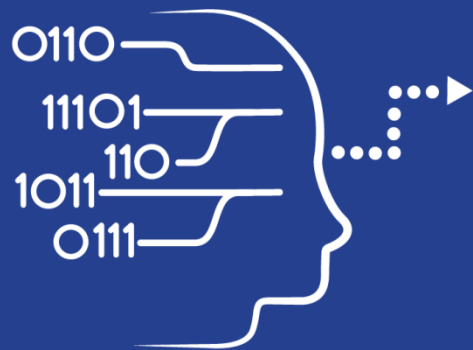




Access to Copernicus Data

Overview and Introduction



User Uptake

Copernicus Data Access

- 10 European Access points
- Several national and private initiatives
- New Generation services : RUS, DIAS

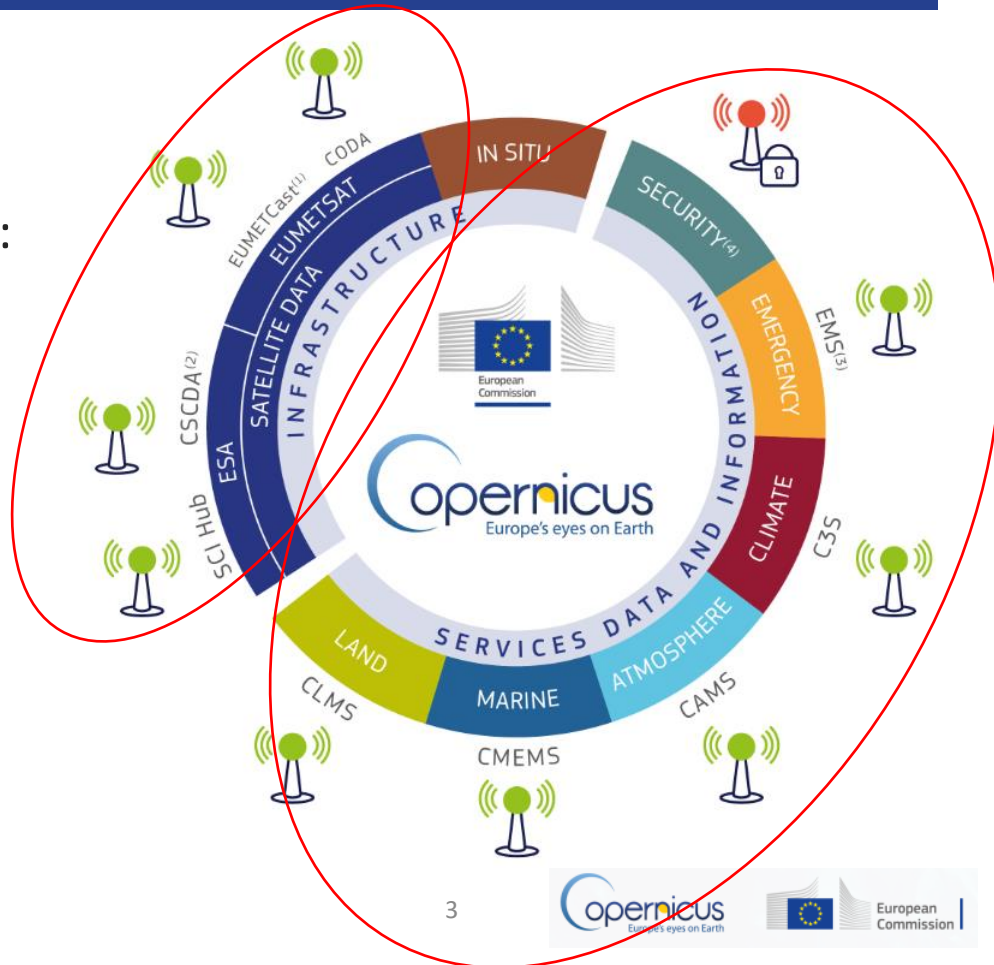




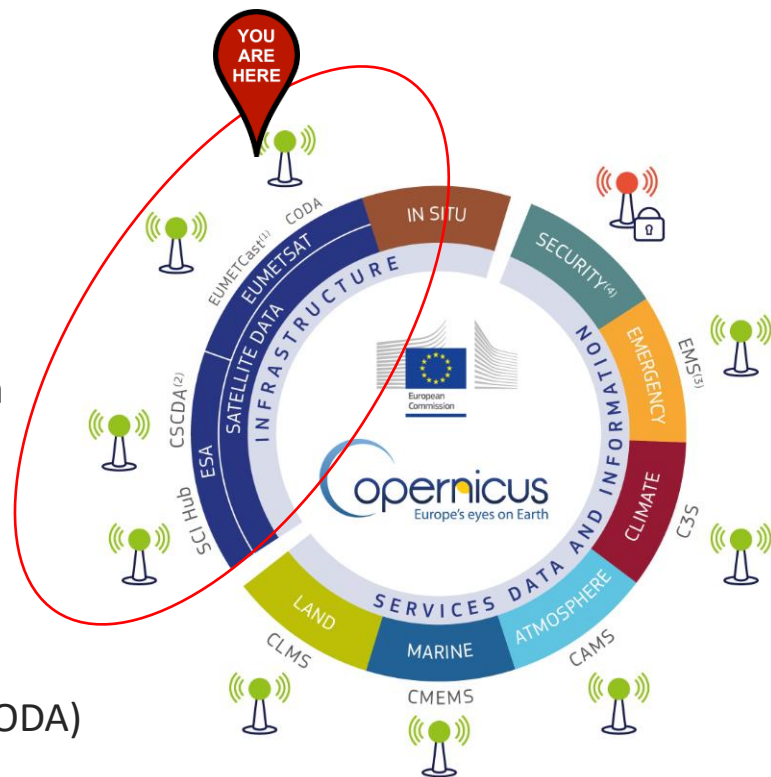
Copernicus Data Access Overview

10 European Data Access points:

- 4 for Satellite Data
- 6 for Services Data and Information



- 4 Satellite data Access Points:
- 2 managed by ESA:
 - Open Access Hub
 - Copernicus Space Component Data Access (CSCDA)
- 2 managed by EUMETSAT
 - EUMETCast
 - Copernicus Online Data Access (CODA)



**FULL, FREE
AND OPEN**

WHICH PRODUCTS :

- All Sentinel-1 products
- All Sentinel-2 products
- All Sentinel-3 Land products
- All Sentinel-5P products

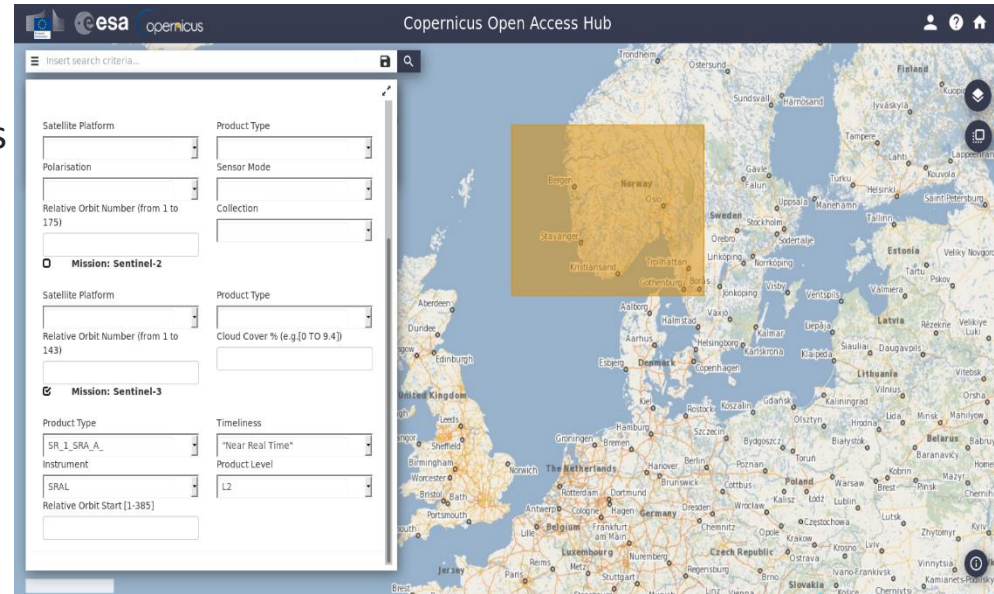
ACCESS CONDITION :

- Self-registration
- Open to everybody

HOW TO USE IT :

- Graphical Interface
- API automatic download

WHERE : Go on <https://scihub.copernicus.eu/>





Space
Component

SPACE COMPONENT DATA ACCESS from ESA



Differentiated
Access Levels*

WHICH PRODUCTS :

- Earth Observation data from a series of Copernicus Contributing Missions

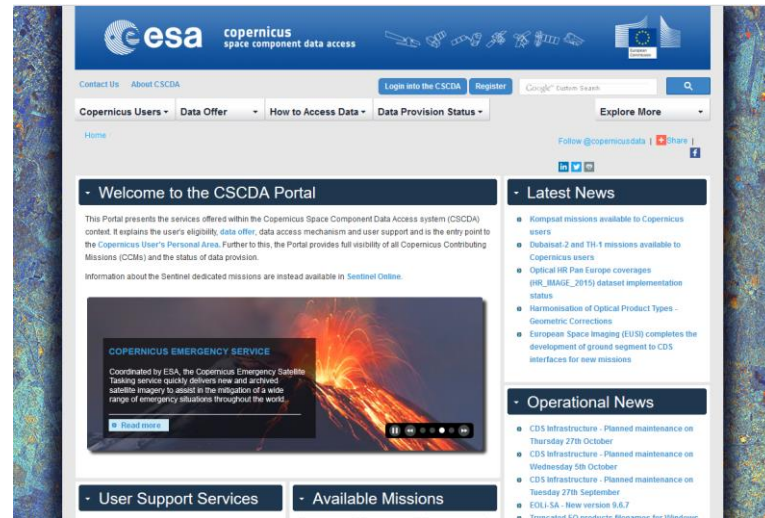
ACCESS CONDITION :

- Open to selected user category :
EU Public authorities and institutions,
EU Research projects, Copernicus Services

HOW TO USE IT :

- Data order
- No Graphical User interface

WHERE : Go on <https://spacedata.copernicus.eu/>



*depending on user category



Data
Access

Access to Services Data and Information

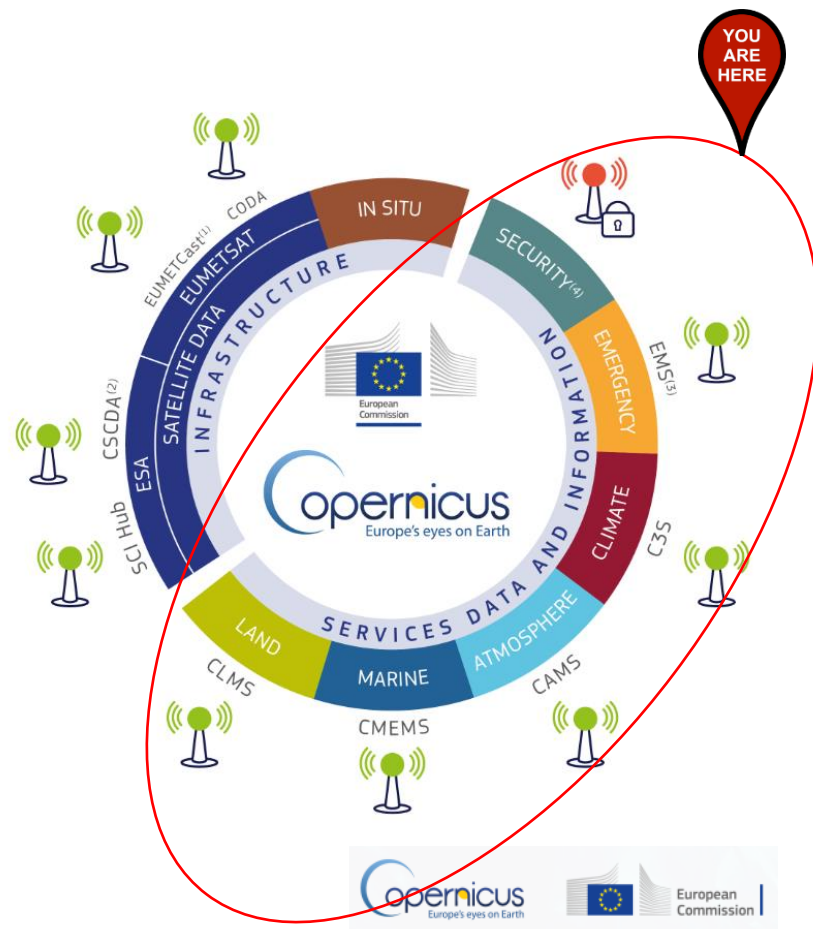
- **6 Thematic Copernicus Services**

- 5 are under Full, free and open access:

- Land
- Marine
- Atmosphere
- Climate
- Emergency

- 1 has restricted access

- Security



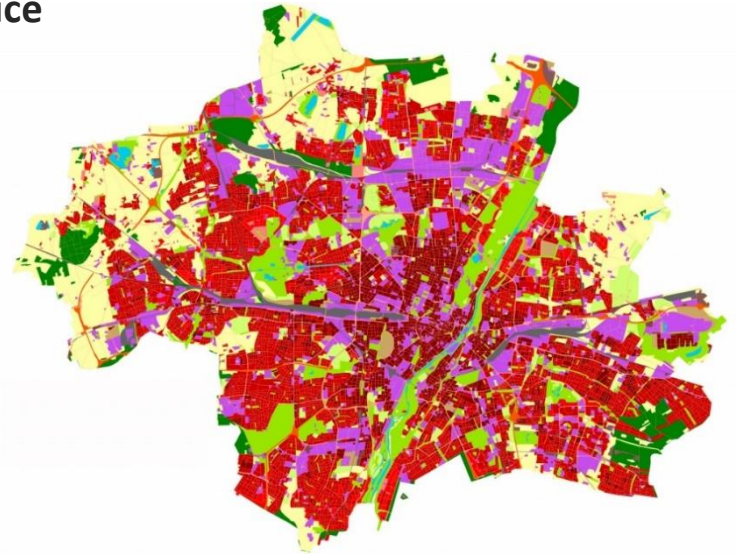


Land
Monitoring

FULL, FREE AND
OPEN

ACCESS TO CLMS

- **CLMS = Copernicus Land Monitoring Service**
- Example of products available :
 - Land Use / Land Cover (CORINE)
 - Hydrology
 - Digital Elevation Model (DEM)
 - Urban Atlas
 - Natura 2000,
 - etc...
- URL : <http://land.copernicus.eu/>





Land

Monitoring

FULL, FREE AND
OPEN

ACCESS TO CLMS

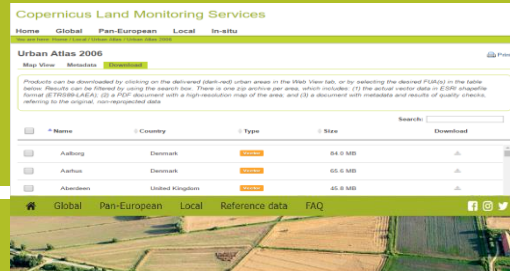
Global <http://land.copernicus.vgt.vito.be/PDF/portal/Application.html#Home>



Pan-European <http://land.copernicus.eu/pan-european>



Local <http://land.copernicus.eu/local>



Reference Data <http://land.copernicus.eu/in-situ>



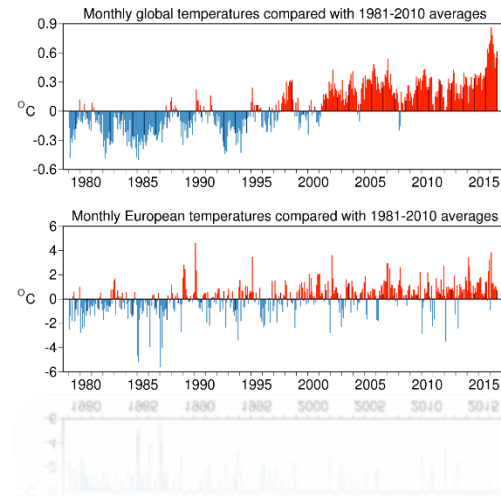
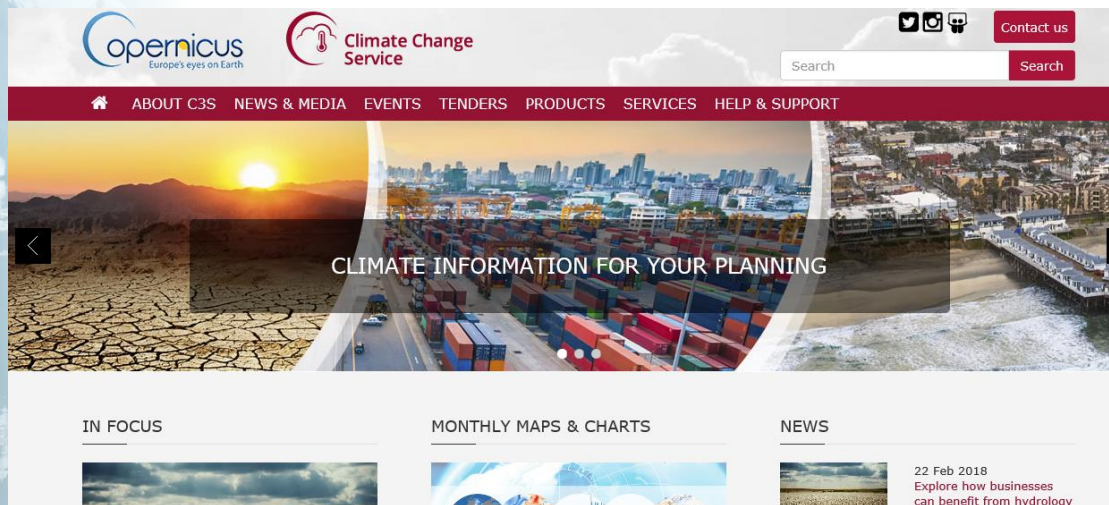


Climate
Change

ACCESS TO C3S

FULL, FREE AND
OPEN

- **C3S = Copernicus Climate Change Service**
- Sectoral Information System
- Climate Data Services



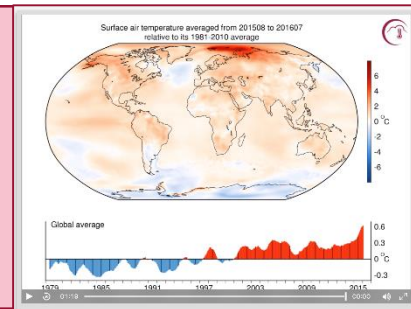


Climate
Change

FULL, FREE AND
OPEN

ACCESS TO C3S

- Visit <https://climate.copernicus.eu> and visualize data of interest
- Access to C3S data on ECMWF website at <http://apps.ecmwf.int/datasets/data/interim-full-daily/>



- To access the **ECMWF public datasets**. You will **need to have an account** on ECMWF web site
- If you **don't have an account**, please self register at <https://apps.ecmwf.int/registration/>
- Very **simple**: the user writes a request, submits it and retrieves a file





FREE AND OPEN

- EMS answers to :

- floods,
- tsunami,
- earthquake,
- landslides,
- fires,
-

- Only authorized users can trigger the service
- But everybody can access maps!
- Where : <http://emergency.copernicus.eu/>

European Commission

COPERNICUS

Emergency Management Service

Copernicus EMS » Copernicus Emergency Management Service

Home | What is Copernicus | EMS - Mapping | EMS - Early Warning System

News

LATEST NEWS - 2017-10-15 | [EMSR249] Hurricane Ophelia in Ireland

EMS - MAPPING

- Service Overview
- Who can use the service
- How to use the service
- Products: Rapid Mapping
- Products: Risk and Recovery
- Quality control / Feedback
- User Guide

RAPID MAPPING

- List of Activations
- Map of Activations
- GeoRSS Feed

RISK AND RECOVERY

Copernicus Emergency Management Service - Mapping

A service in support of European emergency response

Map showing the United Kingdom, Ireland, and surrounding regions. A blue icon labeled EMSR249 is visible over Ireland.



FREE AND OPEN

- Rapid Mapping

- Risk and Recovery

Act. Code	Title	Event Date	Type	Country/Terr.	Feed
EHMSR250	Forest fire Portugal	2017-10-16	Wildfire	Portugal	
EHMSR249	Hurricane Ophelia in Ireland	2017-10-16	Storm	Ireland	
EHMSR248	Forest fire in Castilla y León region...	2017-07-29	Wildfire	Spain	
EHMSR247	Forest fire in Bergama area, Georgia	2017-09-22	Wildfire	Georgia	
EHMSR246	Hurricane Maria in Dominica	2017-09-19	Storm	Dominica	
EHMSR245	Hurricane Maria in Caribbean	2017-09-19	Storm	Saint Kitts and... British	

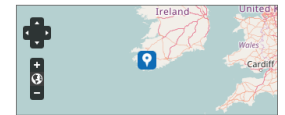
[EHMSR249] Hurricane Ophelia in Ireland

EHMSR249: Hurricane Ophelia in Ireland

Event Time (UTC): 2017-10-16 06:00
Event Time (LOC): 2017-10-16 07:00
Event Type: Storm (Extra-tropical storm)
Activation Time (UTC): 2017-10-15 19:23
Reference maps produced: 0
Delineation maps produced: 16
Grading maps produced: 13
Activation Status: Open
Affected Countries/Territories:

Ireland
Authorized User:
Ireland|National Directorate for Fire and Emergency Management

Activation Reason:
Hurricane Ophelia is forecast to hit the western to south eastern coasts of Ireland the 16/10/2017 from 06:00 onwards with extreme winds, storm surges, waves and flooding.





Xyllela Fastidiosa





2

Ecco i danni al patrimonio naturale del **#Vesuvio** aggiornati al 18/7/2017. Un vero disastro ambientale. **@CopernicusEMS**

 Translate from Italian



Copertura del suolo

- Aree a vegetazione boschiva e arbustiva in evoluzione
- Aree con vegetazione rada
- Boschi di conifere
- Boschi di latifoglie
- Boschi misti
- Prati stabili

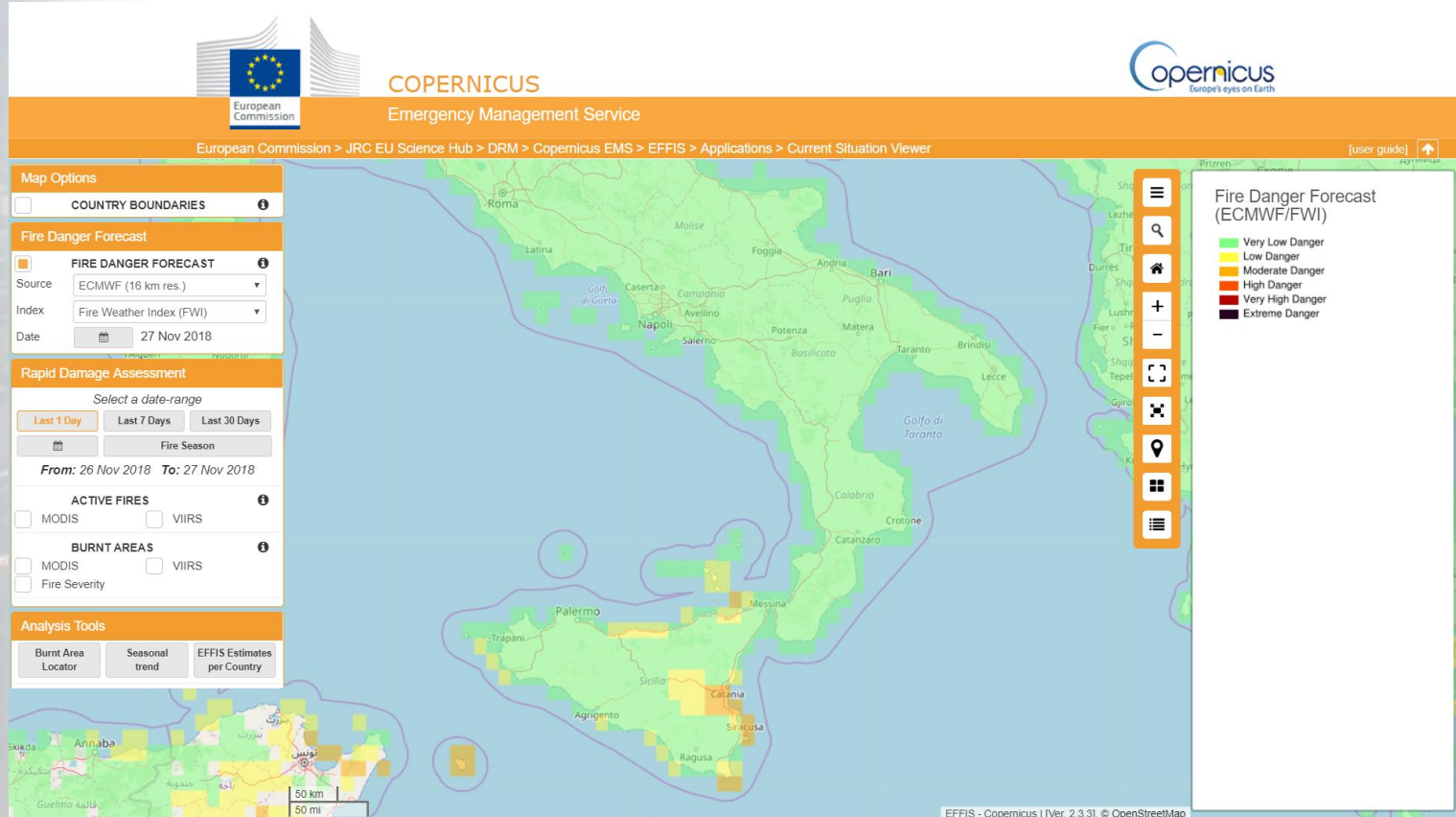
Annamaria Luongo

Copernicus EMS



Copernicus EMS: EFFIS

Emergency
Management







JOINT RESEARCH CENTRE

EFAS European Flood Awareness System

European Commission > JRC Science Hub > IES > EFAS-IES

[Home](#) [About](#) [EFAS Videos](#) [Bulletins](#) [Archive](#) [Partners](#) [National Information](#)

European Flood Awareness System (EFAS)

The European Flood Awareness System (EFAS) is the first operational European system monitoring and forecasting floods across Europe. It provides complementary, flood early warning information up to 10 days in advance to its partners: the National/Regional Hydrological Services and the [European Response and Coordination Centre \(ERCC\)](#).

The Operational EFAS consists of four centres executed by different consortia

- **EFAS Computational** centre - [European Centre for Medium-Range Weather Forecasts](#) (UK) executes forecasts and hosts the EFAS-Information System platform
- **EFAS Dissemination** centre - [Swedish Meteorological and Hydrological Institute](#), [Rijkswaterstaat](#) (NL) and [Slovak Hydro-Meteorological Institute](#) analyse EFAS on a daily basis and disseminate information to the partners and the ERCC
- **EFAS Hydrological data collection** centre - [REDIAM](#) (ES) and [ELIMCO](#) (ES) collect historic and realtime discharge and water level data across Europe
- **EFAS Meteorological data collection** centre - [KISTERS AG](#) and [Deutscher Wetterdienst](#) collect historic and realtime meteorological data across Europe.

EFAS is an operational service under the umbrella of the [Copernicus emergency management service](#) and is fully operational since October 2012.

Contact | Search on EUROPA website | Legal notice | Cookies



PARTNER LOGIN

Username

Password

Remember Me ☐

[Login](#)

[Forgot your password?](#)

[Forgot your username?](#)

EFAS Videos

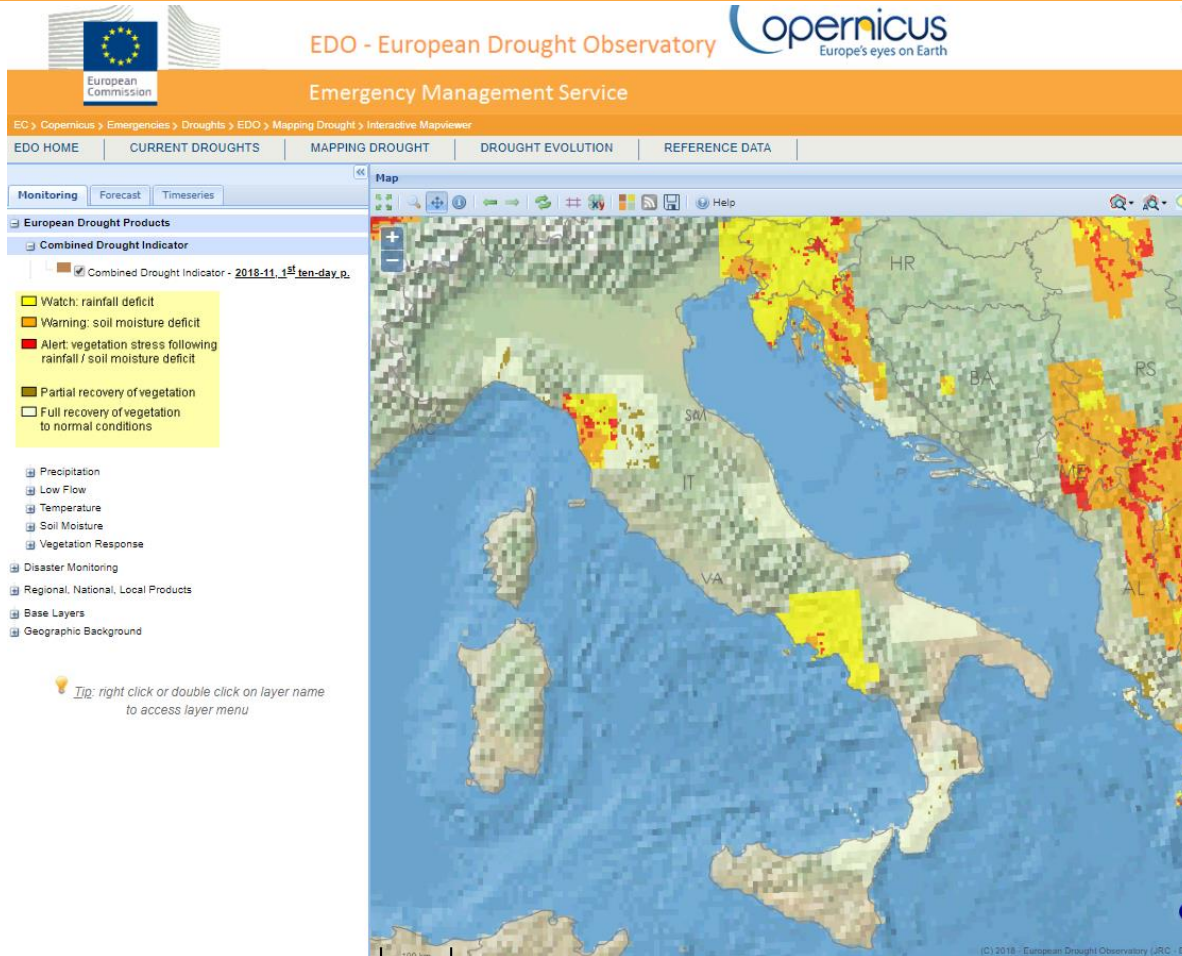
EFAS Bulletin

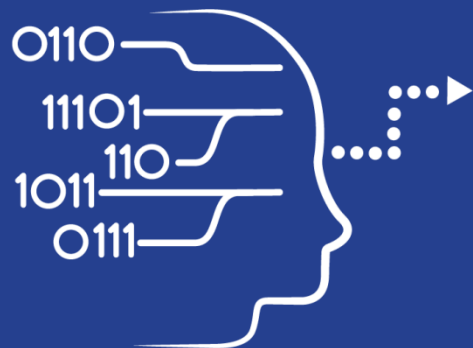




Emergency
Management

Copernicus EMS: EDO





User Uptake

Copernicus Access to Data

National and private Initiatives





User Uptake

OTHER DATA ACCESS PUBLIC INITIATIVES

Initiative Name	Provider	Website and Target User Group
ESA Thematic Exploitation Platforms	ESA	<ul style="list-style-type: none">• URL: tep.eo.esa.int• All user types
THEIA Land Data Centre	CEA, Cerema, CIRAD, CNES, CNRS, IGN, INRA, IRD, IRSTEA, Meteo France, ONERA	<ul style="list-style-type: none">• URL: www.theia-land.fr• Scientific communities and public authorities
Center for Environmental Data Analysis - CEDA	CEDA, NCAS, NCEO	<ul style="list-style-type: none">• URL: catalogue.ceda.ac.uk• All user types
USGS Earth Explorer	USGS	<ul style="list-style-type: none">• URL: earthexplorer.usgs.gov• All user types
Alaska Satellite Facility	NASA University of Alaska Fairbanks	<ul style="list-style-type: none">• URL: asf.alaska.edu/sentinel• Scientific users



User
Uptake

OTHER DATA ACCESS PRIVATE INITIATIVES

Initiative Name	Provider	Website and Target User Group
CloudEO	CloudEO	<ul style="list-style-type: none">• URL: cloudeo-ag.com• Users, developers and providers of geo data/ geo services; software developers
EOBrowser platform	Sinergise	<ul style="list-style-type: none">• URL: apps.sentinel-hub.com/eo-browser/• Users of geo data/ geo services
Geostorm platform	CS-SI	<ul style="list-style-type: none">• URL: geostorm.eu• Users and developers of geo data/ geo services
Google Earth Engine	Google	<ul style="list-style-type: none">• URL: earthengine.google.com• Scientists, researchers and developers
Planet platform	Planet	<ul style="list-style-type: none">• URL: planet.com/products/platform/• Users and developers of geo data/ geo services
Sentinel on AWS	Amazon	<ul style="list-style-type: none">• URL: sentinel-pds.s3-website.eu-central-1.amazonaws.com• Developers, private/public downstream players

* The European Commission does not endorse any particular commercial solution



Data Access

Copernicus Access to Data

New Generation services:

- RUS
- DIAS



RUS Service

Data Access



Data
Access

RUS: A NEW EXPERT SERVICE FOR SENTINEL USERS

- **RUS: Research and User Support for Sentinel Core Products**
- **Goal:** Foster the use of Sentinel Core products by providing several types of support to the Sentinel data users for free.
- **Project funded by EC and managed by ESA.**





Data
Access

RUS: A NEW EXPERT SERVICE FOR SENTINEL USERS

<https://rus-copernicus.eu/portal/>



**Non
Commercial
activities**



Students, Trainers
Researchers
Decision-makers
R&D development

Free access



Powerful computing
environment with
scalable VMs & full
support

**Scientific
Support**



Support from experts
in geospatial
data processing

Process



Process large
Sentinel datasets
possible for any
user

Training



Face-to-face
sessions &
webinars
for all users



DIAS

Data Access



Data
Access

What is the Copernicus DIAS?

- 5 DIAS platforms
 - Full set of Copernicus data and information
 - Ability to process and combine it with data from other sources (space and non-space)
 - Develop and host new applications in the cloud

ALL-IN-ONE
ACCESS



A WEALTH
OF SERVICES



USER FOCUSED
FROM PRODUCTION
TO ACTIONABLE INFORMATION



A WORLD
OF OPPORTUNITIES
WAITING TO BE CAPTURED





Data
Access

Who ?

THE DIAS & WHERE TO REACH THEM

CREODIAS

WWW.CREODIAS.EU

sobloo

WWW.SOBLOO.EU

mundi
WEB SERVICES

WWW.MUNDIWEBSERVICES.COM

ONDA

WWW.ONDA-DIAS.EU

WeKEO
by Copernicus

WWW.WEKEO.EU



Data
Access

Why 5 DIAS?

- Competition supports creativity and quality service.
- Differences between the DIAS:
 - Different ancillary and complementary content, e.g. other EO and non-EO data
 - Different offer of tools
 - Different pricing policies
 - Different user experience
 - Different evolution regarding generic/thematic focuses



Data
Access

Launch of the DIAS

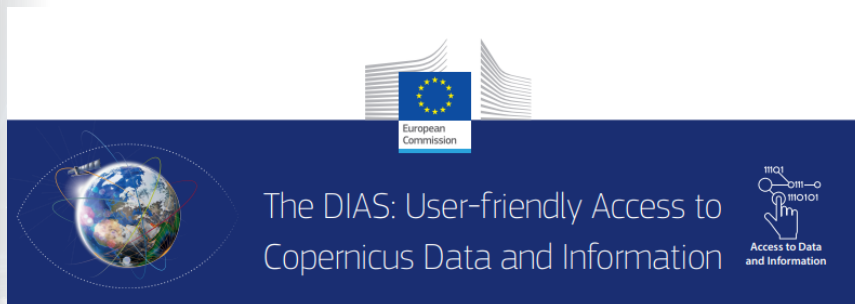
- 20 June 2018: Launch of the 5 DIAS in Baveno
- Next steps:
 - Gradual and incremental deployment process





Data
Access

More information



COPERNICUS DATA AND INFORMATION ACCESS SERVICES

Twenty years ago, in the early days of the Copernicus programme, there was no telling of the technological advances that would come. Space data was used only by government organisations and experts or scientists, satellite imagery was stored not in the relatively recently developed cloud, but physically, on magnetic tapes.

The technological evolution, especially in terms of **availability and accessibility**, has made Copernicus the largest space data provider in the world, currently producing **12 terabytes per day**. Hence, the **user base is rapidly growing** to reach new stakeholders such as businesses, entrepreneurs and citizens worldwide. The mass sharing and use of Copernicus (and earlier GMES) data and information started across a series of heterogeneous platforms while the user carried the burden of download, processing and storage. To **facilitate and standardise access to this data**, the European Commission is funding the deployment of **five cloud-based platforms providing centralised access to Copernicus data and information, as well as to processing tools**. These platforms are known as the **DIAS, or Data and Information Access Services**.

- Copernicus.eu
<http://copernicus.eu/data-access>
- Copernicus Support Office
support@copernicus.eu



Copernicus Support Office

- 3500+ tickets handled
- replies within 1 or 2 days
- animates Relays and Academy and Academy



support@copernicus.eu



Ask on Twitter
[@CopernicusEU](https://twitter.com/CopernicusEU)

ITALIAN ACADEMY

- University of Padova
- CIMA Research Foundation
- IEST
- Fondazione CMCC
- University of Rome “La Sapienza”
- GISIG
- MEEO
- Politecnico di Milano
- StudioMapp
- TeRN
- University of Basilicata
- University of Bologna (2 departments)
- University of Rome “Tor Vergata”

ITALIAN RELAYS

- FORUM NAZIONALE UTENTI COPERNICUS
- IEST/iXItaly
- LazioConnect
- TeRN