



Using the ESA/EUMETSAT Data Access and User Support

Copernicus User Uptake Information Sessions
Data Access



Data
Access

INTRODUCTION OF USE CASE

- Overview of access to the satellite data available under Copernicus
- 2 official distributors of Copernicus **satellite data**:
 - ESA : <https://sentinel.esa.int/web/sentinel/sentinel-data-access>
 - EUMETSAT :
<http://www.eumetsat.int/website/home/Copernicus/AccessData/index.html>
- Presentation of the registration process
- How to download Copernicus **satellite data** (Sentinel-1 ; Sentinel-2 and Sentinel-3)?










Data
Access

Sentinel data procured by ESA and EUMETSAT

Sentinel Mission and Status

Data procured by

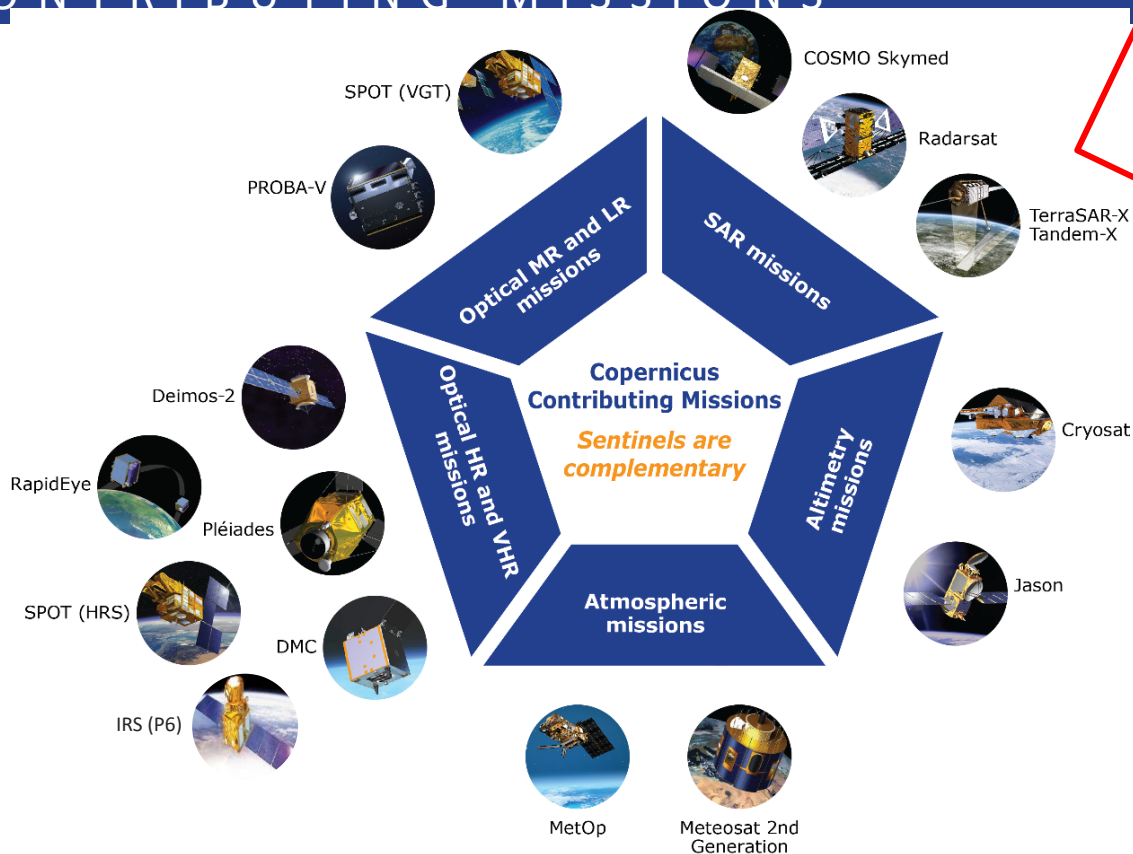
FULL, FREE
AND OPEN

	SENTINEL-1: 4-40m resolution, 3 day revisit at equator	2 sats in orbit	ESA
	SENTINEL-2: 10-60m resolution, 5 days revisit time	2 sats in Orbit	ESA
	SENTINEL-3: 300-1200m resolution, <2 days revisit	1 Sat in Orbit	ESA (S3-OLCI Land data) EUMETSAT (S3-OLCI Marine data)
	SENTINEL-4: 8km resolution, 60 min revisit time	1st Launch in 2023	EUMETSAT
	SENTINEL-5p: 7-68km resolution, 1 day revisit	1 sat: launched in october2017	ESA
	SENTINEL-5: 7.5-50km resolution, 1 day revisit	1st Launch in 2021	EUMETSAT
	SENTINEL-6: 10 day revisit time	1st Launch in 2020	EUMETSAT



Data
Access

THE CONTRIBUTING MISSIONS



Subject to Data
Owner's Data
Policy



Data
Access

ESA Data access navigator

Sentinel Online

[Need Help?](#) [FAQ](#) [Contact Us](#) [About Sentinel Online](#)

Google™ Custom Search

[Missions](#) [User Guides](#) [Technical Guides](#) [Thematic Areas](#) [Data Access](#) [Toolboxes](#)

You are here [Home](#) [Data Access](#) [Share](#) [f](#) [in](#) [t](#) [g](#)

[Data Access Navigator](#)

[Data Access at Your Fingertips](#)

[Data Access Overview](#)

[Data Access Infrastructure](#)

[User Service Charter](#)

[Data Access evolution](#)

Data Access

[Data Access Home](#)
[Sentinel Data Access Description](#)
[Use Typologies and available Services](#)
[Available Data Collections](#)
[Access to Sentinel Data](#)

[Latest News](#)

[Key Resources](#)

Missions

[Missions Home](#) | [Sentinel-1](#) | [Sentinel-2](#) | [Sentinel-3](#)
[Sentinel-4](#) | [Sentinel-5](#) | [Sentinel-5P](#)

User Guides

[User Guides Home](#) | [Sentinel-1 SAR](#) | [Sentinel-2 MSI](#) | [Sentinel-3 OLCI](#)
[Sentinel-3 SLSTR](#) | [Sentinel-3 Synergy](#) | [Sentinel-3 Altimetry](#)
[Sentinel-5 TROPOMI](#) | [Acronyms](#)



Data
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ESA Data access navigator

- **5 mechanisms** are available to access Sentinel data depending on the status of the user

The screenshot shows the ESA Sentinel Online Data Access Navigator interface. The header includes the ESA logo, 'Sentinel Online' text, and navigation links: 'Need Help?', 'FAQ', 'Contact Us', and 'About Sentinel Online'. A search bar with 'Google Custom Search' is on the right. Below the header is a navigation menu with tabs: 'Missions', 'User Guides', 'Technical Guides', 'Thematic Areas', 'Data Access' (selected), and 'Toolboxes'. A breadcrumb trail shows 'You are here Home > Data Access'. The main content area is titled 'Data Access Navigator' and lists three data access mechanisms:

- Copernicus Services Data Hub**: Access for Copernicus Services. Includes a link 'Enter Copernicus Services Data Hub'.
- Sentinel Data Hub**: Open and free data access. Includes a link 'Enter Sentinel Open Access Data Hub'.
- Coordinated Data Access System**: Access to Contributing Missions data for Copernicus users.






A right sidebar titled 'Data Access' contains links: 'Data Access Home', 'Sentinel Data Access Description', 'Use Typologies and available Services', 'Available Data Collections', and 'Access to Sentinel Data'. Below this is a 'Latest News' section with three articles:

- Update on Sentinel-2 data availability** (21 October 2016): Further to the Sentinel-2 data availability news published on 18 October, users are informed that data availability has now resumed its nominal publication on the data hubs (e.g. APIHub, CopHub) except on the Scientific Data Hub (SciHub) in which the recovery is still on-going. Includes a 'Read more' link.
- Sentinel-3 OLCI Level 1 products available in the Data Hub** (20 October 2016): ESA is pleased to announce the first official release of Sentinel-3A OLCI Level 1 data products in the Sentinel Data Hub. Includes a 'Read more' link.
- Sentinel-1B data anomaly** (14 October 2016): A problem has occurred between 12 October 2016 at 07:10 UTC and 13 October 2016 at 15:35 UCT in the dual polarisation data generated by the Sentinel-1B SAR instrument. Includes a 'Read more' link.



Data
Access

ESA Data access navigator: 5 mechanisms

Mechanisms	Access	Which products?
 Copernicus Services Access	Restricted to the Copernicus Service Projects	Restricted
 Sentinel Data Hub	FULL, FREE AND OPEN	<ul style="list-style-type: none">• S1 SAR L-0, L-1 and L-2• S2 MSI L-1C ; S2 MSI 2Ap• S3 OLCI L-1&L-2 ; S3 SRAL L-1&L-2 ; S3 SLSTR L-1&L-2.
 Coordinated Data Access System	User categories: Copernicus Services, EU Institutions, EC R&D space projects, EC R&D non-space projects, Public Authorities , Int. org. and NGOs, Public	<ul style="list-style-type: none">• CORE datasets• ADDitional datasets from Copernicus Contributing Missions (third parties missions)
 Collaborative Data Hub	Collaborative ground segments only. No self-registration possible	Restricted Rolling Archive of Sentinels user products
 International Data Hub	International partners having established agreements with EC	Restricted Rolling Archive of 1 month of Sentinels user products



Data
Access

ESA Sentinel data hub: user guide and self registration

URL: <https://scihub.copernicus.eu/>

The screenshot shows the 'Overview' page of the Sentinel Scientific Data Hub. The header includes the Copernicus logo, the title 'Sentinels Scientific Data Hub', and the ESA logo. A sidebar on the left lists navigation options: Overview, 1 Self Registration, 2 Graphical User Interface, 3 Full Text Search, 4 Advanced Search, and 5 APIs And Batch Scripting. The main content area is titled 'Overview' (Rev. 95 - 24 Aug 2016) and contains sections for 'Sentinel-1 Data Offer', 'Sentinel-2 Data Offer', 'The Data Hub Archive', and 'Free and Open data access'. The 'Sentinel-1 Data Offer' section lists acquisition modes for Level-0 and Level-1 products, including Strip Map (SM), Interferometric Wide Swath (IW), Extra Wide Swath (EW), Wave (WV), and Interferometric Wide Swath (IW) for Level-2 products.

The screenshot shows the '1 Self Registration' page of the Sentinel Scientific Data Hub. The header includes the Copernicus logo, the title 'Sentinels Scientific Data Hub', and the ESA logo. A sidebar on the left lists navigation options: Overview, 1 Self Registration, 2 Graphical User Interface, 3 Full Text Search, 4 Advanced Search, and 5 APIs And Batch Scripting. The main content area is titled '1 Self Registration' (Rev. 38 - 24 Oct 2016) and contains a 'Login' section with a map of Europe. A blue arrow points to a 'Sign up Button' on the map. Below the map, there is a section for 'Self-registration can be performed by the user itself following these steps:' followed by two numbered steps: 1. Click on the 'Sign up' button in the Sentinels Scientific Data Hub home page, and 2. Fill in all fields of the registration form and then click on 'Register' button. At the bottom, there is a 'Register new account' button.

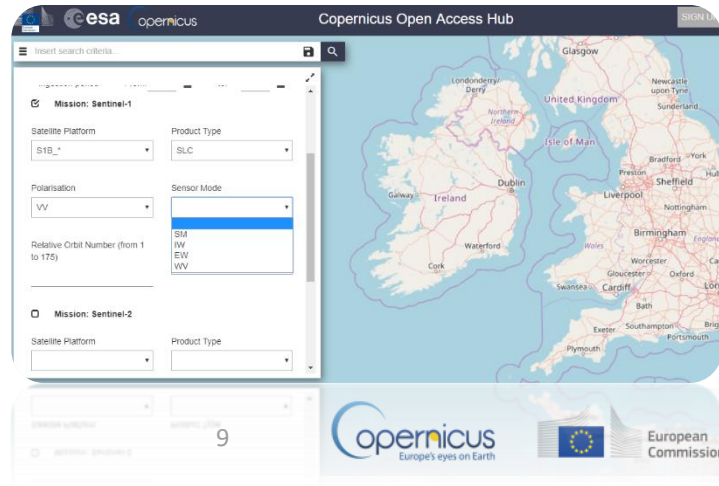
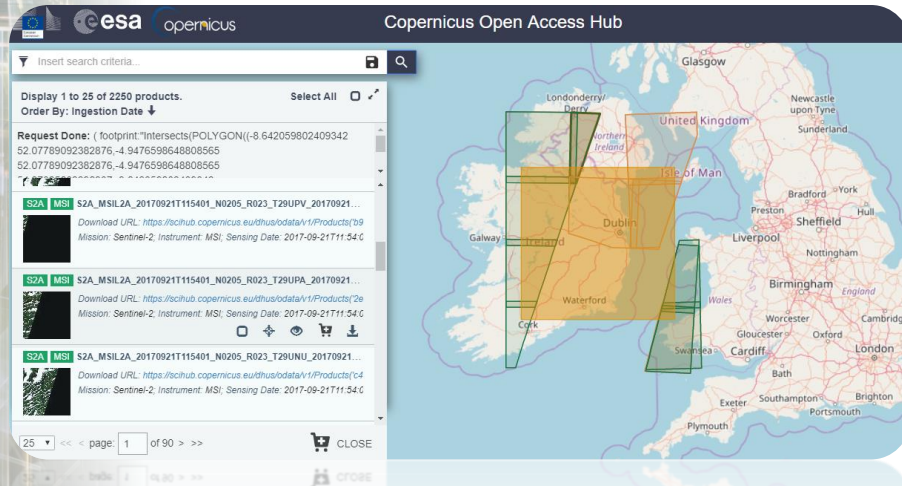
The self-registration procedure is explained online:

<https://scihub.copernicus.eu/userguide/1SelfRegistration>



ESA Sentinel data hub: search and download

- The Graphical User Interface for the Search and Download is explained online <https://scihub.copernicus.eu/userguide/2GraphicalUserInterface>
- To search for and download, go to <https://scihub.copernicus.eu/dhus/#/home>
- Draw your region of interest
- Click on the Menu button ☰ to the left. A popup opens wherein you can fill in your search parameters for the mission you need. Then, launch the search. 🔍
- Sentinel 1 ; 2 ; 3 land available.
- More than **1000 new** more products published everyday.





Data
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View details and download products

S2A_OPER_PRD_MSIL1C_PDMC_20160516T053333_R108_V20160515T103846_20160515T103846

[https://scihub.copernicus.eu/dhus/odata/v1/Products\('9e88591f-b03a-4b52-b1ad-3d0c69b09002'\)/\\$value](https://scihub.copernicus.eu/dhus/odata/v1/Products('9e88591f-b03a-4b52-b1ad-3d0c69b09002')/$value)

Footprint



Attributes

Summary

Date: 2016-05-15T10:38:46.000Z

Filename:

S2A_OPER_PRD_MSIL1C_PDMC_20160516T053333_R108_V20160515T103846_20160515T103846

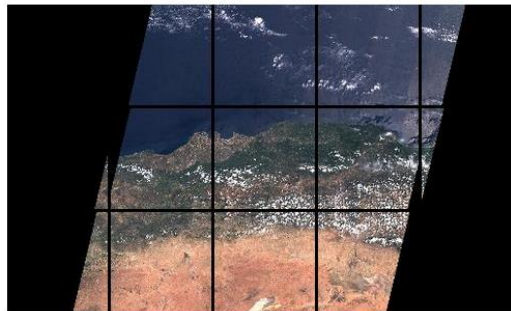
Identifier:

S2A_OPER_PRD_MSIL1C_PDMC_20160516T053333_R108_V20160515T103846_20160515T103846

Instrument: MSI

Satellite: Sentinel-2

Quicklook



Inspector

S2A_OPER_PRD_MSIL1C_PDMC_20160515T103846.SAFE

- AUX_DATA
- DATASTRIP
- GRANULE
- HTML
- rep_info

If the image satisfies
your criteria, press
this button to
download it !





Data
Access

ESA Coordinated Data Access System (CSC-DA)

- Need to register before login as the portal is accessible to **eligible users only**
- **Up to 72 hours** to get registered
- Explore the data offer
- Keep attention to latest news

The screenshot displays the ESA Copernicus Space Component Data Access (CSCDA) portal. At the top, the ESA logo and 'copernicus space component data access' text are visible. Navigation links include 'Contact Us', 'About CSCDA', 'Login into the CSCDA', and a circled 'Register' button. Below these are dropdown menus for 'Copernicus Users', 'Data Offer', 'How to Access Data', and 'Data Provision Status', along with a 'Explore More' button. The main content area features a 'Welcome to the CSCDA Portal' section with a description of the portal's purpose and a 'Latest News' section with a red circle around the title. The 'Latest News' section lists several updates, including 'Komsat missions available to Copernicus users' and 'Dubaisat-2 and TH-1 missions available to Copernicus users'. A 'Copernicus Emergency Service' video player is also present, showing a volcanic eruption. The footer contains links for 'User Support Services' and 'Available Missions'.



Data
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ESA CSC - DA : registration

- Through the CSC-DA, ESA organises the procurement of EO data from **Copernicus Sentinels Missions** and from **Copernicus Contributing Missions** (e.g. Pleiades, TERRASAR-X, COSMO-SkyMed, IKONOS, QuickBird).
- Details on the datasets and the conditions (i.e. data licensing, ordering mechanisms, product types available, delivery timelines, data access mechanisms) is available here:
https://spacedata.copernicus.eu/documents/12833/14545/DAP_Release_Phase_2
- The registration procedure is explained online
<https://spacedata.copernicus.eu/documents/12833/20397/CDS+Registration+Guidelines>



ESA CSC - DA: two types of datasets

- **CORE Datasets**

- **Fixed part of the data offer**, consisting in continuous data delivery from systematic missions or generation of large predefined coverages.
- Access rights are specific to each dataset, and are defined in the section of the portal.
- Access is via subscription.

Example:

Optical VHR multispectral and panchromatic coverage over Europe (VHR_IMAGE_2015)

Optical MR2 Worldwide coverage (MR_OPTICAL_GLOBAL)

VHR1-2 Urban Atlas 2012

- **ADDITIONAL Datasets**

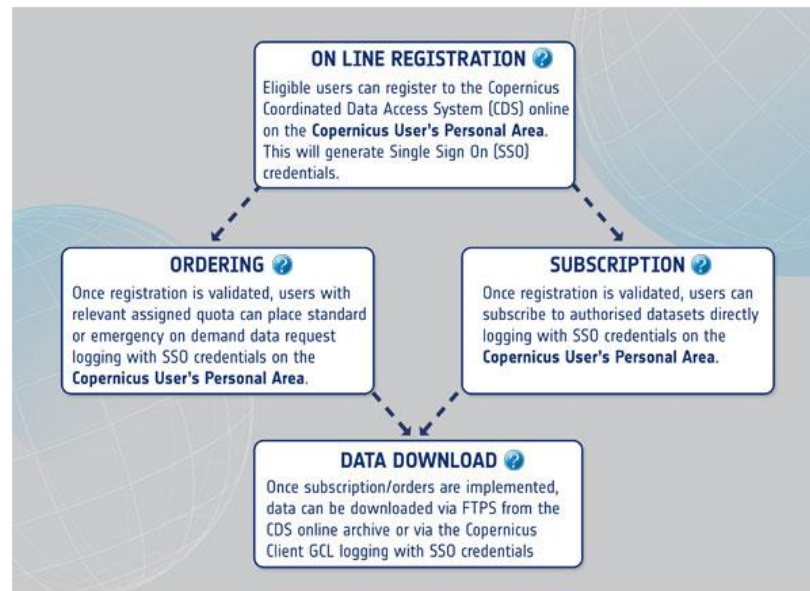
- **Variable part of the data offer** for which 40 data type categories are defined in terms of resolution, service type (Rush/Standard, Archive/New tasking), mission type (optical/SAR).
- Depending on their requirements, eligible users are granted a quota by the European Commission and may order data within these datasets.
- Eligibility is defined in the Access Rights section of the portal.
- Access via ordering.



ESA CSC-DA: how to access data





How to Access Data

CSCDA data access is made up of four main processes, as shown in the schematic diagram. A useful data and services guide for Copernicus users is available in the [Data Access Guidelines document](#)





EUMETSAT offers a range of data delivery mechanisms to meet the needs of the user:

	EUMETCast	EUMETCast is a multi-service push dissemination system based on multicast technology. The multicast stream is transported to the user via satellite.
	Copernicus Online Data Access (CODA)	Download service offers all Sentinel-3 marine and atmosphere products through a rolling buffer which at its maximum will span up to 12 months of data
	Data Centre Long-Term Archive	Ordering application enables users to browse and select from EUMETSAT's long-term archive of products, including the Copernicus Sentinel-3 marine and atmosphere products
	EUMETView	EUMETView is a visualisation service that allows users to view EUMETSAT's data and Copernicus Sentinel-3 marine data in an interactive way using an online map viewer



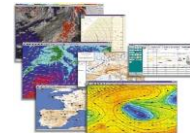
Data
Access

EUMETSAT's Data Push Service

- EUMETCast is EUMETSAT's integrated dissemination system for the delivery of near real-time environmental data including S3 and later on S4 and S5;
- EUMETCast Satellite service has coverage over Europe, the Middle-East and Africa;

Key Features:

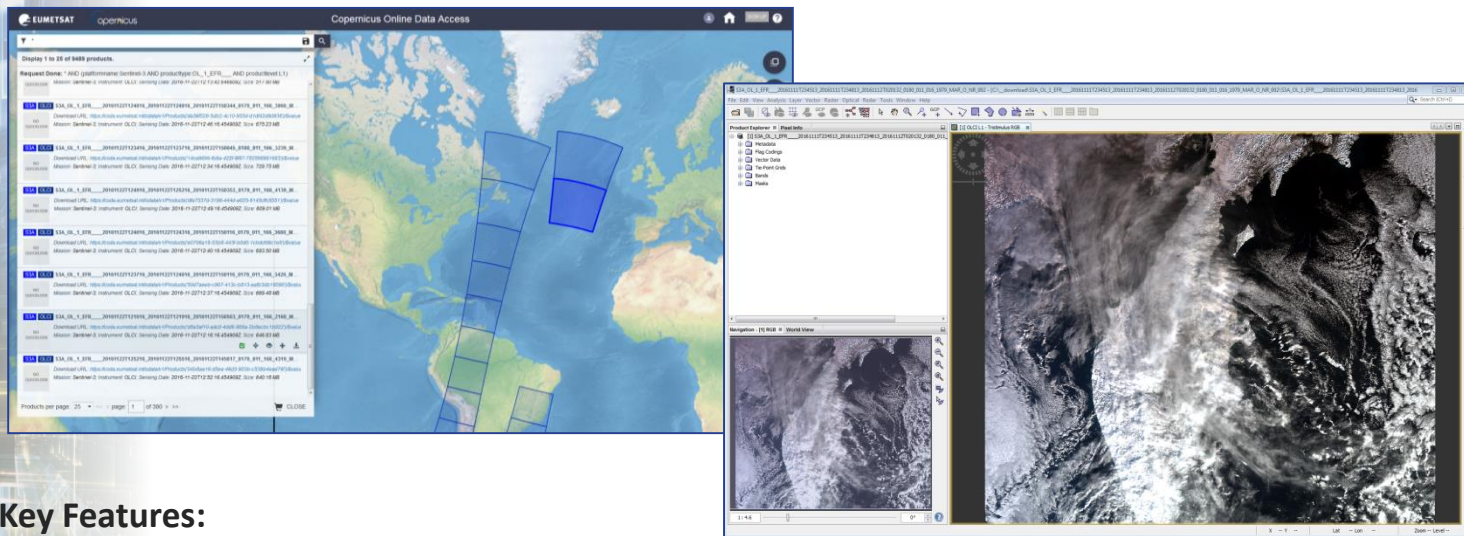
- Targets a large audience and delivers a wide range of earth observation data;
- Near real-time data stream includes Meteosat, Metop, Jason-2 / -3, Sentinel-3 satellite data and wide range of third-party satellite data services;
- Service utilises low cost, user-friendly satellite receiving equipment similar to satellite TV;
- Secure delivery of data files to targeted audiences, with guaranteed service level.





Data
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EUMETSAT's CODA Download Service



Key Features:

- CODA is an online rolling archive with http access. It provides access to Sentinel-3 Level 1 and Level 2 global data in near real-time (NRT), short time critical (STC) and none time critical (NTC) latency mode;
- Current service provides a few months archive of data this will increase to a one year archive in the coming months. For longer time-series data we provide an archive ordering system through the Data Centre;
- The user manual explains how to use the online tool, including how to download via an API;
- It's easy to display the downloaded images using standard GIS desktop applications.



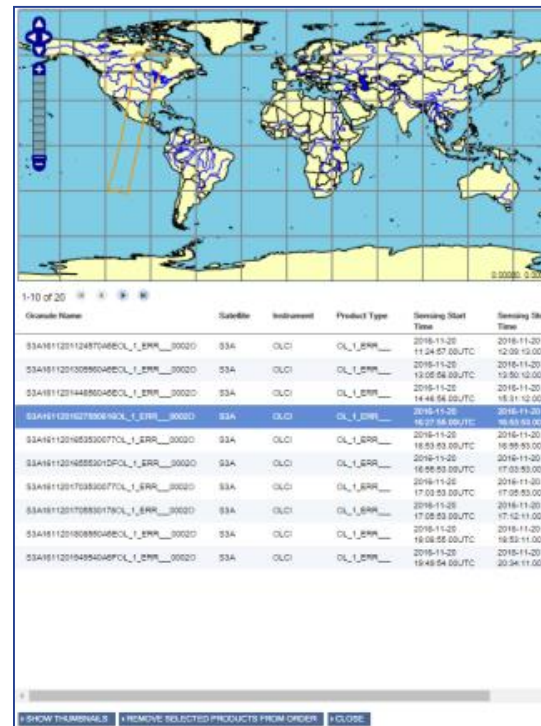
Data
Access

EUMETSAT's Archive Data Ordering Service

- The Data Centre provides access to the long-term archive of S3 and EUMETSAT mission data.

Key Features:

- Order options allow you to select your chosen format, spatial and spectral sub-setting and apply data compression;
- Orders are automatically processed and smaller orders are delivered within a few hours;
- Resulting data can be retrieved from an online server (http-download) or via offline media, depending on the volume of data requested;
- The Data Centre catalogue spans the whole satellite mission life. It guarantees the long-term preservation of these data which are critical for the generation of climate data records.





Data
Access

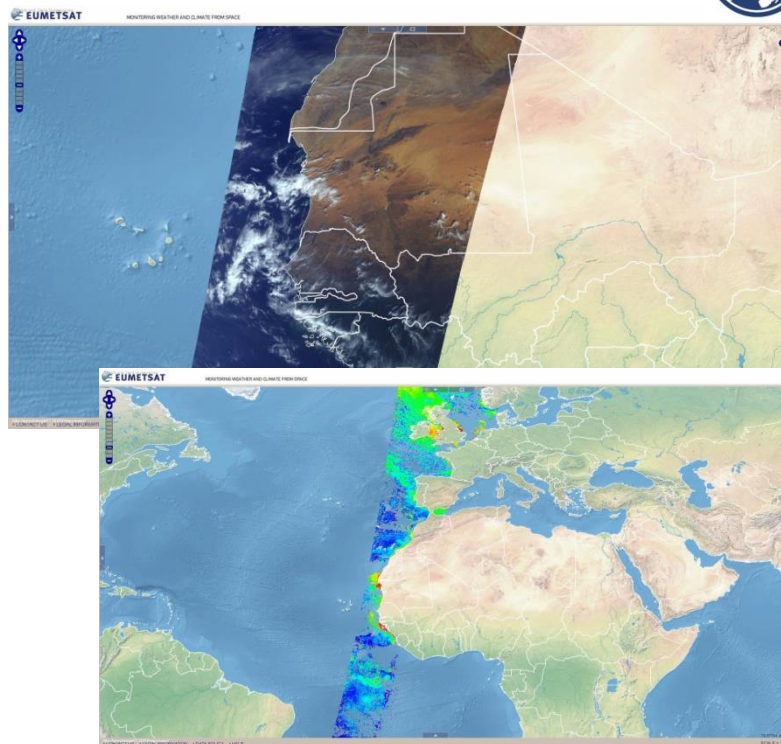
EUMETView interactive view service



- EUMETView is a visualisation service to view EUMETSAT (Meteosat, Metop and Jason data) and Copernicus Sentinel-3 marine imagery in an interactive way using an online map viewer.

Key Features:

- Choose a layer, select the date range and area of interest and display your chosen visualisation;
- Run an animated loop or download your selected visualisations;
- EUMETView implements the OGC Web Map Service (WMS) Interface Standard and can be used to request and overlay products in GIS clients supporting OGC WMS 1.3.0.

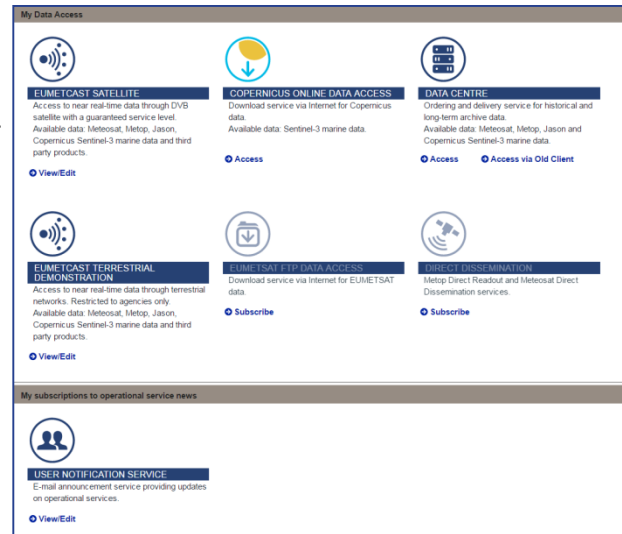




Data
Access

Discovery and Registration Service







- To discover the full list of products EUMETSAT provides use our Product Navigator;
- This central catalogue lists all EUMETSAT (Meteosat, Metop, Jason-2) and Copernicus Sentinel-3 marine and atmosphere products. It includes the third-party products disseminated via EUMETCast.
- To access our data register through our central EO portal:
 - Firstly, create your account;
 - From within the EO portal home page select your chosen delivery mechanism/s, e.g. CODA, Data Centre, EUMETCast;
 - For the CODA and the Data Centre simply follow the links to access the service directly;
 - For EUMETCast complete the detailed registration steps to subscribe to the data streams you require and to request the quantity of EUMETCast Client Software packages you need;
- EUMETView is available without registration.





Data
Access

Resources and Contacts

	eoportal.eumetsat.int	create and manage your user account, subscribe to our services
	navigator.eumetsat.int	explore our catalogue, what and where, supporting documentation
	eumetcast.com	learn more about our push delivery service
	coda.eumetsat.int	download Sentinel-3 marine and atmosphere data
	archive.eumetsat.int	order past data
	eumetview.eumetsat.int	visualise and explore, create layers in GIS applications

For everything else
www.eumetsat.int

Any questions
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