Rectifying an image and digitizing feature data

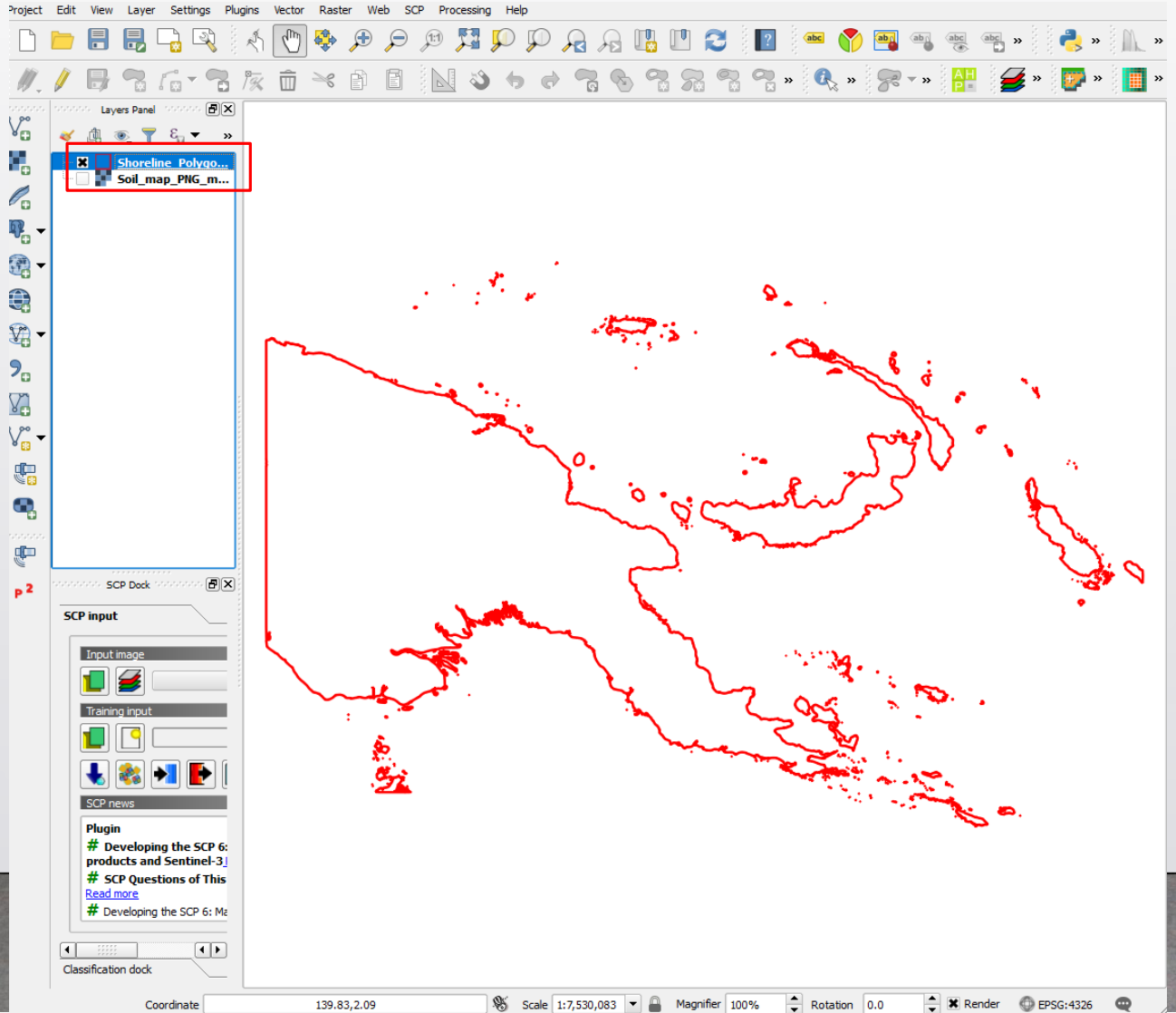
Data Needed:

- Shoreline (Shoreline_Polygon_GCS.shp)
- Soil map (Soil_Map_PNG.tif)

Plugin Needed:

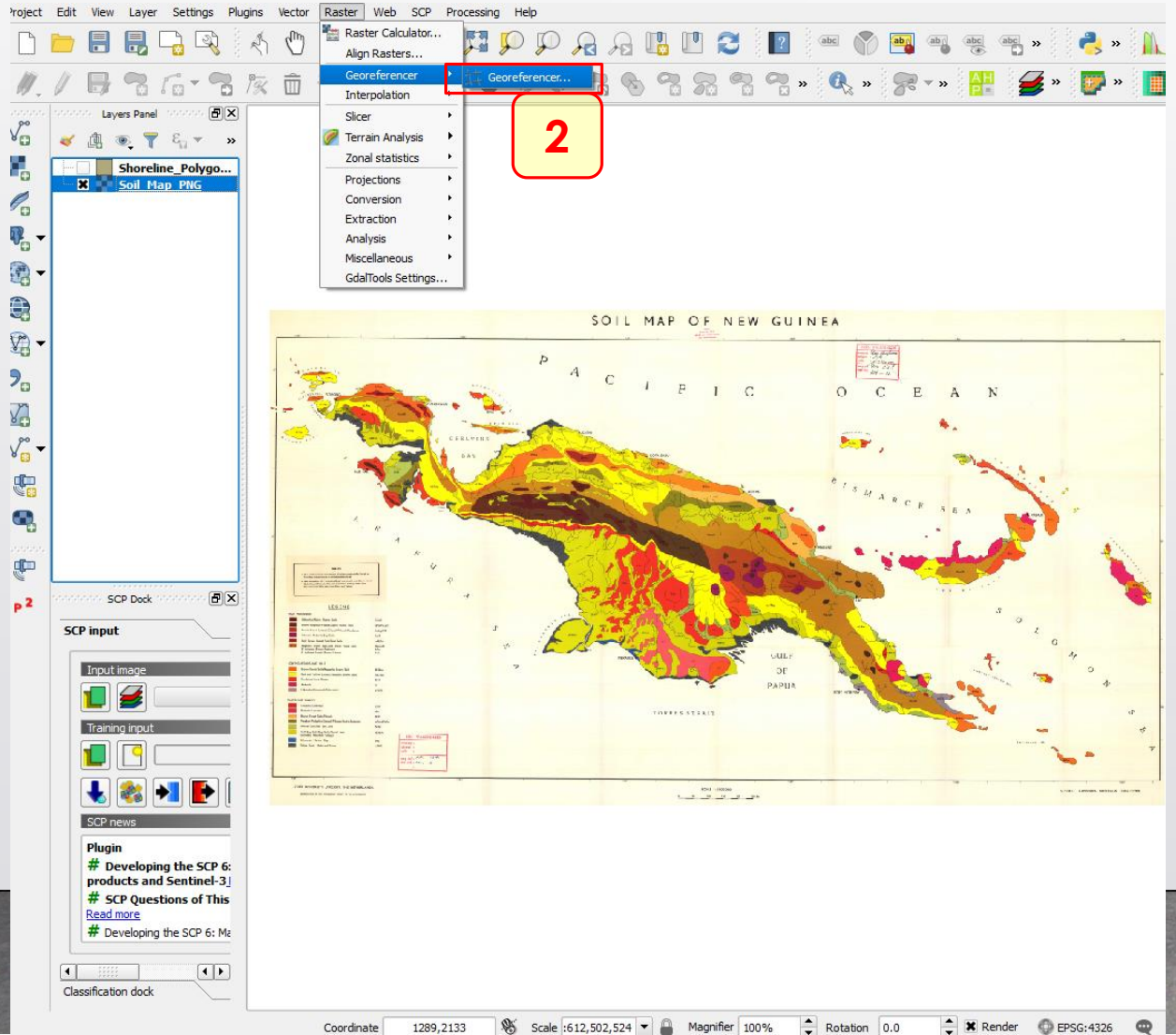
- Points2One
- Digitizing Tools

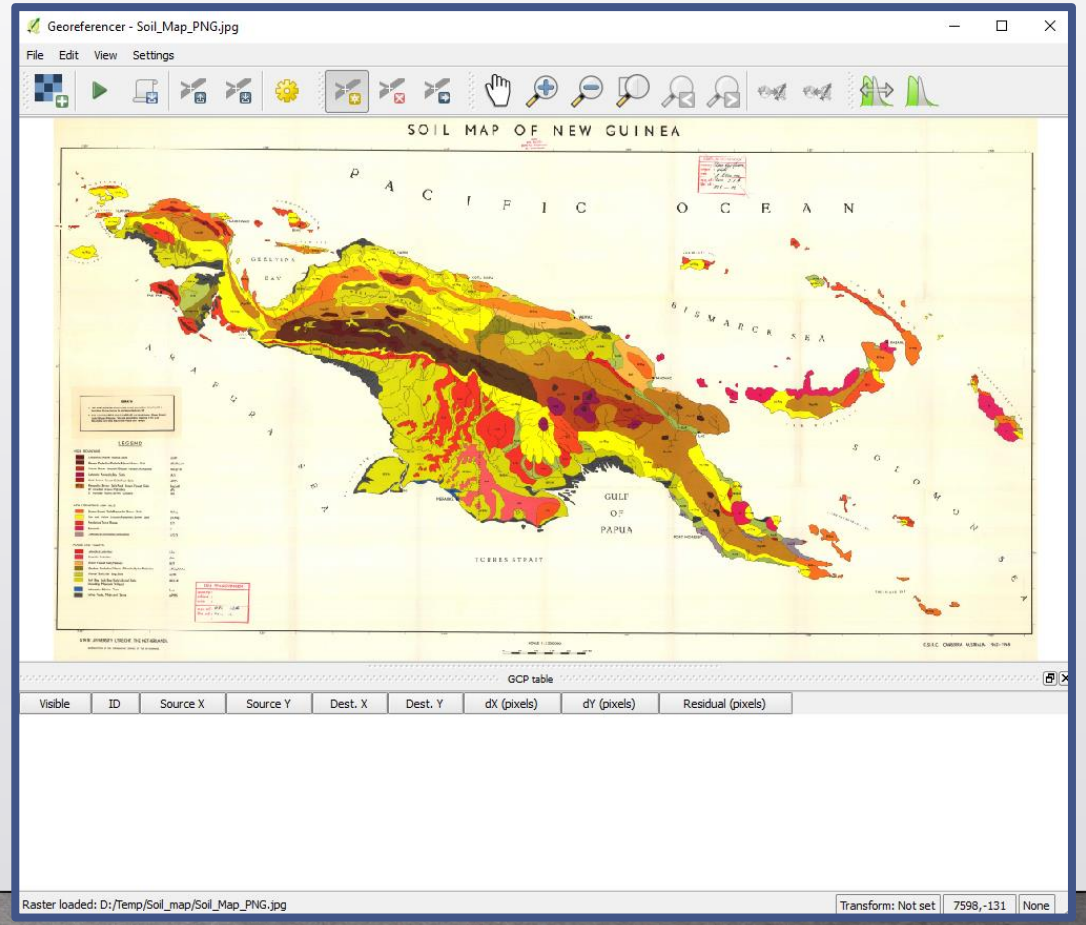
1. Load all layers



Georeferencing a raster layer

2. Select Georeferencer under Raster menu



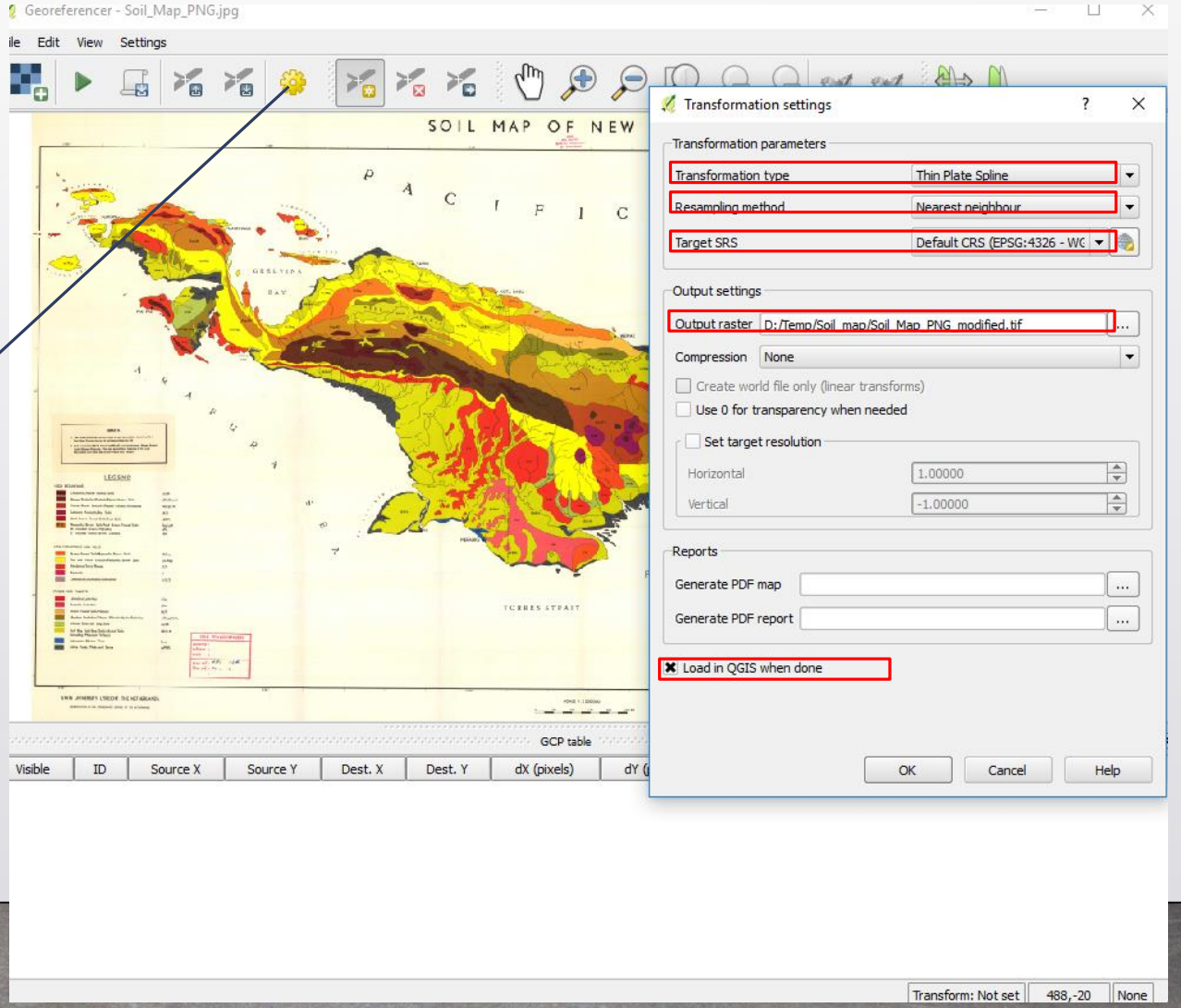


Georeferencing a raster layer

3. Select Georeferencer under Raster menu

Select Transformation Settings icon to setup parameters

Note: Use coordinate system of the layer you are using to reference the raster image, in this case, the shoreline data, which is based on EPSG 4326



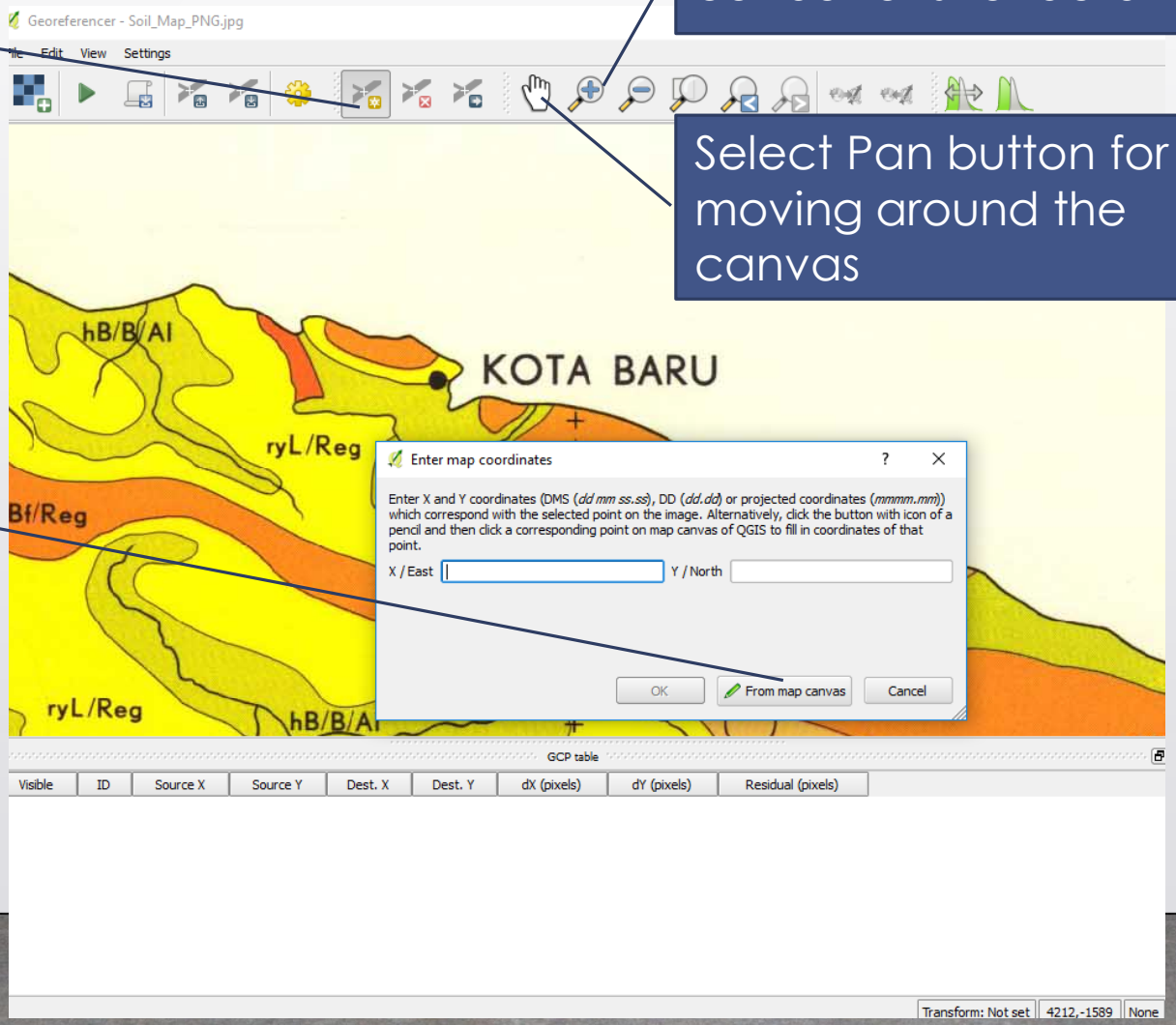
Georeferencing a raster layer

4. Select Add Point icon to start adding GCPs based on the coordinate system of the shoreline layer (EPSG 4326)

5. Select a GCP on the raster layer: If location is known, input coordinates in the x and y field; otherwise, select From map canvas to match location on the shoreline layer

Select Zoom in and Zoom out buttons for detail

Select Pan button for moving around the canvas

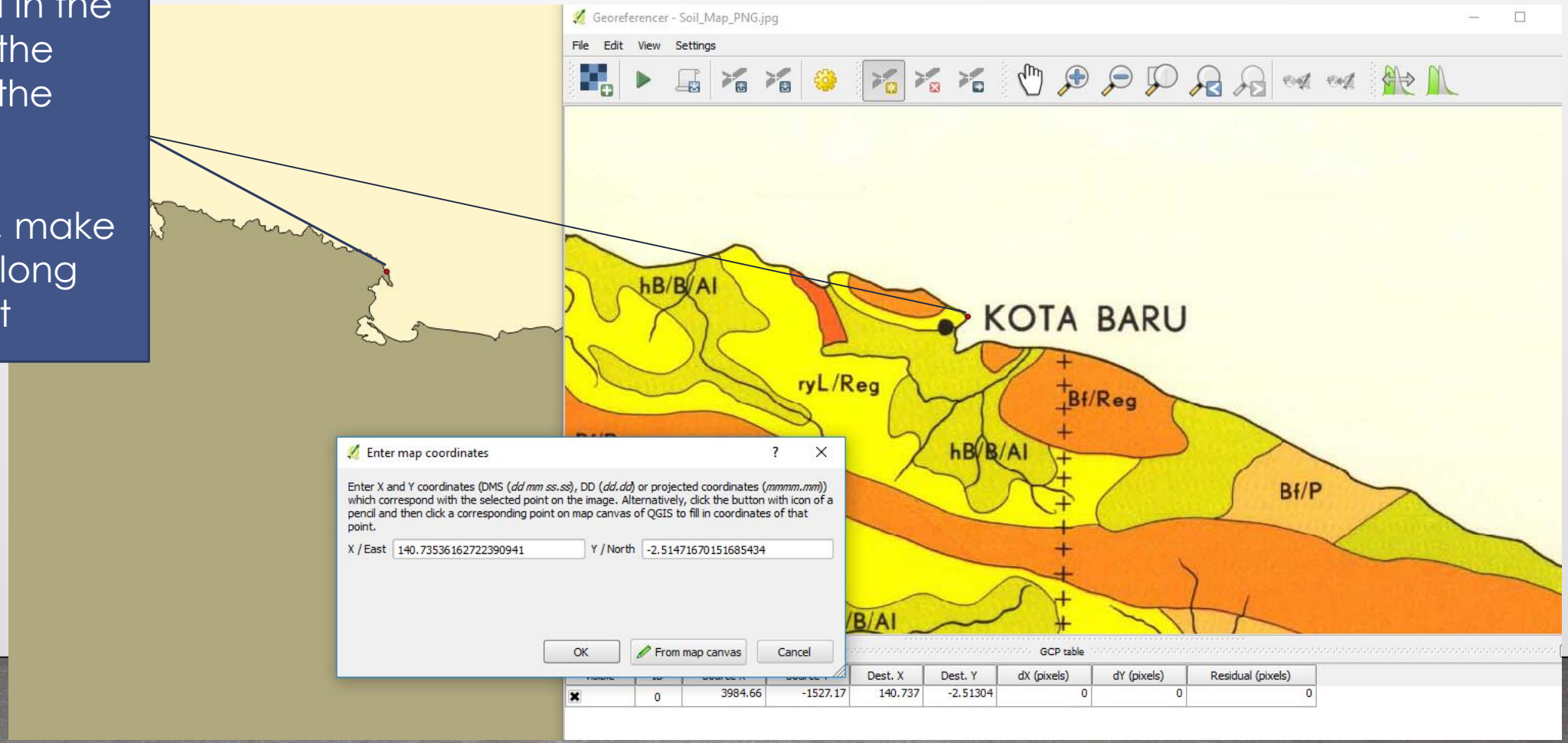


*GCP – ground control point

Georeferencing a raster layer

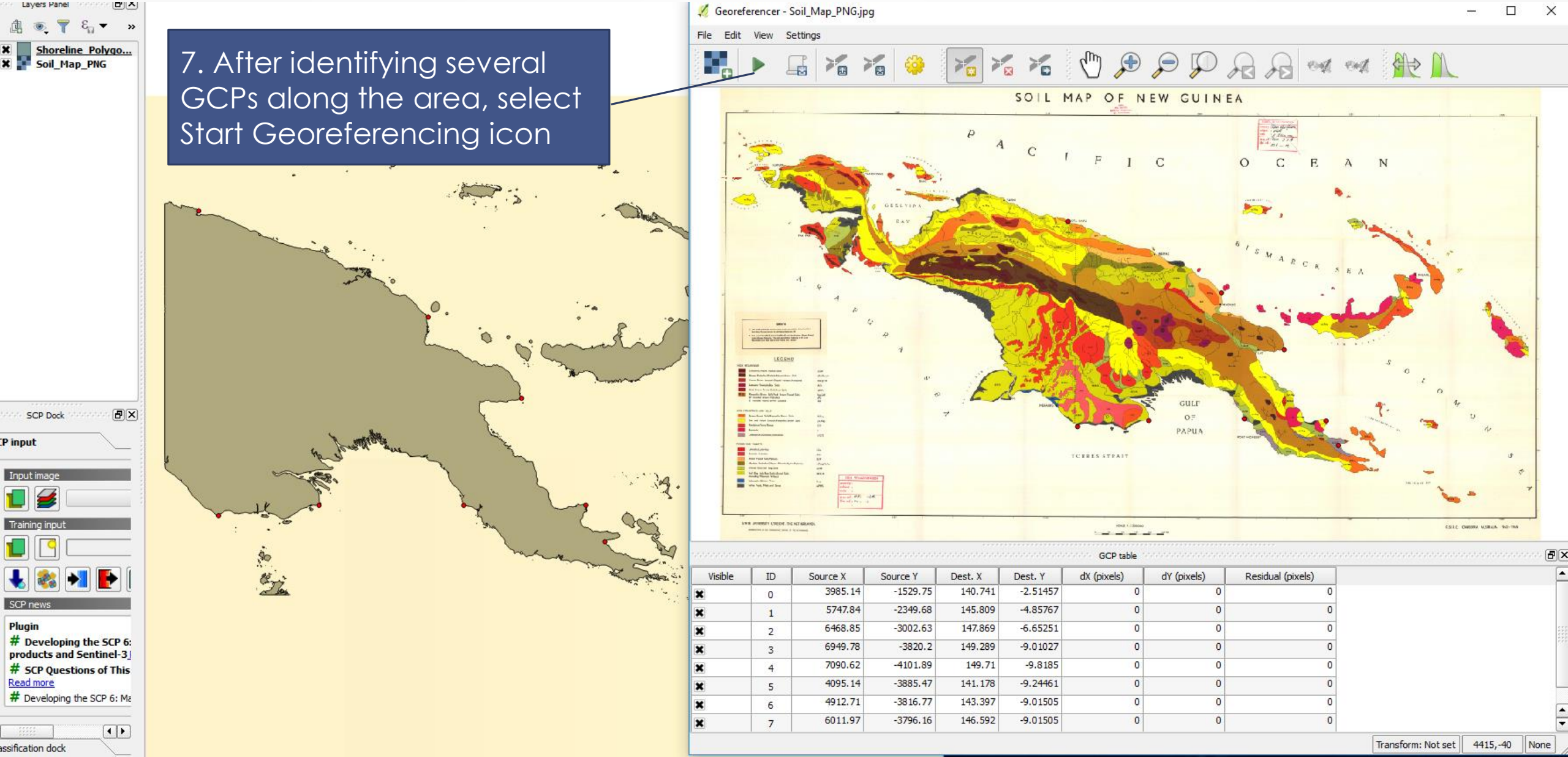
6. Match the location of the GCP identified in the the raster data to the same location on the shoreline data

Do for more GCPs, make sure to distribute along the area of interest

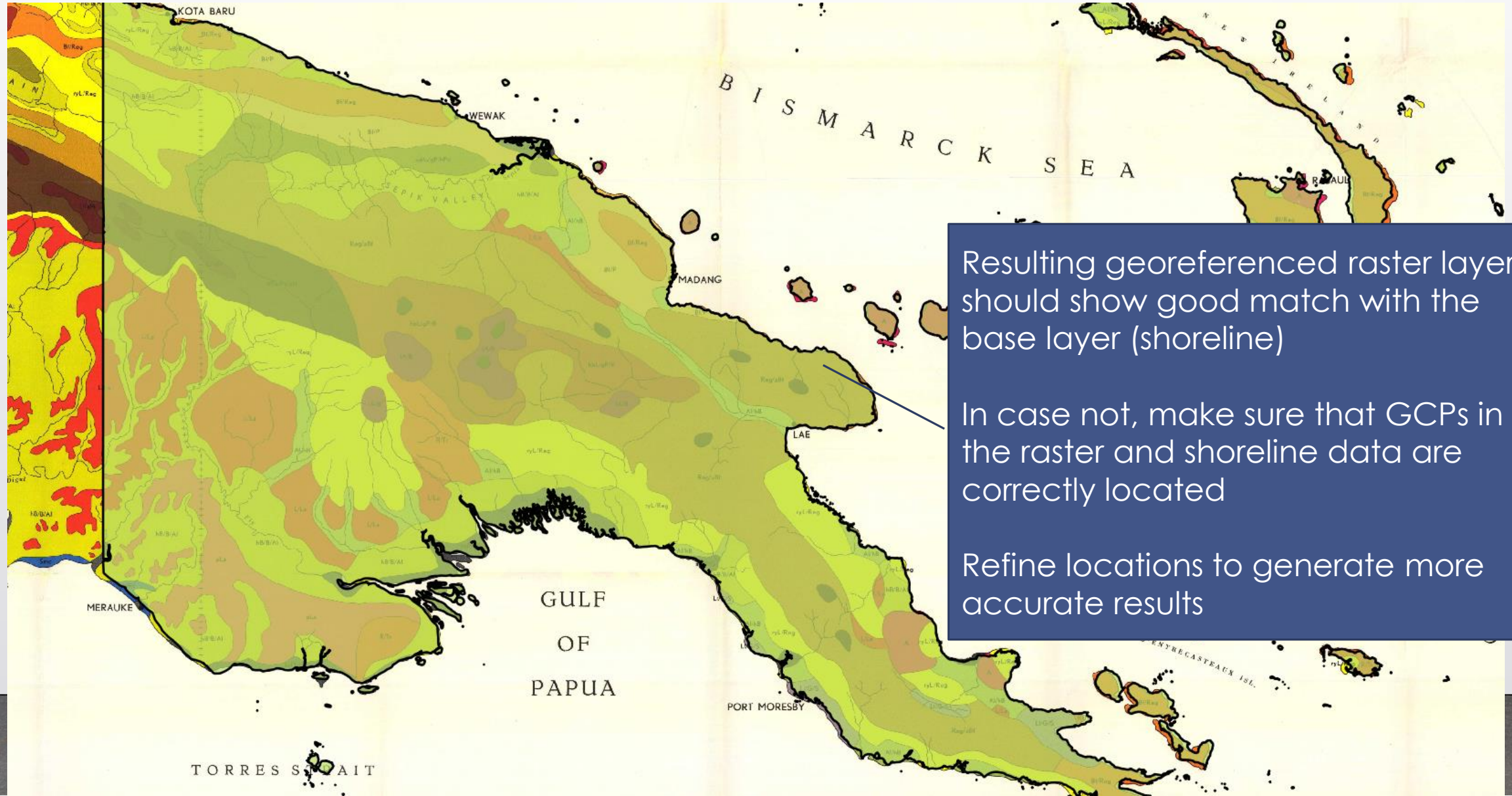


Georeferencing a raster layer

7. After identifying several GCPs along the area, select Start Georeferencing icon



Georeferencing a raster layer



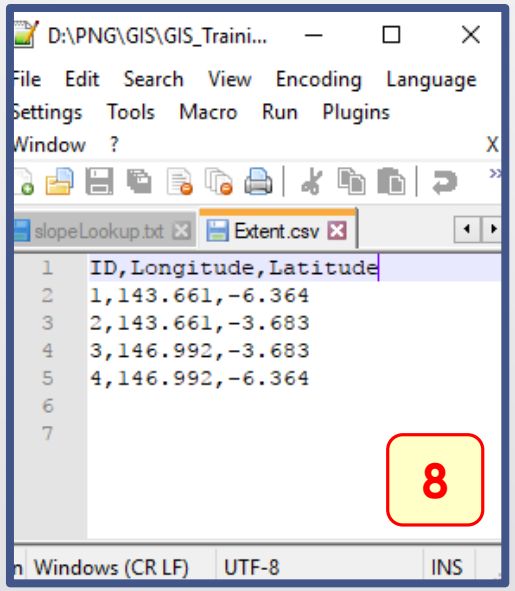
Resulting georeferenced raster layer should show good match with the base layer (shoreline)

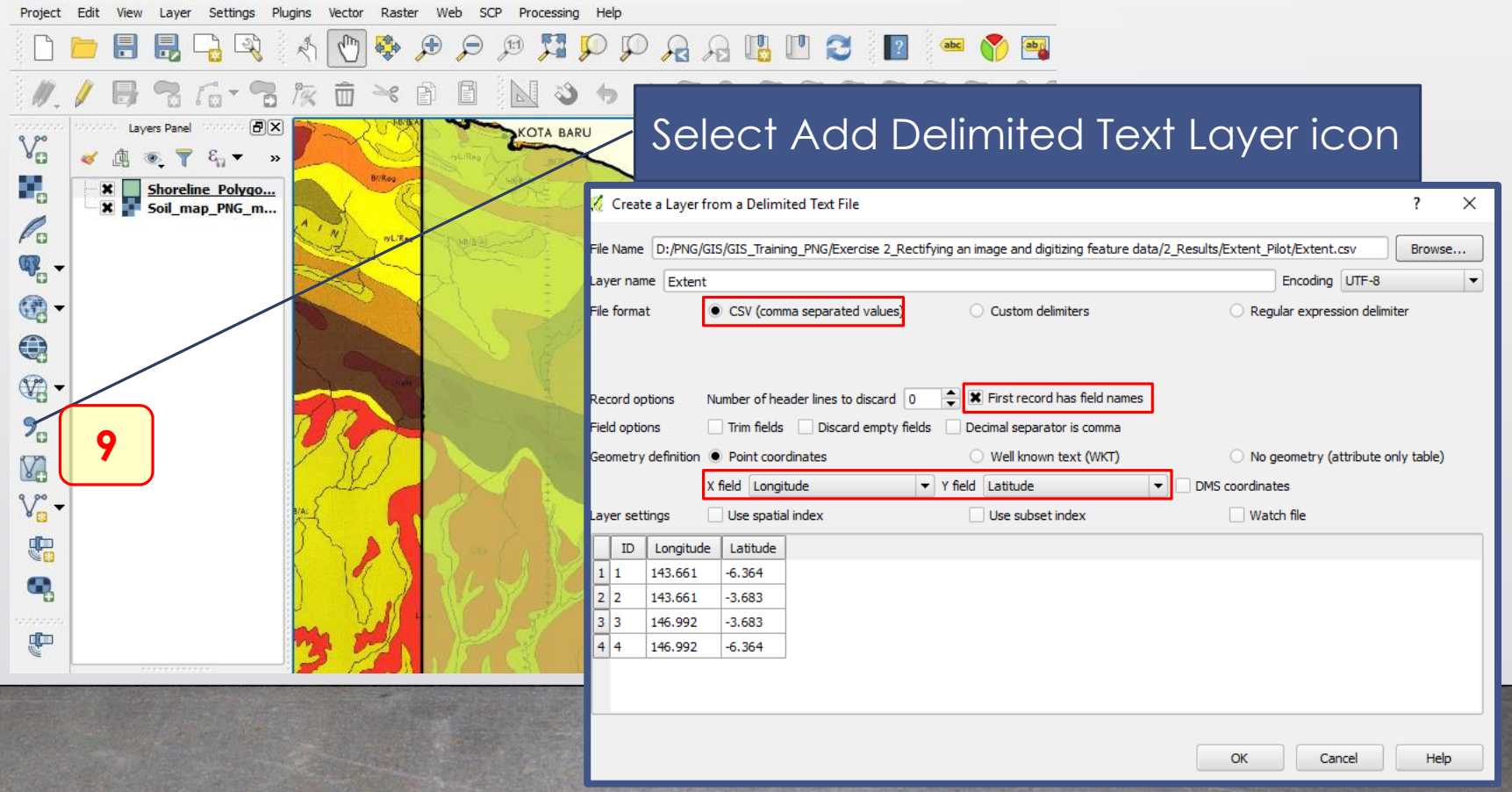
In case not, make sure that GCPs in the raster and shoreline data are correctly located

Refine locations to generate more accurate results

Importing a table data

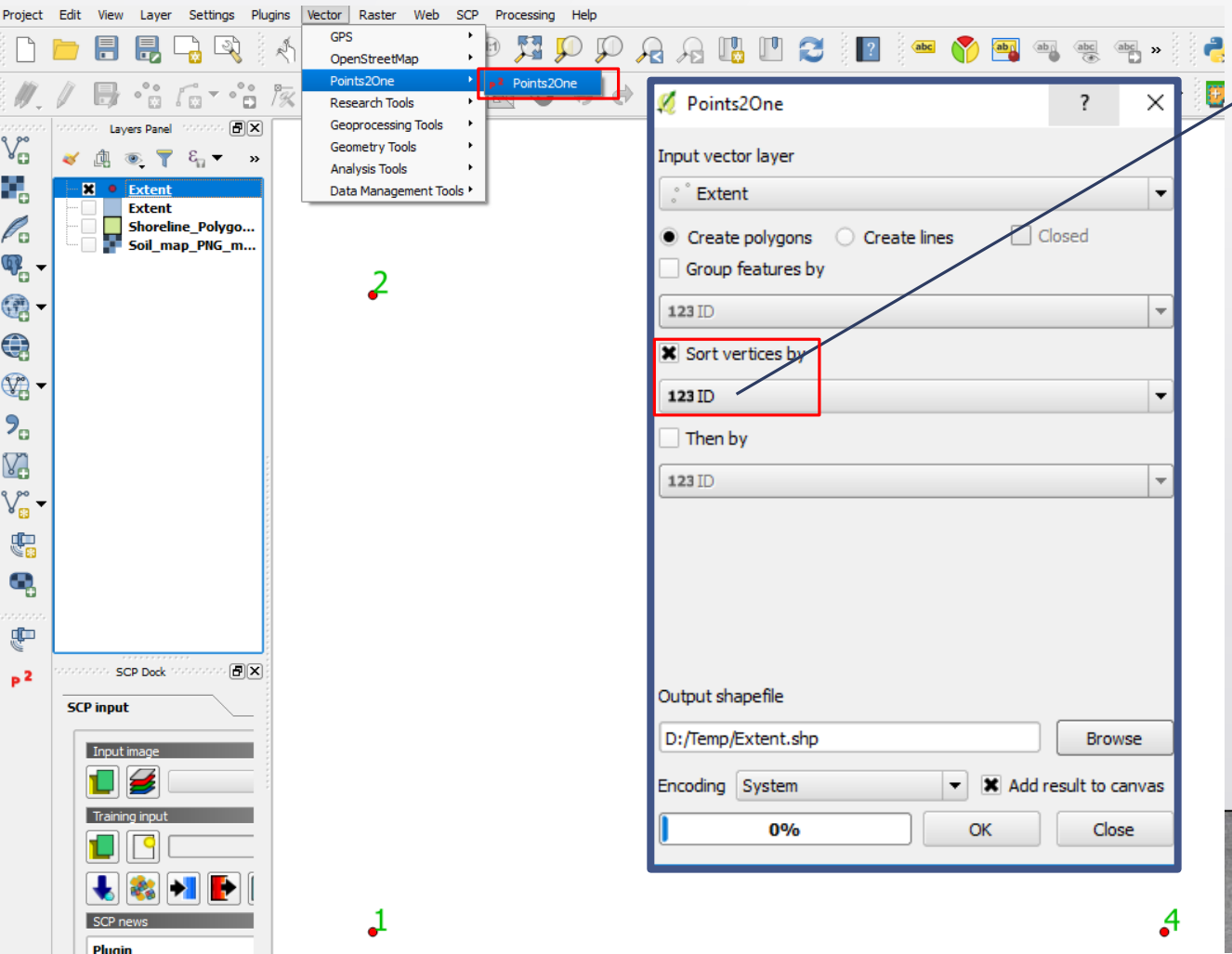
8. Prepare extent in notepad
9. Import table (csv) data





Converting point data to polygon data

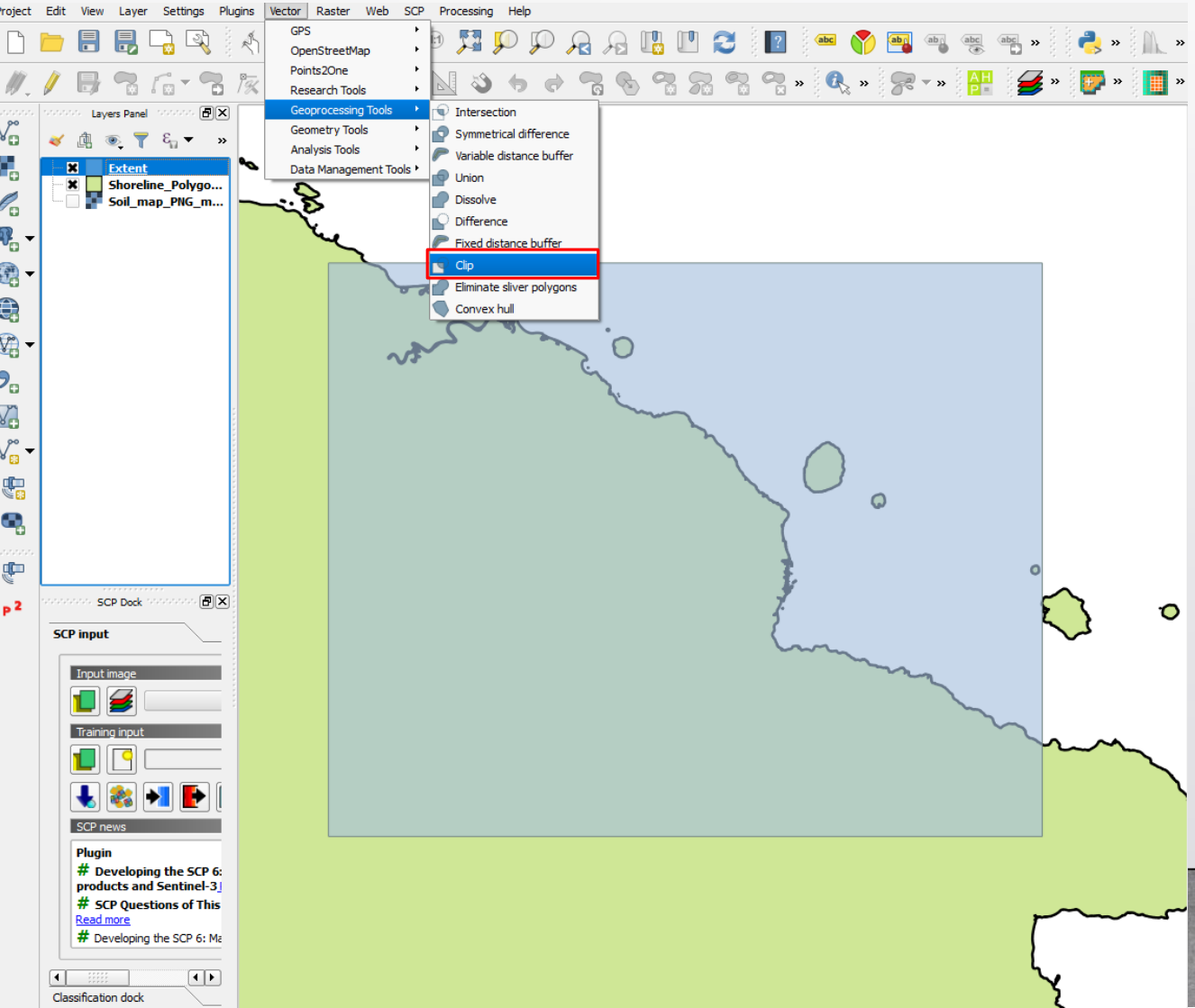
10. Select Points2One under the Vector menu and set parameters

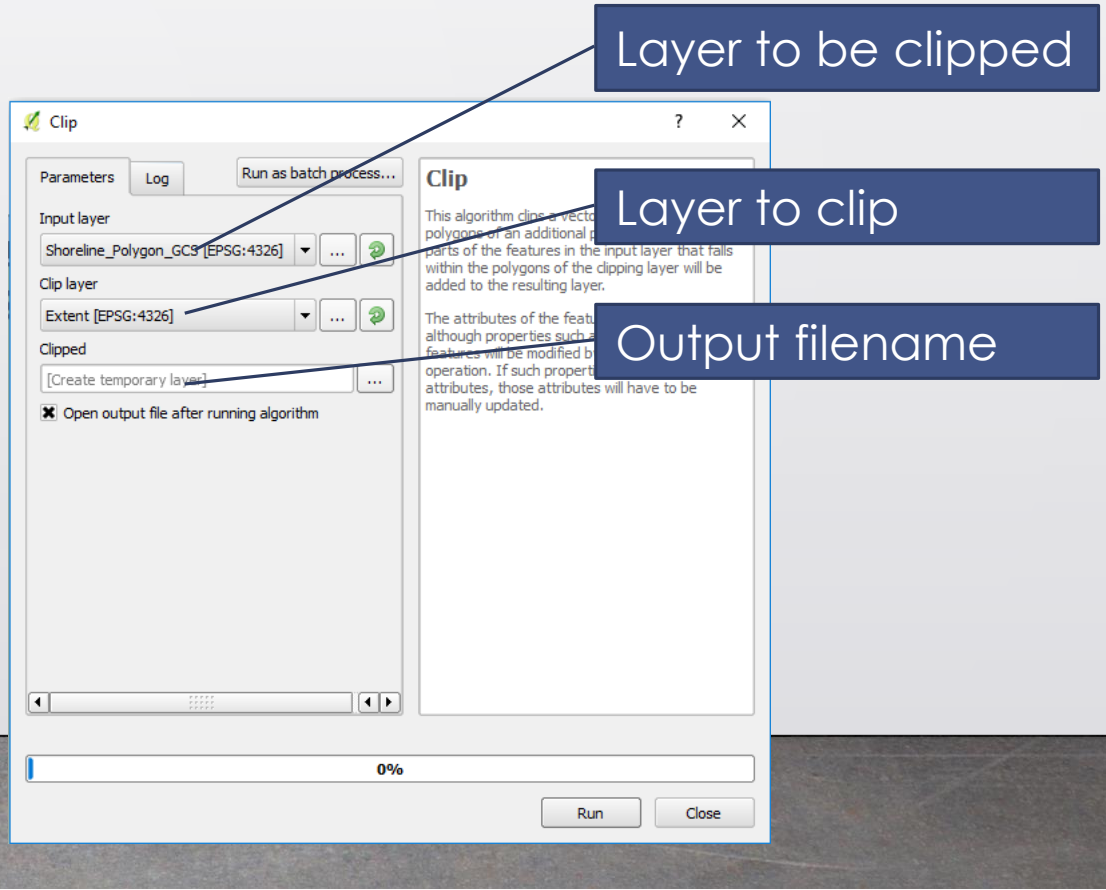


Make sure that points are arranged in chronological order in notepad

Clipping vector data

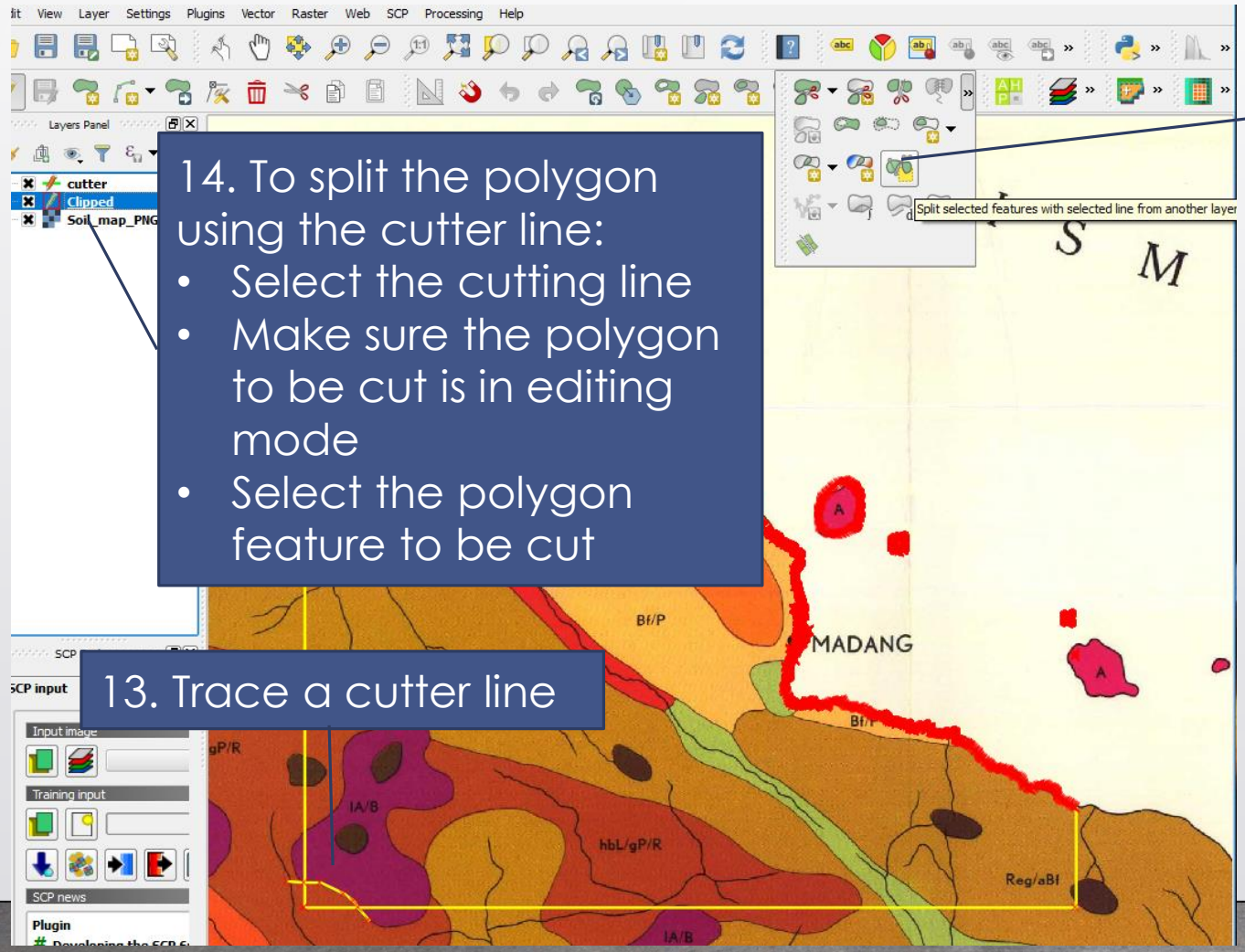
11. Select Clip under the Vector menu/Geoprocessing tools





Splitting polygon layer with line layer

12. Create a cutter shapefile to split the polygon

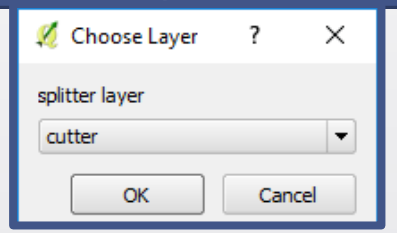


14. To split the polygon using the cutter line:

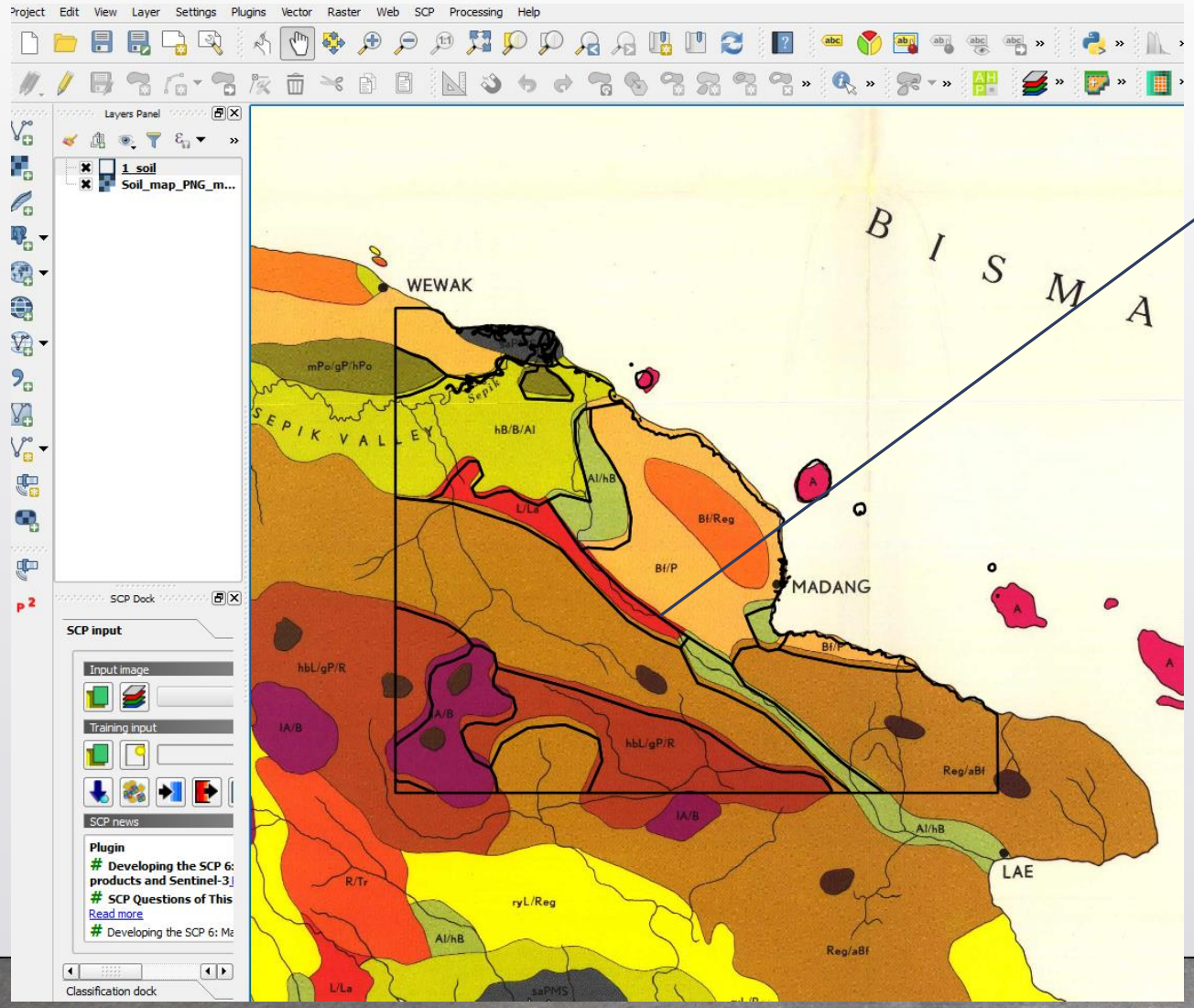
- Select the cutting line
- Make sure the polygon to be cut is in editing mode
- Select the polygon feature to be cut

13. Trace a cutter line

15. Select Split polygon layer with line layer icon, choose the Cutter layer as spiltter layer

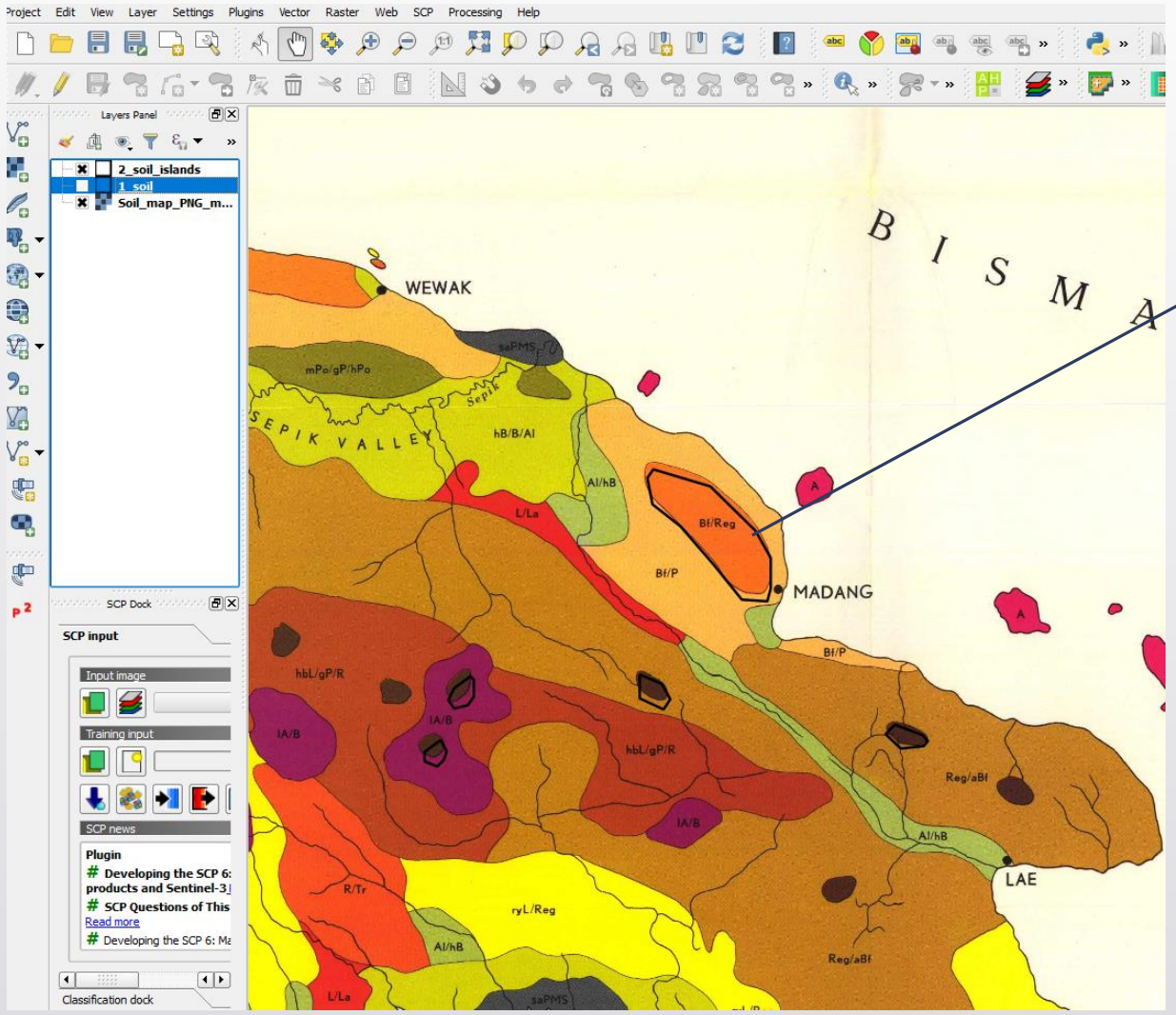


Splitting polygon layer with line layer



16. Do for all boundaries; final layer should look like this

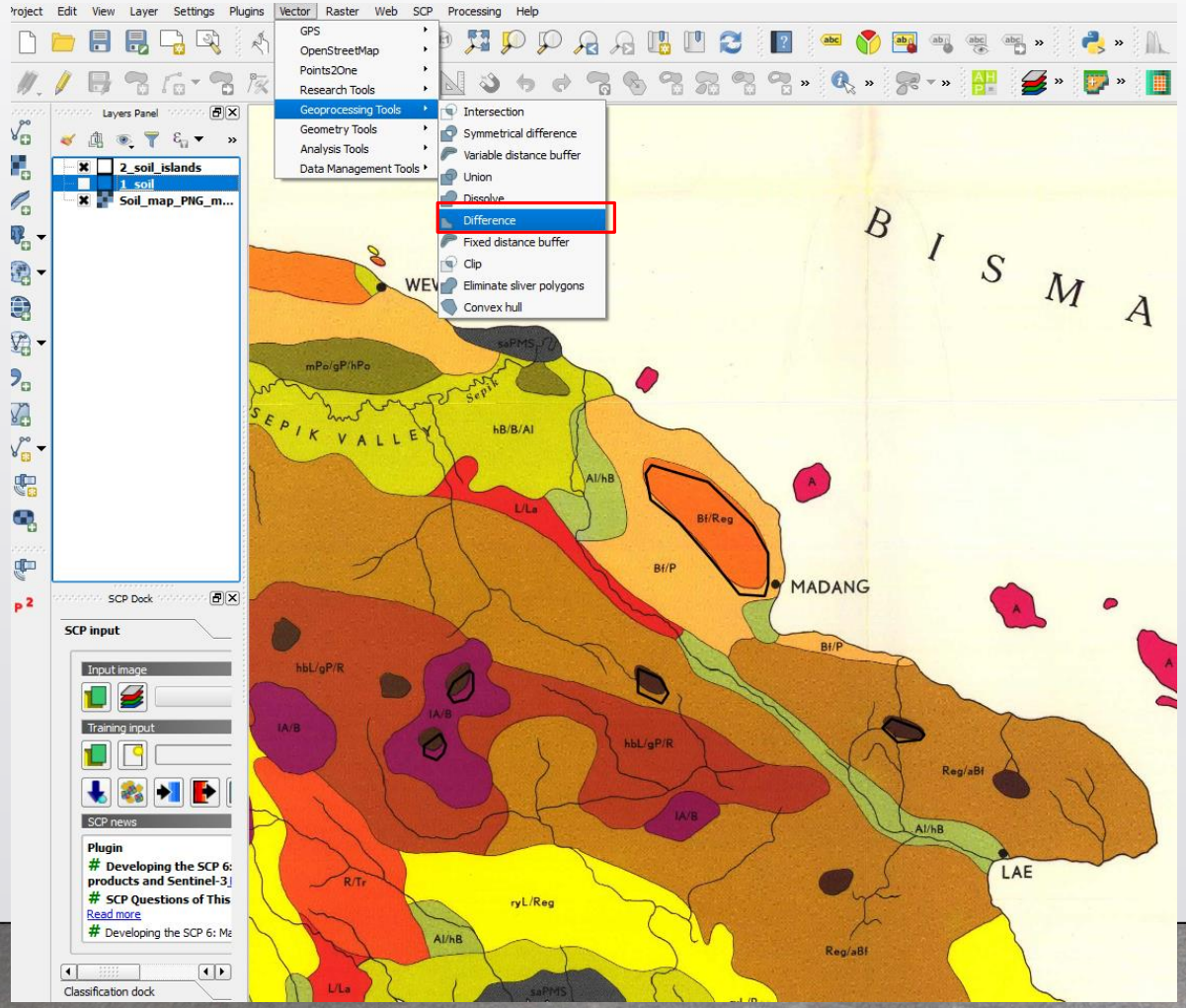
Digitizing island features

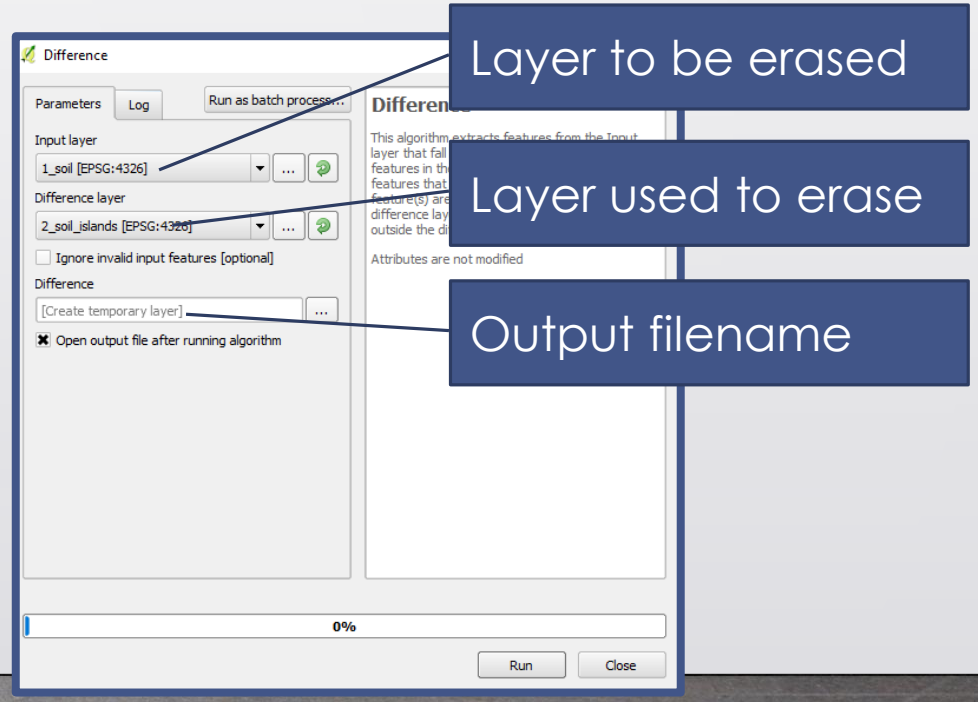


17. Create a new polygon shapefile and trace all island features

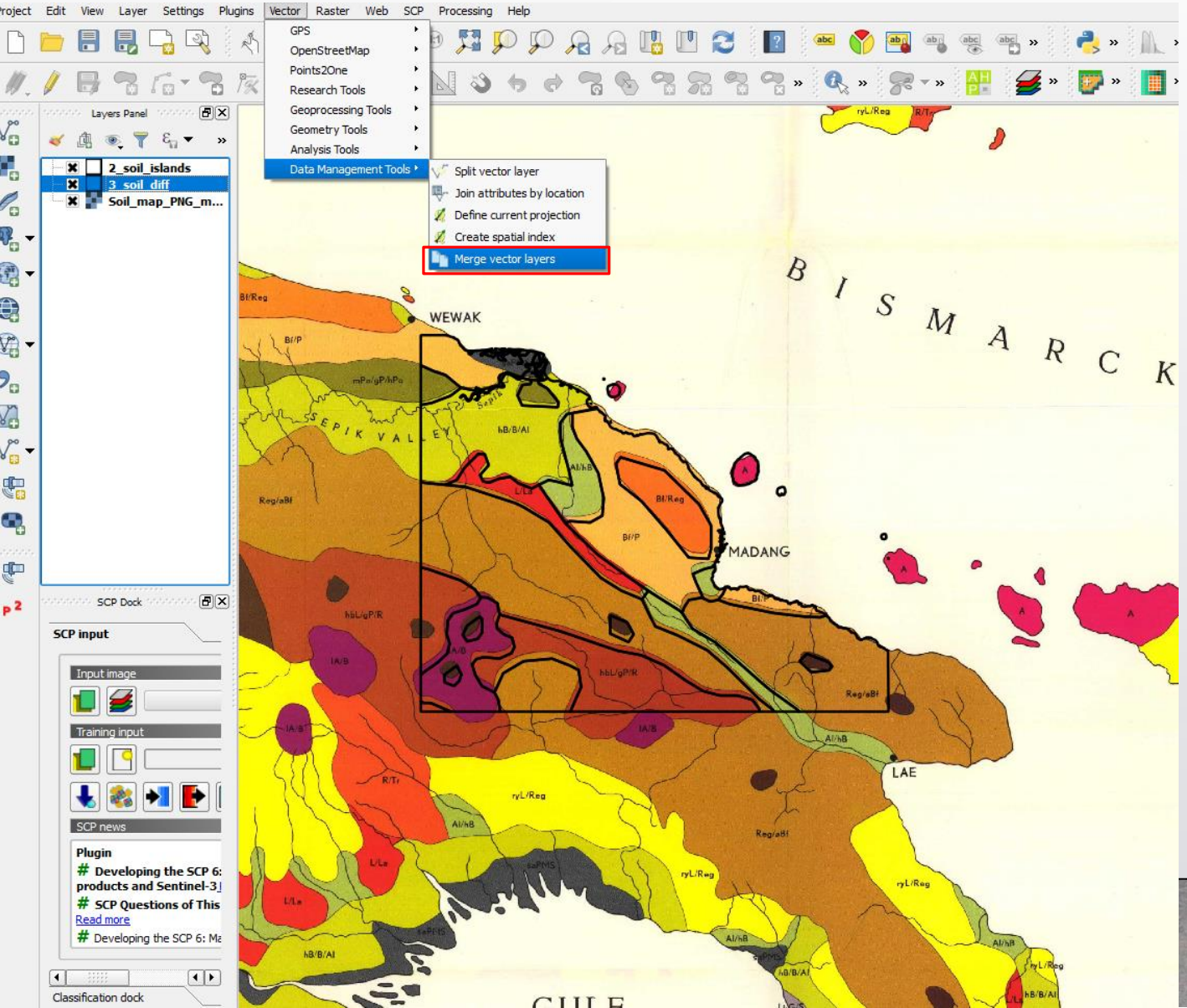
Erasing island features in the main polygon layer

18. Select Difference under Vector menu/Geoprocessing tools

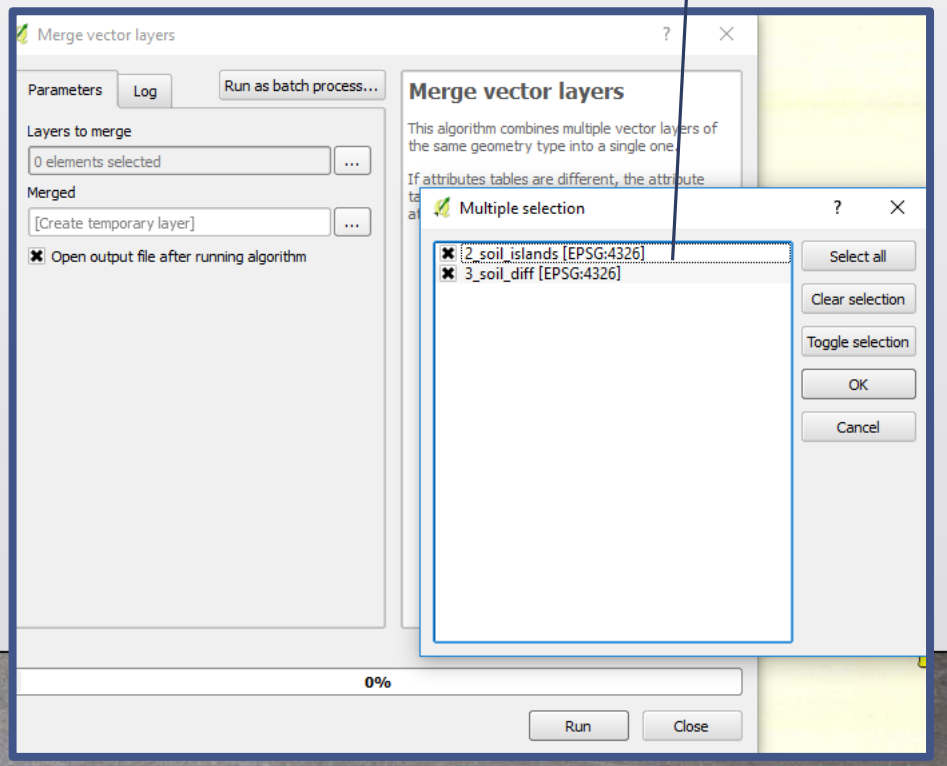




Merging island features with the main polygon layer



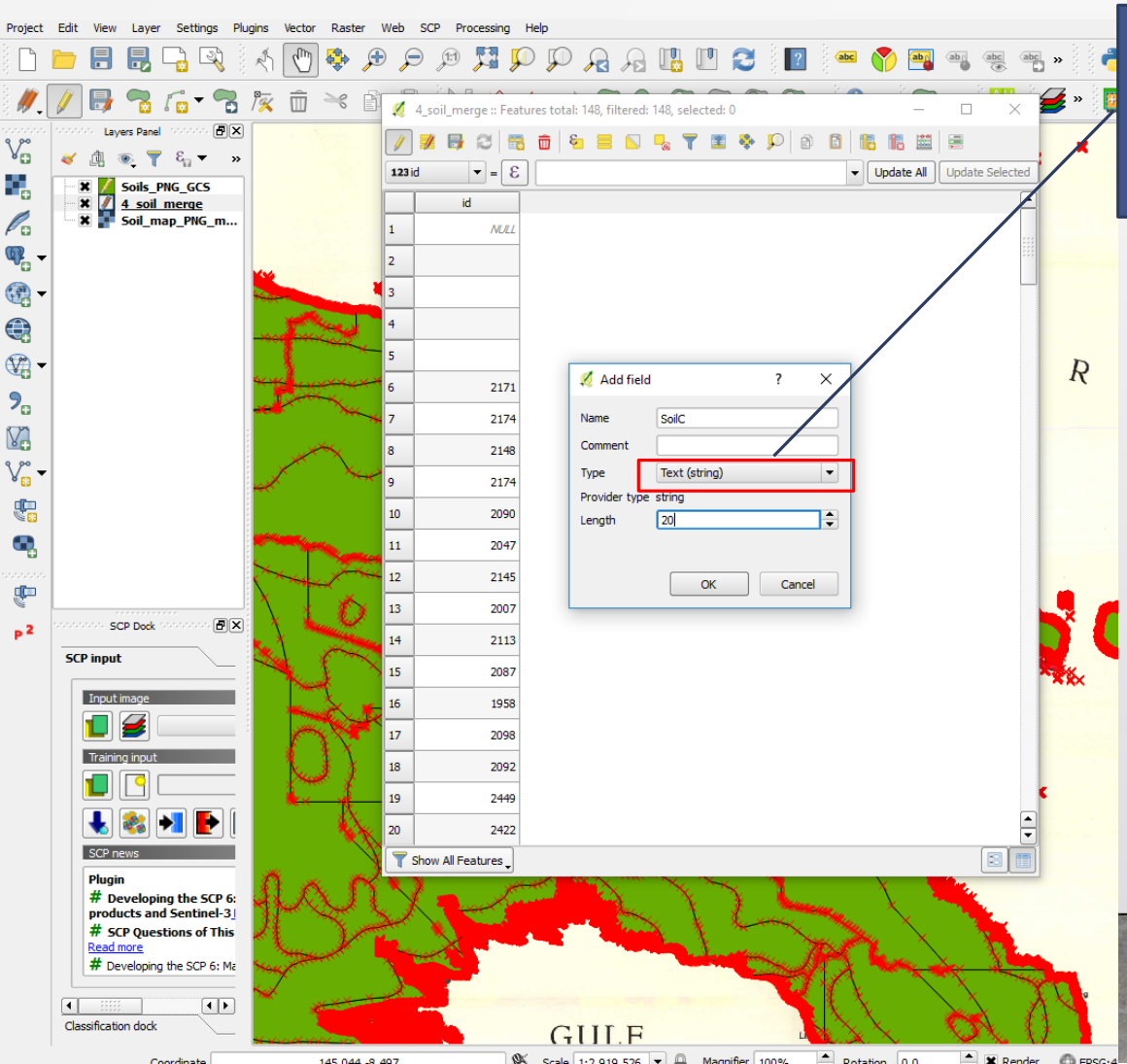
Select all layers to merge

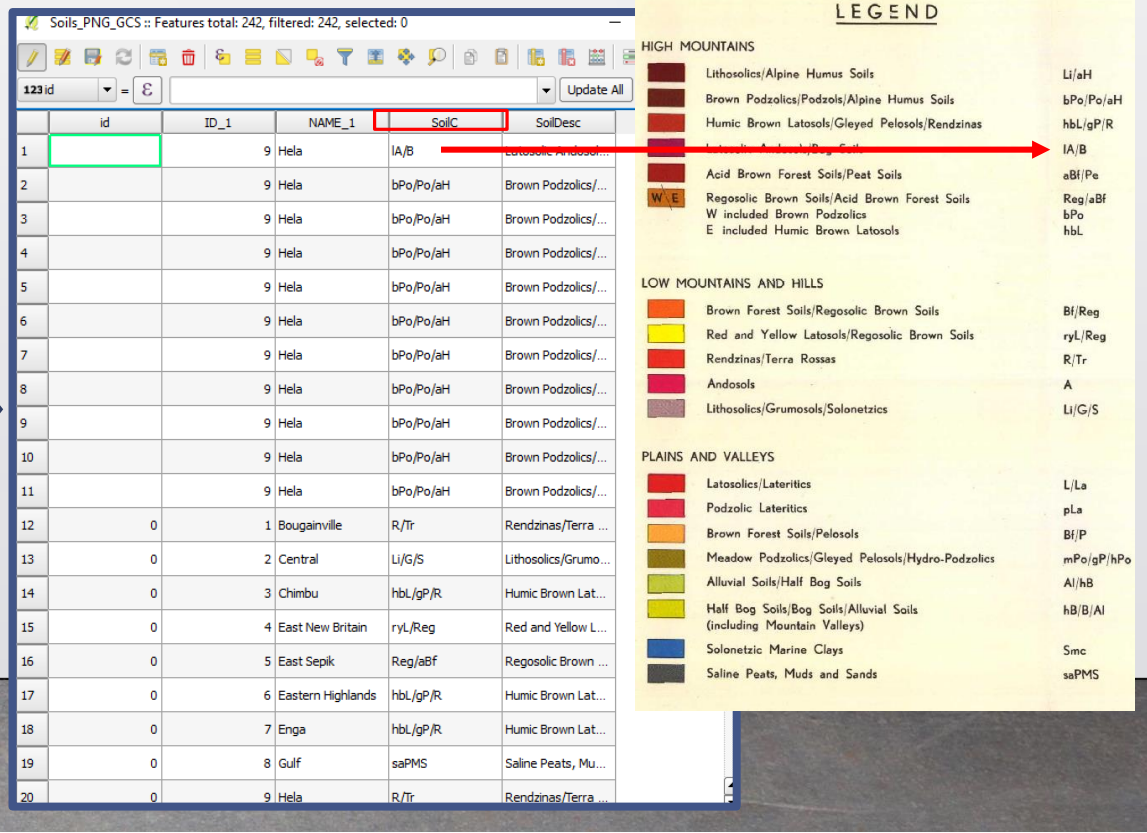


Updating soil attributes

19. Select New Field to create a new attribute column

When adding/creating attribute column, depending on the content, the user can choose either string (text) or integer (number)





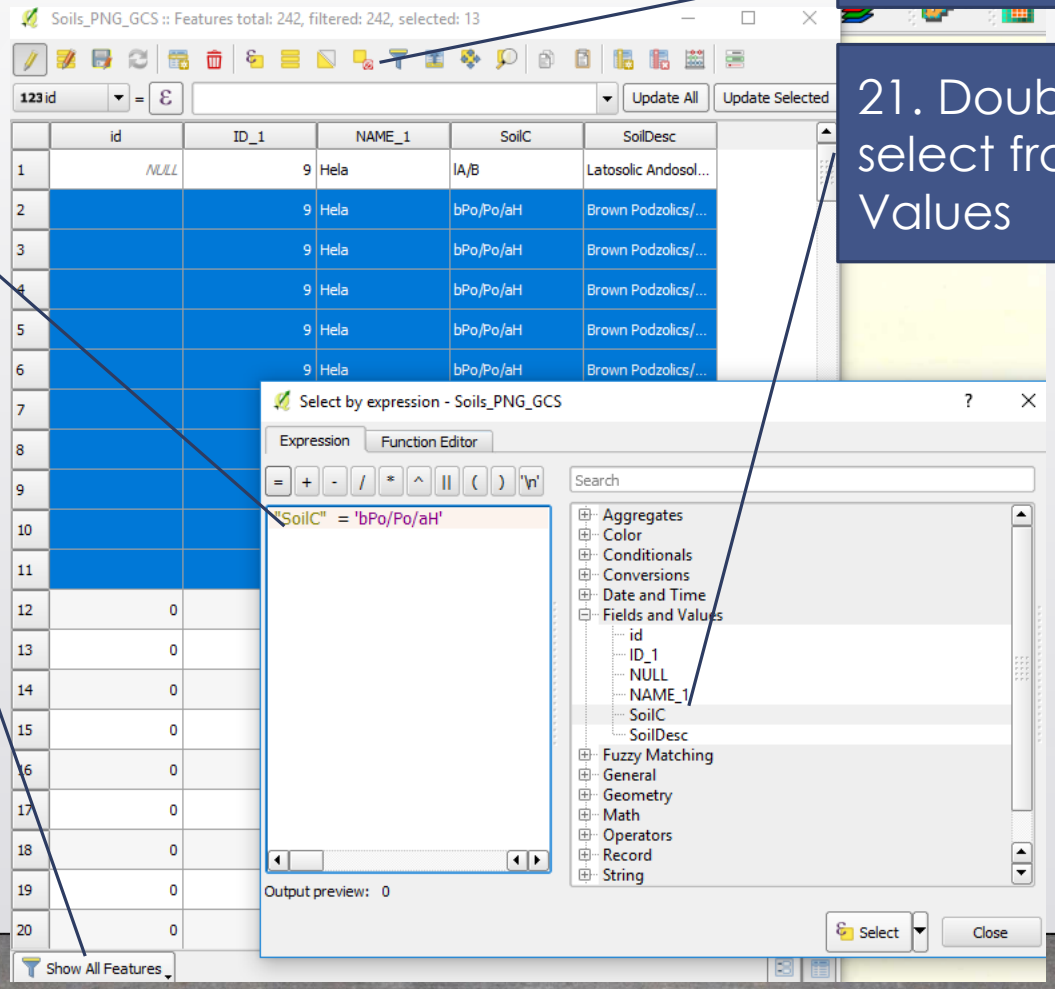
Batch selecting features

20. Select Select by expression icon

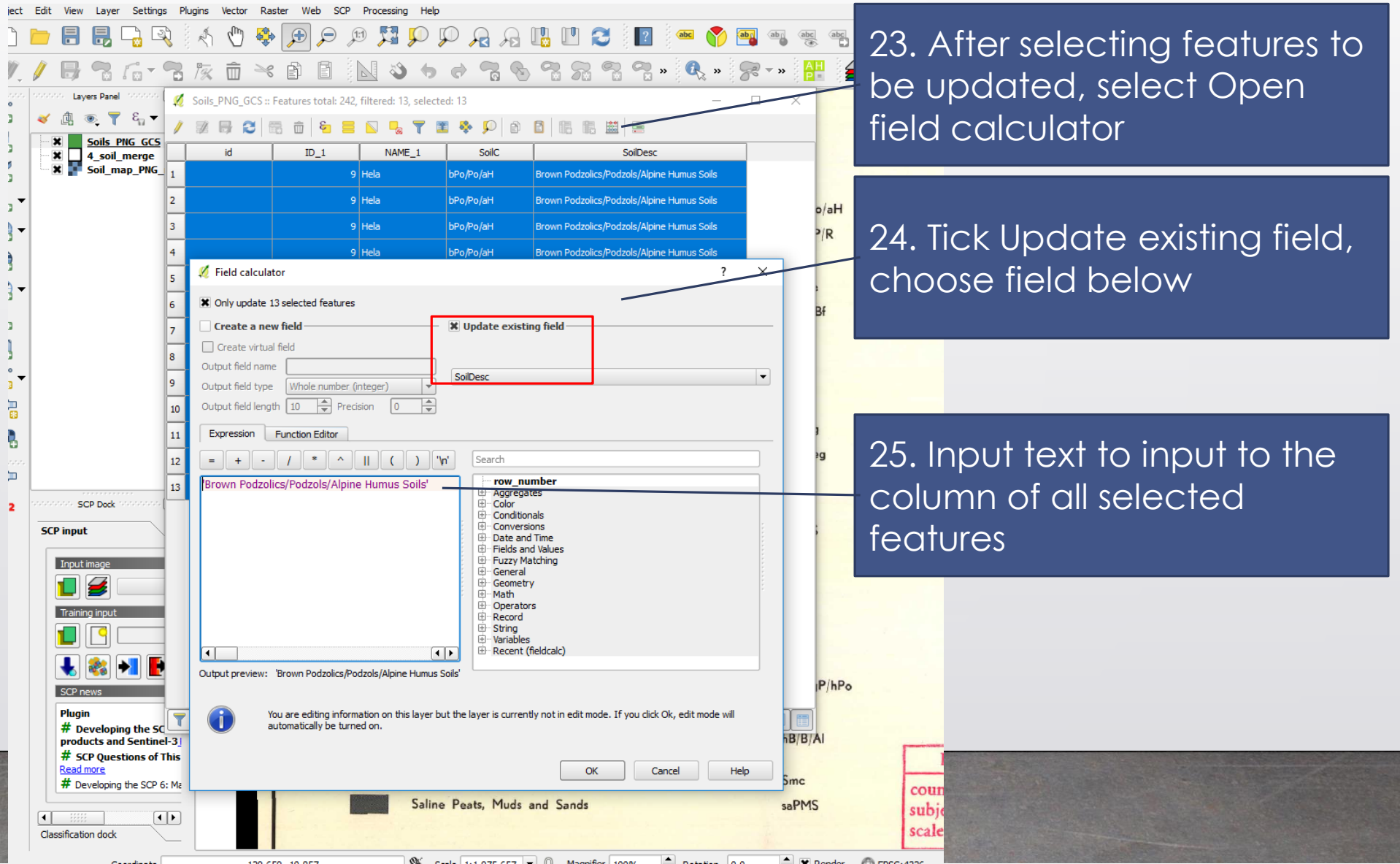
21. Double click on attribute to select from – under Fields and Values

22. Input equation in the box → particular attribute to be selected should be enclosed in quotes (to signify a text attribute)

22. Select Selected Features to display only selected features



Batch updating features



23. After selecting features to be updated, select Open field calculator

24. Tick Update existing field, choose field below

25. Input text to input to the column of all selected features

Thank you