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Federal Ministry
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8 Raster Processing

b) Cloud masking and mosaicking in QGIS

Learning objectives

Learn to use the Semi-Automatic Classification Plugin in QGIS

Practice how to apply a cloud mask on Sentinel-2 imagery

Understand the mosaicking of two satellite images

Practice preprocessing satellite imagery in QGIS

Semi-Automatic Classification plugin

What is it?

- A QGIS plugin for supervised classification of remote sensing imagery
- Facilitates image preprocessing, classification, and post-processing

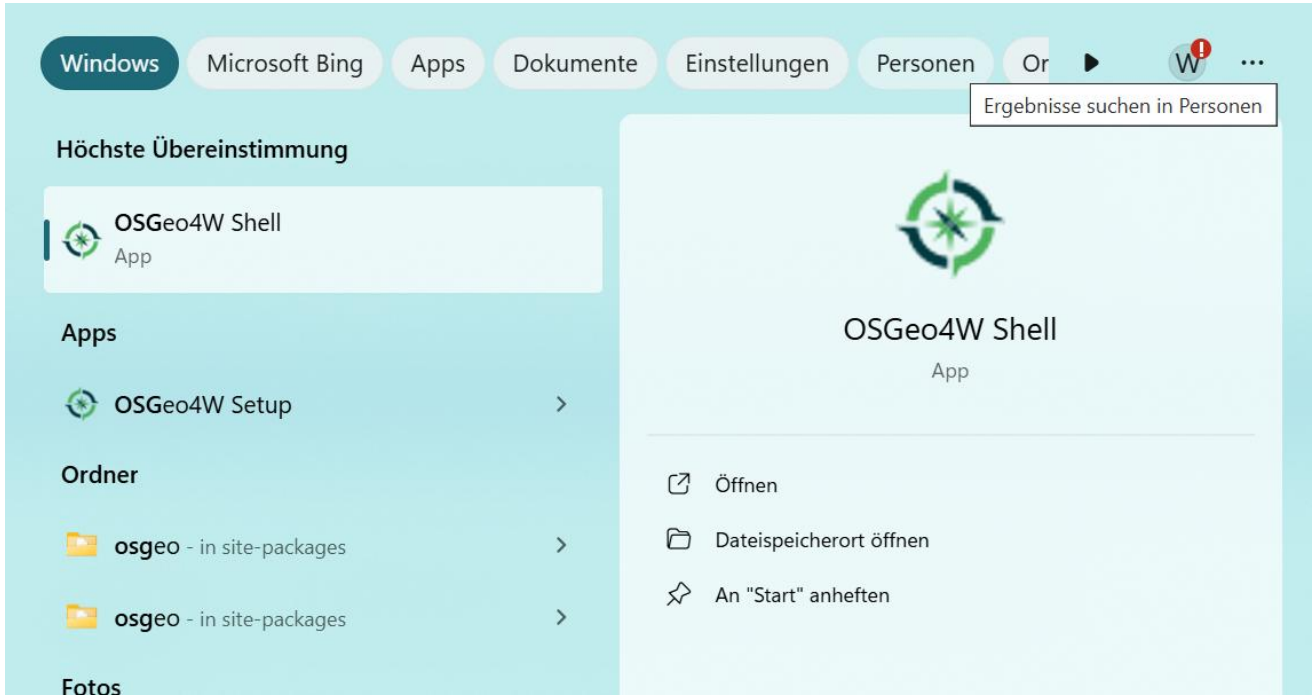
Key features

- Preprocessing – Convert digital numbers (DN) to reflectance, atmospheric correction
- Training Samples – Define land cover classes based on known pixels
- Classification – Supervised classification using machine learning algorithms
- Post-Processing – Refine classification results with filtering and accuracy assessment

Installing Semi-Automatic Classification plugin

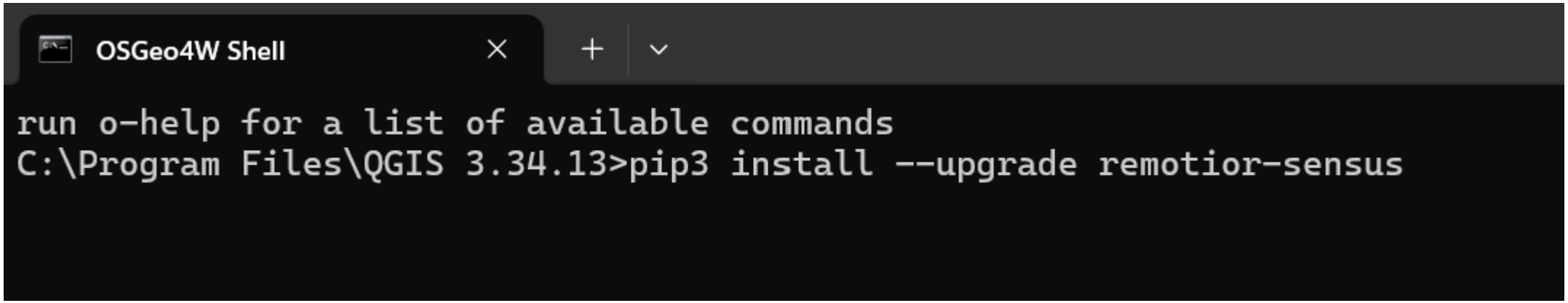
In comparison to other plugins, SCP has some co-dependencies we need to fulfill first

1. Close your QGIS application and search for the OSGeo4W Shell
2. Start it



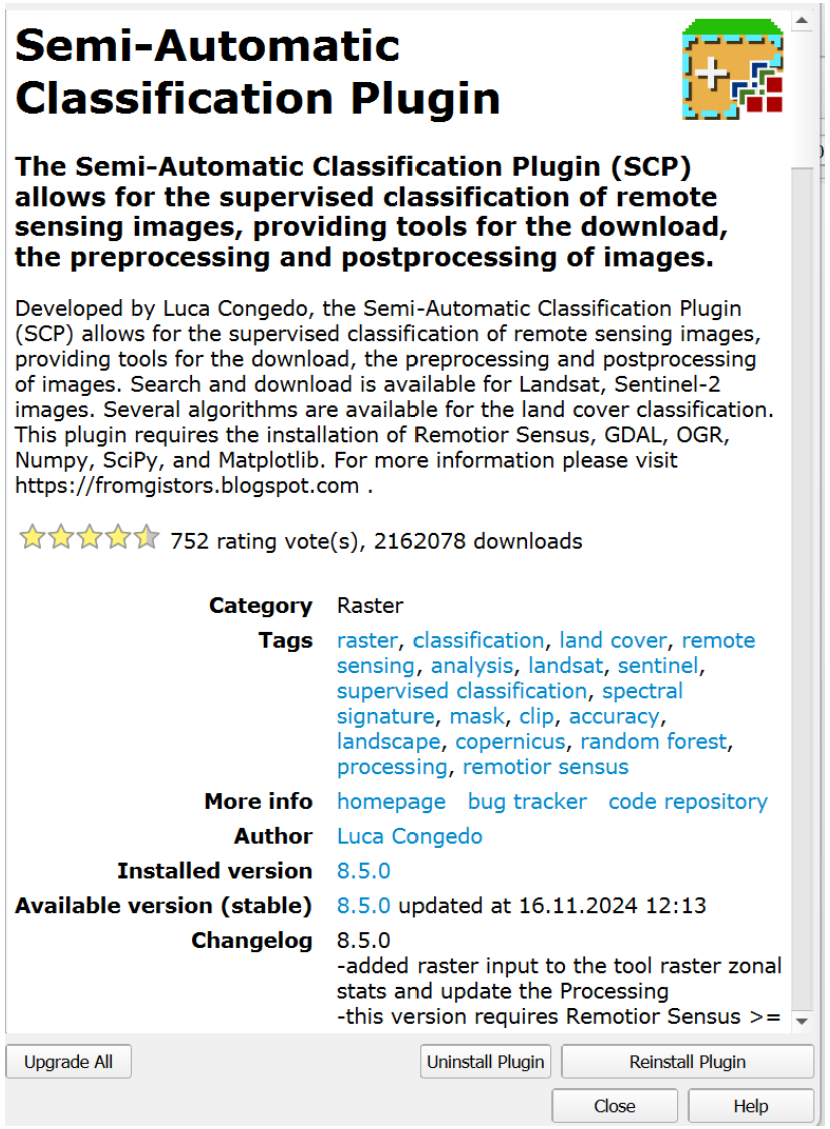
Installing Semi-Automatic Classification plugin

3. Enter the following command in the shell: pip3 install --upgrade remotior-sensus



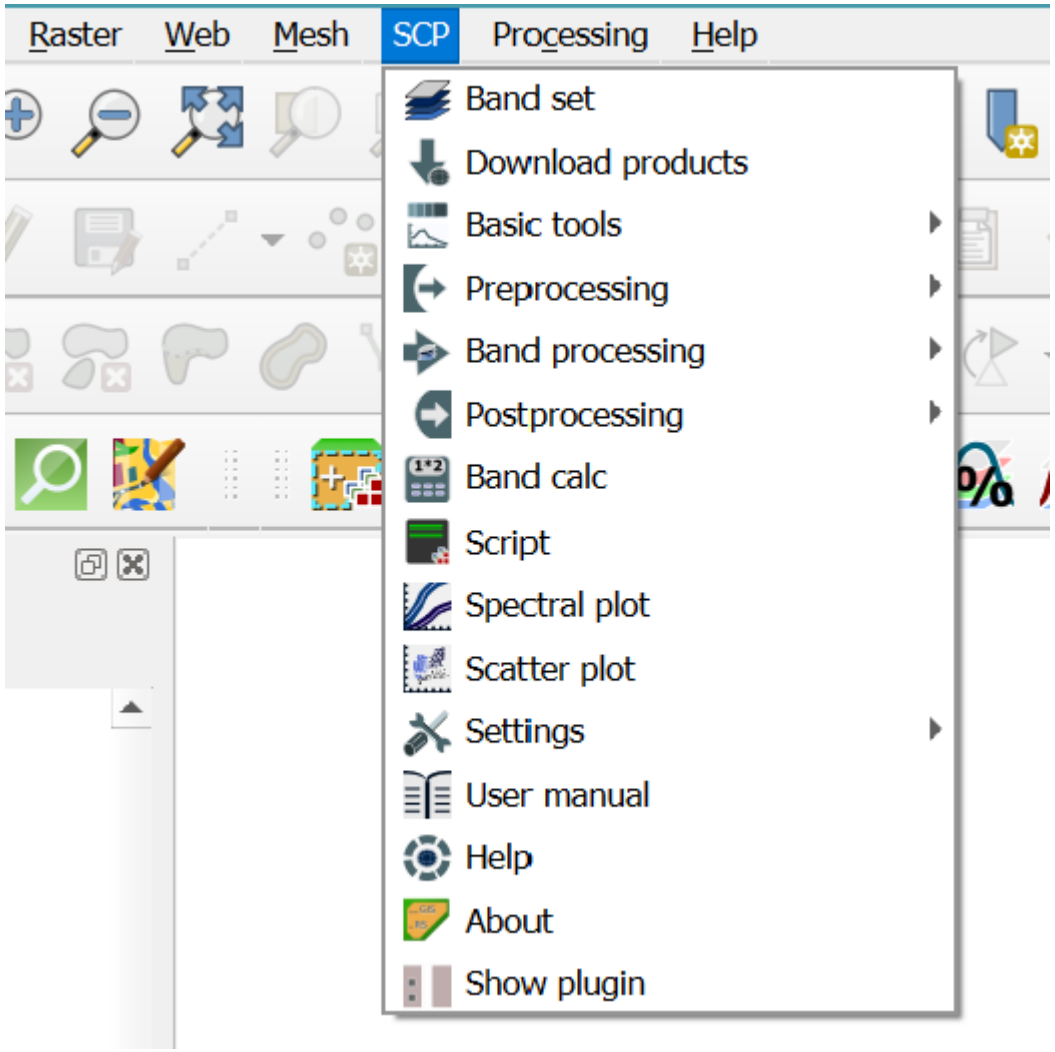
Installing Semi-Automatic Classification plugin

4. Start QGIS and create a new project
5. Install the SCP plugin via the plugin manager



Installing Semi-Automatic Classification plugin

6. SCP is successfully installed and will show up at the top



Task: Cloud masking

Using the provided Sentinel-2 scene, create a cloud mask to remove the cloud cover of the satellite image

Task: Mosaicking

Using the provided raster files to create a mosaic raster image and clip it to the AOI

Summary & key takeaways

Mosaicking is a simple process that merges two or more rasters with one another

Cloud masks can be applied using the SCP plugin

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Thank you for your attention!

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