



ICIMOD

Empowering Women in Geospatial Information Technology

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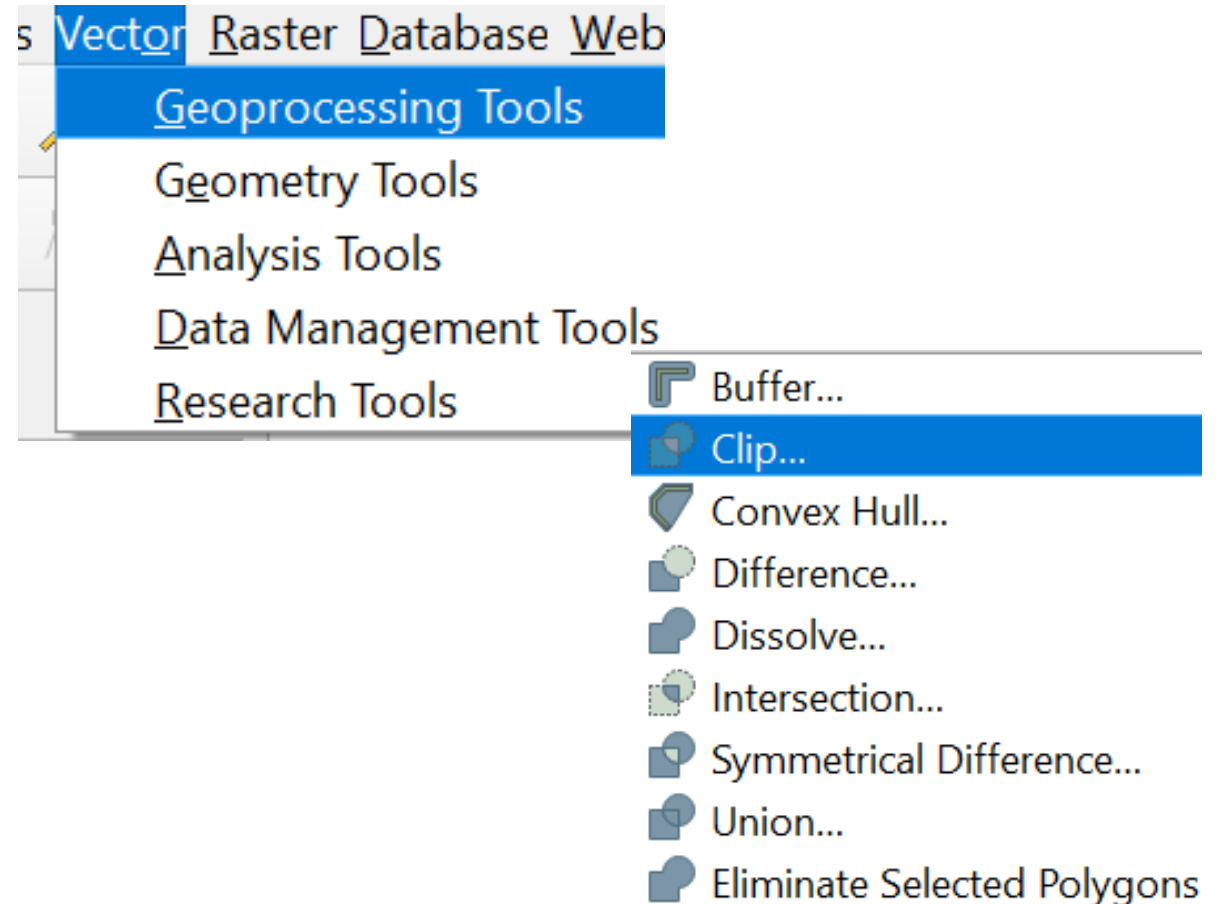
Poonam Tripathi

20 June 2021

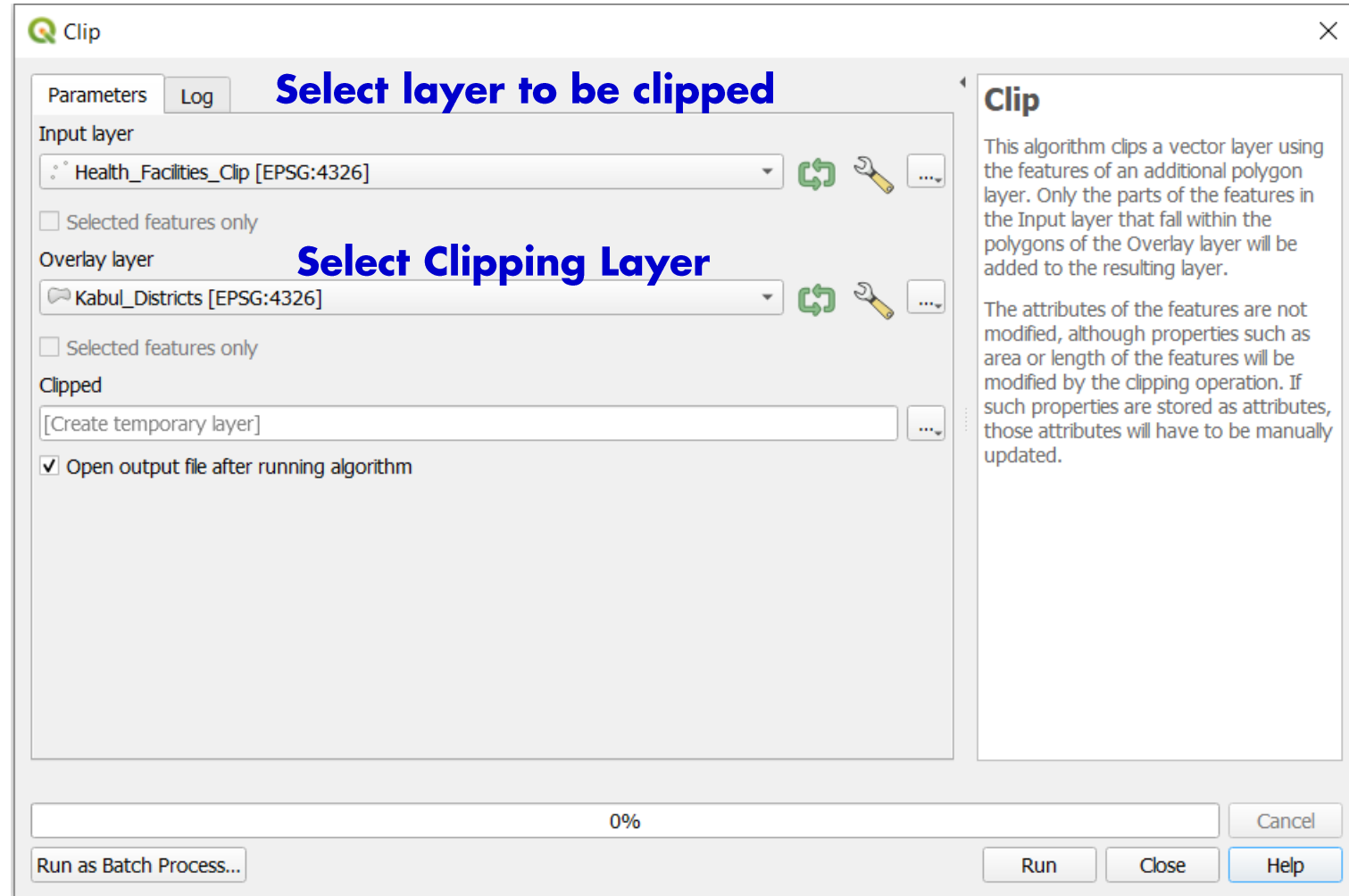
Exploring geo-processing tools

Exploring geo-processing tools (Clip)

- Click  ->Add vector data
- Add **Kabul_districts.shp** from the folder **Day 1 \Exercise 2**
- Add **Health_Facilities.shp** from the folder
- Click **Vector->geoprocessing tools->Clip**

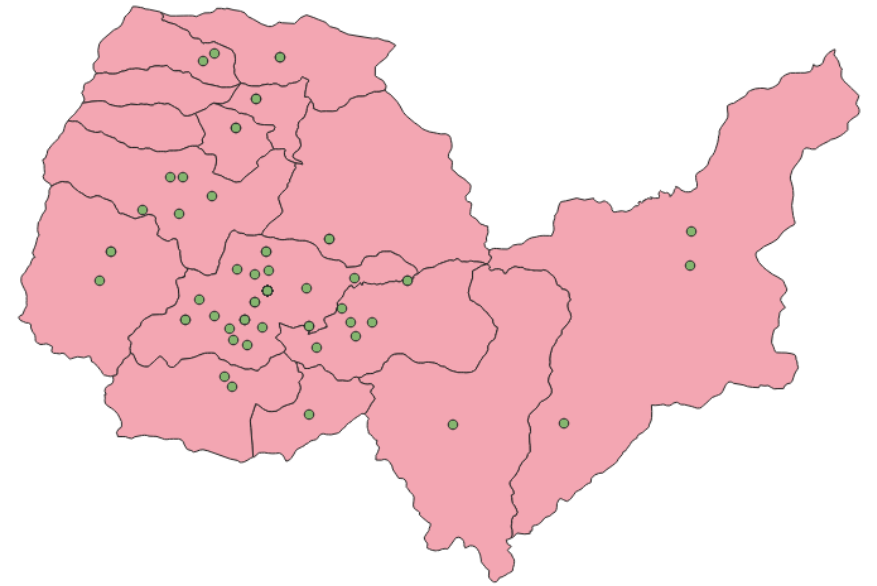
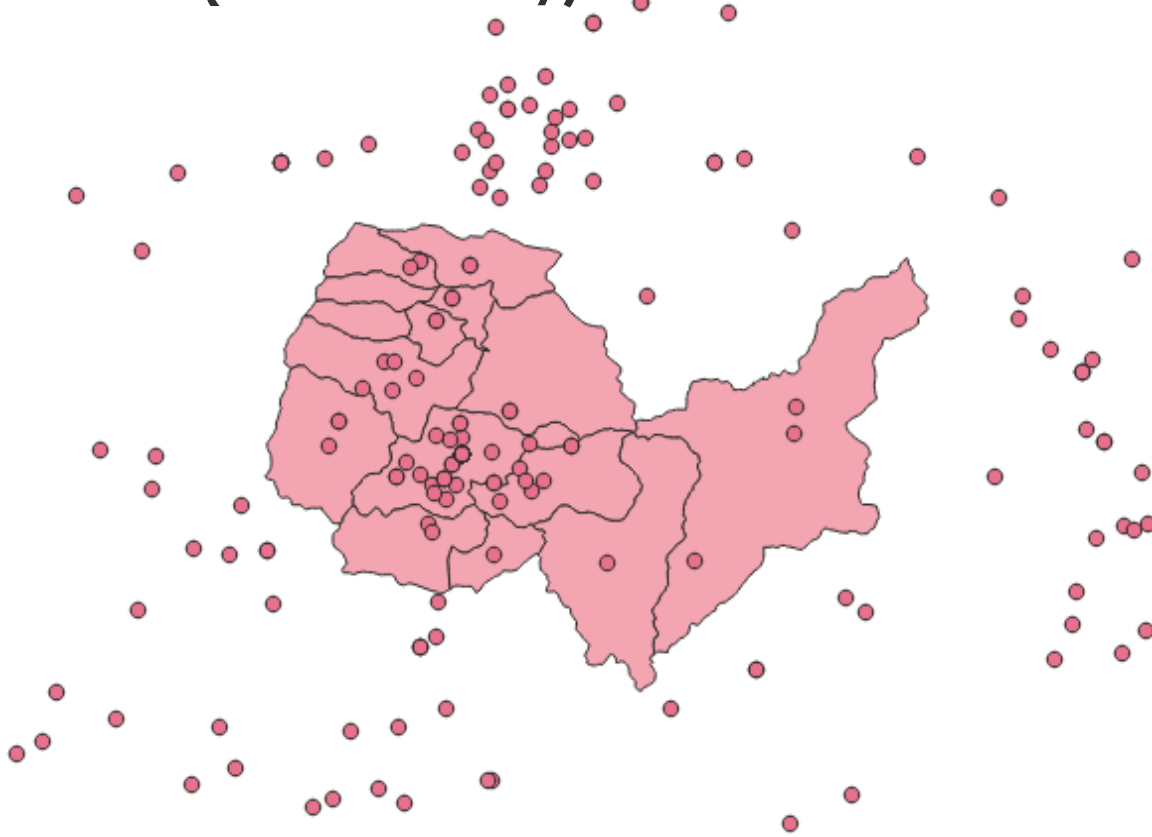


Exploring geo-processing tools (Clip)



Exploring geo-processing tools (Clip)

Point Data (Health Facility)

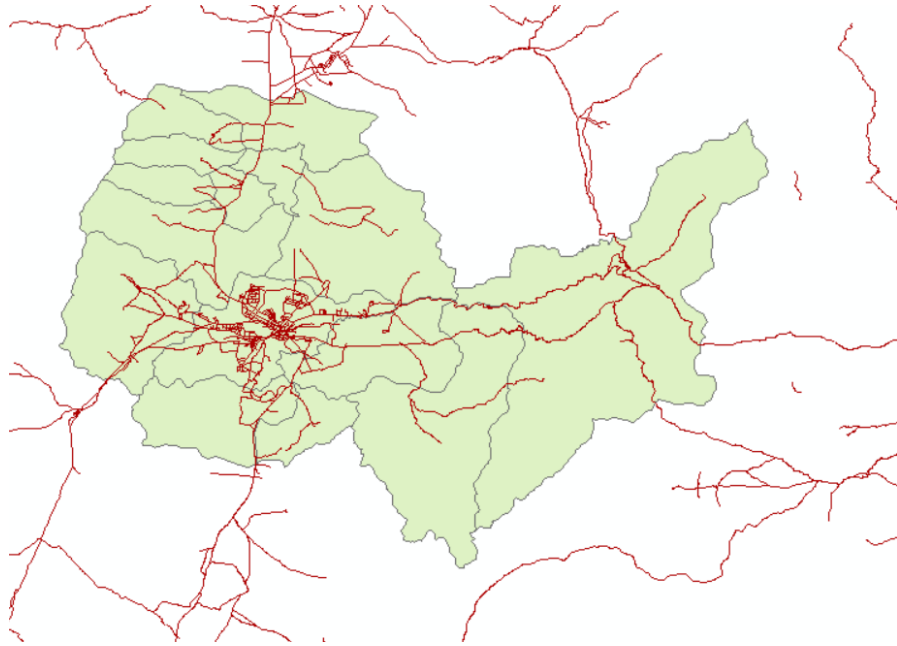


Exploring geo-processing tools (Clip)

Before

After

Line Data (Road)



Exploring geo-processing tools (Clip)

Before

After

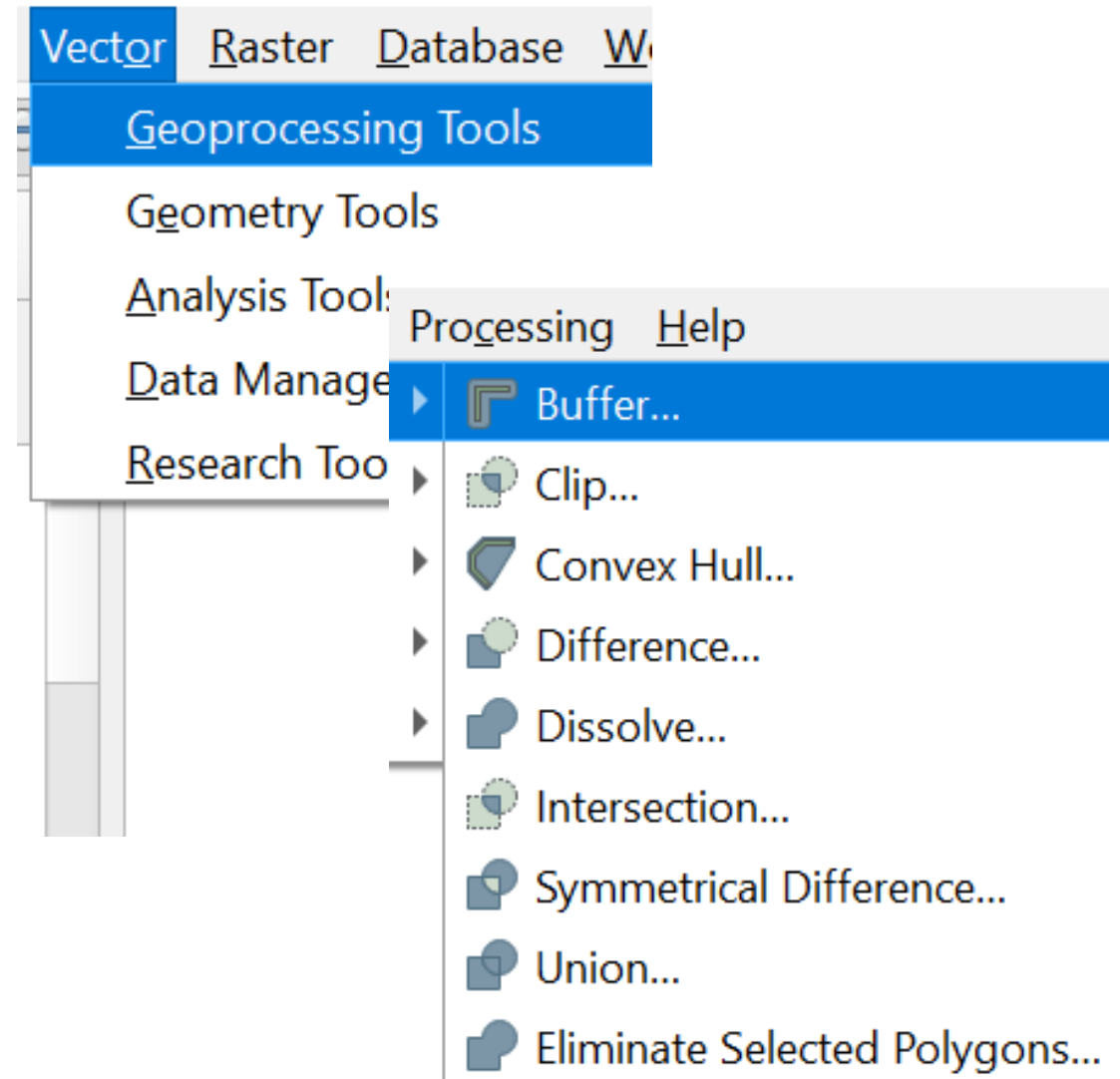
Polygon Data (District)



Exploring geo-processing tools

Buffer Tool

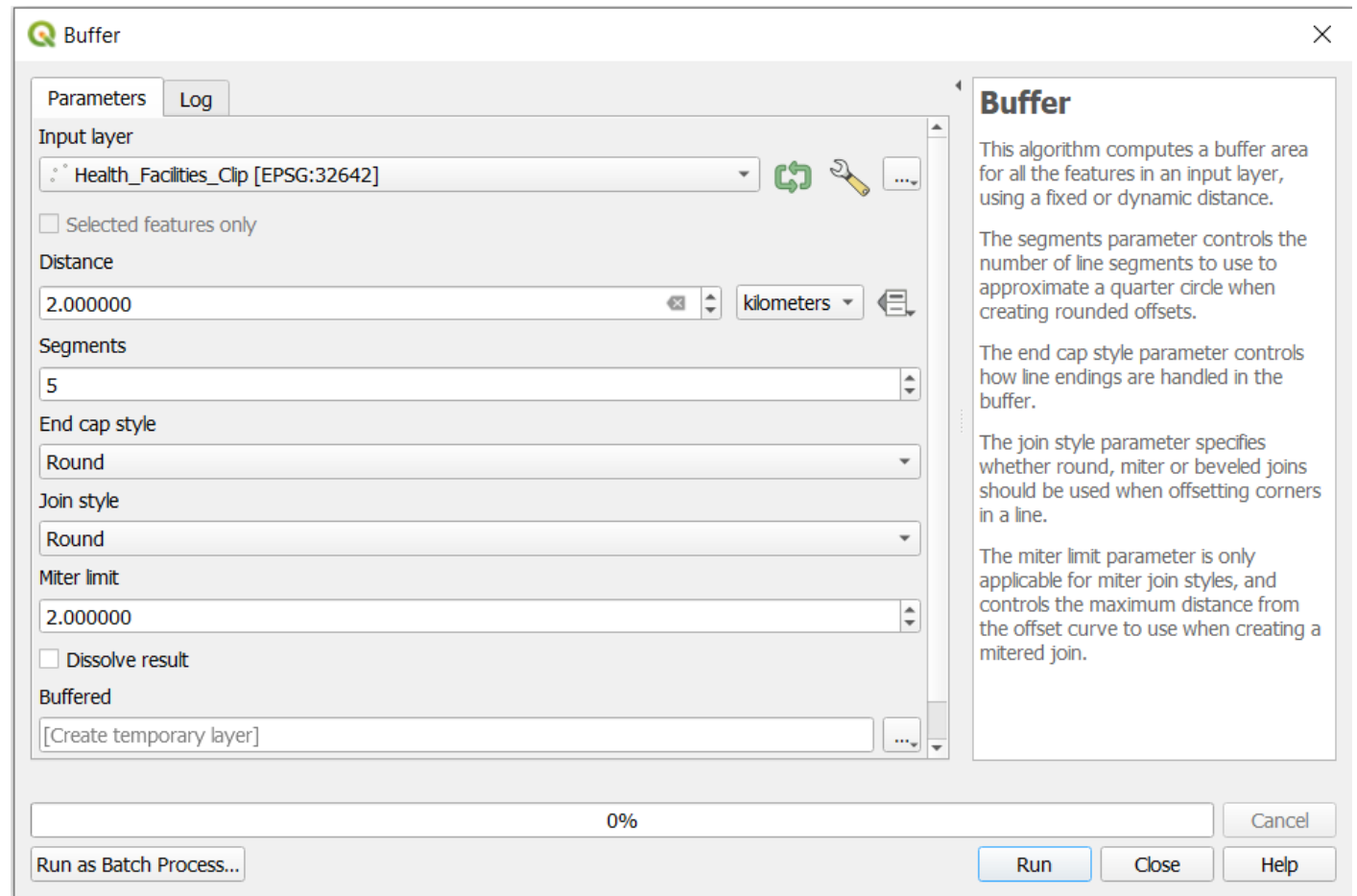
- Open the clipped shapefile on the QGIS window
- Click **Vector**->
Geoprocessing tools->
buffer



Exploring geo-processing tools

Buffer Tool

- Select the input layer
- Enter the distance limit



The screenshot shows the 'Buffer' tool dialog box in QGIS. The 'Parameters' tab is active, displaying various settings for creating a buffer around a selected input layer. The input layer is 'Health_Facilities_Clip [EPSG:32642]'. The distance is set to 2.000000 kilometers. The number of segments is 5. The end cap style and join style are both set to 'Round'. The miter limit is 2.000000. The 'Dissolve result' checkbox is unchecked. The 'Buffered' option is set to '[Create temporary layer]'. A progress bar at the bottom shows 0% completion. The 'Run' button is highlighted in blue. A 'Log' button is located next to the 'Parameters' tab. On the right side, there is a help panel titled 'Buffer' with explanatory text about the algorithm and its parameters.

Buffer

This algorithm computes a buffer area for all the features in an input layer, using a fixed or dynamic distance.

The segments parameter controls the number of line segments to use to approximate a quarter circle when creating rounded offsets.

The end cap style parameter controls how line endings are handled in the buffer.

The join style parameter specifies whether round, miter or beveled joins should be used when offsetting corners in a line.

The miter limit parameter is only applicable for miter join styles, and controls the maximum distance from the offset curve to use when creating a mitered join.

Parameters Log

Input layer
Health_Facilities_Clip [EPSG:32642]

☐ Selected features only

Distance
2.000000 kilometers

Segments
5

End cap style
Round

Join style
Round

Miter limit
2.000000

☐ Dissolve result

Buffered
[Create temporary layer]

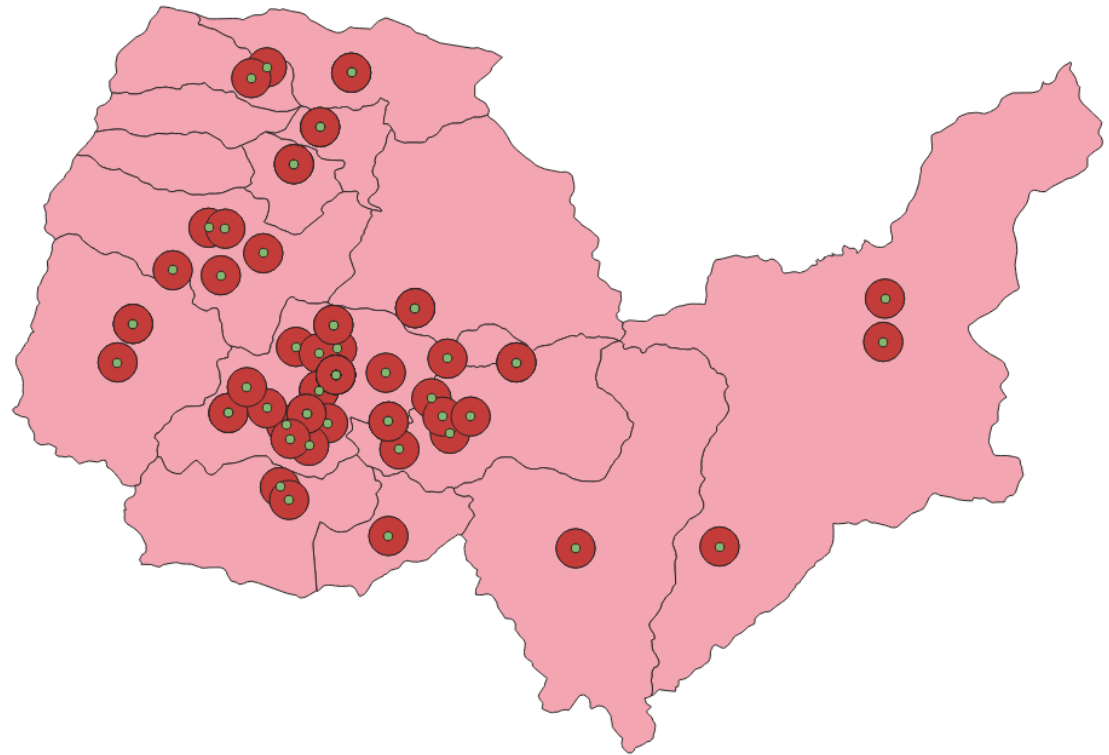
0%

Run as Batch Process... Run Close Help

Exploring geo-processing tools

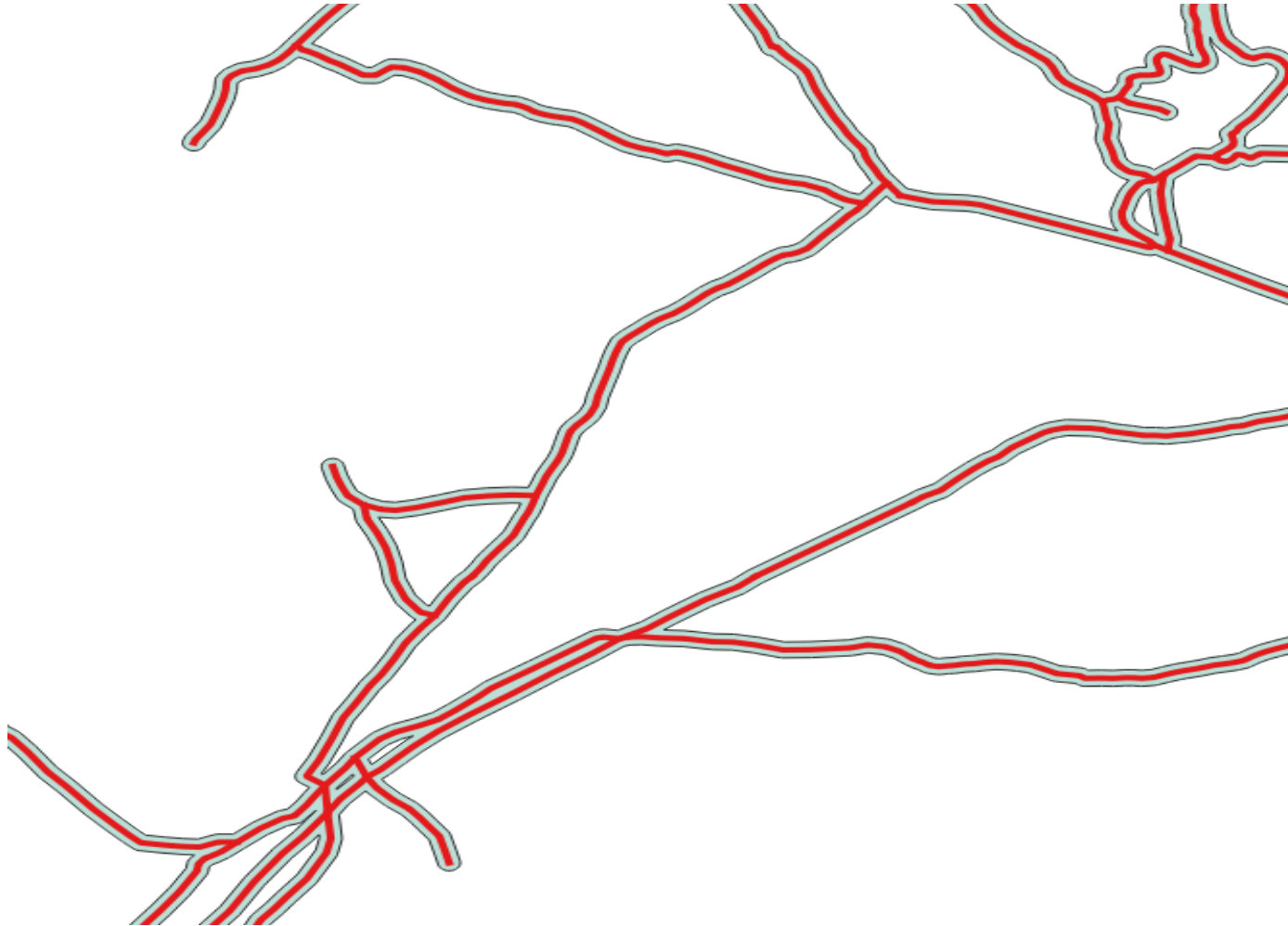
Buffer Tool

**Red boundary represents
Buffered points**



Exploring geo-processing tools

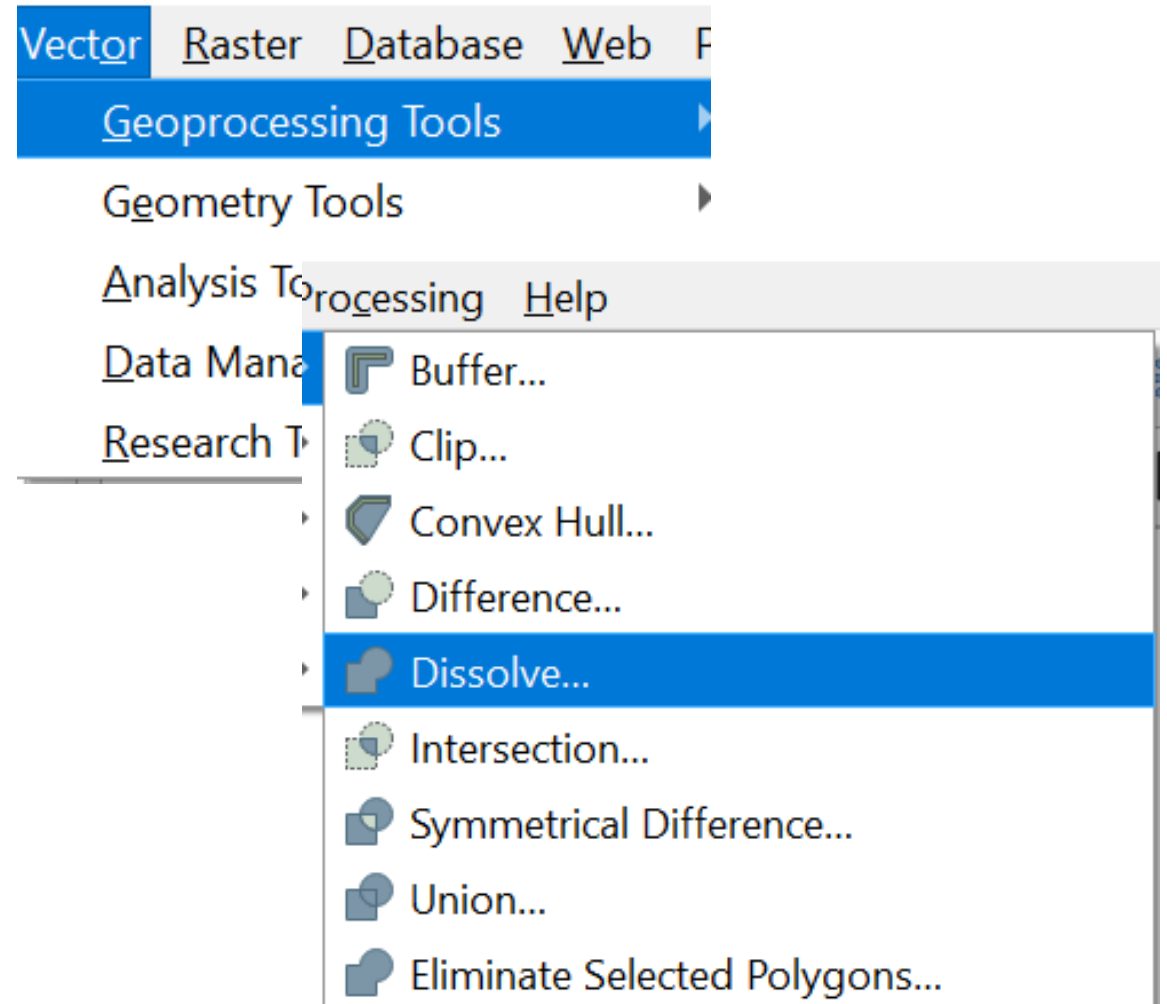
Buffer Tool



Exploring geo-processing tools

Dissolve Tool

- Click **Vector->geoprocessing tools -> Dissolve**
- Select the **Kabul_districts.shp** as input layer from the folder **Day 1 \Exercise 2**



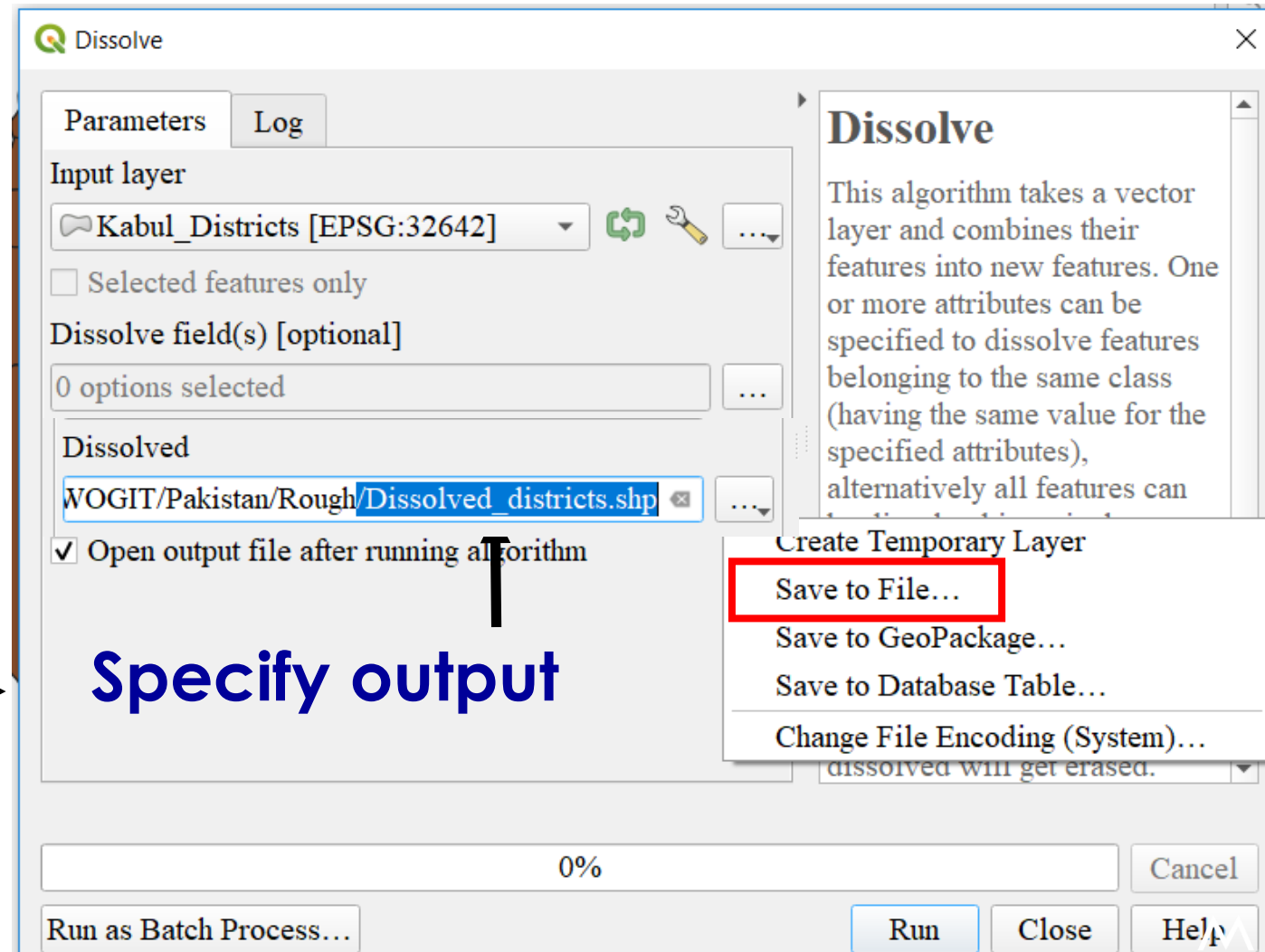
Exploring geo-processing tools

Dissolve Tool

Select input layer



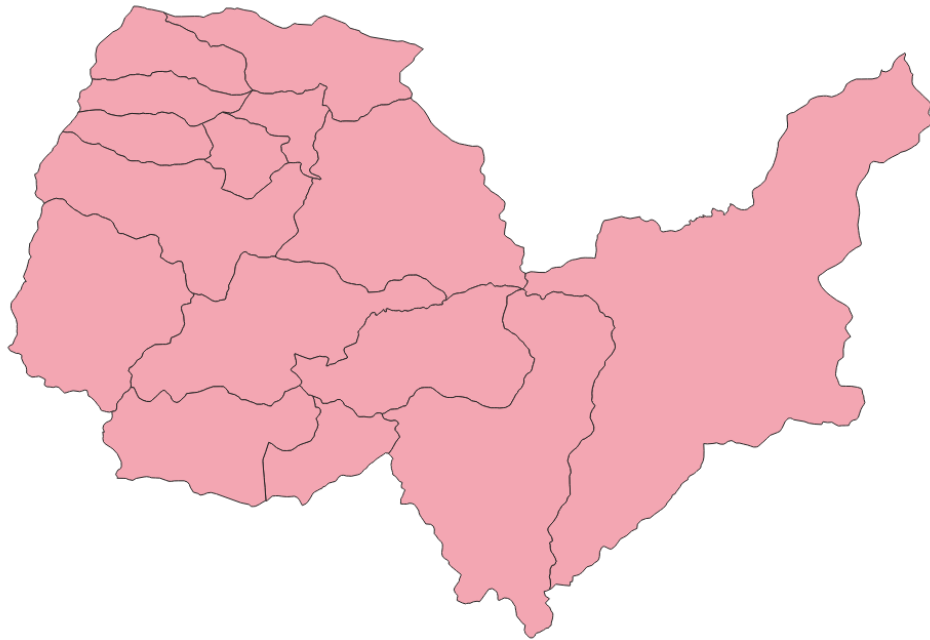
Select save to file
under Dissolved



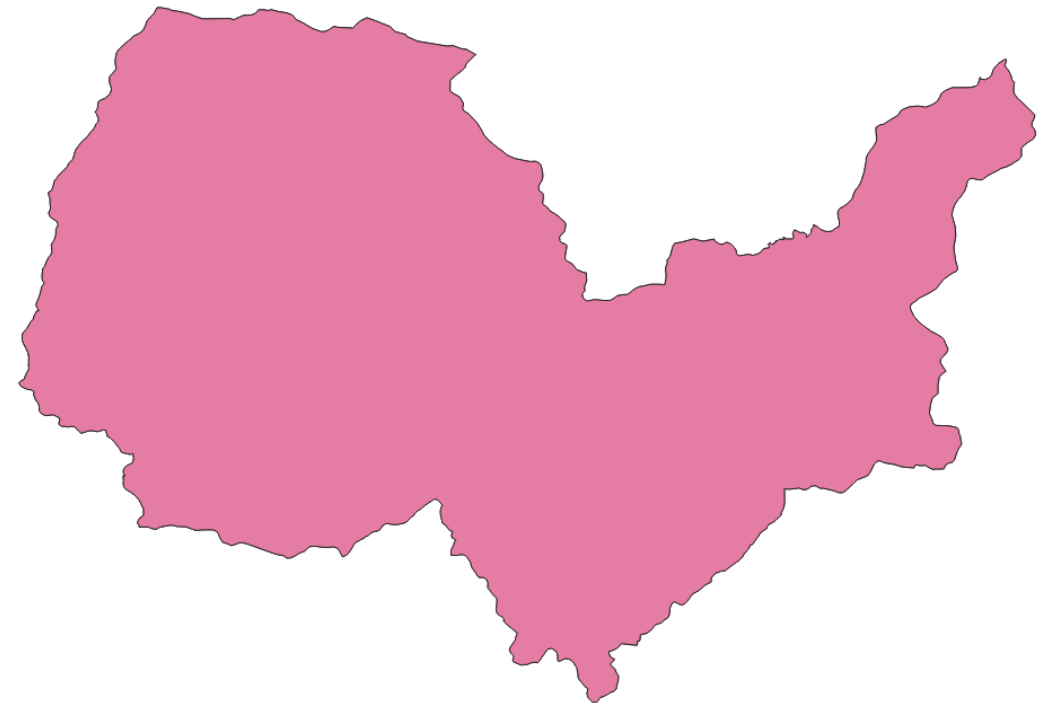
Exploring geo-processing tools

Dissolve Tool


Before

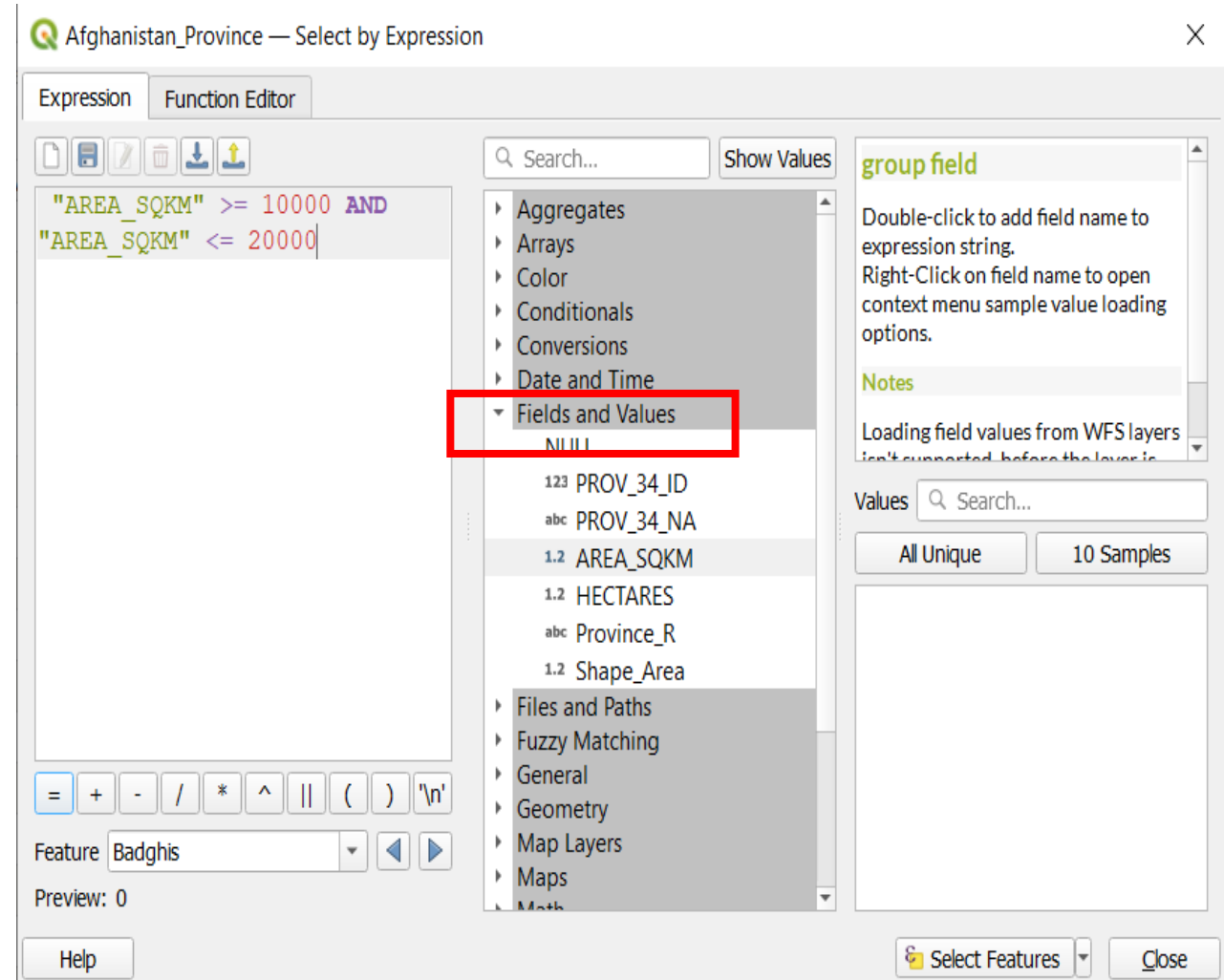


After

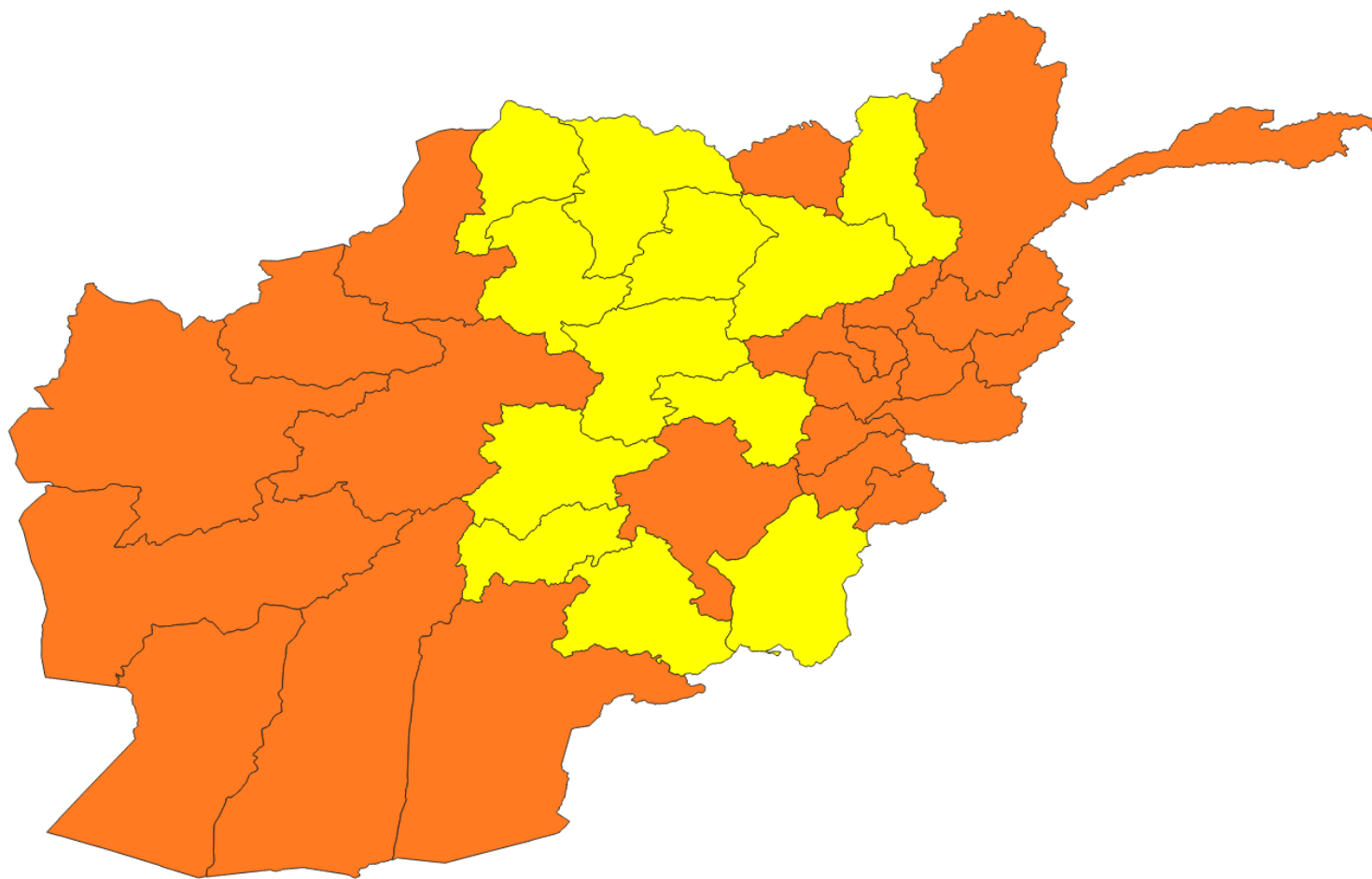


Select by expression (Query)

- Open the **Afghanistan_Population.shp** file from exercise 1
- Open attribute table and click on icon 
- Select **Fields and Values**
- Write an expression as shown below:
"Area_SqKM" >= 10000 AND
"Area_SqKm" <= 20000



Select by expression (Query)





Thank you

Let's protect
the pulse.