

ASSIGNMENT 2

(Unsupervised Classification)

2020CEB1024

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Aim: To download Data and perform Unsupervised classification for

- a) Forest b)Agriculture
- c)Water d)Build- Up area
- e)Open area

Symbol used: For the above mentioned areas we used colour scheme respectively as follows:

- a) Blue
- b) Green
- c) Brown
- d) Light Red
- e) Pink

Procedure:

DATA DOWNLOAD

- 1) Search for the area in the earth explorer that we need

1. Enter Search Criteria

To narrow your search area: type in an address or place name, enter coordinates or click the map to define your search area (for advanced map tools, view the [help documentation](#)), and/or choose a date range.

Geocoder KML/Shapefile Upload

Select a Geocoding Method

Address/Place ▼

Address/Place

jaipur

Show

Clear

Click on an Address/Place to show the location on the map and add coordinates to the Area of Interest Control.

Num	Address/Place	Latitude	Longitude
1	Jaipur, Rajasthan, India	26.9124	75.7873

- 2) After finding area select the date range of the collected data also set cloud cover range and click on Data Sets

Polygon Circle Predefined Area

Degree/Minute/Second

Decimal

1. Lat: 26° 29' 42" N, Lon: 076° 31' 15" E



Use Map

Add Coordinate

Clear Coordinates

Date Range Cloud Cover Result Options

Search from: 01/01/2020



to: 10/08/2021



Search months: (all)













Data Sets »

Additional Criteria »


Results »

3) Select the below Data set and get results.

Data Set Search:

- ☐ Digital Elevation
- ☐ Digital Line Graphs
- ☐ Digital Maps
- ☐ EO-1
- ☐ Global Fiducials
- ☐ HCMM
- ☐ ISERV
- ☐ Land Cover
- ☒ Landsat 
 - ☐ Landsat C2 U.S. Analysis Ready Data (ARD)
 - ☐ Landsat Collection 2 Level-2
 - ☒ Landsat Collection 2 Level-1
 - ☒   Landsat 8 OLI/TIRS C2 L1
 - ☐   Landsat 7 ETM+ C2 L1
 - ☐   Landsat 4-5 TM C2 L1
 - ☐   Landsat 1-5 MSS C2 L1
 - ☐ Landsat C2 Atmospheric Auxiliary Data 
 - ☐ Landsat Collection 1
 - ☐ Landsat Legacy
- ☐ LCMAP
- ☐ NASA LPDAAC Collections

4) Look for the suitable data set by seeing it's footmark and then download it


EarthExplorer Manage Criteria Item Basket (0)  Help Feedback Logout [priyanshu552]

Search Criteria Data Sets Additional Criteria Results

4. Search Results

If you selected more than one data set to search, use the dropdown to see the search results for each specific data set.

Show Result Controls


Data Set [Click here to export your results](#) 

Landsat 8 OLI/TIRS C2 L1





New download functionality for Collection 2 datasets. See [Landsat Collection 2 Download](#) for assistance.


« First < Previous 1 of 5 Next > Last »

Displaying 1 - 10 of 43







ID: LC08_L1TP_147041_20210814_20210819_02_T1
Date Acquired: 2021/08/14
Path: 147
Row: 041

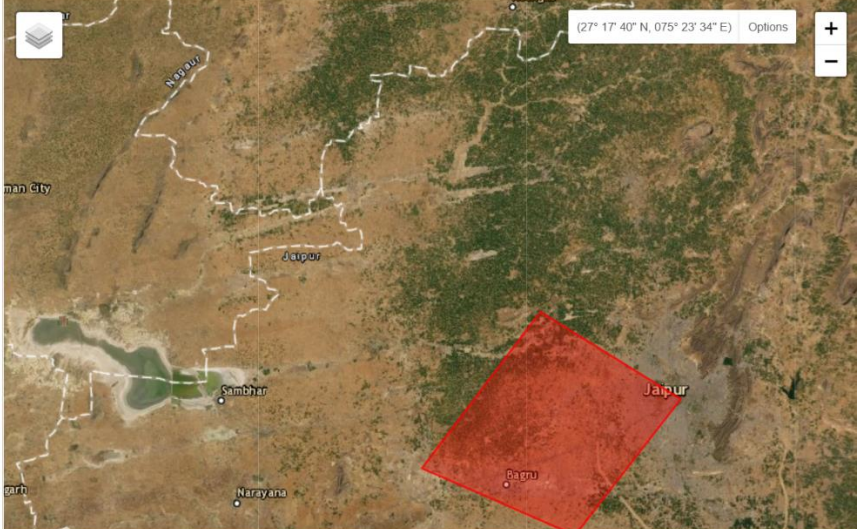




ID: LC08_L1TP_147041_20210627_20210707_02_T1
Date Acquired: 2021/06/27
Path: 147
Row: 041



Search Criteria Summary (Show) Clear Search Criteria



CREATING UNSUPERVISED CLASSIFICATION

Plugins | All (795)

All

Installed

Not installed

Install from ZIP

Settings

SCP

SCP-Plugin

✓ Semi-Automatic Classification Plugin

Semi-Automatic Classification Plugin

The Semi-Automatic Classification Plugin (SCP) is a QGIS plugin for supervised classification of remote sensing images. It provides tools for the download, the preprocessing and the postprocessing of images.

Developed by Luca Congedo, the Semi-Automatic Classification Plugin (SCP) is a QGIS plugin for supervised classification of remote sensing images. It provides tools for the download, the preprocessing and the postprocessing of images available for ASTER, GOES, Landsat, MODIS, Sentinel-1, Sentinel-2, and Sentinel-3 images. Several algorithms are available for the land cover classification. The plugin requires the installation of GDAL, OGR, Numpy, SciPy, and requires also the installation of SNAP (ESA Sentinel Application Platform). For more information please visit: <https://lucacongedo.blogspot.com/2015/05/semi-automatic-classification-plugin.html>

Upgrade All

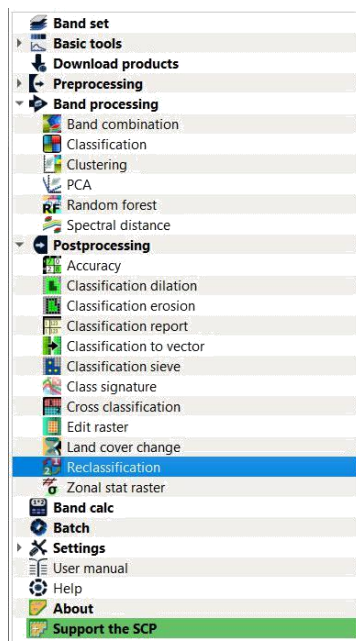
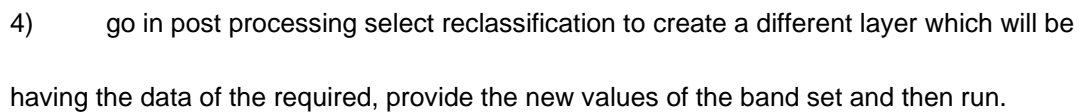
Uninstall Plugin

Reinstall Plugin

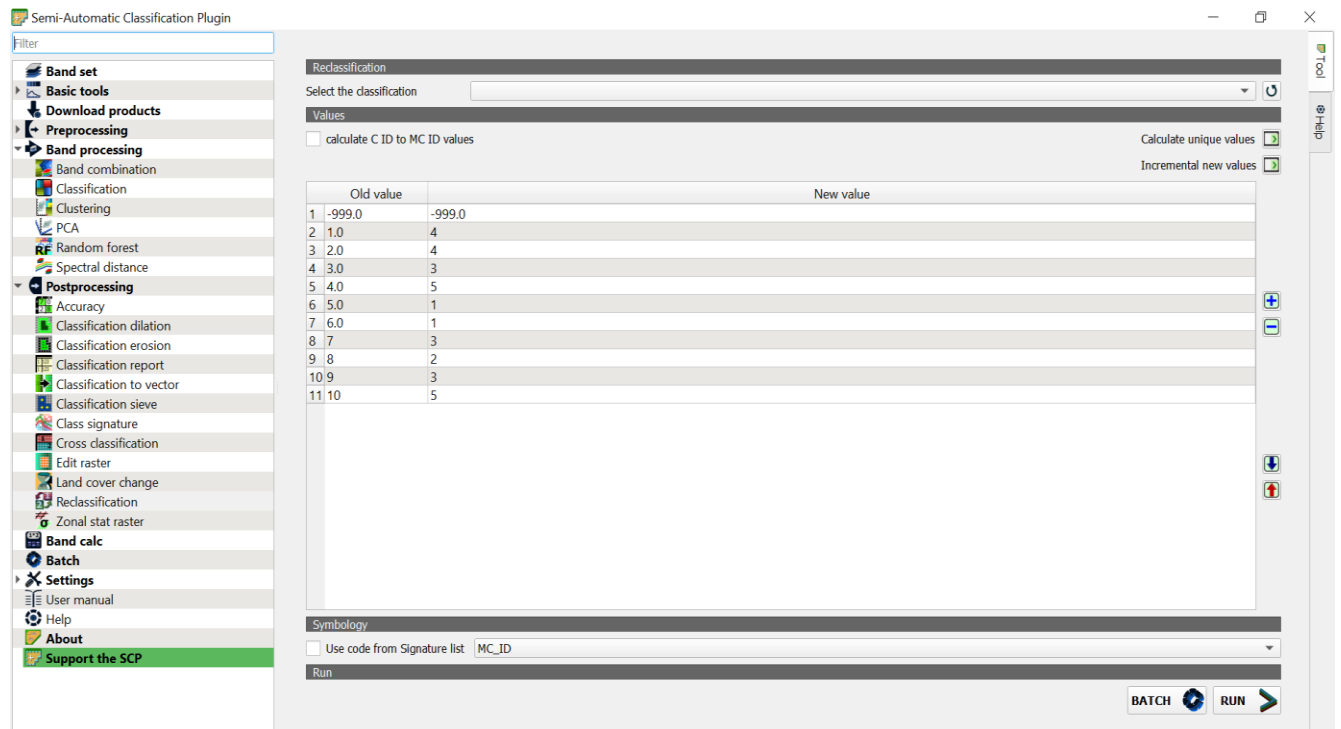
Close

Help

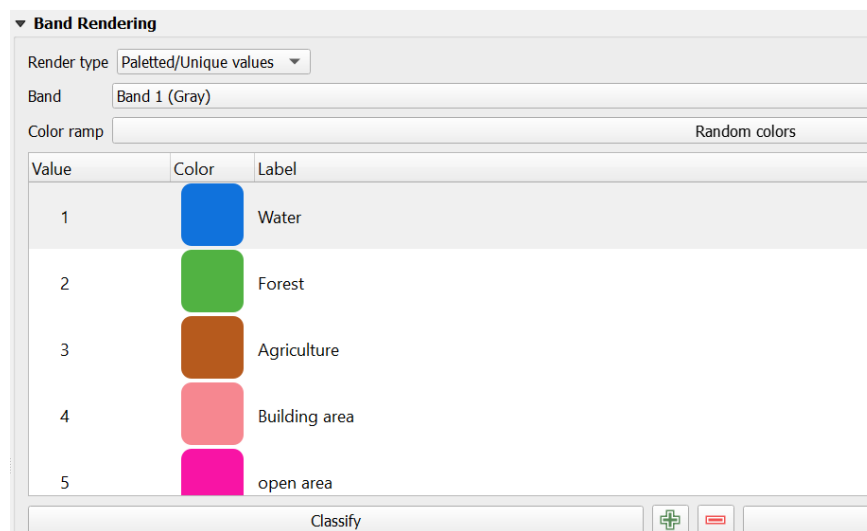
3) Cluster the above downloaded data for one unsupervised classification



5) Change the colour of the selected bands and label them with their name



6) Print the layout (add north, grids, scale, legend, coordinates) and export it as image.



Conclusion: We created an unsupervised classification of an area whose exported image is attached below

