COPERNICUS SATELLITE DATA DISTRIBUTED BY ESA FOR PUBLIC AUTHORITIES

Data Access Overview

WHO CAN APPLY AS A PUBLIC AUTHORITY?

1. Employees of a government or public administration of States participating in the Copernicus Programme

2. A person having public responsibilities or functions, or providing public services relating to a EU policy

3. Employees of research and academic organizations (i.e. National Research Council, University etc.)

4. Contractors of such entities

The complete list is available at CSCDA User Categories web page:

https://spacedata.copernicus.eu/web/cscda/copernicus-users/user-categories

WHAT IS THE DATA OFFER?

Copernicus Sentinel Missions data

Open access to the full archive upon simple registration

Additional Optical & SAR Missions data from Copernicus Contributing Missions (CCMs)

- Predefined large coverages (e.g. Europe in Very High Resolution every 3 years)
- Coverages acquired to respond to specific users' needs (marine monitoring, natural disaster analysis, humanitarian aid etc.)
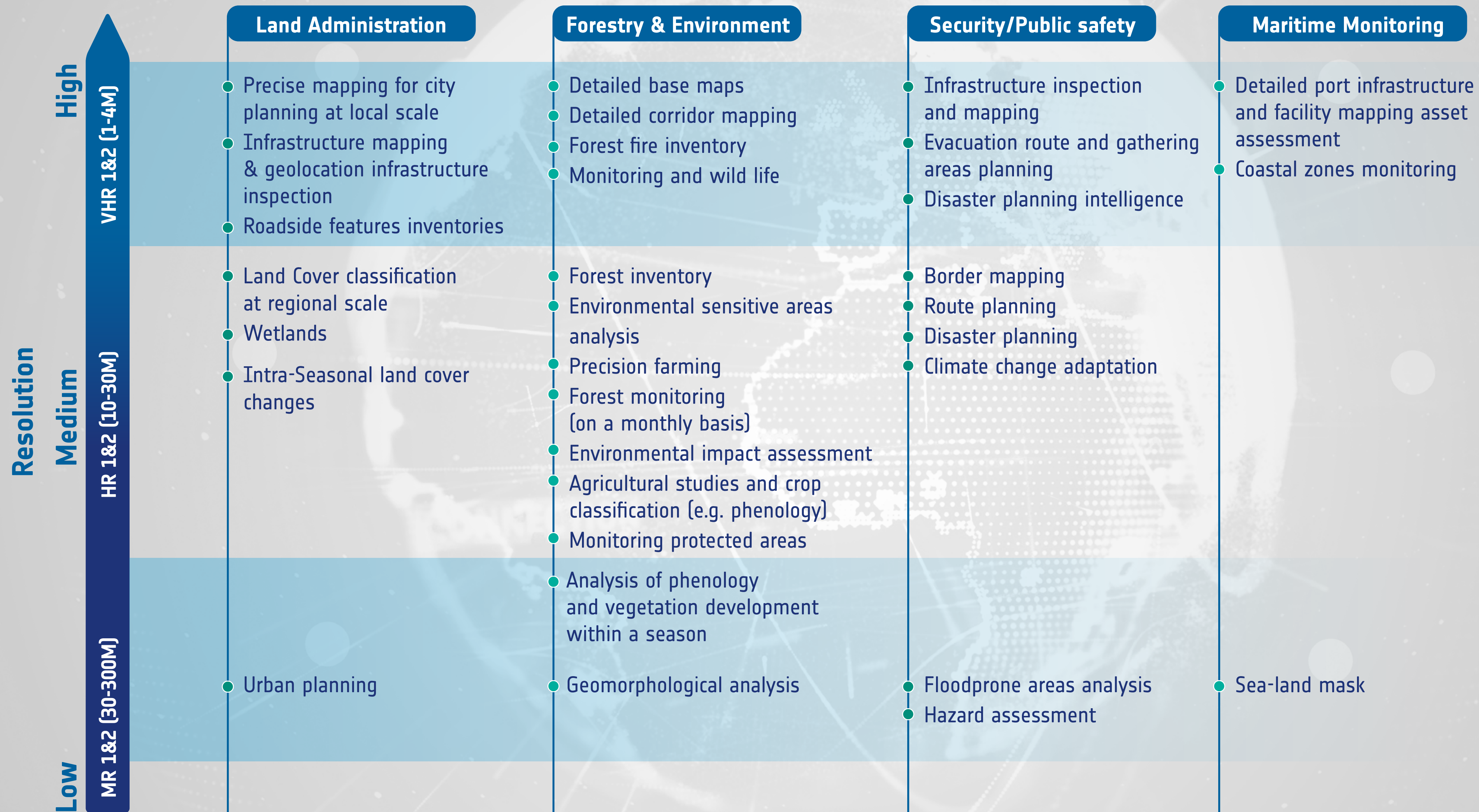- Copernicus Digital Elevation Model Data

SATELLITE MISSIONS CONTRIBUTING TO THE COPERNICUS PROGRAMME (September 2021)

Legend:
- Copernicus Sentinels
- Optical CCM
- SAR CCM
- Upcoming CCM

Satellites:
- Resourcesat-2
- Sentinel-2A
- Sentinel-3A
- Sentinel-1A
- Sentinel-5P
- SPOT-6
- SPOT-7
- PlanetScope
- Sentinel-1B
- Sentinel-2B
- Sentinel-3B
- Pleiades-1A
- Pleiades-1B
- Kompsat-5
- WorldView-2
- Kompsat-3
- SkySAT
- WorldView-3
- Deimos-2
- RADARSAT-2
- GeoEye-1
- SuperView-1
- Superview-2
- WorldView-1
- TerraSAR-X
- Kompsat-2
- Cosmo-SkyMed
- PAZ
- ICEYE
- Vision-1
- COSMO-SkyMed Second Generation
- Pleiades Neo

Years: 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021

Categories: Others, HR2, HR1, VHR2, VHR1, VHR1, VHR2, HR1, HR2, Others

WHAT CAN THE DATA BE USED FOR?

EO datasets of different spatial resolution are available for various types of applications.

Resolution

	Land Administration	Forestry & Environment	Security/Public safety	Maritime Monitoring
High — VHR 1&2 (1-4M)	• Precise mapping for city planning at local scale • Infrastructure mapping & geolocation infrastructure inspection • Roadside features inventories	• Detailed base maps • Detailed corridor mapping • Forest fire inventory • Monitoring and wild life	• Infrastructure inspection and mapping • Evacuation route and gathering areas planning • Disaster planning intelligence	• Detailed port infrastructure and facility mapping asset assessment • Coastal zones monitoring
Medium — HR 1&2 (10-30M)	• Land Cover classification at regional scale • Wetlands • Intra-Seasonal land cover changes	• Forest inventory • Environmental sensitive areas analysis • Precision farming • Forest monitoring (on a monthly basis) • Environmental impact assessment • Agricultural studies and crop classification (e.g. phenology) • Monitoring protected areas	• Border mapping • Route planning • Disaster planning • Climate change adaptation	
Low — MR 1&2 (30-300M)	• Urban planning	• Analysis of phenology and vegetation development within a season • Geomorphological analysis	• Floodprone areas analysis • Hazard assessment	• Sea-land mask

EXAMPLES OF EXISTING LARGE DATA COVERAGES AVAILABLE TO PUBLIC AUTHORITIES

Dataset title	Description	Acquisition window	Resolution
Copernicus Global and European Digital Elevation Model (DEM)	Digital Surface Model (DSM) represents the surface of the Earth including buildings and vegetation. Two global coverages at 90 and 30m and one European coverage at 10m *(only for Copernicus services)*	2010-2015	30m and 90m
Optical Very High Resolution (VHR) over Europe	One coverage of 38-39 European states and the French Overseas Departments. Such coverages are generated every 3 years	Vegetation season in reference years 2012, 2015, 2018 and 2021	1-4m
Optical Very High Resolution (VHR) Urban Atlas (2006-2009)	One coverage of 318 Functional Urban Areas (FUA) acquired with VHR missions	2006 to 2009	2.5m pansharpened
Optical Very High Resolution (VHR) Urban Altlas 2012	One coverage of 310 Functional Urban Areas (FUA)	February 2011 to October 2013 and completed in 2015	40cm PAN & 120cm Multispectral
Optical High Resolution 2 (HR2) European Multi-temporal Coverages	7 monthly coverages of 39 European states and the French Overseas Departments with UK-DMC2 and DEIMOS-1 missions	April to October 2015	22m
Optical High Resolution (HR) Pan Europe Coverages	One to two coverages of 38-39 European states and the French Overseas Departments. Such coverages were generated every 3 years, and are now replaced by systematic Sentinel-2 data availability	Vegetation season in reference years 2006, 2009, 2012 and 2015	10m and 25m
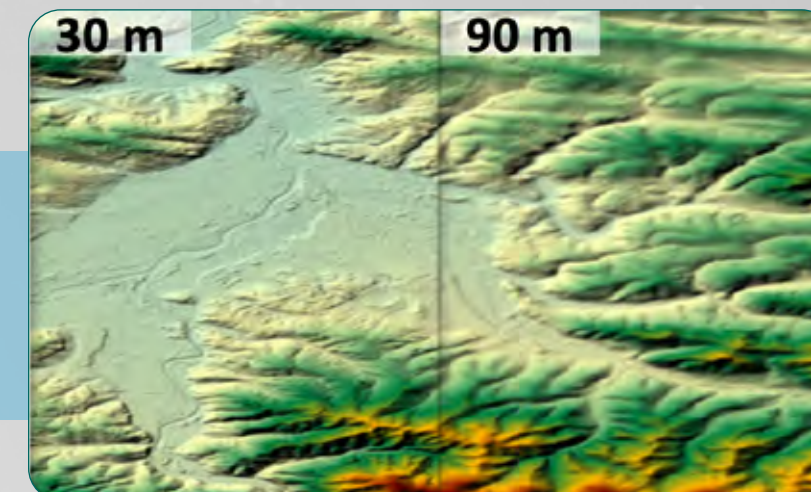
EXAMPLES OF ADDITIONAL OPTICAL AND SAR MISSIONS DATA

Data ordered by authorized users, in particular the Copernicus Services, are available to Public Authorities.

The table below provides some examples of events covered by the Copernicus Emergency Management Service (CEMS); over 500 activations were opened and the relevant distributed data are available in the archive.

Dataset Title	Acquisition window	Data type and Resolution
Flood in Western Germany	13 to 20 Jul-2021	Optical VHR1 and Radar HR1/2
Fire in Peloponnese and in Attika Regions, Greece	21-23 May 2021	Optical VHR1 and VHR2
La Soufrière Volcano Eruption in St. Vincent and the Grenadines, Caribbean islands	11 to 20 Apr-2021	Optical VHR1 and Radar VHR1/2
Earthquake in Sulawesi, Indonesia	21-25 January 2021	Optical VHR1
Tropical Cyclone Iota in Central America (Guatemala, Honduras, Nicaragua)	21-26 November 2020	Radar HR2
Explosion in Beirut, Lebanon	05-07 August 2020	Optical VHR1

HOW CAN I ACCESS COPERNICUS SENTINELS DATA?
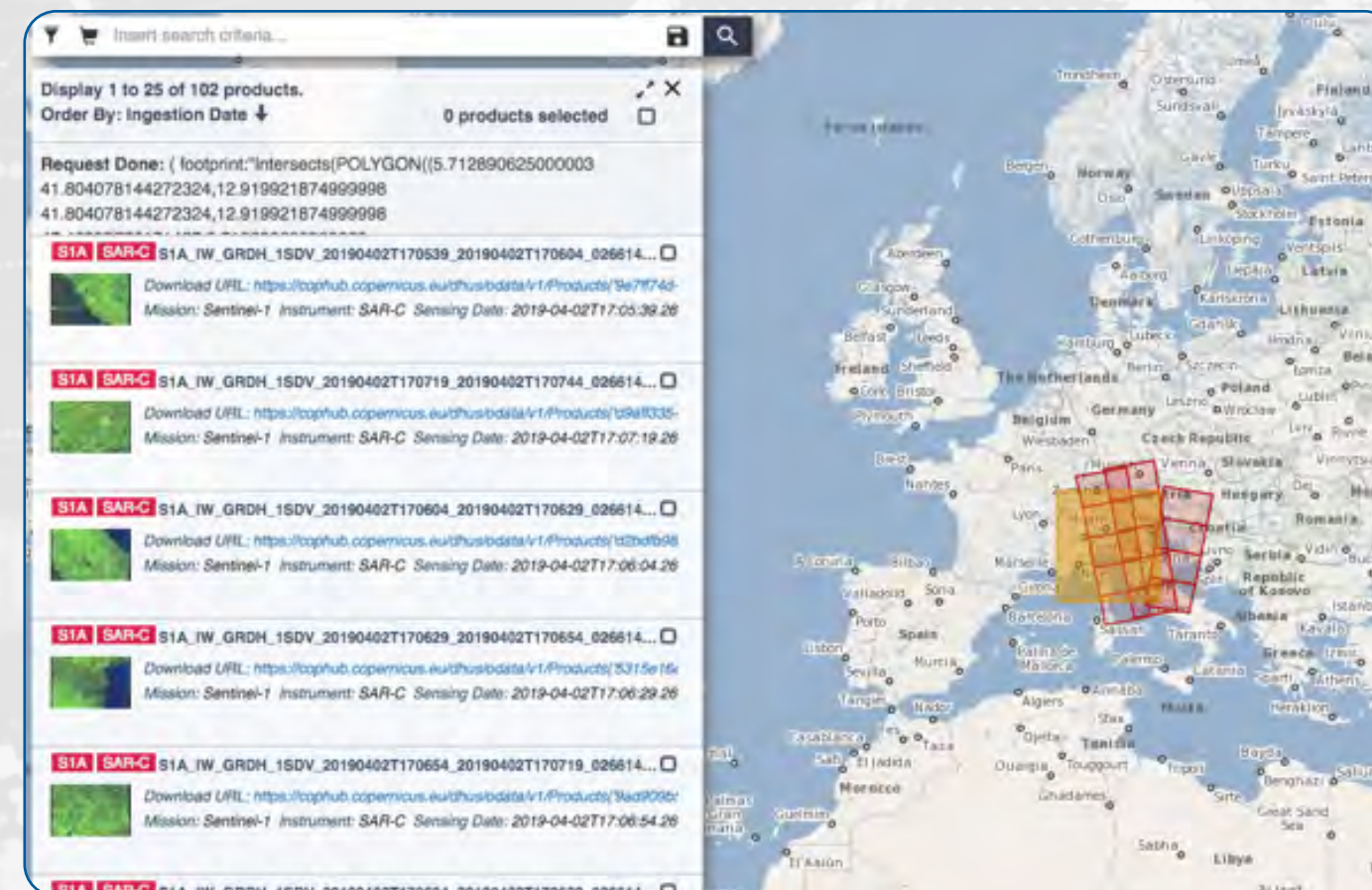
1. Go to Copernicus Open Access Hub

https://scihub.copernicus.eu/dhus/#/home

2. Click on the login button to register

3. Search, browse and download data

SEARCH
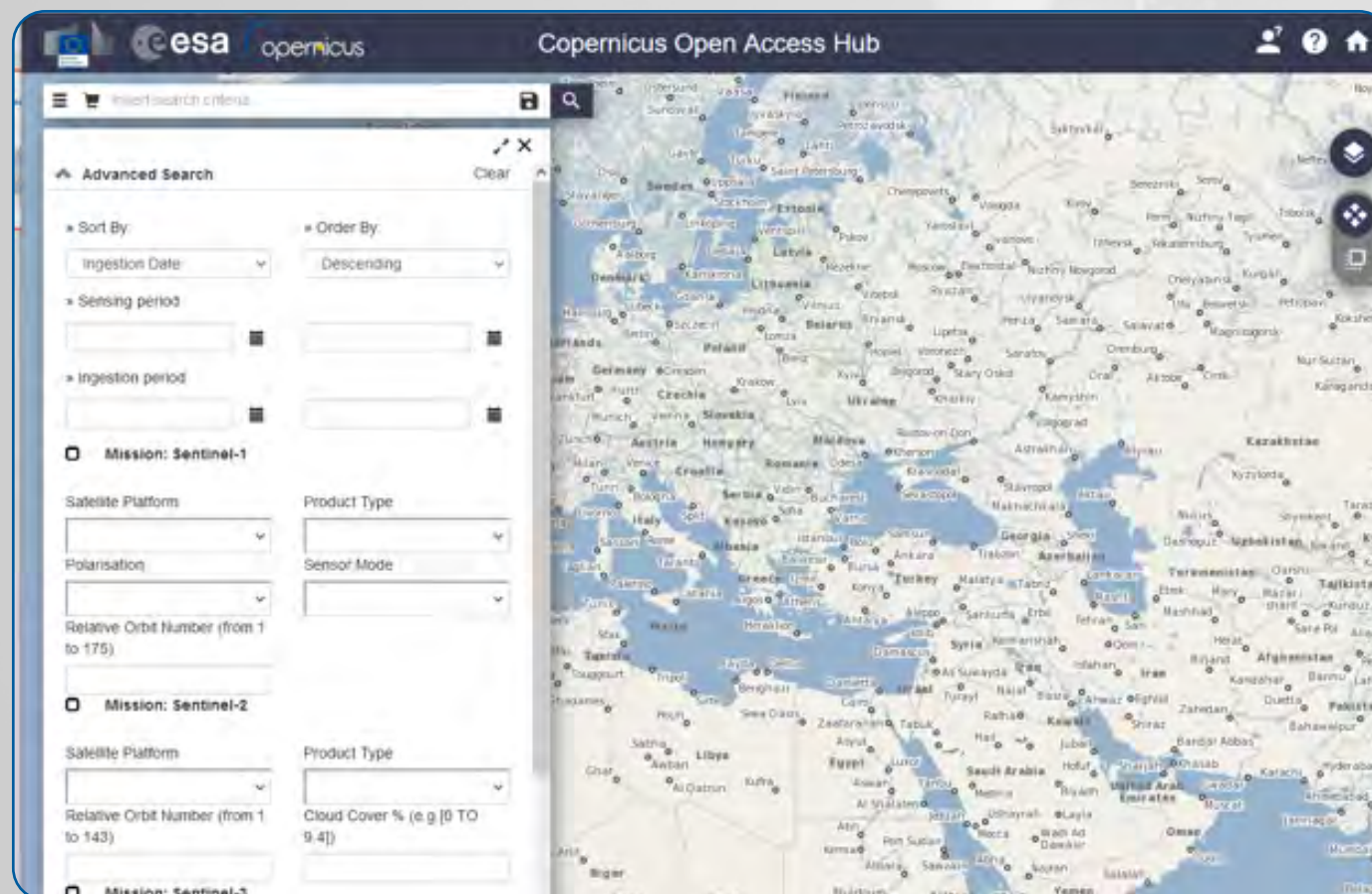
BROWSE

VIEW/DOWNLOAD

HOW CAN I ACCESS ADDITIONAL COPERNICUS DATA FROM CCMs ?

All archived data can be accessed via catalogue (PANDA) or via FTP.

https://spacedata.copernicus.eu

The Copernicus DEM dataset example is provided below:

1. Register and accept terms and conditions for the use of EO data by clicking on the **REGISTER** button

2a. Access the catalogue (PANDA)
- **Search** (by Area, Mission/Dataset, time constraint, Resolution...): enter the Area and fill in Dataset with DEM, then select COP-DEM_GLO-30
- **Browse**
- **Download**

How to register?

REGISTRATION

The Copernicus DEM datasets available in PANDA.

COPERNICUS DEM

How to use the catalogue?

PANDA

SEARCH

BROWSE

VIEW/DOWNLOAD
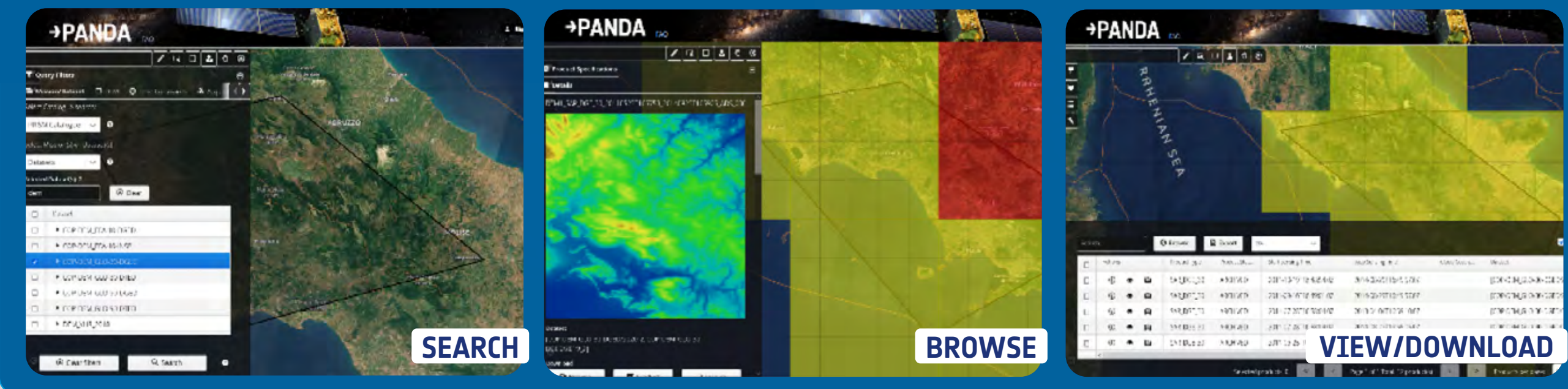
2b. Alternatively, **download via FTPS** (FTP Secure): This requires specific settings in the user FTP. Guidelines are available **HERE**

**How to download data via FTP?**

FTP

COPERNICUS SPACE COMPONENT DATA ACCESS

The European Copernicus Programme is a user driven programme with the aim to provide, on a sustainable basis, reliable and timely services related to environmental and security issues in support of public policy makers' needs.

CSCDA provides access to data from the Sentinels dedicated missions as well as from over 40 European and international space missions.
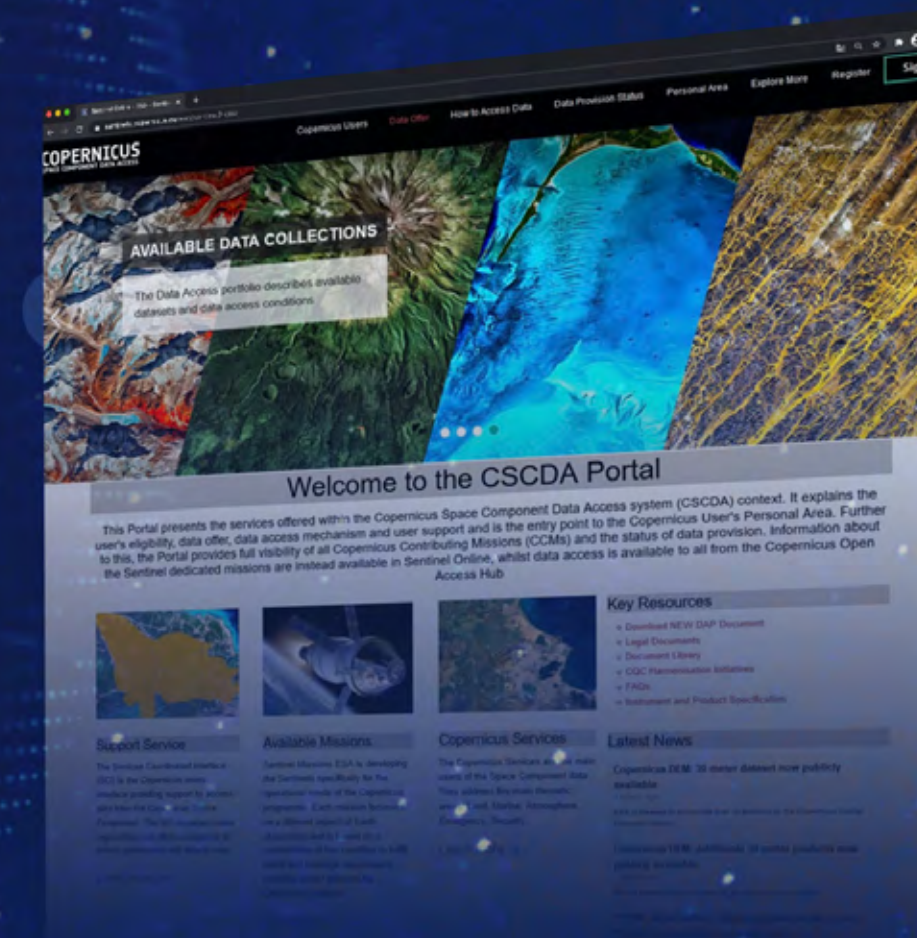
ONLINE INFORMATION

https://sentinels.copernicus.eu
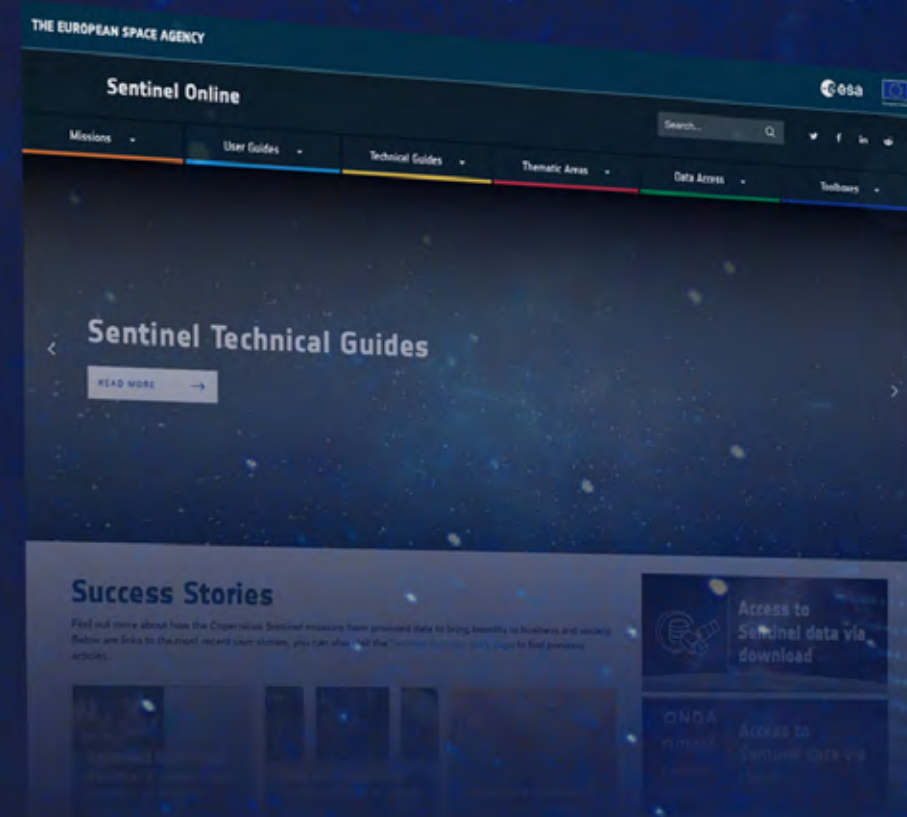
CONTACTS

Services Coordinated Interface (SCI)
For registration, enquiries or data requests
Email: **EOSupport@copernicus.esa.int**

https://spacedata.copernicus.eu