TUTORIAL FOR DATA DOWNLOAD FROM THE COPERNICUS OPEN ACCESS HUB

Data:
- Sentinel-2 Level 2A over North East Italy:
  S2B_MSIL2A_20200622T100559_N0214_R022_T32TQQ_20200622T134211
  S2A_MSIL2A_20200627T101031_N0214_R022_T32TQQ_20200627T120035
  S2A_MSIL2A_20200707T101031_N0214_R022_T32TQQ_20200707T135316
  S2B_MSIL2A_20200712T100559_N0214_R022_T32TQQ_20200712T143845
  S2A_MSIL2A_20200727T101031_N0214_R022_T32TQQ_20200727T124546
  S2B_MSIL2A_20200801T100559_N0214_R022_T32TQQ_20200801T135302
  S2A_MSIL2A_20200816T101031_N0214_R022_T32TQQ_20200816T130108
  S2B_MSIL2A_20200821T100559_N0214_R022_T32TQQ_20200821T130423

- Sentinel-3 Level 2 over North East Italy:
  S3A_OL_2_LFR____20200821T092813_20200821T093113_20200822T143439_0179_062_036_2160_LN1_O_NT_002.SEN3

  For additional information on the Sentinels (e.g. product levels, naming convention), see the Sentinel User Guides at https://sentinels.copernicus.eu/web/sentinel/user-guides.

1. **Accessing the Copernicus Open Access Hub**
   1.1. Navigate to the **Copernicus Open Access Hub** at https://scihub.copernicus.eu/.
   There is a Copernicus Open Access Hub User Guide (https://scihub.copernicus.eu/userguide/), with information about which types of data are available and the different ways to download them. It describes as well the Graphical User Interface at https://scihub.copernicus.eu/userguide/GraphicalUserInterface.

   1.2. We will use the Graphical User Interface, accessible from the **Open Hub** button, **which redirects us to https://scihub.copernicus.eu/dhus/#/home**.
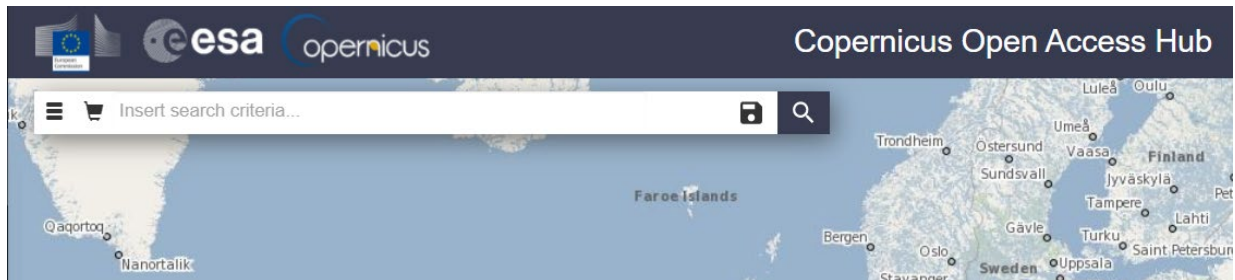
   1.3. **Login** or **Register** to create your account. Having an account is needed to download the data, to see past searches and to view your Cart.

2. **Searching for <u>a single dataset</u> from Sentinel-2 Level 2A**
   At the top left part of the screen, you can search for data in various ways.
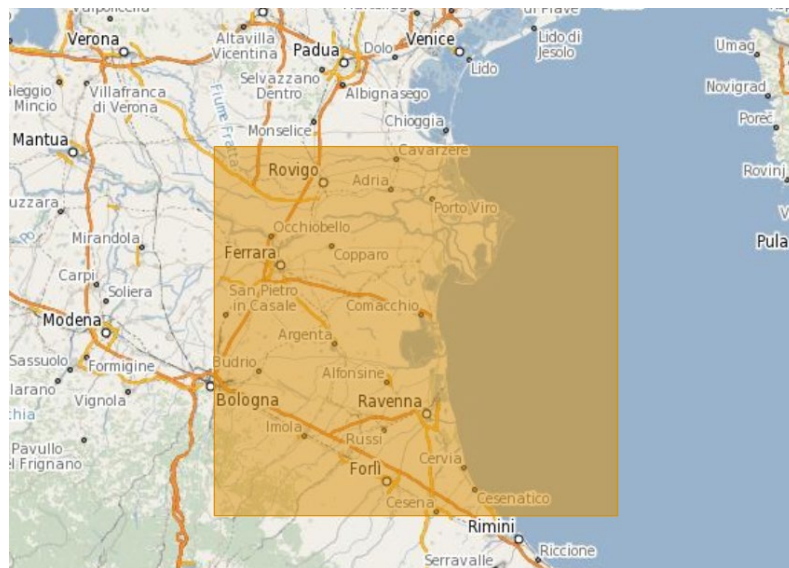   - **Text Search**: If you know the ID of the product, you can directly paste it inside the white bar and click on Search. For more information about text search, visit the **Copernicus Open Access User Guide** at https://scihub.copernicus.eu/userguide/FullTextSearch.
   - **Advanced Search**: Using specific search fields. For more information, visit the **Copernicus Open Access Hub User Guide** at https://scihub.copernicus.eu/userguide/AdvancedSearch.

In this step-by-step tutorial we will show how to use the **advanced search** menu for a single Sentinel-2 Level 2A image, acquired on 22^d June 2020 over the north east of Italy.
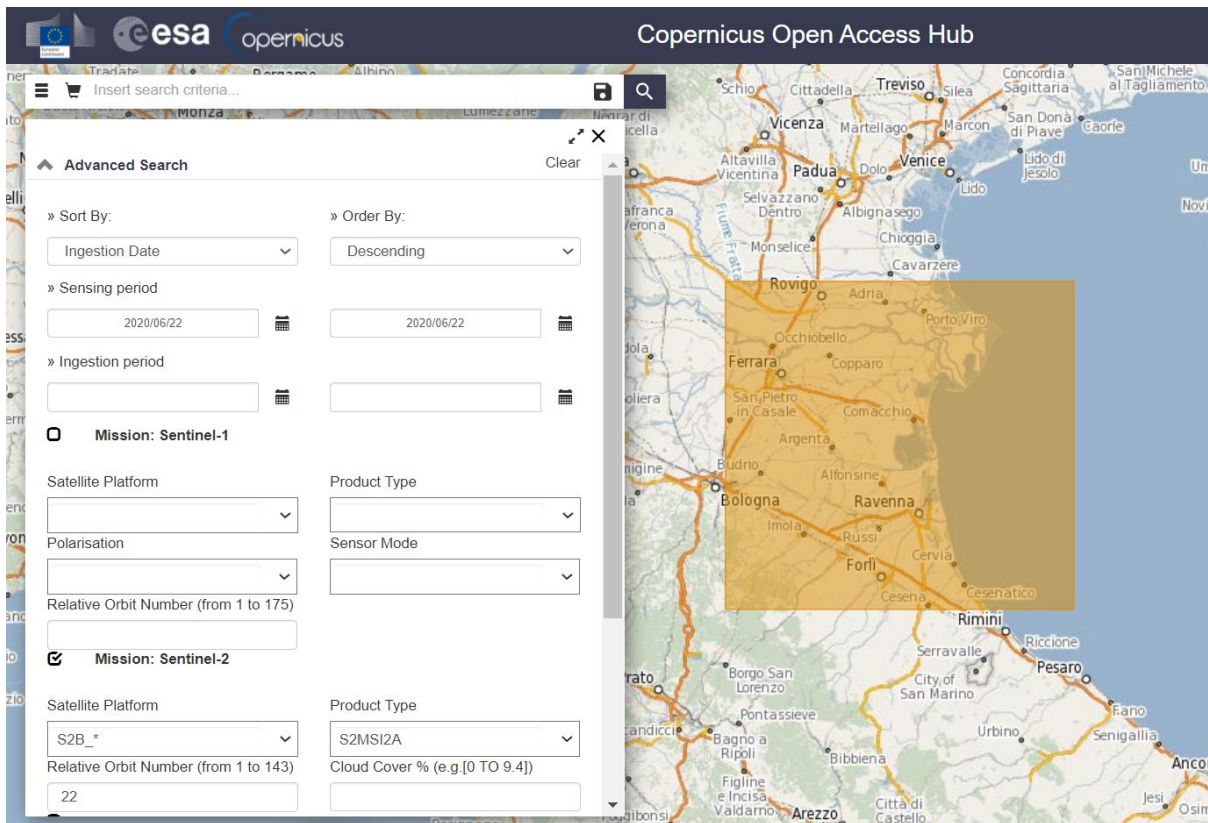

2.1. Use the cursor to **centre** and to **zoom** the display around the **North East region of Italy**.

2.2. With the **right button** of your mouse, **draw** a rectangle making sure to cover the cities of Porto Viro, Rovigo, Ferrara and Forli:
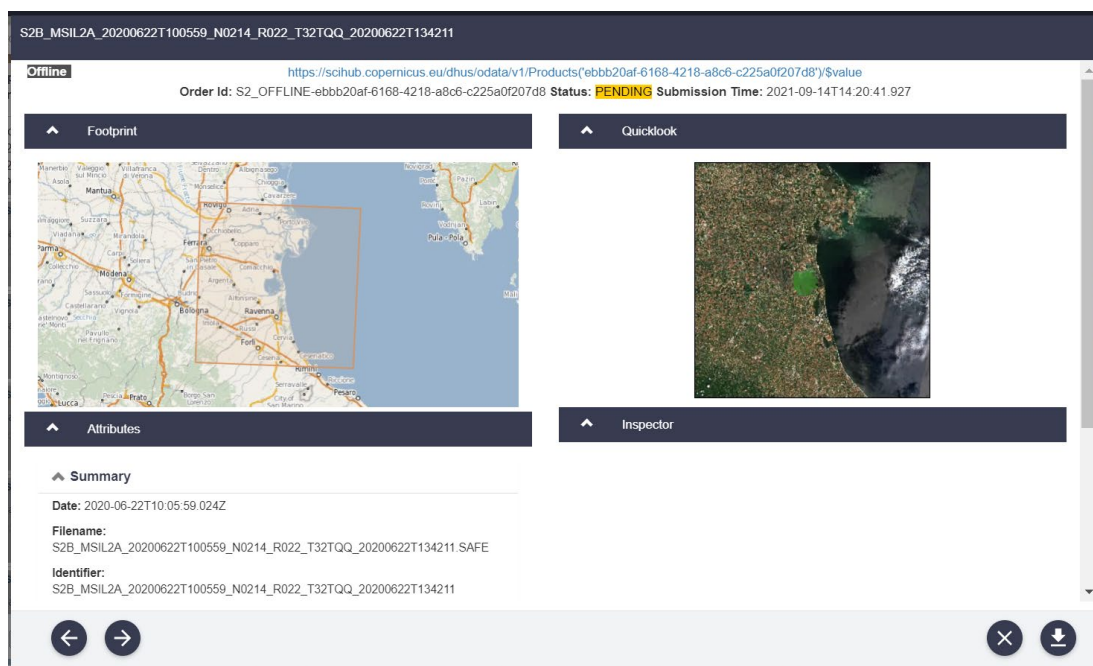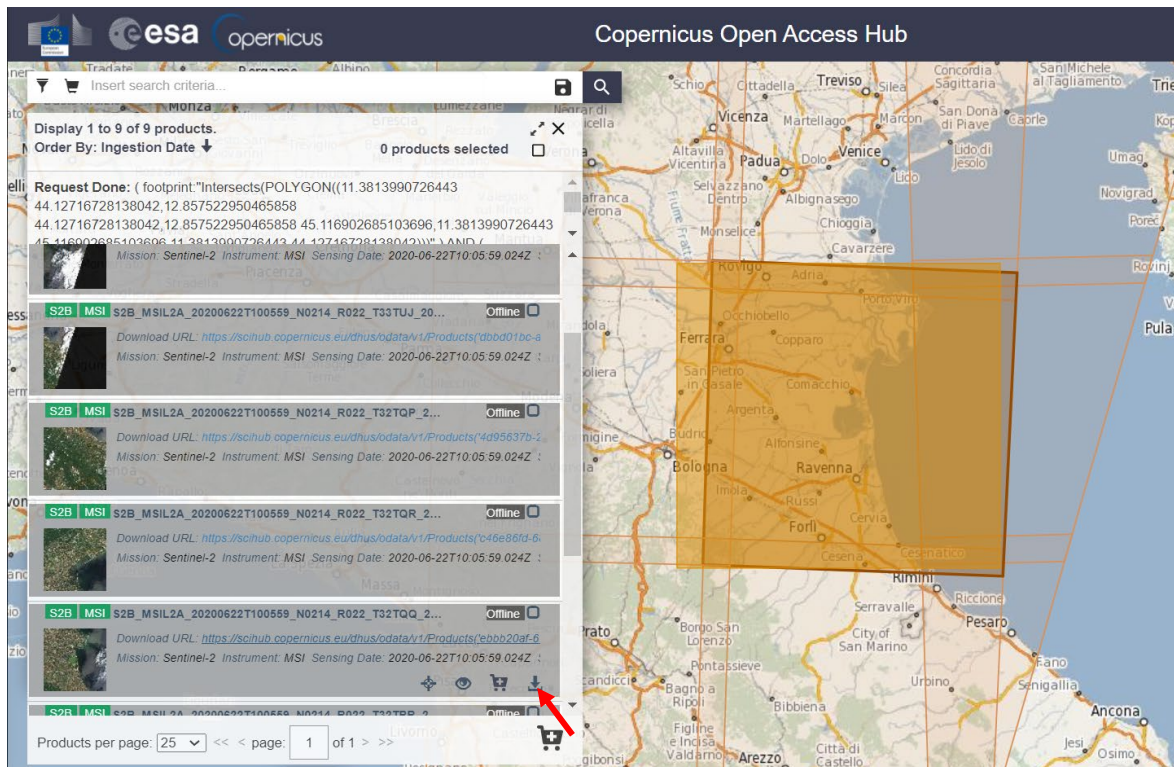

2.3. Display the **Advanced Search Menu** . In this occasion, we want to find an image acquired on a single day (22^d June 2020), so we will restrict the search period according to that, and enter the following parameters:
-    **Sensing Period**: 2020-06-22 to 2020-06-22. Note it is in format yyyy/mm/dd.
-    **Mission**: Sentinel-2
-    **Product Type**: S2MSl2A. This corresponds to Sentinel-2 MSI Level 2A (more information in the **Sentinel-2 User Guide**, section **Processing Levels: Level-2**, at https://sentinels.copernicus.eu/web/sentinel/user-guides/sentinel-2-msi).
-    **Relative Orbit**: 22
-    Click Search
-    You will get all the different tiles acquired on that pass by the satellite.

2.4. **Repeat the steps above** to download the **remaining Sentinel-2 images** (adjusting the search criteria as needed), or alternatively, use the **text search** mentioned at the beginning of this section.

2.5. Among the search results, observe the **Tile number**. For more information about Sentinel-2 Tiles, refer to the **Sentinel-2 User Guide**, section **Product Types**, at https://sentinels.copernicus.eu/web/sentinel/user-guides/sentinel-2-msi.

2.6. You can download any image that suits your needs. On this occasion, we will **select the result with Tile Number T32TQQ**, which should be the sixth result in the list.
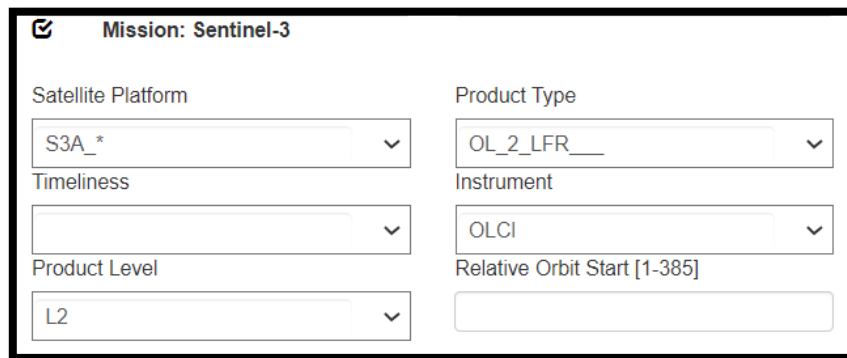
2.7. Click on the **download icon** . If the product is **Offline**, it will be available **in your cart within 1h**. If it is **Online**, it can be **downloaded directly**. For more information about how the archive works, visit the **Copernicus Open Access Hub User Guide,** section Overview, subsection The Data Hub Archive, at https://scihub.copernicus.eu/userguide/.

3. **Searching for <u>a single dataset</u> from Sentinel-3 Level-2**
   As explained in Section 2., to search for the image you can:
   - Either **paste the image ID in the search box** and press Search
   - Repeat **steps 2.1 to 2.8** but adjusting the **search criteria** as follows:
     - **Sensing period**: 21-08-2020 to 21-08-2020 (Format dd-mm-yyyy)
     - **Satellite platform**: Sentinel 3A
     - **Product type**: OL_2_LFR. For more information about Sentinel-3 product types, visit the **Sentinel-3 User Guide**, section **Product Types** at https://sentinel.esa.int/web/sentinel/user-guides/sentinel-3-olci.
     - **Instrument**: OLCI
     - **Product Level**: L2

4. **Additional information**

Application Program Interfaces (API): The Copernicus Open Access Hub exposes **two dedicated APIs** for browsing and accessing the EO data stored in the rolling archive. For more information, visit https://scihub.copernicus.eu/userguide/APIsOverview.

Scientific Toolbox Exploitation Platform (STEP) and its Forum: STEP is the ESA community platform for accessing the **software** and its **documentation**, communicating with the **developers**, dialoguing within the **science community**, promoting **results** and **achievements** as well as providing **tutorials** and **material for training scientists** using the **Toolboxes** (https://step.esa.int/main/). We encourage you to use its **Forum** (https://forum.step.esa.int/) to ask any questions you have regarding the **access** and **use** of Sentinel data, as well as to **read answers from past questions** and **discuss with other experts**.