

Seismic Zones with morphological gradient

The morphological gradient in seismic areas with slopes $\geq 15^\circ$ can influence the propagation of seismic waves, amplify their energy and increase the risks of landslides or ground subsidence. This plugin identifies areas with a morphological gradient with slopes $\geq 15^\circ$ within seismic zones (Input vector file) starting from the DTM.

Software installation

Installation is performed directly from the QGIS plugins section (Figure 1. QGIS Plugins Section) by entering the keyword "Geology" in the search box (Figure 2. Plugin Search and

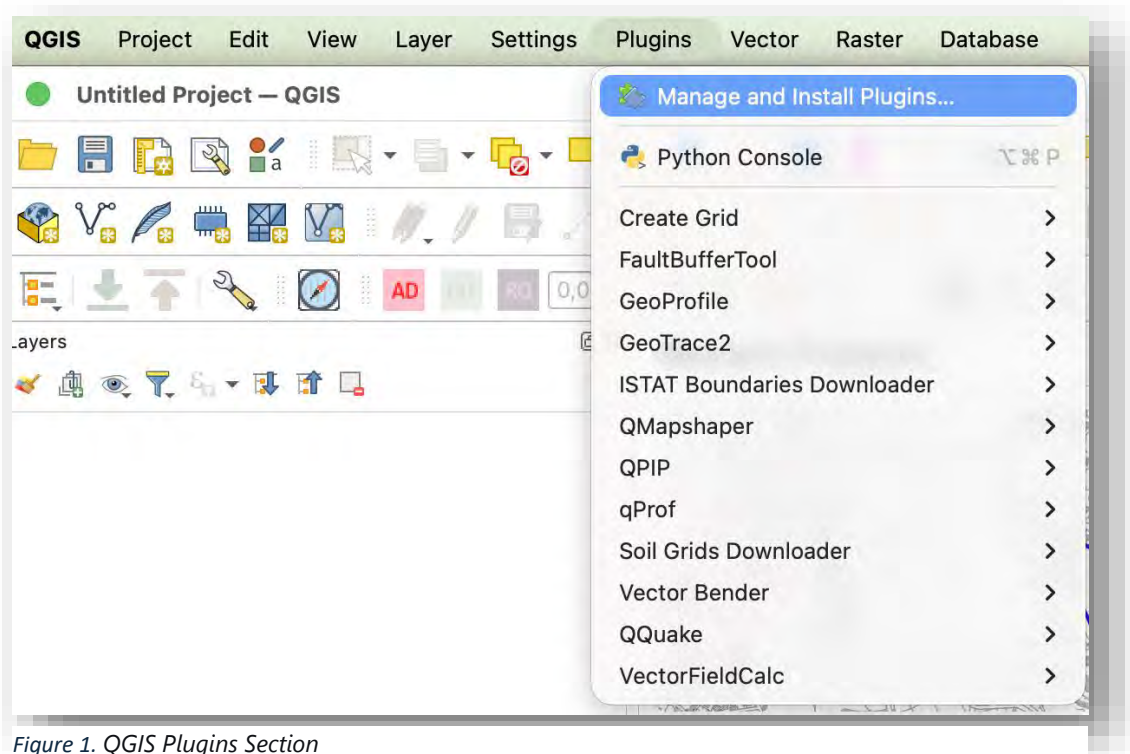


Figure 1. QGIS Plugins Section

Installation).

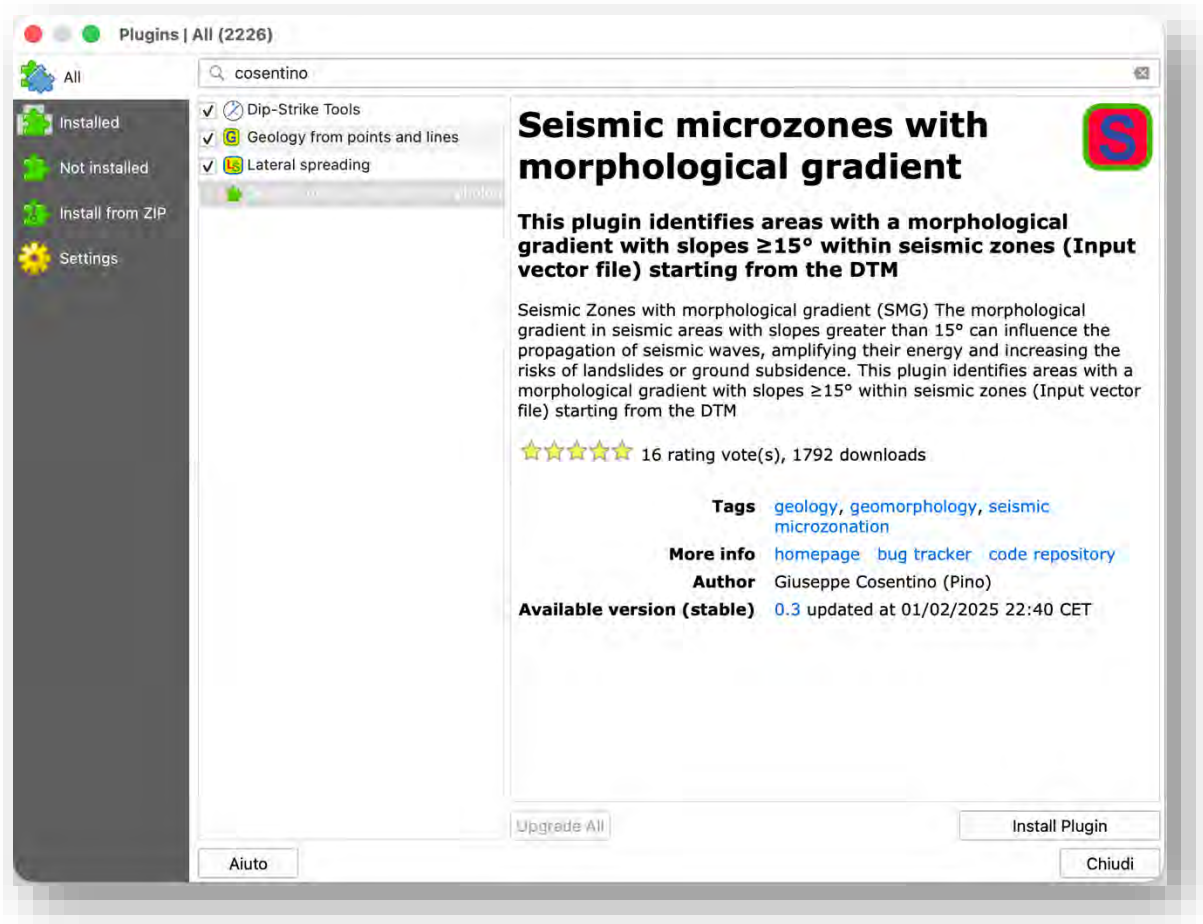


Figure 2. Plugin Search and Installation

Once installed, the plugin will be available in the Processing Tools section (Figure 3. QGIS Processing Tools Section). Clicking on the tool will open the interface for selecting input files and configuring the geoprocessing operations that will generate the seismic zones map files with a morphological gradient with slopes $\geq 15^\circ$. (Figure 4. Plugin Input and Output data entry form)

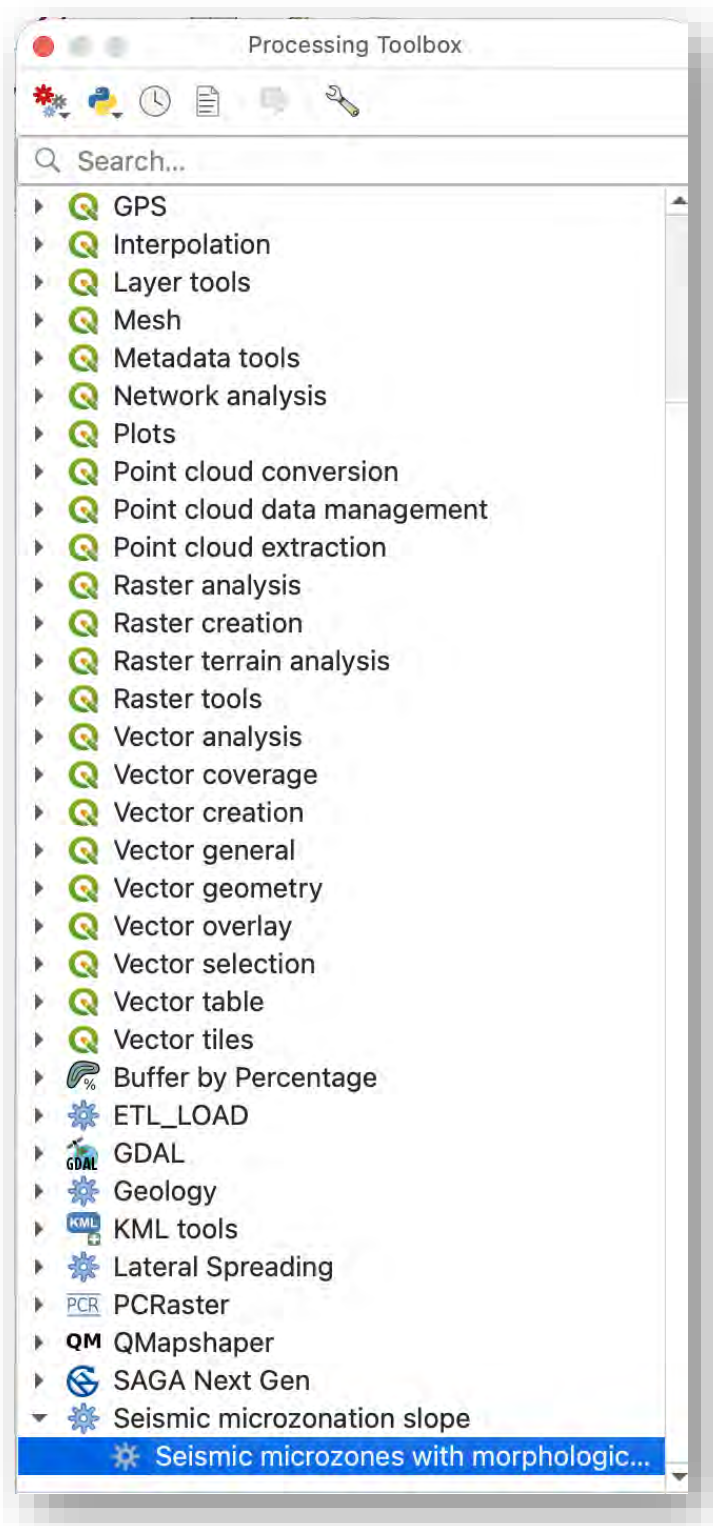


Figure 3. QGIS Processing Tools Section

Seismic Microzones With Morphological Gradient

Parameters Log

Digital terrain model (raster INPUT)

Geological Seismic Zones (Vector INPUT)

Slope (°)

[Save to temporary file]

☒ Open output file after running algorithm

ZS15 [optional]

[Create temporary layer]

☒ Open output file after running algorithm

0%

Advanced Run as Batch Process...

Chiudi Run

Seismic microzones with morphological gradient

Seismic Zones with morphological gradient (SMG)

The morphological gradient in seismic areas with slopes greater than 15° can influence the propagation of seismic waves, amplifying their energy and increasing the risks of landslides or ground subsidence. This plugin identifies areas with a morphological gradient with slopes $\geq 15^\circ$ within seismic zones (Input vector file) starting from the DTM

Useful Link: [Guidelines For Seismic Microzonation](#)

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Figure 4. Plugin Input and Output Data Entry Form