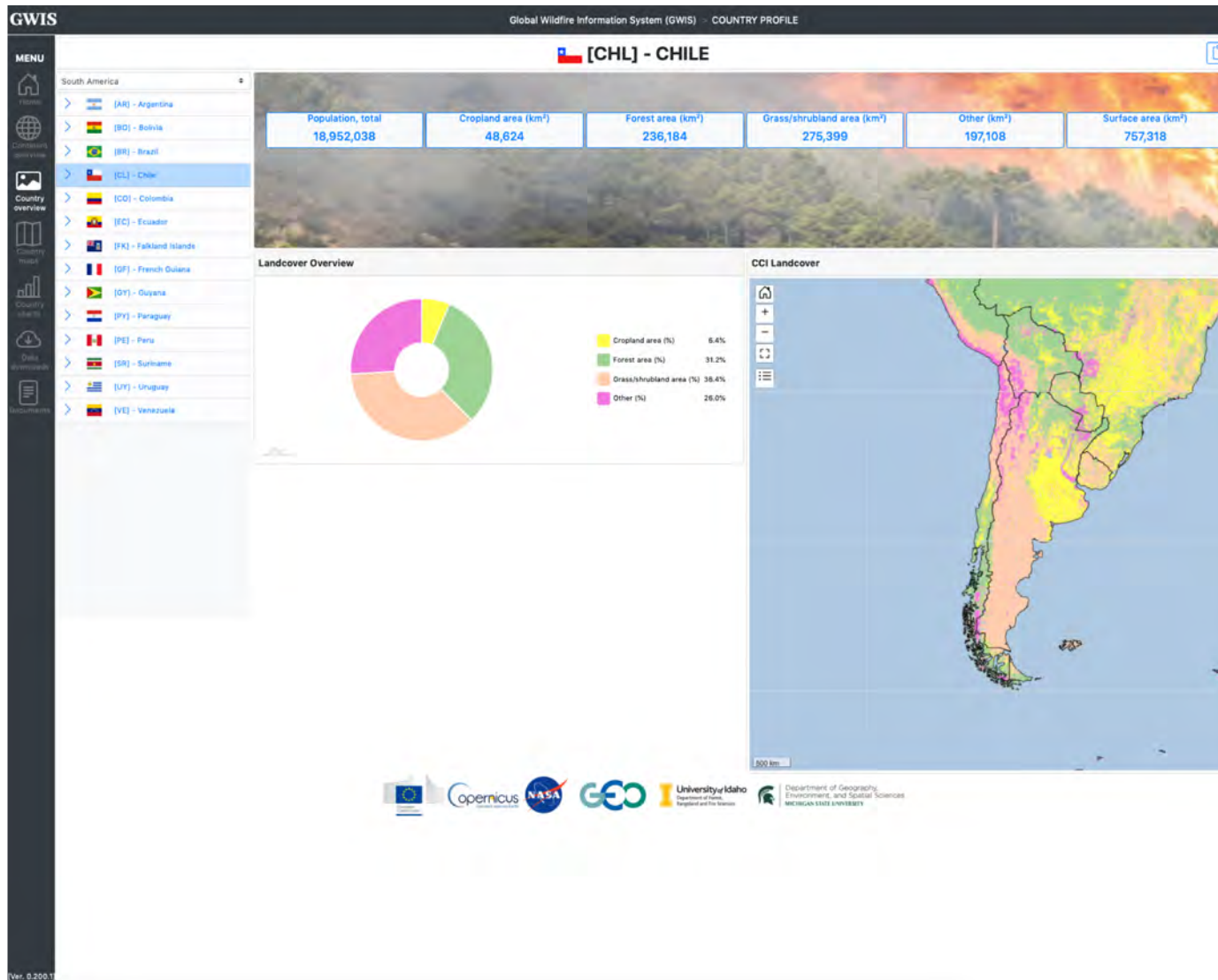


GWIS: Historical analysis of wildfire regimes and impact: Analysis of burnt areas, number of fires, fire size, seasonality, fire emissions, damage to protected areas, land cover damage (e.g. Chile)





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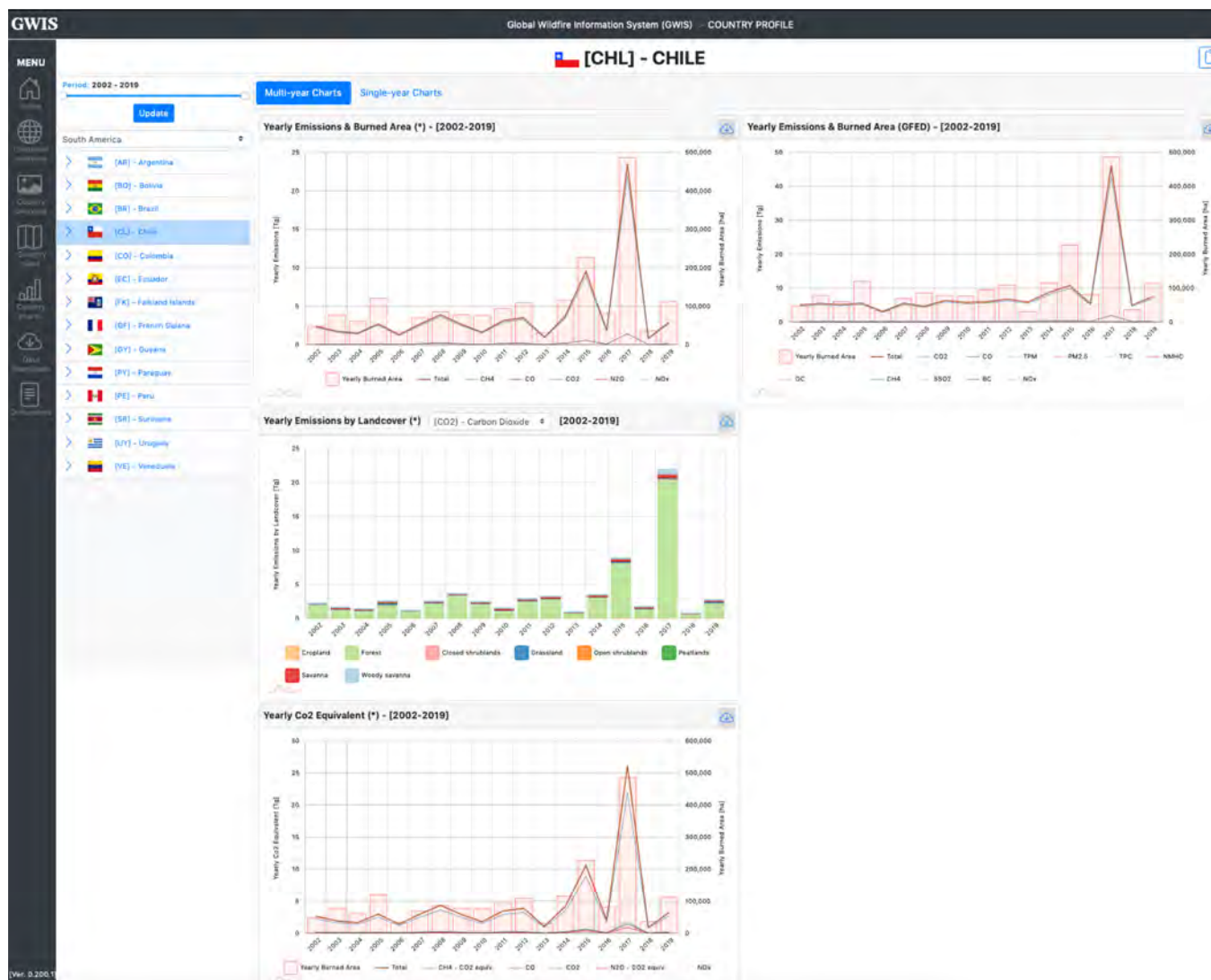


GWIS: Historical analysis of wildfire regimes and impact: Analysis of burnt areas, number of fires, fire size, seasonality, fire emissions, damage to protected areas, land cover damage (e.g. Chile)





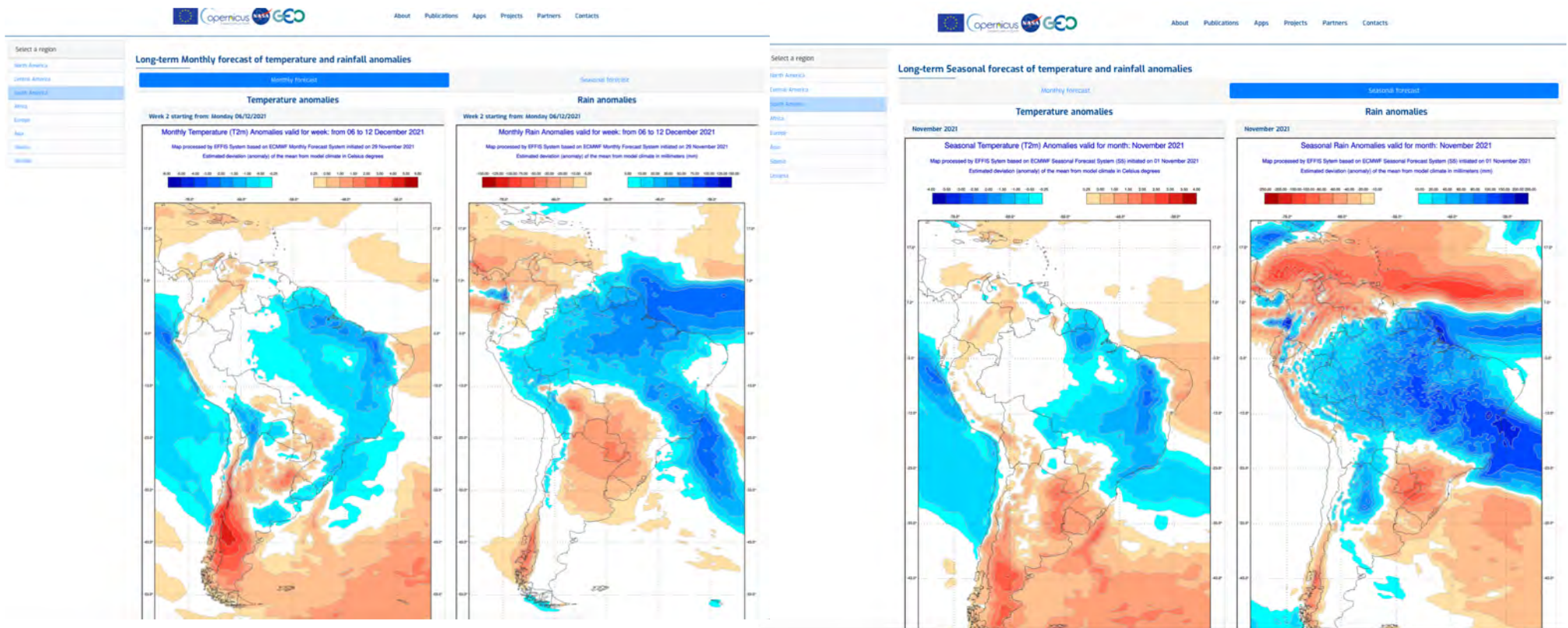
GWIS: Historical analysis of wildfire regimes and impact: Analysis of burnt areas, number of fires, fire size, seasonality, fire emissions, damage to protected areas, land cover damage (e.g. Chile)





GWIS applications – fire weather long term forecast

Monthly and seasonal fire weather anomalies





GWIS applications – data access and download

Data and services





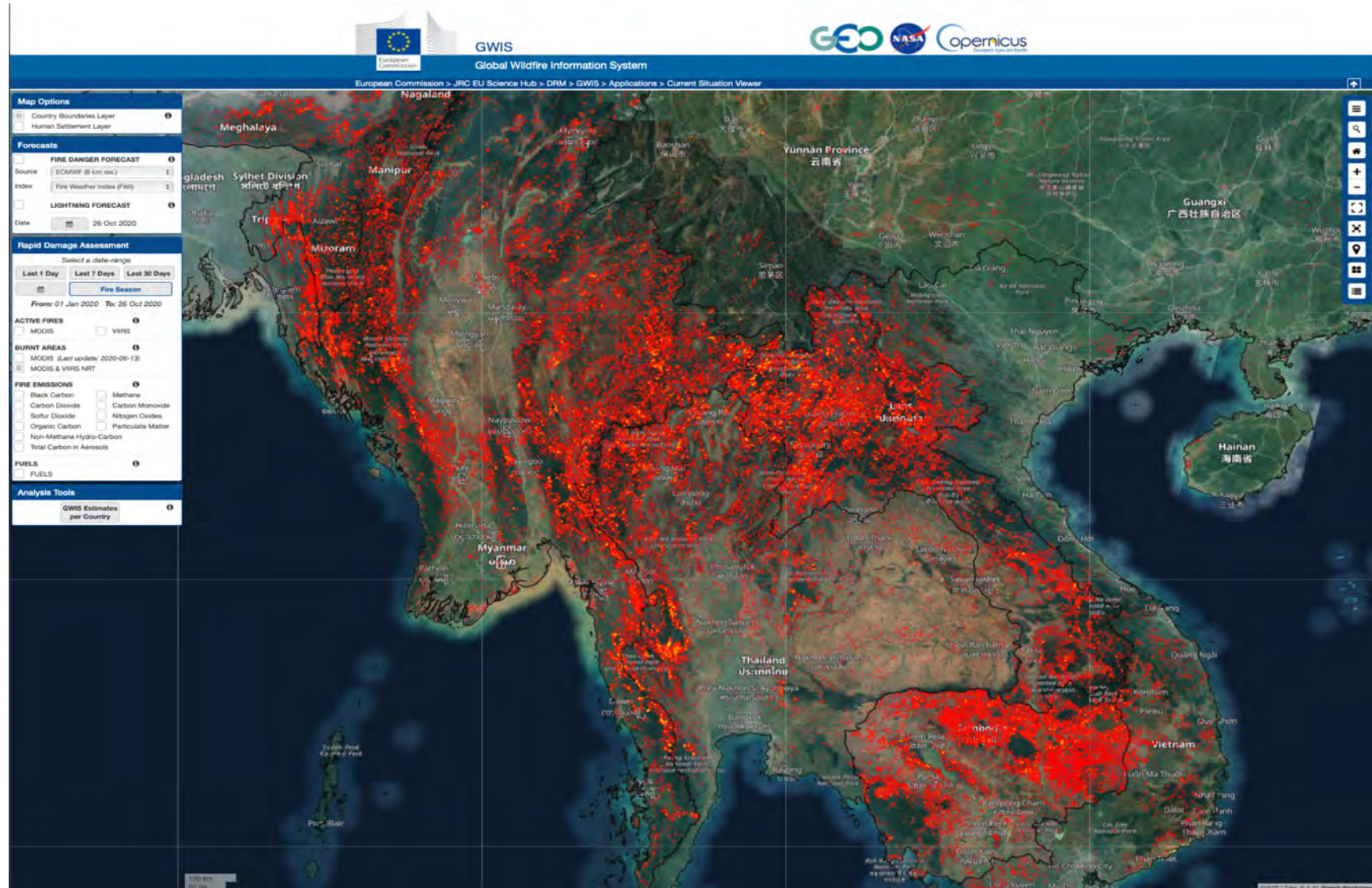

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[Projects](#)
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Data and services

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Country Boundaries Layer 		
Human Settlement Layer		
Protected Areas Layer 		
CCI Landcover		
Fire Danger Forecast  (1 day forecast)	ECMWF (8 km res.)	NASA Geos-5
FWI - Fire Weather Index (FWI)		
FWI - Initial Spread Index (ISI)		
FWI - Build Up Index (BUI)		
FWI - Fine Fuel Moisture Code (FFMC)		
FWI - Duff Moisture Code (DMC)		
FWI - Drought Code (DC)		
FWI - Anomaly		-
FWI - Ranking		-
KBDI - Keetch-Byron Drought Index		-
MARK-5 - Drought Factor (MARK-5 DF)		-
MARK-5 - Rate of Spread (MARK-5 ROS)		-
MARK-5 - Fire Danger Index (MARK-5 FDI)		-

Most affected areas in 2020

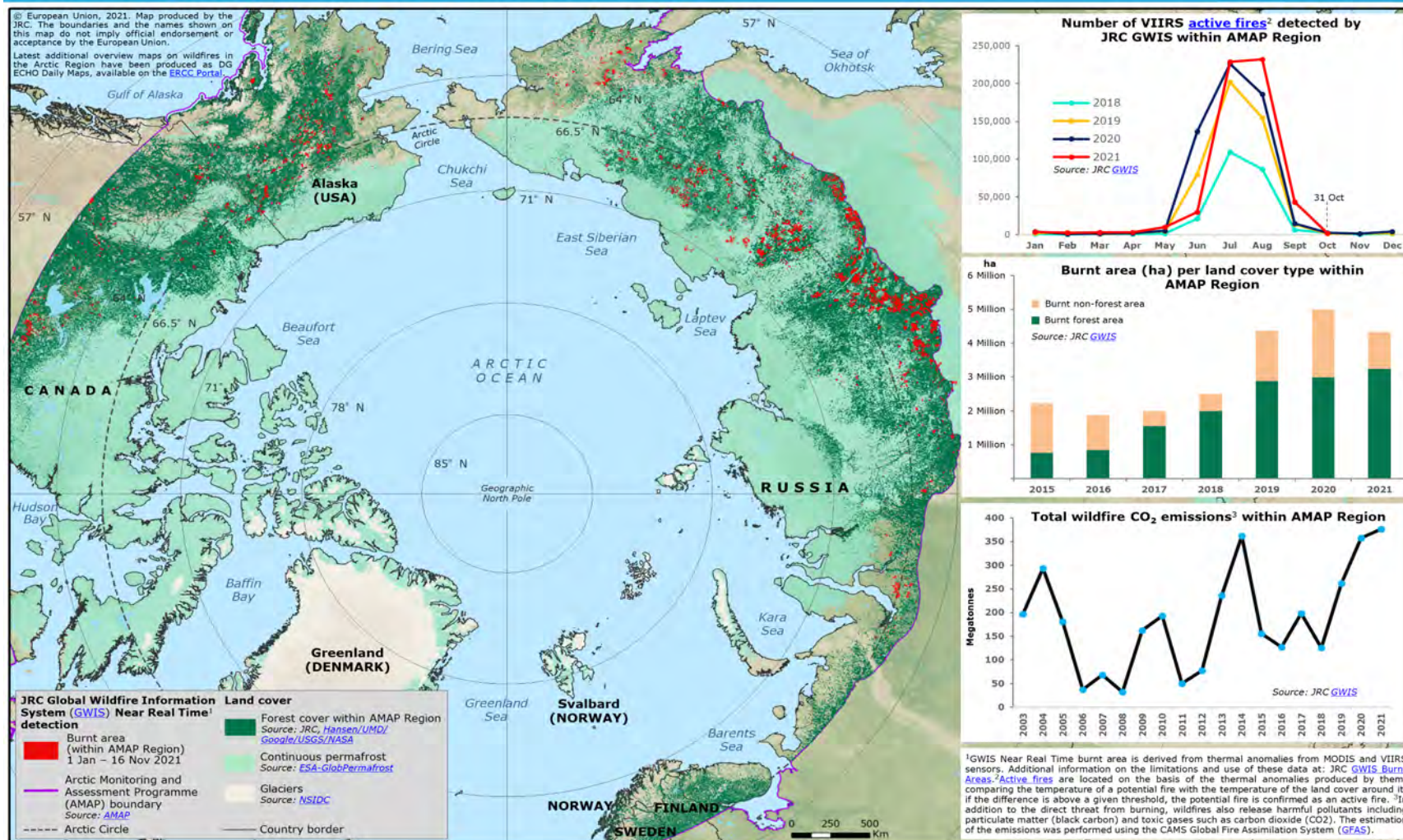




Wildfires in the Arctic Circle 2020 & 2021

Emergency Response Coordination Centre (ERCC) – DG ECHO Daily Map | 19/11/2021

Arctic Region | Forest fires and forest loss





GWIS Projects – Support to Wildfire Management in LAC



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Support to Wildfire Management in LAC

The European Union (EU) and Latin America and the Caribbean (LAC) have a longstanding relationship based on common values and established on a legal framework with most of the 33 countries through association and trade agreements, and political and cooperation dialogues.

Both regions collaborate in numerous international fora to tackle global challenges, such as the United Nations (UN) in the context of the 2030 Agenda for Sustainable Development cooperation, or the fight against climate change through the Paris Agreement.



Collaboration on wildfire mangement between the EU and Latin America and the Caribbean region



Regional Achievements

In the pan-European region, the EU, through its Joint Research Centre (JRC) - a science and knowledge centre that provides scientific advice and supports EU policies-, has a wide long-term expertise on facing global challenges, such as wildfires. JRC, in collaboration with other services

<https://gwis.jrc.ec.europa.eu/projects/support-wildfire-management-lac>



General Objectives

- ★ (1) Reduce the impact of wildfires in the the Amazon region and neighboring countries through cooperation with LAC countries and regional organizations (ACTO, Leticia Pact, UNEP, FAO, UNDRR, etc.) by providing evidence for policies.
- ★ (2) Share the experience of the EC on the establishment of the Expert Group on Forest Fires (EGFF)¹ and the development of wildfire early warning and monitoring systems in the pan-European region (i.e. European Forest Fire Information System)² using the **Global Wildfire Information System in the LAC region**
- ★ (3) Establish a common base of information on wildfires using GWIS and support data harmonization in the region to support cooperation with fire management services in the countries and organizations operating in the region, e.g. FAO, ACTO, Leticia Pact, UNEP, etc.

¹ Group made of fire managers from Ministries of Environment, Agriculture or Civil Protection from 43 countries in Europe, Middle East and North Africa

² European Forest Fire Information System (EFFIS), developed by JRC and currently operating under the EU Copernicus Regulation



What can GWIS provide for wildfire monitoring at global scale?

- Analysis of fire regimes and changes in different regions of the world
- Harmonized and up to date comparable data across the globe to assess wildfire effects
 - wildfire regime profiles, fire seasonality, impact, trends
- Methods for reliable analysis of fire damages and economic impacts, including near real time information on critical events
- Implementation of information systems reachable at national/regional/global scale
- Web information services reaching citizens (education/awareness)
- Development of tools supporting fire prevention/preparedness
- Repository for relevant global datasets for users
- Training and capacity building...



Thank you

Contact at: jrc-effis@ec.europa.eu