

Data Access to Sentinels and Contributing Missions





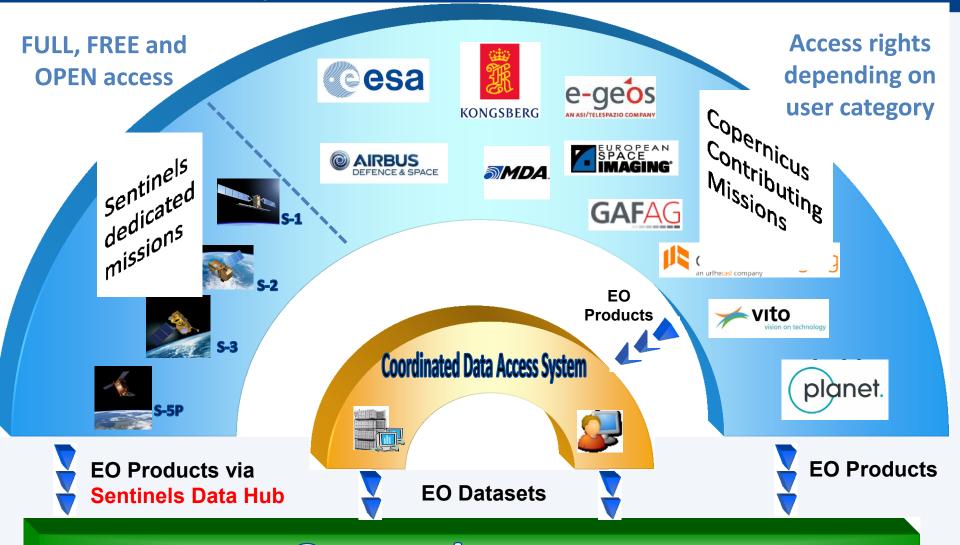
Véronique Amans

Copernicus Space Component Data Access Operations Manager



Copernicus Space Component (CSC) and Data flow to Copernicus Users





Copernicus users



Sentinels missions data access

Copernicus Sentinels Data Policy

- Users shall have free, full and open access to Copernicus dedicated Sentinel data and Copernicus service information
- Legal Notice for Sentinel data allow use
 and onward/re-distribution
- By using Sentinel Data or Service
 Information, the user acknowledges that
 these conditions are applicable to him/her



EUROPEAN COMMISSION

Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs

Space Policy, Copernicus and Defence Space Data for Societal Challenges and Growth

Legal notice on the use of Copernicus Sentinel Data and Service Information

The access and use of Copernicus Sentinel Data and Service Information is regulated under EU law. In particular, the law provides that users shall have a free, full and open access to Copernicus Sentinel Data² and Service Information without any express or implied warranty, including as regards quality and suitability for any purpose.³

EU law grants free access to Copernicus Sentinel Data and Service Information for the purpose of the following use in so far as it is lawful⁴:

- (a) reproduction;
- (b) distribution;
- (c) communication to the public;
- (d) adaptation, modification and combination with other data and information;
- (e) any combination of points (a) to (d).

EU law allows for specific limitations of access and use in the rare cases of security concerns, protection of third party rights or risk of service disruption.

By using Sentinel Data or Service Information the user acknowledges that these conditions are applicable to him/her and that the user renounces to any claims for damages against the European Union and the providers of the said Data and Information. The scope of this waiver encompasses any dispute, including contracts and torts claims, that might be filed in court, in arbitration or in any other form of dispute settlement.

Where the user communicates to the public or distributes Copernicus Sentinel Data and Service Information, he/she shall inform the recipients of the source of that Data and Information by using the following notice⁵:

- (1) 'Copernicus Sentinel data [Year]' for Sentinel data; and/or
- 'Copernicus Service information [Year]' for Copernicus Service Information.

Where the Copernicus Sentinel Data and Service Information have been adapted or modified, the user shall provide the following notice:

Regulation (EU) No 377/2014 and Commission Delegated Regulation (EU) No 1159/2013.

² In agreement with the Copernicus Sentinel Data Policy, ESA/PB-EO(2013)30, rev. 1.

³ See in particular Art. 3 and 9 of Regulation 1159/2013.

⁴ See in particular Art. 7 of Regulation 1159/2013

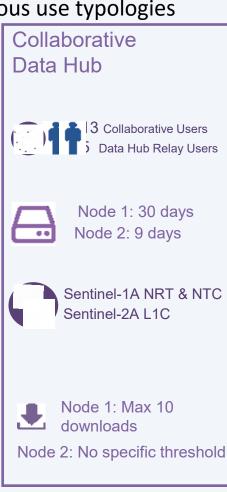
⁵ See in particular Art. 8 of Regulation 1159/2013.

Sentinels Data Access current configuation



The CSC Ground Segment features **dedicated data access infrastructure solutions**, tailored to the needs of the various use typologies









Sentinels Scientific Data Hub (SciHub)



ESA Data Hub offers an OPEN SOURCE Web interface to access single products or the use of APIs (Open Data Protocol or Open Search) automatically search, filter and download large volumes of data



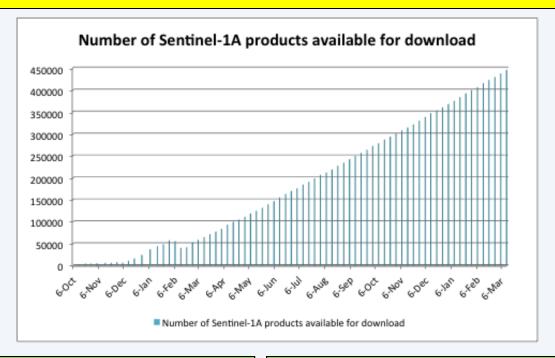
- ESA delivers on the Data Hub, on a 24/7 basis, Non Time
 Critical Sentinels core products (24 hrs from sensing)
- ESA also delivers, via dedicated interfaces, Sentinels NRT products (3 hrs from sensing), for Marine and Emergency Service in particular
- Commissioning and ramp-up phase data are reprocessed and disseminated as soon as possible after official data release.

Sentinel data – Systematic Production



In 2015 an average of 3 TB of core products was generated daily

By Q4 2016 it is projected that this figure will increase to <u>more than</u>
6 TB a day



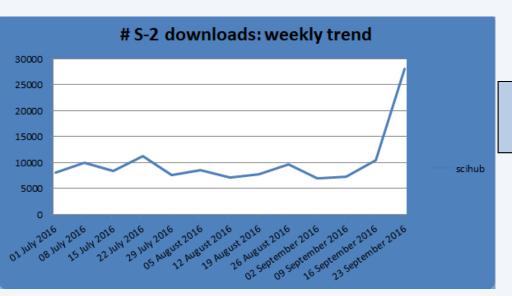
Full Sentinel-2A production is available online: > 92,000 products (386 TB of data)

Sentinel-3 data released on 20 October: ~1000 products today

Statistics: 30 Sept. 2016

Sentinel-2: Data Dissemination Overview





> 778,000 products were downloaded since data release (>half in the last quarter)

Exploitation ratio - 1:8

on average each product published has been downloaded 8 times

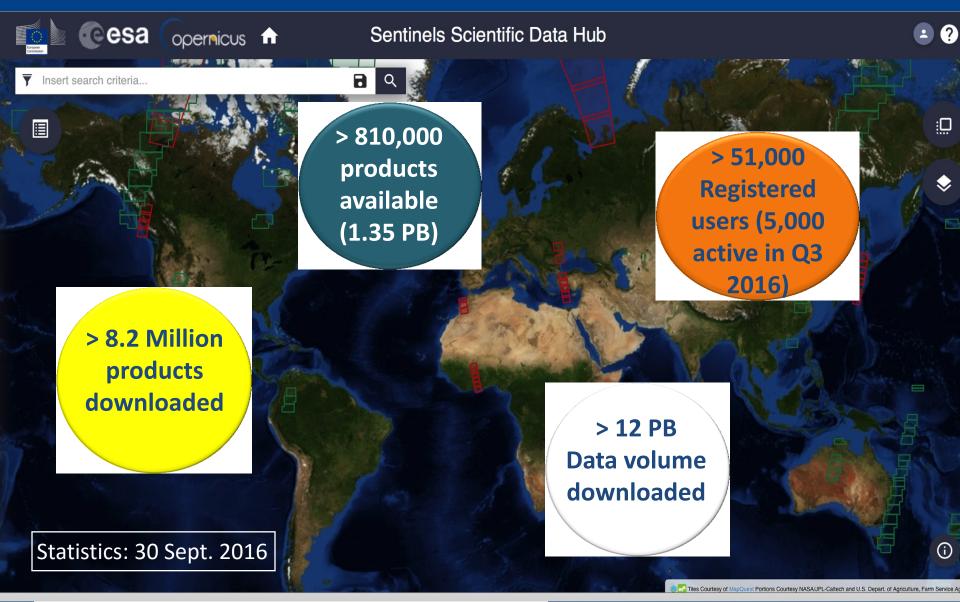
Routine dissemination of the single-tile products began on 27 Sept.

- → Lower volumes
- → Faster download
- → Less risk of download interruption

Some delay in data publication, during Aug-Sep, and newly since mid October due to change in S2 for single tiles. See news on Sentinel online.

Sentinels Data Access Statistics - Open Access Data Hub



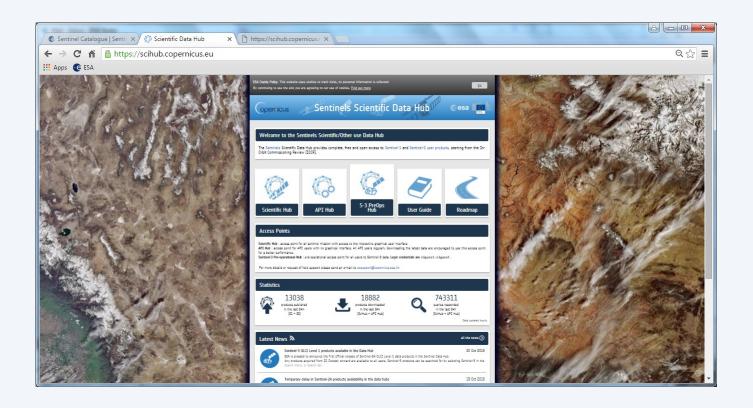


Access to Sentinels Data Hubs



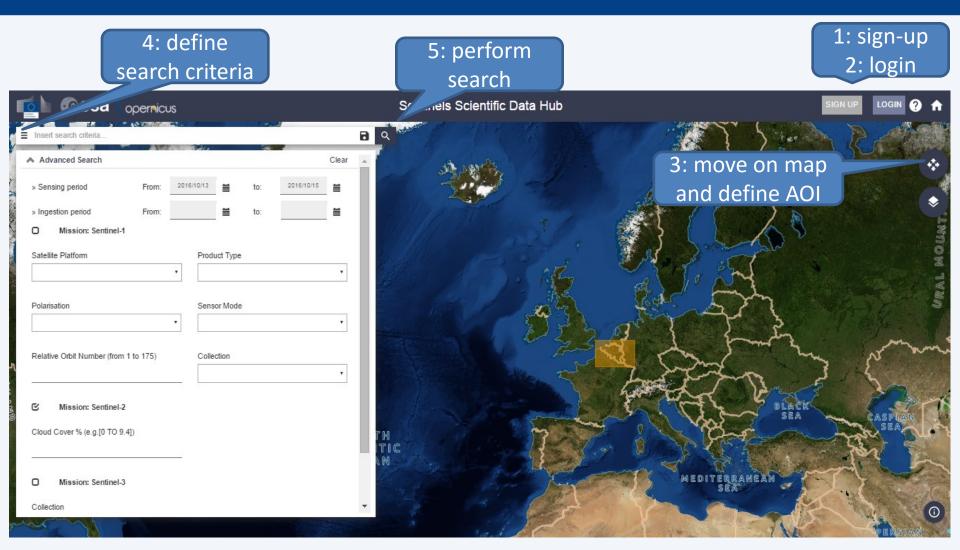
https://scihub.copernicus.eu Or

https://scihub.copernicus.eu/s3 (temp. access to S3 data)



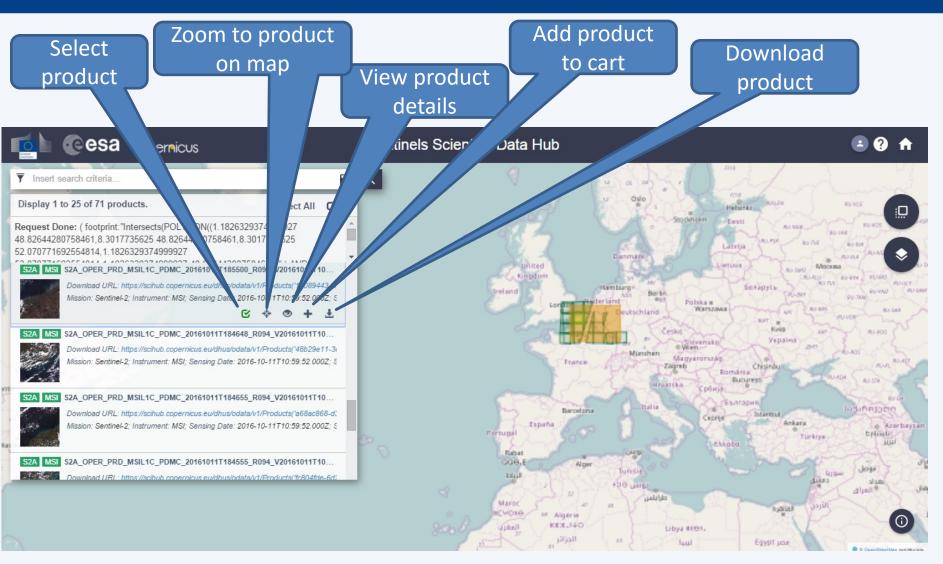
From registration to data download (1/2)





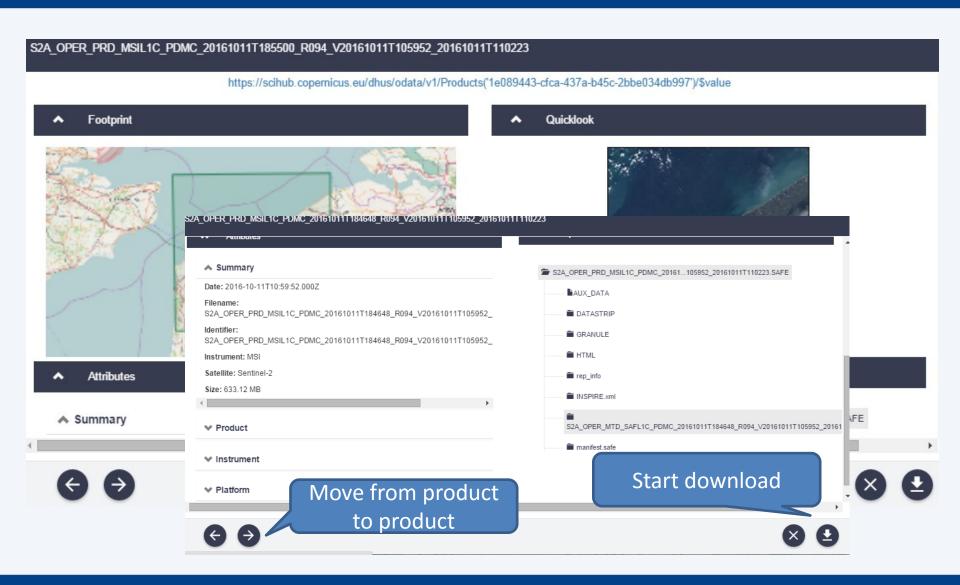
From registration to data download (2/2)





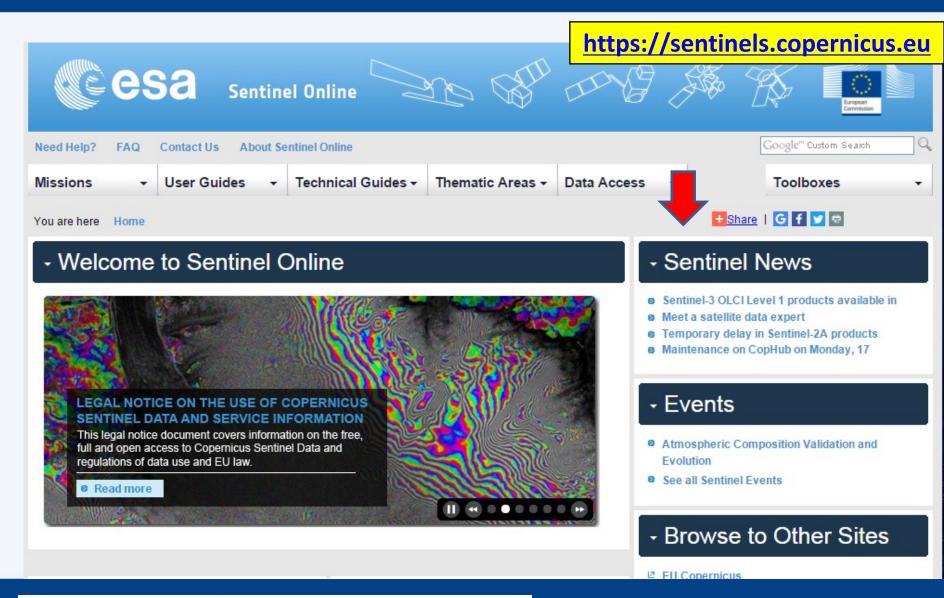
Product details





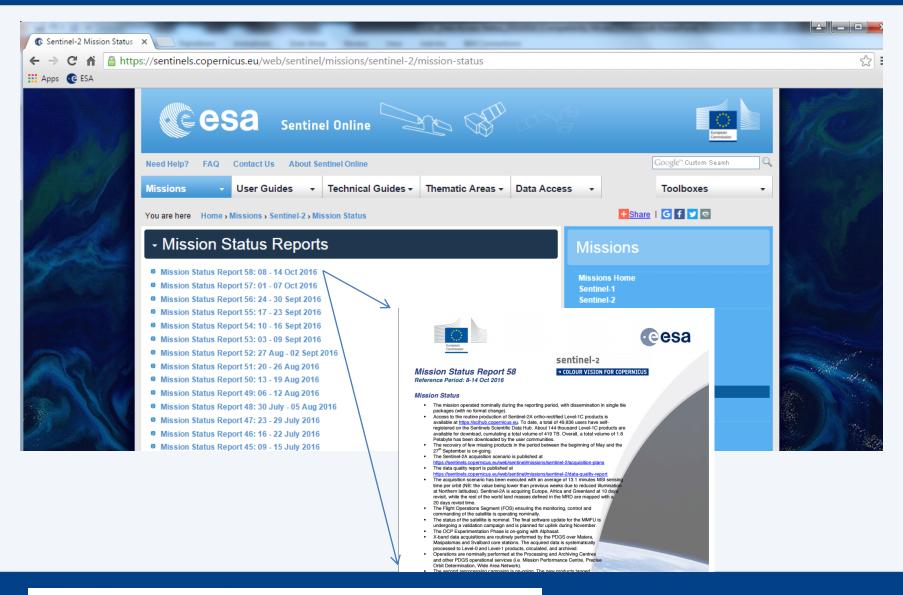
Useful information: NEWS





Useful information: WEEKLY MISSION STATUS REPORT







Copernicus Contributing Missions (CCMs) data access

Copernicus Contributing Missions





Providing since 2008 high quality data to Copernicus users

The BRIGHT side of Remote Sensing, Brussels, 25 October 2016

Licence for the use of CCMs data



- User categories are defined by the European Union as funding body
- Access to CORE (predefined) and ADDITIONAL (on-demand) datasets is granted depending on user category
- The ESA-user **Licence** includes the different conditions coming from commercial data providers and national legislation (annex)
- Acceptance of the Licence is a prerequisite to being granted access to CCMs data

<u>Contributing Missions data - Data Warehouse phase</u>
2 (2014-2020) available on CSCDA web portal at https://spacedata.copernicus.eu/web/cscda/data-offer/legal-documents



Copernicus Users categories



- Copernicus Services
- Institutions and Bodies of the EU
- Participants to a research project financed under the Union research programmes - Space
- Participants to a research project financed under the Union research programmes - Non-space
- Public Authorities
- International Organisations and NGOs
- Public

Definition is available in the Licence itself

Corresponding access rights

Dataset	Copernicus Services	Union Institutions	Union Research Projects space	Union Research Projects non- space	International Organisation & NGO	Public
HR_IMAGE_2015	DOWNLOAD	DOWNLOAD	DOWNLOAD	DOWNLOAD	VIEW	DISCOVERY
VHR_IMAGE_2015	DOWNLOAD	DOWNLOAD	DOWNLOAD	DOWNLOAD	VIEW	VIEW
MR_IMAGE_2015	DOWNLOAD	DOWNLOAD	DOWNLOAD	DISCOVERY	DISCOVERY	DISCOVERY
MR_OPT_GLOBAL	DOWNLOAD	DOWNLOAD	DOWNLOAD	DOWNLOAD	DISCOVERY	DISCOVERY
LR_OPT_GLOBAL	DOWNLOAD	DOWNLOAD	DOWNLOAD	DOWNLOAD	DOWNLOAD (1Km PV01)	DOWNLOAD (1Km PV01)
HR2- MR1_SAR_GLOBAL (Sentinel-1)	DOWNLOAD	DOWNLOAD	DOWNLOAD	DOWNLOAD	DOWNLOAD	DOWNLOAD
HR2- MR1_SAR_Sea_lce	DOWNLOAD	DOWNLOAD	DOWNLOAD	DOWNLOAD (TerraSAR-X and Cosmo-SkyMed)	DISCOVERY	DISCOVERY
EUR_HR2_MULTITEMP	DOWNLOAD	DOWNLOAD	DOWNLOAD	DOWNLOAD	DOWNLOAD	VIEW
VHR1- 2_Urban_Atlas_2012	DOWNLOAD	DOWNLOAD	DOWNLOAD	DOWNLOAD	VIEW	VIEW

Copernicus Contributing Missions - Status



- ESA implements the Copernicus Space Component Data Access (CSCDA)
 System providing since 2008 comprehensive and coordinated access to EO data products from Contributing Missions to Copernicus users across Europe
- The Data Access is based on the production of **Datasets**: predefined multi-mission EO data collections answering specific user needs or ondemand sets of data ordered upon user requests. They are defined in the Data Access Portfolio
- The key component of the CSCDA is the Coordinated Data Access System (CDS), ensuring Dataset archive and dissemination
- Single user interface at eosupport@copernicus.esa.int

From registration to data download (1/3)



Online license acceptance!

How to access the data?

Registration and License signature:

*tps://spacedata.copernicus.eu/web/cscda/data-access/registration

Password provision for SSO account



Select one or more datasets and Subscribe for data access https://spacedata.copernicus.eu/web/cscda/data-access/subscription-to-datasets



Download Data via FTP or the dedicated Catalogue and Download Tool https://spacedata.copernicus.eu/web/cscda/data-access/discovery-and-download

From registration to data download (2/3)

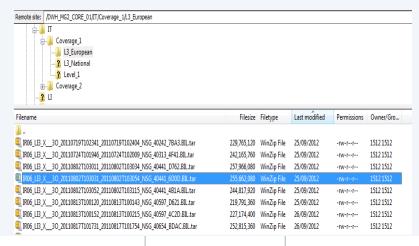




From registration to data download (3/3)



FTPS for large volumes



Copernicus Client (Eoli-SA) for single products



Copernicus Users ▼

Data Offer

How to Access Data ▼

Subscription to Datasets

Access to ESA EO data

Data Discovery and Download

Access to ESA Third Party Mission data

Registration

Ordering

Data Provision Status -

em (CSCDA)

Home

Welcome to the CSCDA

This Portal presents the services offered within the 0

context. It explains the user's eligibility, data offer, data access mechanism and user support and is the entry point to the Copernicus User's Personal Area. Further to this, the Portal provides full visibility of all Copernicus Contributing Missions (CCMs) and the status of data provision.

Information about the Sentinel dedicated missions are instead available in Sentinel Online.

- Data Discovery and Download

Data providers implement tasking, processing and delivery based on the received orders. Depending on the

- Directly by the data provider, via FTP or http, this applies to delivery of systematic global missions data (CORE
 datasets) and emergency activations data (ADDitional emergency datasets)
- In the Coordinated Data Access system (CDS) archive: this applies to all CORE and ADDitional (standard and emergency) datasets. Direct access to the archive or catalogue interface are implemented;

FTPS access

Direct access to the Coordinated Data Access system online archive (CDS ODA) is implemented via FTPS protocol using your Single Sing On (SSO) credentials (see Registration section for details); different FTP Client and access methods can be configured, as explained in this Data Download guidelines. When logging in the CDS ODA with your SSO account you will obtain access to all the datasets you have subscribed to in your Copernicus User's Personal Area (see Subscription to Datasets section).

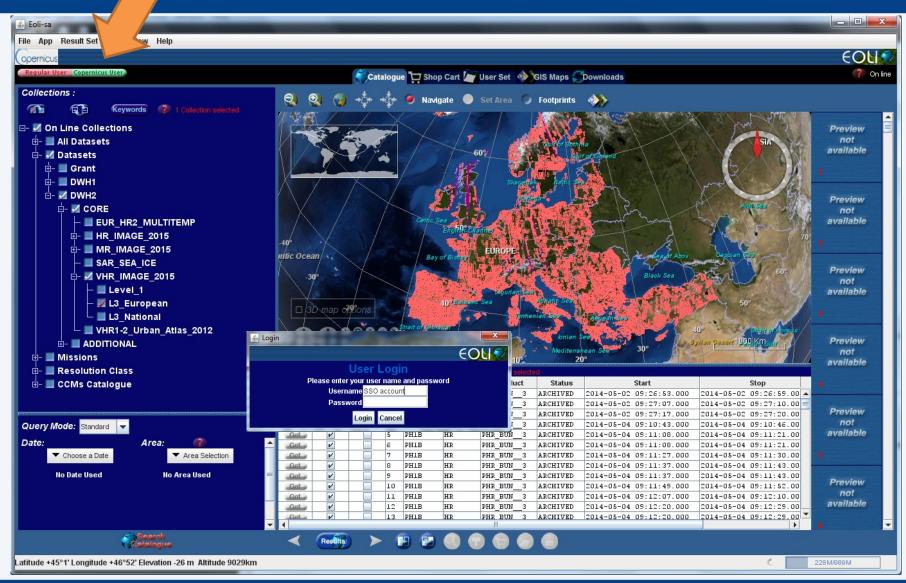
On line catalogue

All data archived in the CDB infrastructure can be accessed via the Copernicus Client (EOLISA/ICCL), a standalone tool to be installed on your computer. With the Copernicus Client, queries can be made for a variety of parameter, such as dataset mission, resolution etc, while identifying your Area of Interest and time period (see Data Download guidelines). Catalogue browsing is open while downloading of products is restricted to eligible and authorised Copernicus users, following implementation of a subscription request (further details are available in the Registration and Subscriptions to datasets section.)

The Copernicus Client also provides data discovery capability for the complete archives of the Contributing Missions, as explained in the Data Download quidelines.

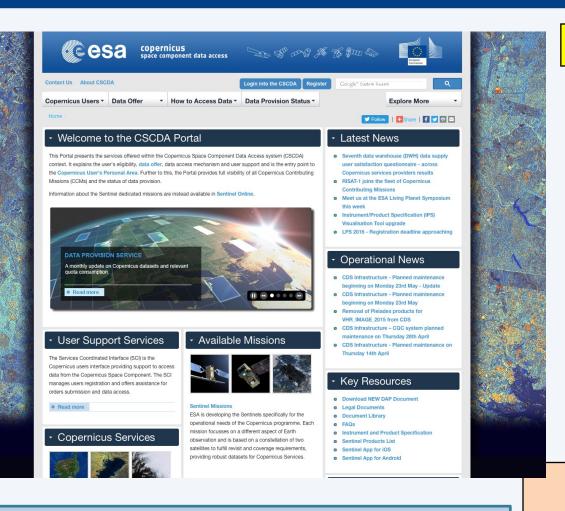
GCL/EOLI-SA





More information on CSCDA





http://spacedata.copernicus.eu

Users category	Number of licence signatures		
Copernicus Services	168		
Union Institution	36		
Space Research Project	146		
Non-Space Research Project	25		
Public Authority	235		
Int. Org. & NGO	7		
Public	212		
Total	829		

Over 800 user licences signed (status 15.10.2016)

Help Desk: EOSupport@copernicus.ESA.int

CSC Missions Management On-Line



