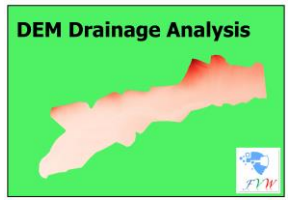
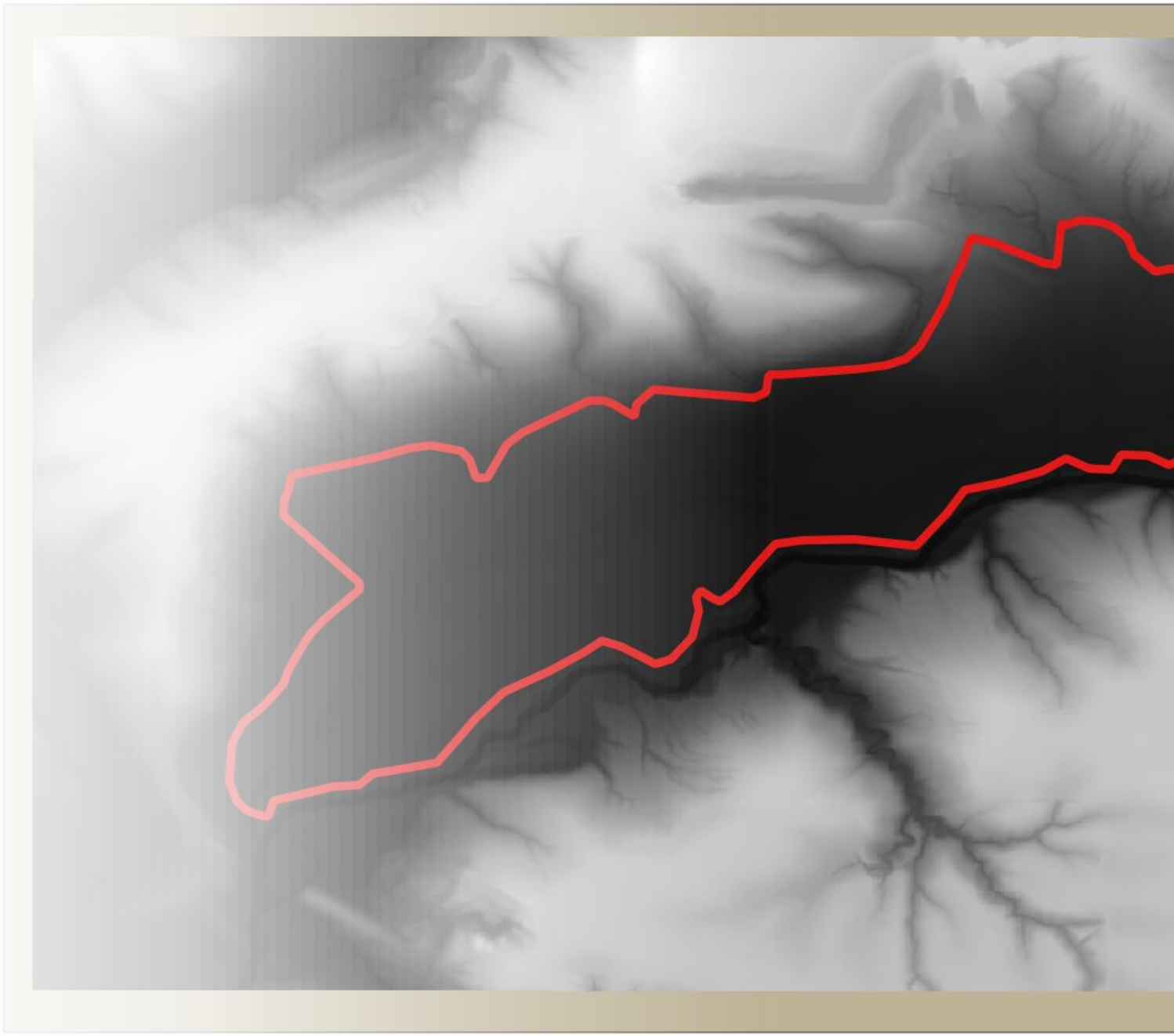
Starting up Plugin Installation for “DEM Drainage Analysis”

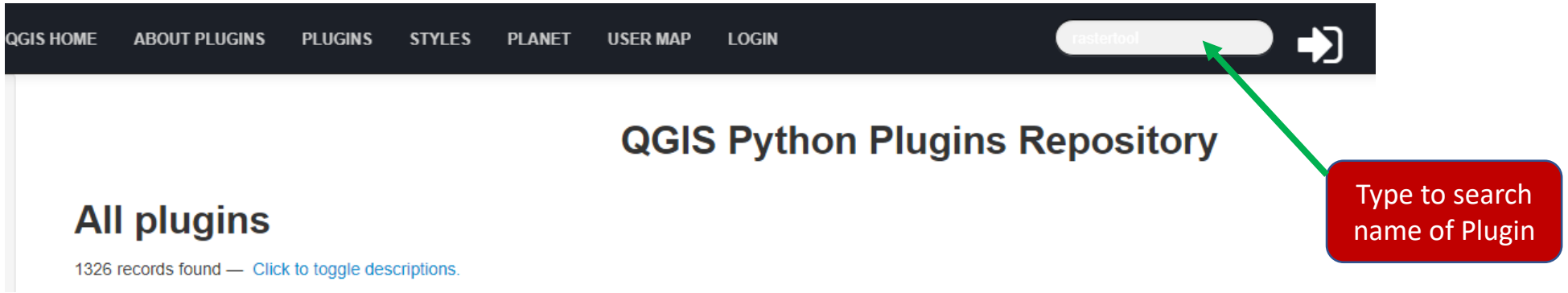


Plugin Logo

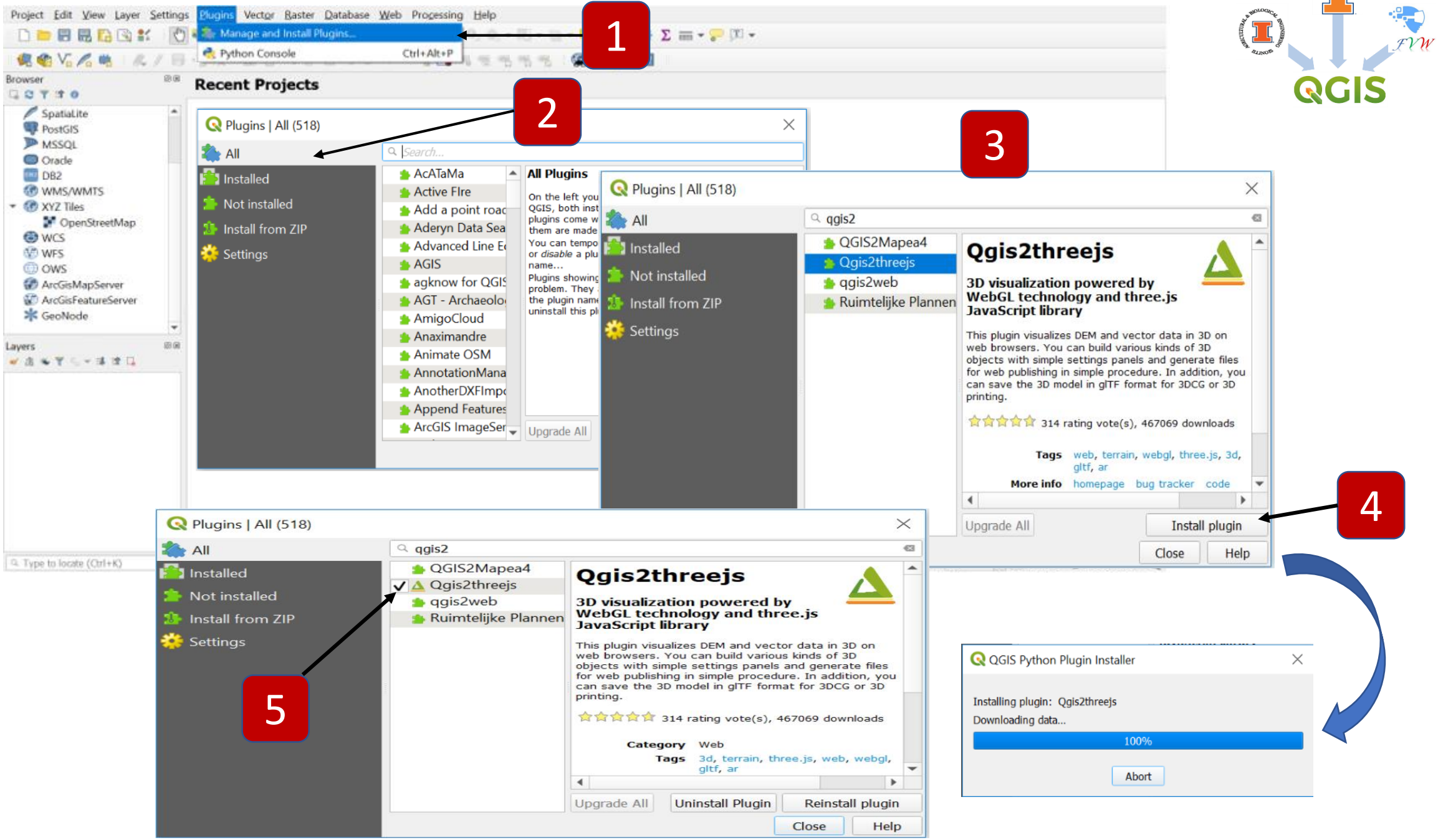


Method 1 Installation Guide

Online from the QGIS Plugin Repository directly (https://plugins.qgis.org/plugins/), just type to search the name of the plugin. Once it appears, click to download it.



Here, a direction is given on how to install the "DEM Drainage Analysis" plugin from the plugin function of the menu bar in QGIS Software window, using the example provided below for downloading and installing a plugin into QGIS. Type "DEM Drainage Analysis" Instead of "Qgis2threejs" in the search field. Simply follow the directions given by the arrows. To begin, first launch the QGIS software and the follow the directions below.


Project Edit View Layer Settings Plugins Vector Raster Database Web Processing Help
Manage and Install Plugins...
Python Console Ctrl+Alt+P
1
Recent Projects
Browser
SpatiaLite
PostGIS
MSSQL
Oracle
DB2
WMS/WMTS
XYZ Tiles
OpenStreetMap
WCS
WFS
OWS
ArcGisMapServer
ArcGisFeatureServer
GeoNode
Layers
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2
Plugins | All (518)
All
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Qgis2threejs
qgis2web
Ruimtelijke Plannen
Qgis2threejs
3D visualization powered by WebGL technology and three.js JavaScript library
This plugin visualizes DEM and vector data in 3D on web browsers. You can build various kinds of 3D objects with simple settings panels and generate files for web publishing in simple procedure. In addition, you can save the 3D model in glTF format for 3DCG or 3D printing.
314 rating vote(s), 467069 downloads
Tags web, terrain, webgl, three.js, 3d, gltf, ar
More info homepage bug tracker code
Upgrade All
Install plugin
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4
Plugins | All (518)
All
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qgis2
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Qgis2threejs
qgis2web
Ruimtelijke Plannen
Qgis2threejs
3D visualization powered by WebGL technology and three.js JavaScript library
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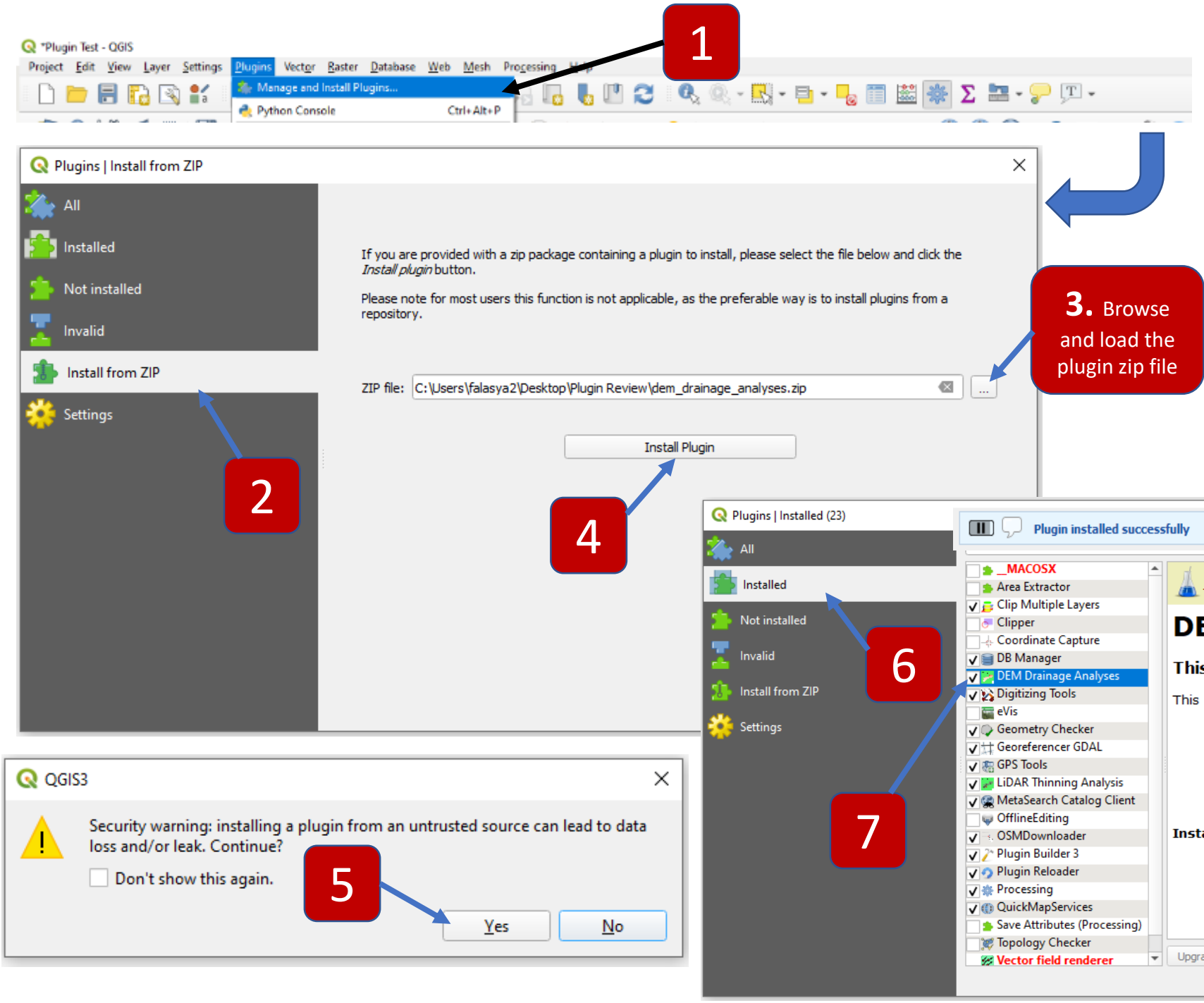
314 rating vote(s), 467069 downloads
Category Web
Tags 3d, terrain, three.js, web, webgl, gltf, ar
Upgrade All
Uninstall Plugin
Reinstall plugin
Close
Help
5
QGIS Python Plugin Installer
Installing plugin: Qgis2threejs
Downloading data...
100%
Abort

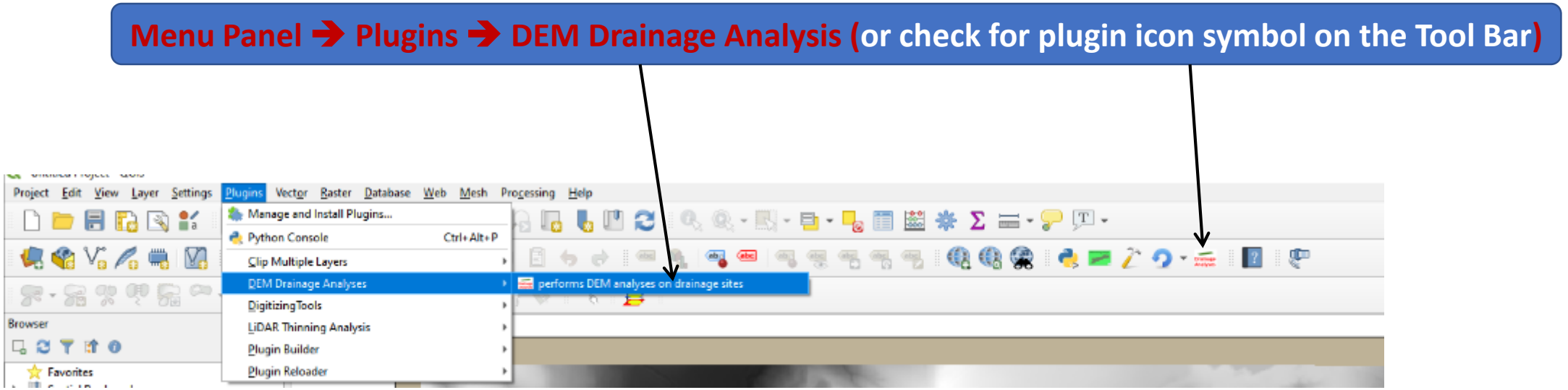
Method 2 Installation Guide

Here, a direction is given on how to install the **"DEM Drainage Analysis"** plugin from the plugin function of the menu bar in QGIS Software window, using the example provided below for downloading and installing a plugin into QGIS. To begin, first download the plugin zip file unto your computer desktop. Next, launch the QGIS software and then simply follow the directions given by the arrows below.



Here, a direction is given on how to install the **"DEM Drainage Analysis"** plugin from the plugin function of the menu bar in QGIS Software window, using the example provided below for installing a plugin into QGIS. Simply follow the directions given by the arrows. To begin, first launch the QGIS software and the follow the directions below.

“DEM Drainage Analysis” – Plugin Installation Check



Here, a direction is given on how to check and confirm the installation of the **“DEM Drainage Analysis”** plugin from the plugin function of the menu bar or Tool Bar. Simply follow the directions given by the arrows on the slide.

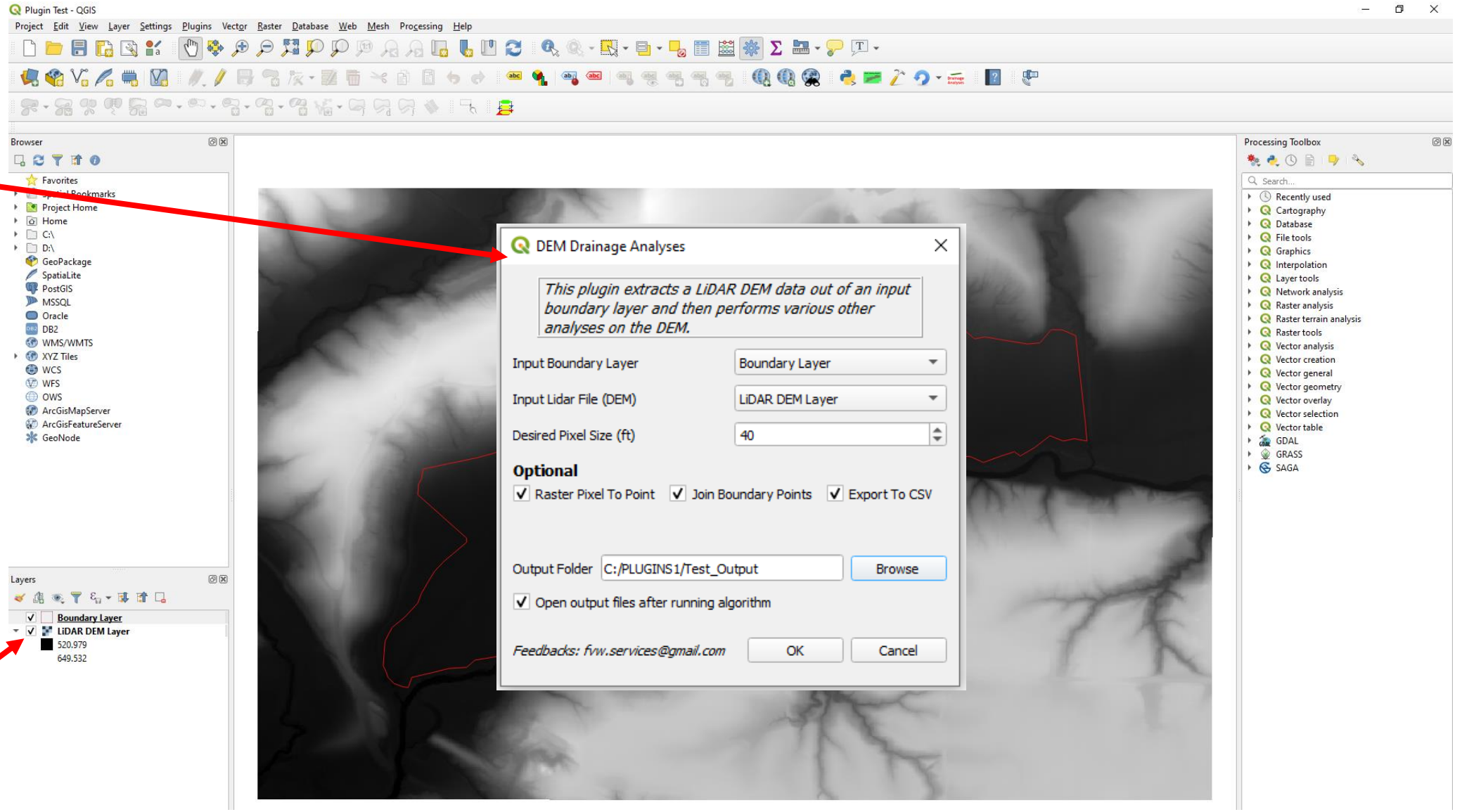
Method II - Plugin

2: Call Plugin ➔

Menu Panel ➔ Plugins ➔ DEM Drainage Analysis (or check for plugin icon symbol on the Tool Bar).
See next page.

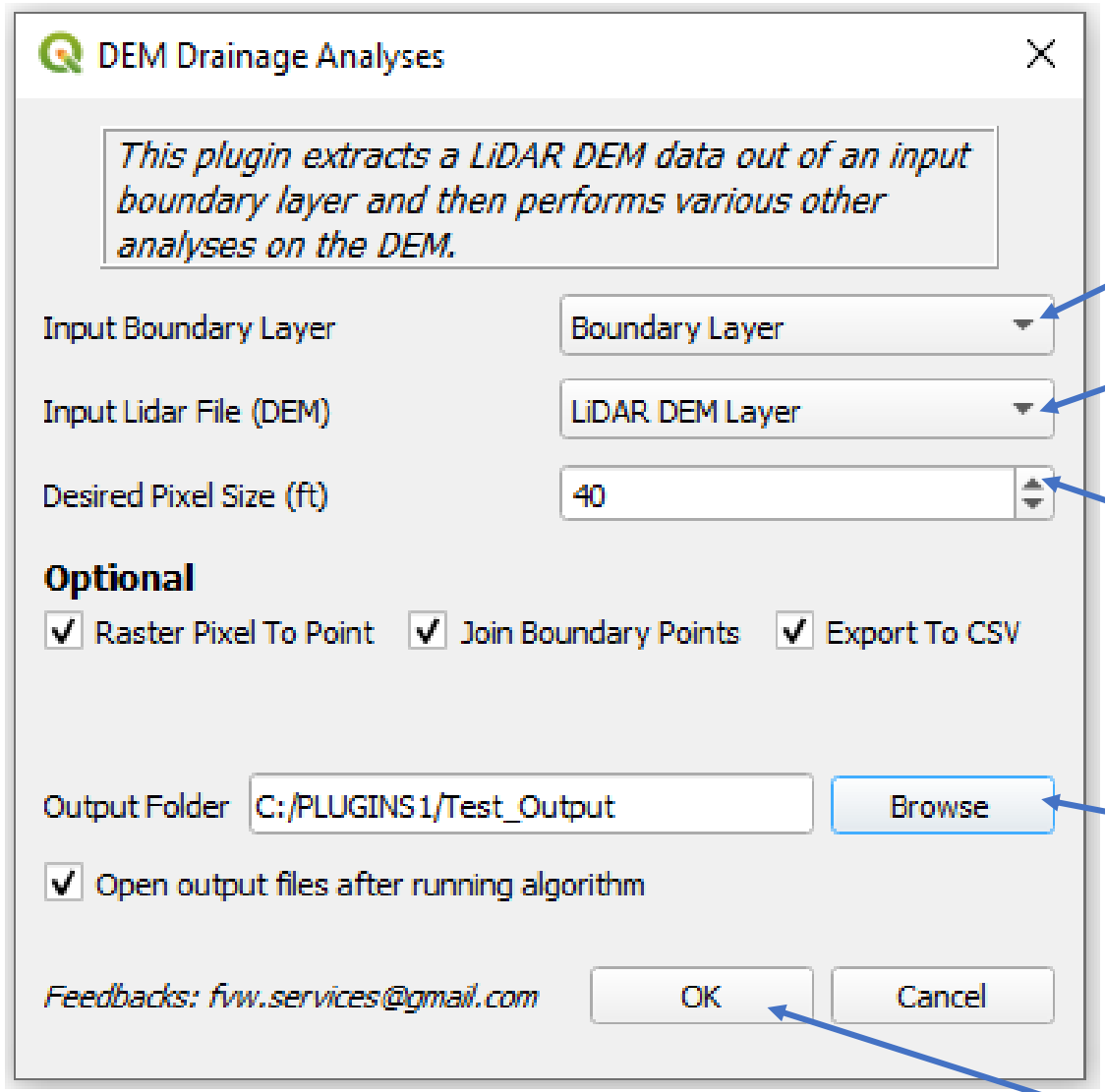
1: Load Layers ➔

Boundary Data (vector layer), LiDAR DEM regional data (raster layer), Web Base Map (optional).



“DEM Drainage Analysis” - Plugin GUI

All Analyses Tasks Performed by the Plugin, checked at default. However, you can uncheck the task not desired.



1

2

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4

5: Press OK and wait for a few seconds depending on the density of point cloud data within the extent of the boundary layer extracted.

Note: Once the Process is completed, cancel all prompt ups.

Plugin Function:

Extracting and Thinning of LiDAR Data for a Field

LiDAR Thinning is a process that reduces the density of a point cloud data based on a specified threshold spacing. 'Thinning' is the process of discarding LiDAR data from a file, in order to generate a smaller, less detailed file.

This plug-in exacts a LiDAR DEM data out of an input boundary layer and then performs specific DEM analyses on drainage site. Such analysis includes:

a. Extracts out all loaded checked vector and raster files within the boundary layer extent on the map canvas. Note: uncheck all web map layers from "QuickMapServives" like Google Satellite or Google Hybrid or OSM in the layers panel before pressing the OK button in the plugin.

b. Performs raster resampling to the desired pixel size desired. Note range of executable pixel size: 20 – 100 (ft).

c. Coverts the resampled raster layer to a vector point layer, by creating point features for each individual pixel's center in the raster layer.

d. Generates boundary lines into points layer and then join points to vector point layer

e. Exports the boundary lines points layer and the converted vector point layer to CSV files respectively, using the boundary layer extent. The CSV files can then be opened in excel. This function adds X and Y (or latitude/longitude) fields to the vector point layer.

f. All operations are saved in your specified subfolders accordingly. After all tasks have been executed and analyzed, go to the specified save folder and there you will see all 3 subfolders containing all files: "CSV_Files", "Rasters", and "Vectors". The entire task of the plugin takes few seconds depending on the density of point cloud data within the extent of the boundary layer extracted.

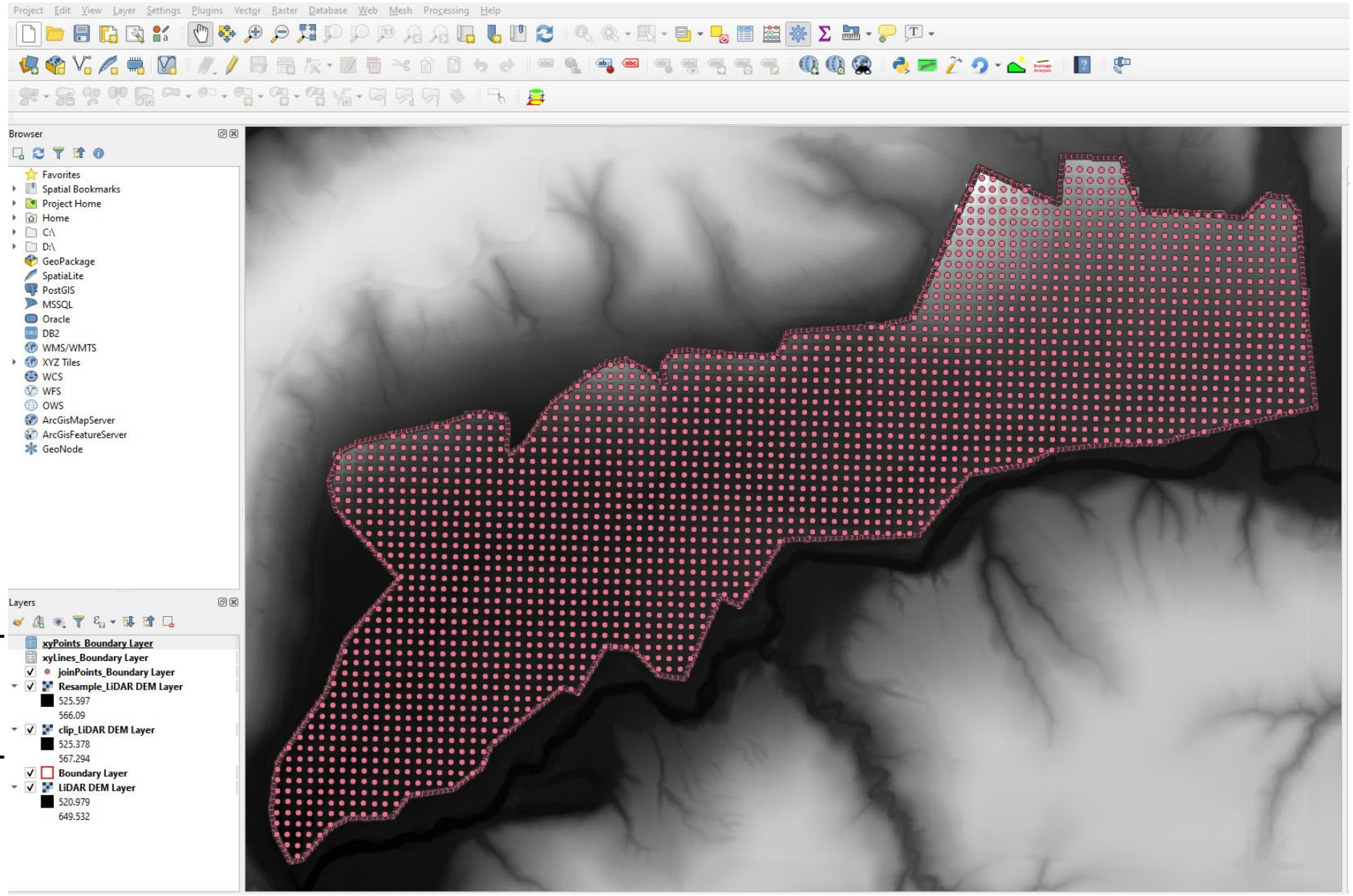
"DEM Drainage Analysis" Plugin Processing Module Flow-chart

S/N	Functions	Actions	Processing Module
A	Input Boundary Data (vector layer)	Setup Parameters	
B	Input LiDAR File DEM (raster layer)		
C	Specify the Desired Resampling Pixel Size (in Feet)		
D	Browse to Select the Output Folder Location		
E	Open output files after running (Default: Leave Box Checked)		
E	Check all needed Boxes (Default: All Checked)		
F	Creates 3 Storage Subfolders (CSV files, Vectors, and Rasters)	1st	QGIS
G	Extracts all selected and displayed Raster layers within the boundary extent	2nd	GDAL
H	Resamples extracted Raster Layer to the specified pixel size	3rd	SAGA
I	Converts Resampled Raster pixel to Vector Point layer	Optional Tasks	QGIS
J	Generates boundary lines into points layer and then join points to vector point layer		QGIS
K	Exports the boundary lines points layer and the converted vector point layer to CSV files respectively, using the boundary layer extent		QGIS
L	Saves all extracted and analyzed data into the respective subfolders created	4Th	QGIS

Completed Plugin Task Window

Output from all Analyses Tasks Performed by the Plugin ➔

a. Clipped LiDAR DEM regional data (raster layer)
b. Resampled LiDAR DEM regional data (raster layer)
c. Joined Points of Boundary Lines & Inner regional points (vector layer)
d. Exported XY data files for both boundary points and inner points, respectively (csv layer)



Note: Once the Process is completed, cancel all prompt ups.