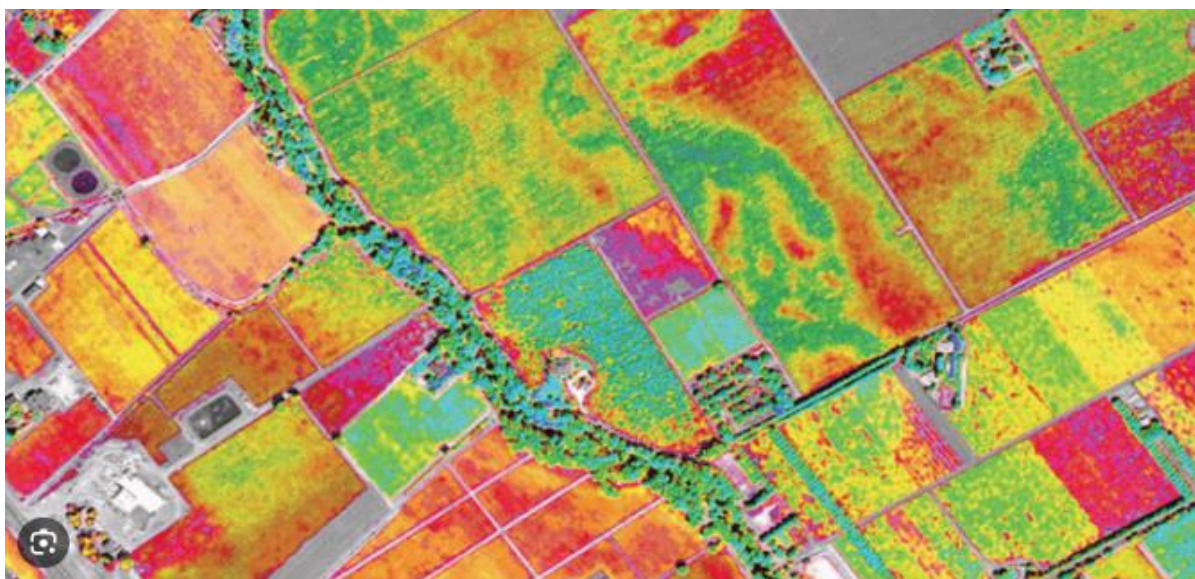# Handling remotely sensed data in QGIS

Practical Manual

Downloading The Sentinel-2 image

The sentinel-2 data can be downloaded from various sources. These include
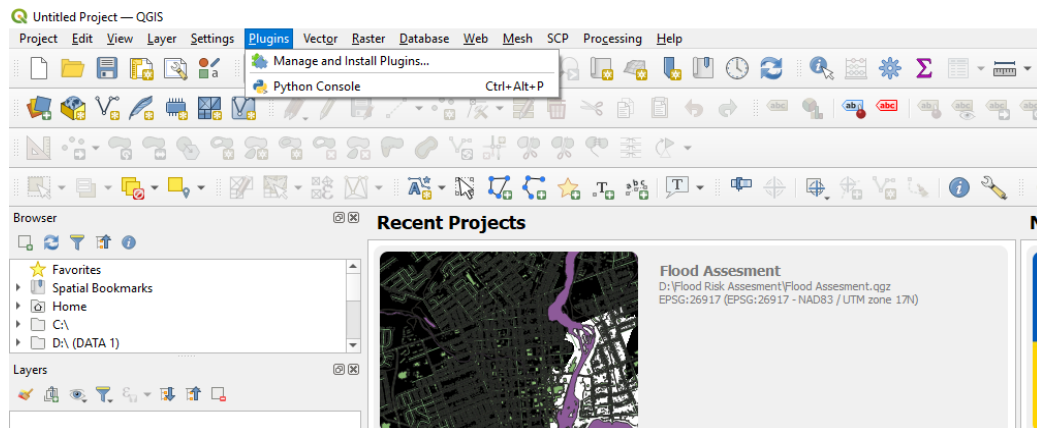
- QGIS Platform: Semi Automated Classification Plugin
- Copernicus Open Access Hub https://scihub.copernicus.eu/.
1. Open the Copernicus Open Access Hub website and register for an account. Select the Open Hub option
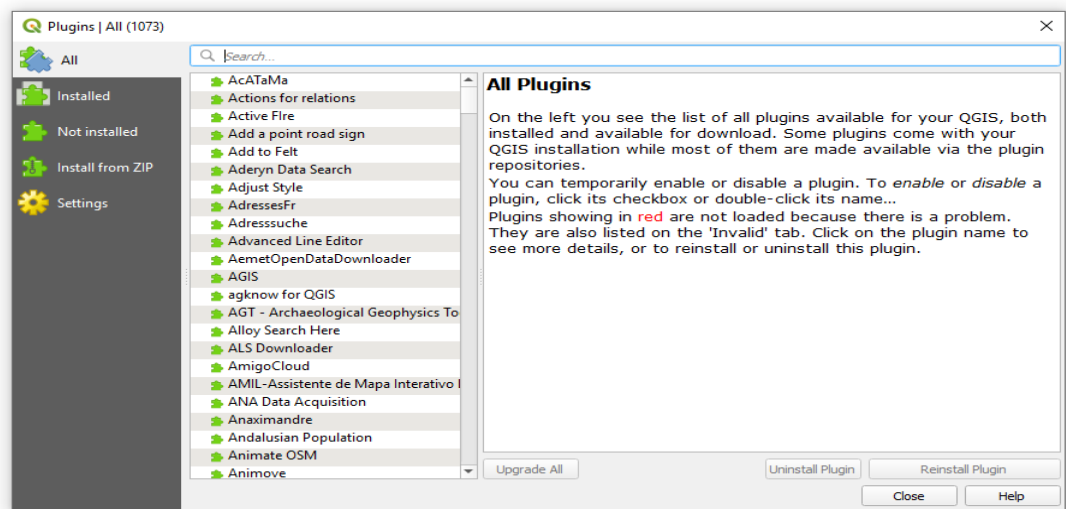

2. Enter the required details and register your account as requested. Keep your logging details as you will use them in QGIS for downloading the Sentinel-2 images.
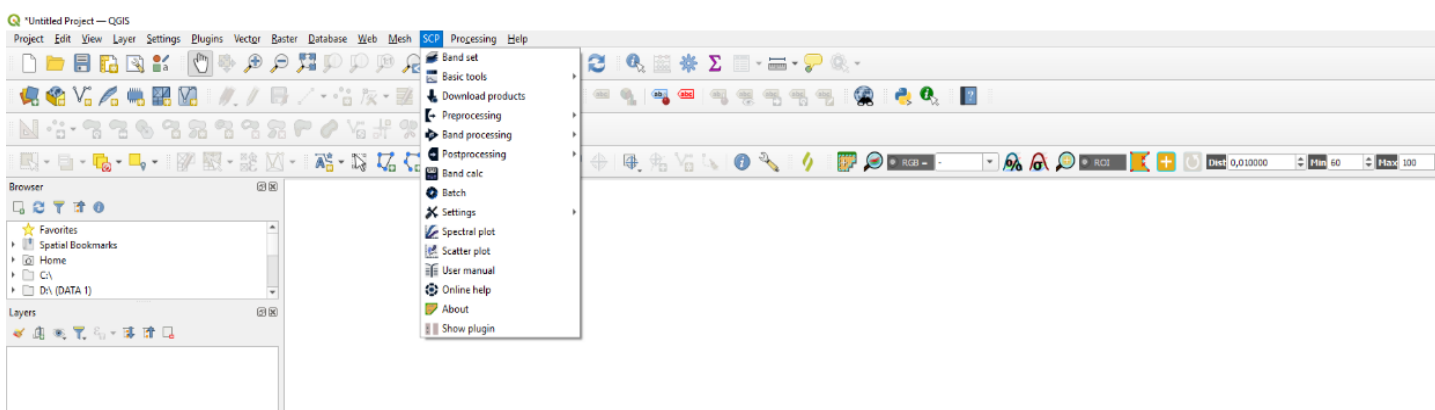
3. Launch the QGIS Desktop Application. From the menu bar, navigate to **Plugins** and select **Manage and install Plugins.**

4. In the Plugins dialogue search box, type Semi-Automatic Classification Plugin and select it, install it once it appears in search results. When the plugin is installed it will appear in the top Menu tool bar as "SCP"

5. Upload your vector file (shapefile) with your region of interest. Make sure the shapefile is displayed in the MapView. NB refer to practical 1 on how to upload a vector data file into QGIS.

6. Open the SCP Plugin and select **Dowload products.**

7. From the Download products menu, three Tabs will appear: Login data, search and Download options. Lets explore these three Tabs.

   a) Login data: Since we are downloading Sentinel-2 data enter your Copernicus Open Access Hub creditiantials under Login Sentinels. Under the Dowload tab, make sure your select Preprocessing images and load bands in QGIS. You must make sure you untick 'Only if preview in Layers' and 'Virtual Download.'
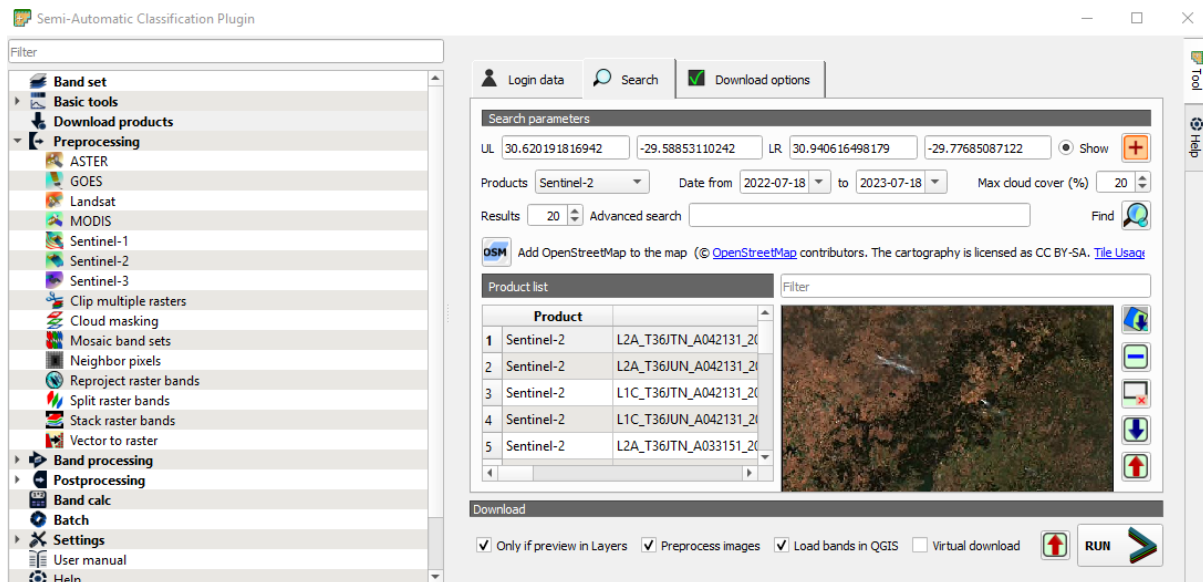

   b) In the search option, ensure that you have selected "Sentinel" from the products drop-down menu. Choose the desired date range for the images you wish to download. For this practical exercise, let's select images ranging from June 17th, 2023, to June 31st, 2023. Select the OpenStreetMap option (OSM) to bring the open street map to the Mapview.

To select your region of interest on the OpenStreet Layer displayed in the Mapview, click on the Show icon located at the top right corner. Look for the orange plus sign, and click on it. This will enable you to define your desired area. Click on the Find Icon, so search for the Sentinel-2 images.

If the search is successful, the list of available images will show under the Product Tab, click on one tile of your choice and it will display on the preview panel as shown below.

c) To download the selected image, make sure all the sentinel bands are ticked. You may untick all bands for other sensors such as Landsat and Sentinel-3. Under the Download tab, make sure your select Pre-processing images and load bands in QGIS. You must make sure you untick 'Only if preview in Layers' and 'Virtual Download.' Press Run and select the folder you would like to save the downloaded image.