



OBJECTIVES

- Use European Union Copernicus program and SENTINEL satellite imagery (free) to map the land
- Understand the Remote Sensing basics
- Download satellite imagery data using QGIS
- Download and analyze satellite imagery data with QGIS
- Perform a Semi-Automatic land classification with QGIS
- Perform vegetation indices calculation from satellite imagery data
- Carry out a map of the results



BACKGROUND

Basics in computing science and IT technology. QGIS training level 1 (3.10 version at least)



PUBLIC

Everyone who wants to handle, organize, and process satellite imagery data with QGIS in order to perform classifications and spectral indices calculation.



DURATION > 2 days (14 hours of training)



PRICES

- ✓ Individual training: 1 500 € taxes free
- ✓ Open course : 500 € taxes free per person
(confirmed training from 3 trainees and up to a maximum of 10 trainees)



TEACHING RESOURCES

- ✓ Interactive training using Microsoft Teams
- ✓ Practical exercises and case studies
- ✓ Loan of temporary software license : yes
- ✓ Training certificate : yes
- ✓ Evaluation : yes



HOW TO REGISTER

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TRAINING CONTENTS

REMINDERS ON REMOTE SENSING

- Brief introduction to Remote Sensing
- Remote Sensing mission description
- Sensors and their uses
- Introduction to the European Earth Observation Program "Copernicus"
- Register a new account on the Copernicus Open Access Hub

DOWNLOAD IMAGERY / DISCOVER SCP PLUGIN

- Reminders on QGIS interface
- QGIS SCP plugin installation
- Discover the main tools of the SCP plugin
- Sentinel Imagery download
- Atmospheric correction application

SENTINEL 2 IMAGERY HANDLING

- Create virtual rasters using different spectral bands
- Create / analyze natural and infrared color combination
- Clip rasters using a shapefile or an extent

LAND OCCUPATION / LAND USE MAP

- Reminders on classification
- Understand Semi Automatic Classification process
- Land use class definition
- Macroclass creation
- Region of interest (ROI) creation
- Run the Semi Automatic Classification preview
- Run the Semi Automatic Classification process
- Understand the basic vegetation indices NDVI and EVI

LAYOUT OF THE RESULTS

- Build a map composition
- Insert objects (legend, title, text, logo, scale bar...)
- Atlas set up