

Hands on session of
Coral Reef Mapping

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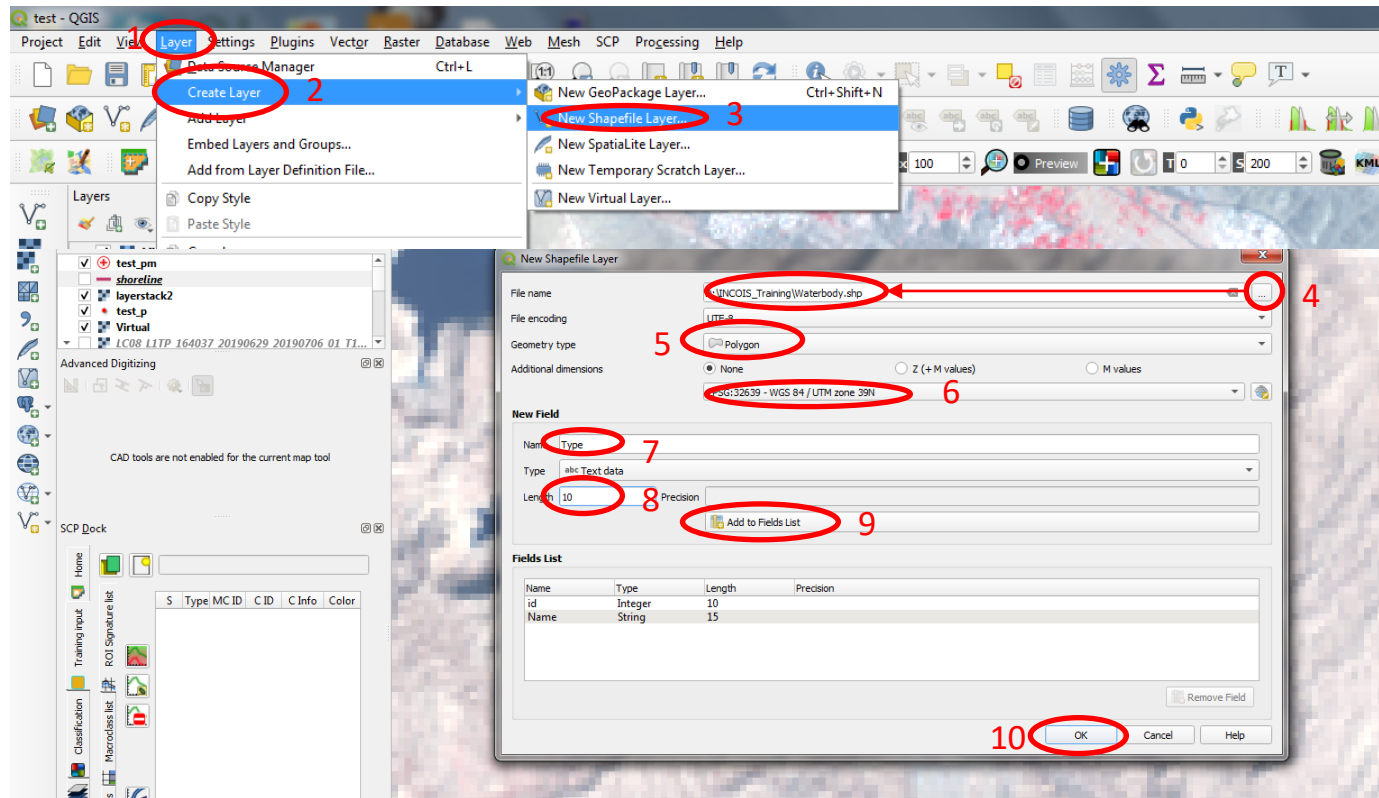
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ITCOOcean Training Program
on
“Remote Sensing and GIS for Earth Observation and Applications”
Organized by
International Training Center for Operational Oceanography (ITCOO)
INCOIS, Hyderabad, India
April 10 – 14, 2023



Polygon Shape file creation:

- Go to layer → Create Layer → New shapefile Layer

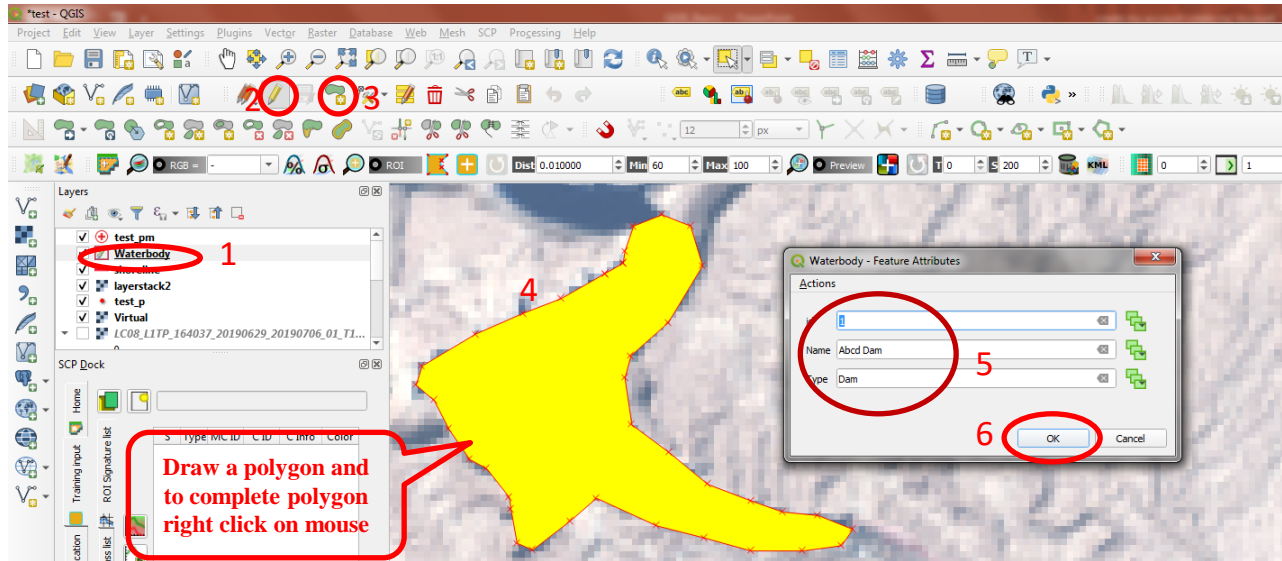


Like this we have create 2 shape files.

Polygon Shape file Editing:

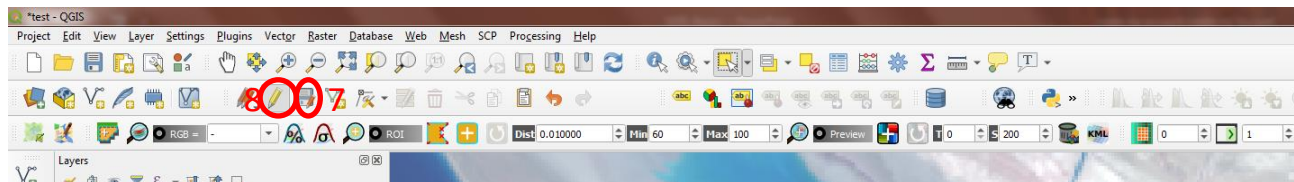
➤ Select polygon shape file

➤ Click on Toggle editing → add polygon feature → draw a polygon on image



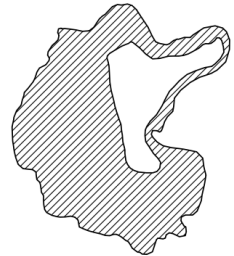
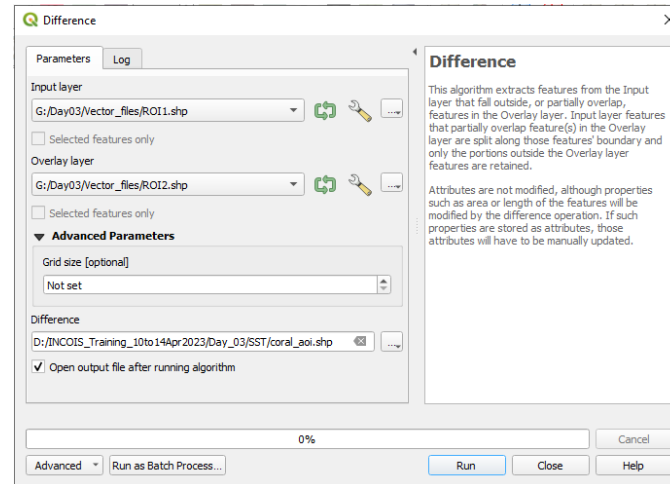
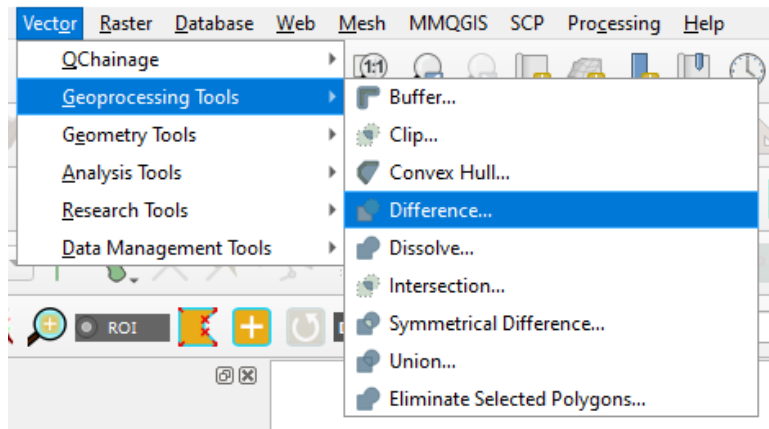
➤ To save edited data click on save layer edits.

➤ To stop editing click on Toggle editing



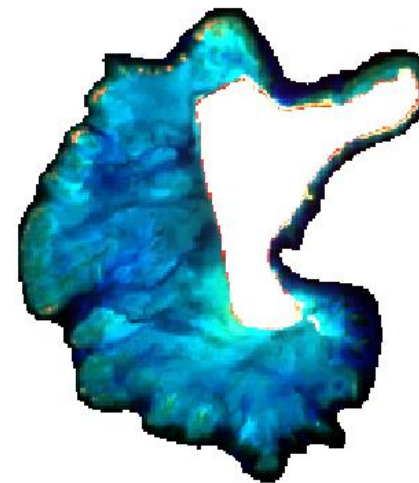
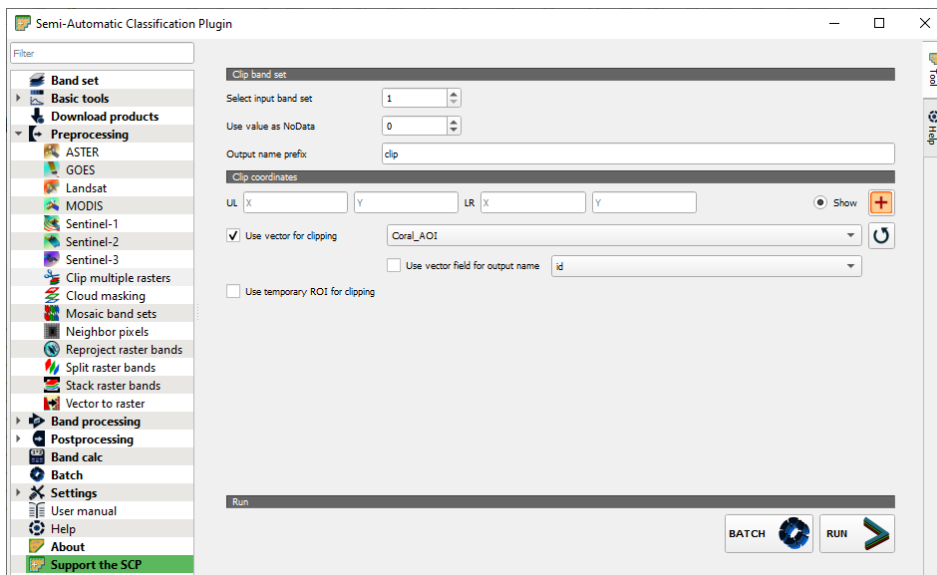
Data Clipping:

- Like last slide, we have to create 2 boundaries in 2 shape files. One shape file have outer boundary and 2nd other have an inner boundary. Subtract these 2 shape files.



Difference layer

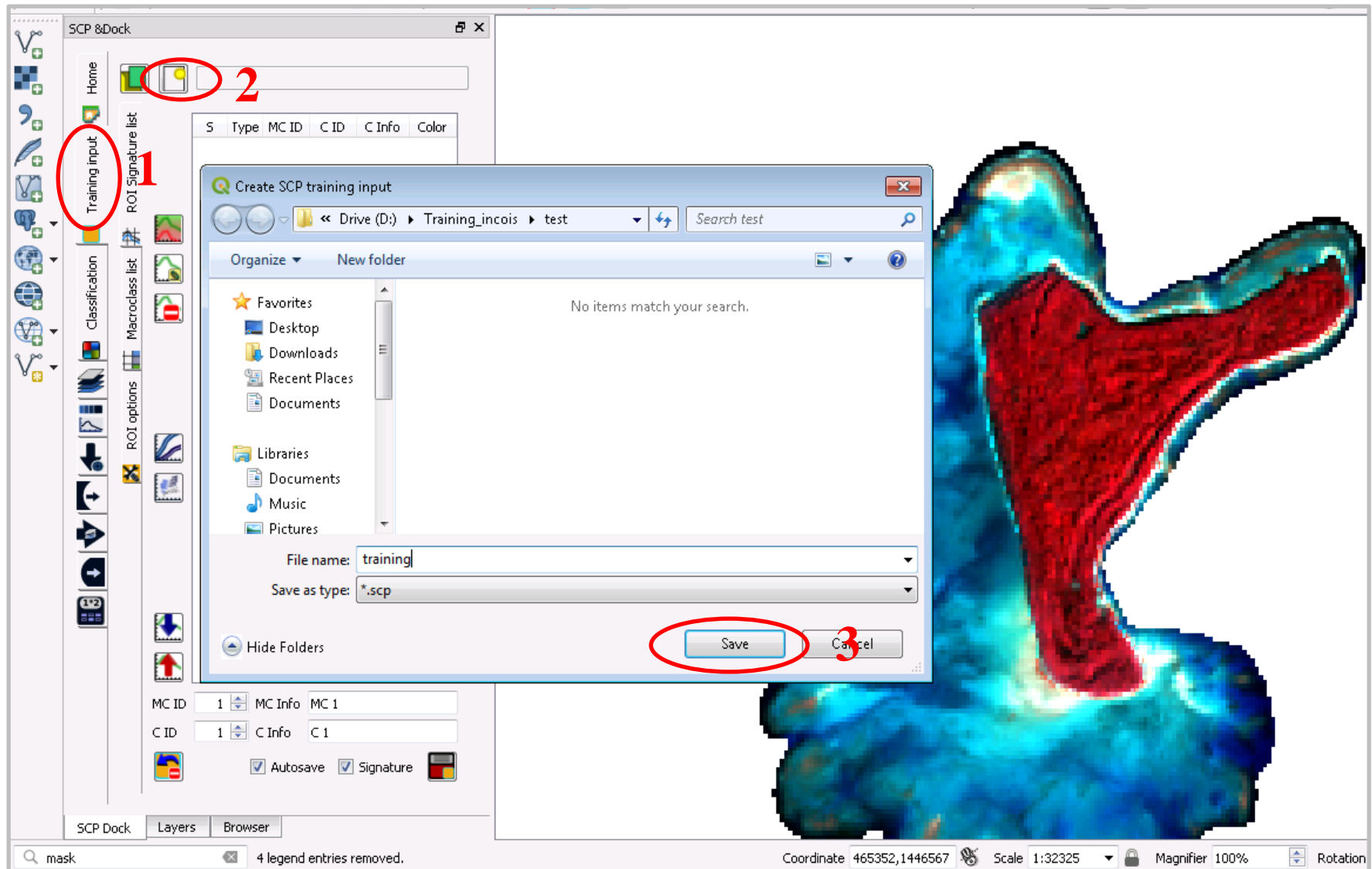
- Go to SCP → Preprocessing → Clip multiple rasters → give o/p name → check use vector for clipping select our difference vector file → run → select folder.



Output Image

Create the training input file

Go to SCP Dock → Training input → Create SCP training input



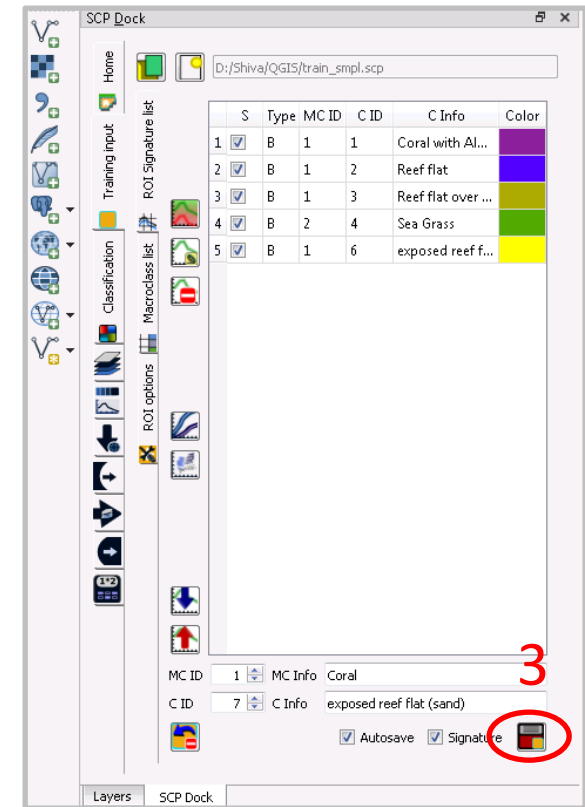
Training sample extraction

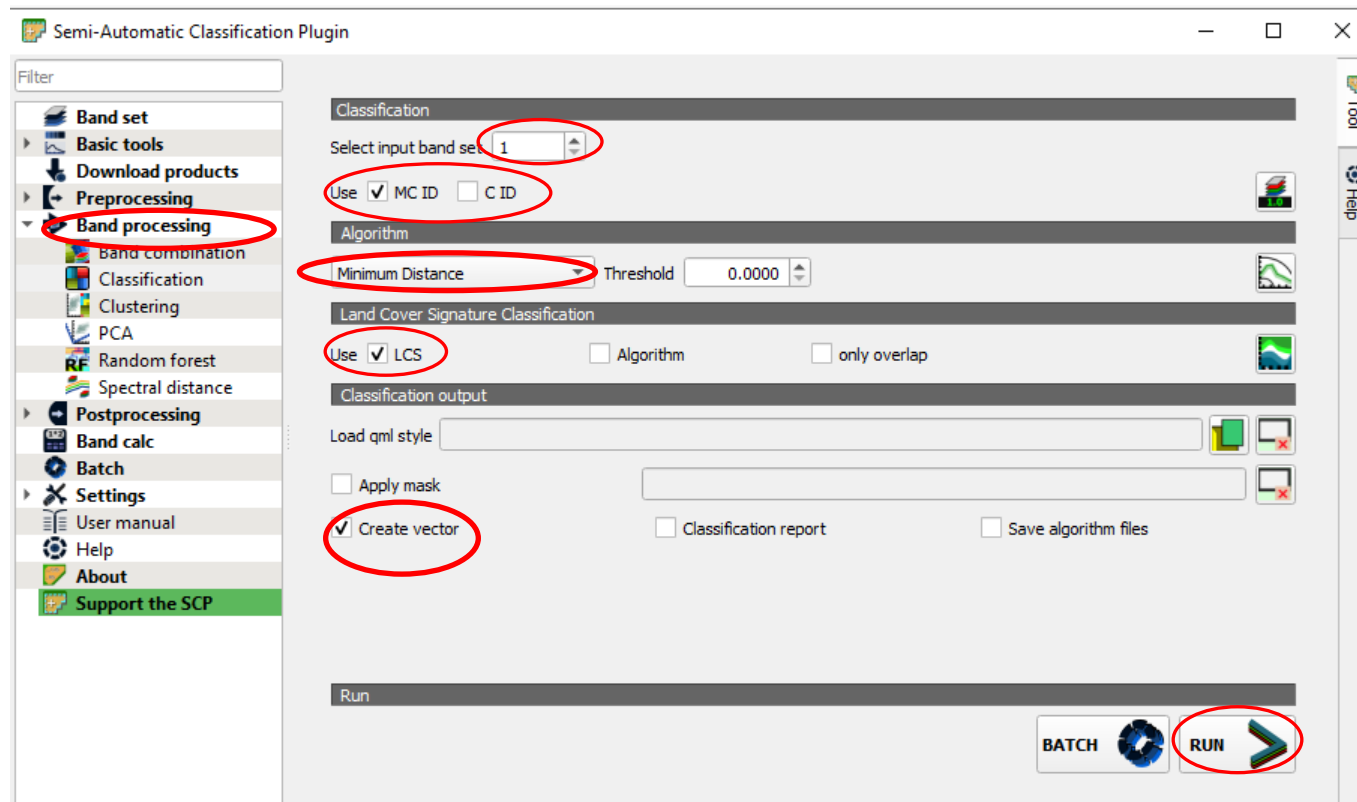
➤ Now go to the create ROI polygon and draw a polygon



➤ Now click on save temporary ROI to training input

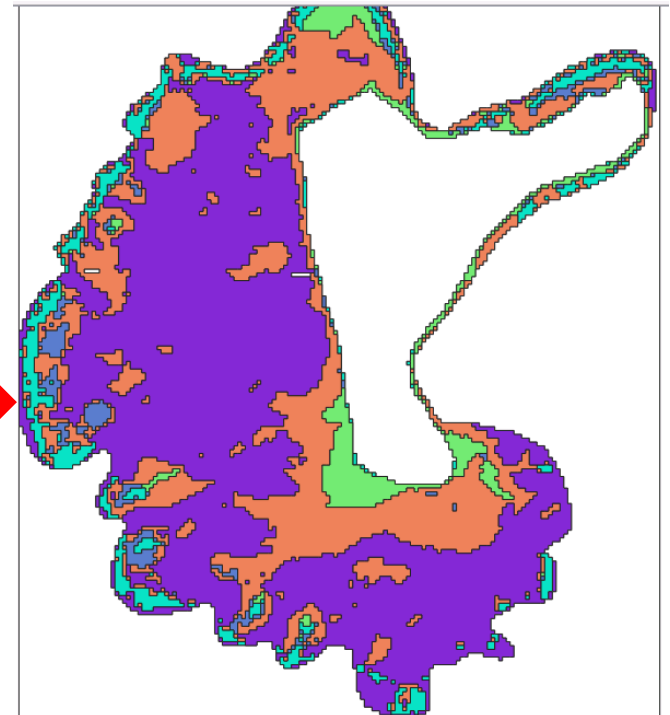
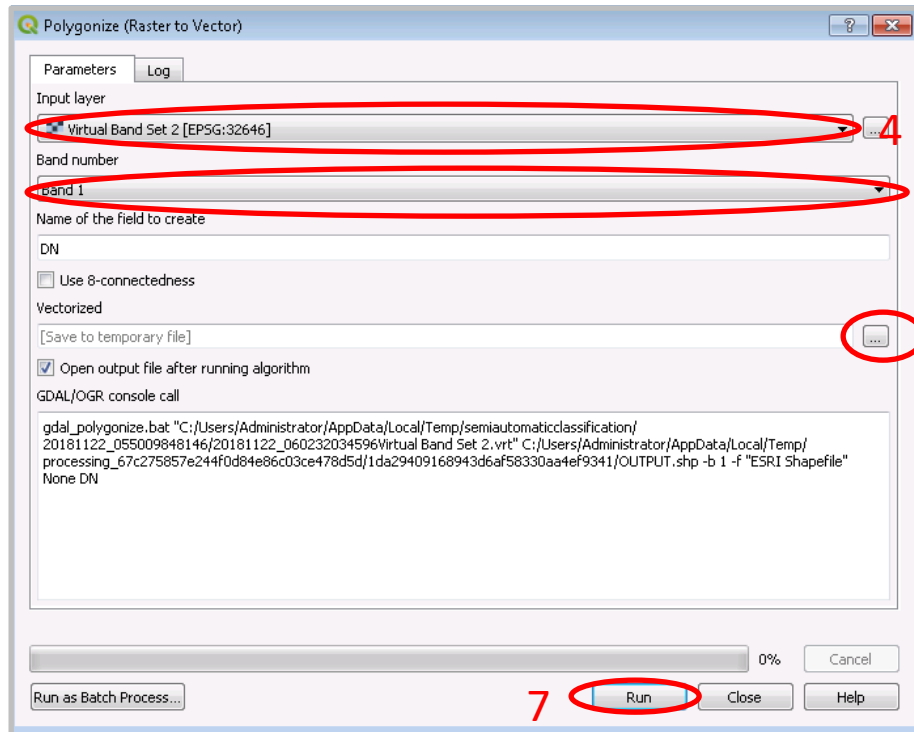
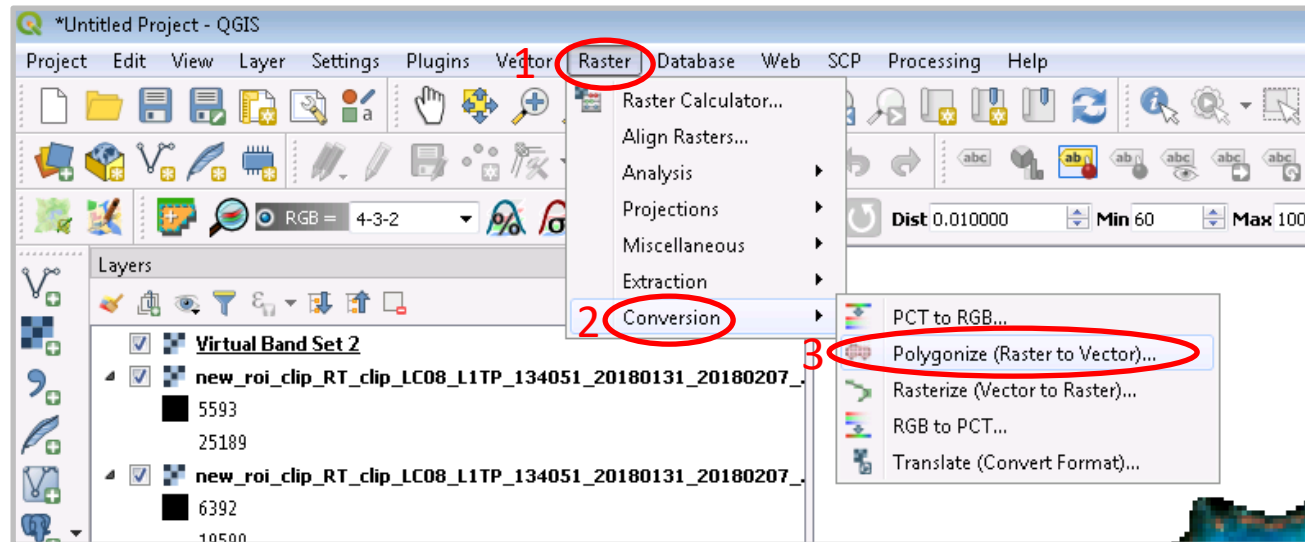
➤ Collect all training classes





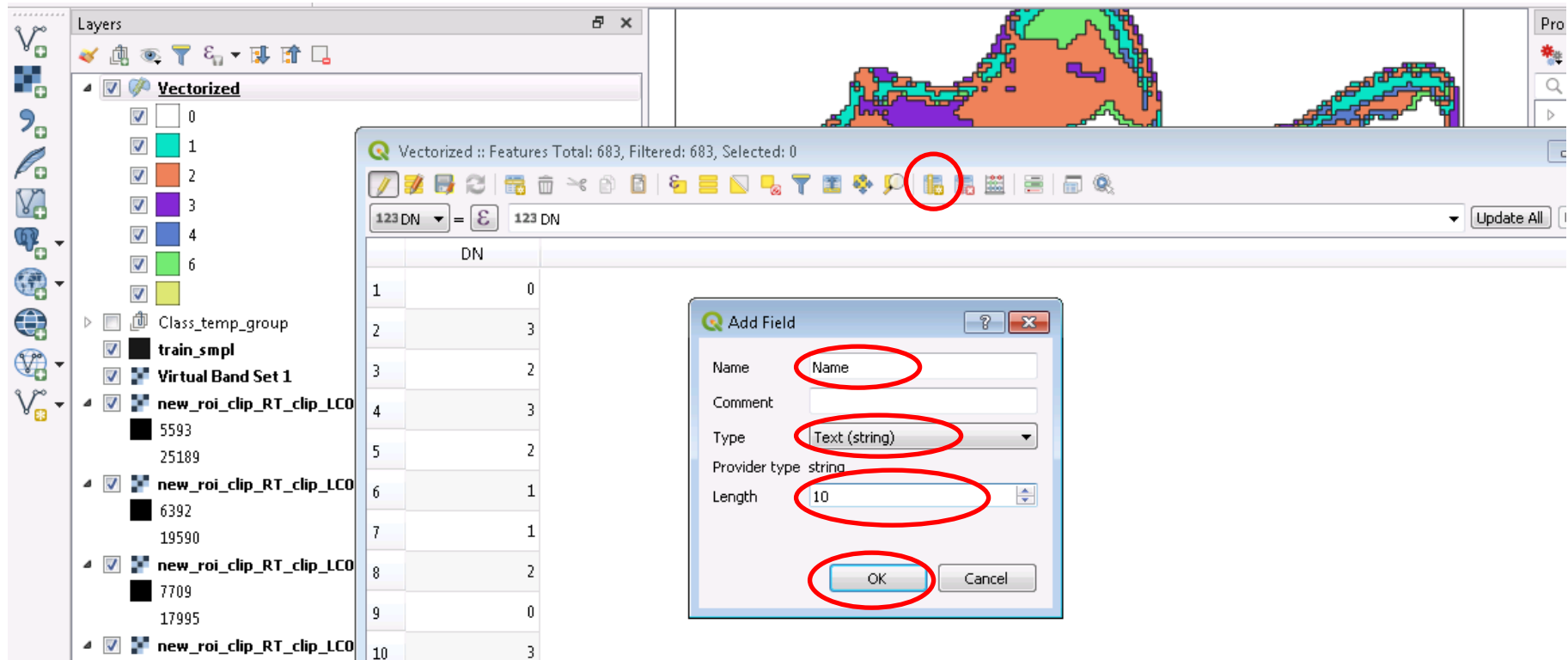
- Go to SCP ➔ Band Processing ➔ Classification
- Use Micro ID or class ID
- Select algorithm ➔ Landcover signature classification
- Click on run ➔ give the path to save the classified image.

Data conversion from raster to vector



Adding fields to attribute table

- Select Vector layer → right click → Open attribute table
- In attribute window click on add field
- Add field window opens → give the field name → Select the field type
Length → ok



Attribute data editing

If we want give the name to all same class fields at a time:

- Click on open attribute table
- Click on select by expression → type the expression → Click on Select feature
- Click on modify attributes of all selected features simultaneously → enter the name ok

The screenshot illustrates the steps for editing attribute data in QGIS. The main window shows a map with a vector layer named 'Vectorized'. The 'Layers' panel on the left lists several layers, including 'train_smpl', 'Vectorized', 'Class_temp_grc', 'Virtual Band Se', 'new_roi_clip_f', '5593', '25189', 'new_roi_clip_f', '6392', '19590', 'new_roi_clip_f', '77', '17', 'ne', '89', and '16'. The 'Vectorized' layer is selected, and its attribute table is open. The table has two columns: 'DN' and 'Name'. The 'DN' column contains values 1, 2, 3, 4, and 5. The 'Name' column contains the value 'Coral with Algae' for all rows. The 'Select by Expression' dialog is open, showing the expression 'DN = 1' in the 'Expression' field. The 'Select features' button is highlighted. The 'Feature Attributes' dialog is also open, showing the 'Name' field with the value 'Coral with Algae' and the 'OK' button highlighted.

1. Click on the 'Open Attribute Table' icon in the top toolbar.

2. Click on the 'Select by Expression' icon in the top toolbar.

3. Type the expression 'DN = 1' in the 'Expression' field.

4. Click on the 'Select features' button.

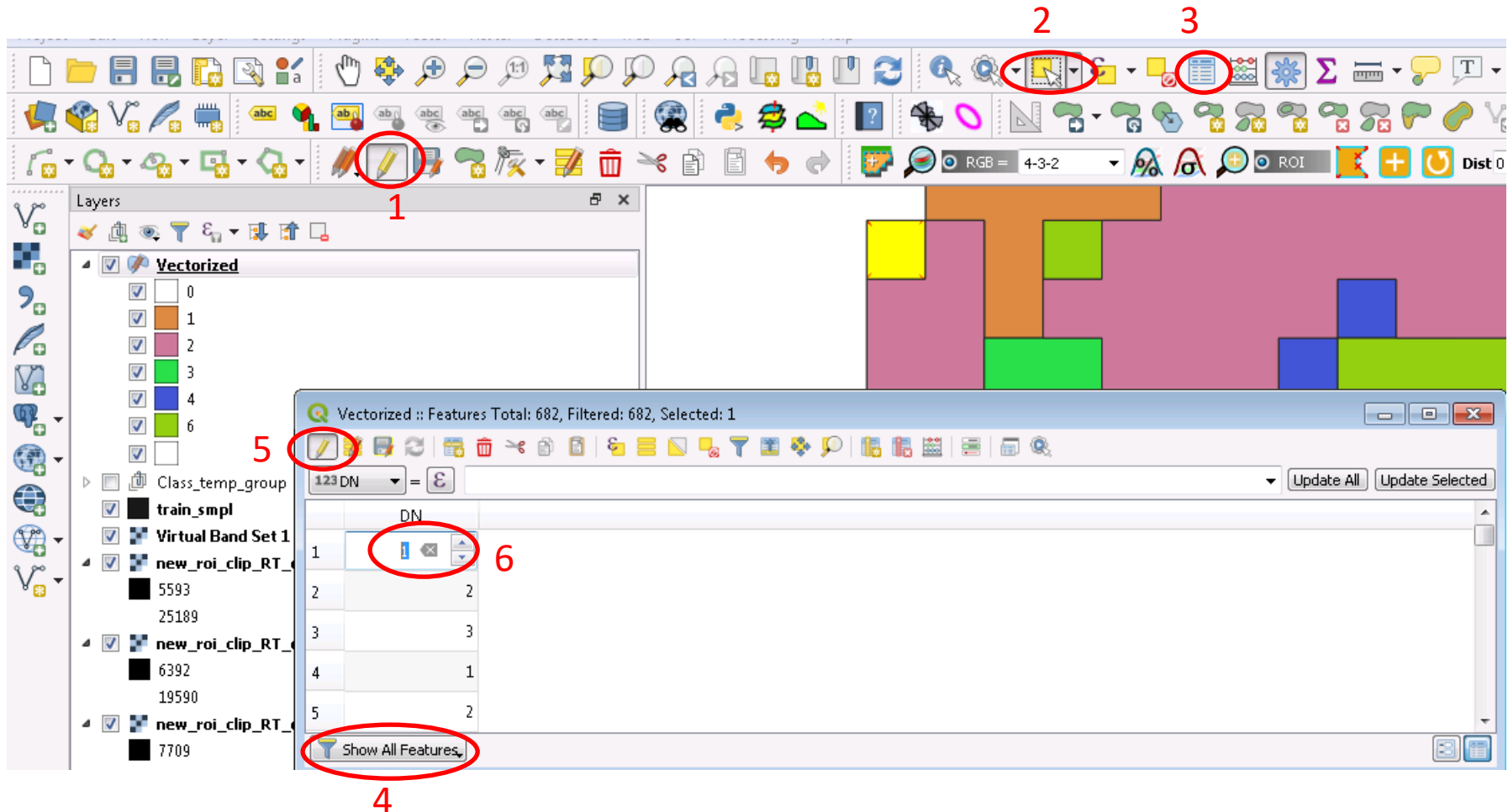
5. Click on the 'Open Attribute Table' icon in the top toolbar.

6. Click on the 'Name' field in the 'Feature Attributes' dialog.

7. Click on the 'OK' button in the 'Feature Attributes' dialog.

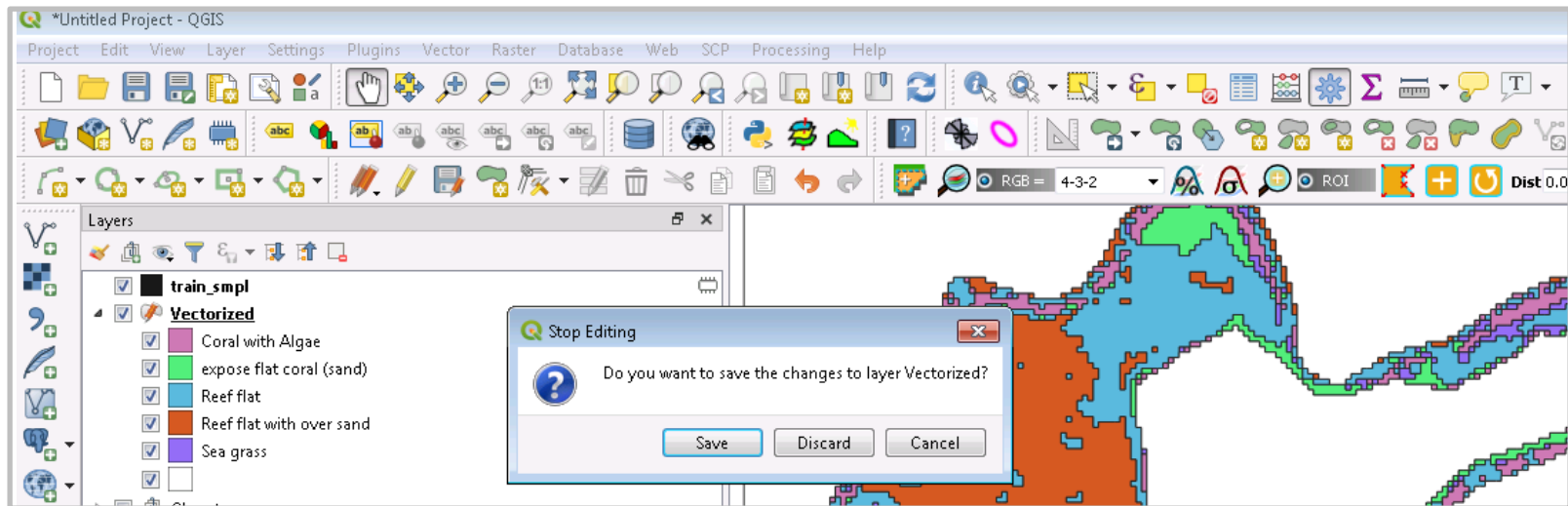
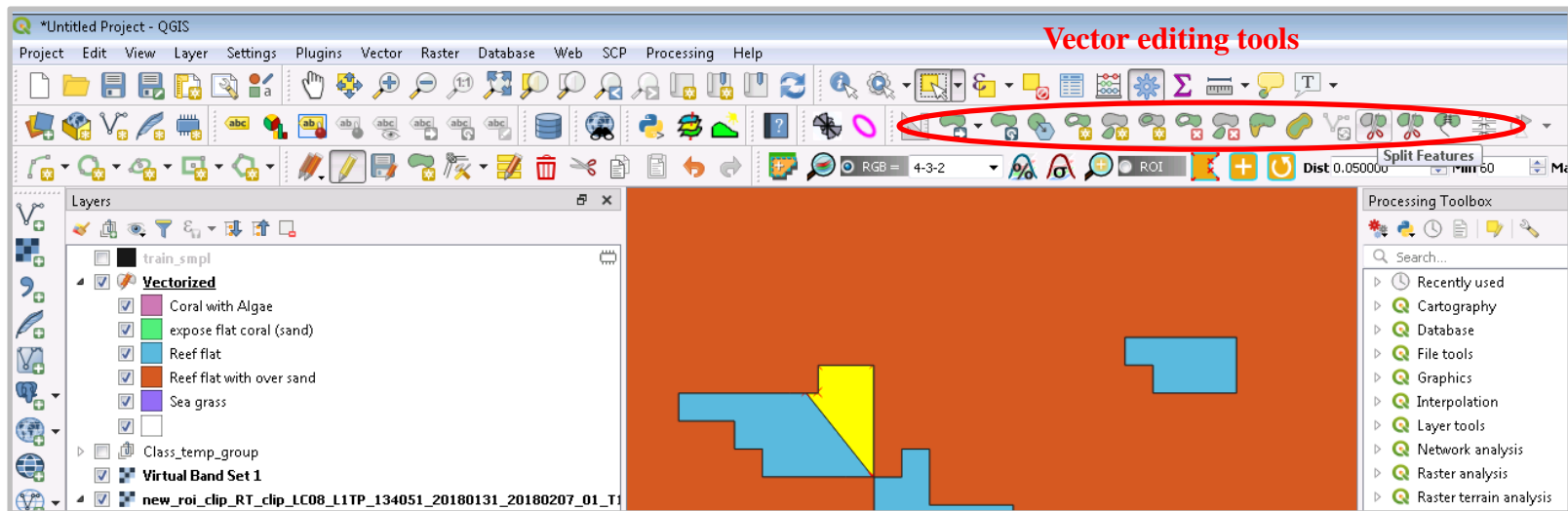
Vector data reclassification

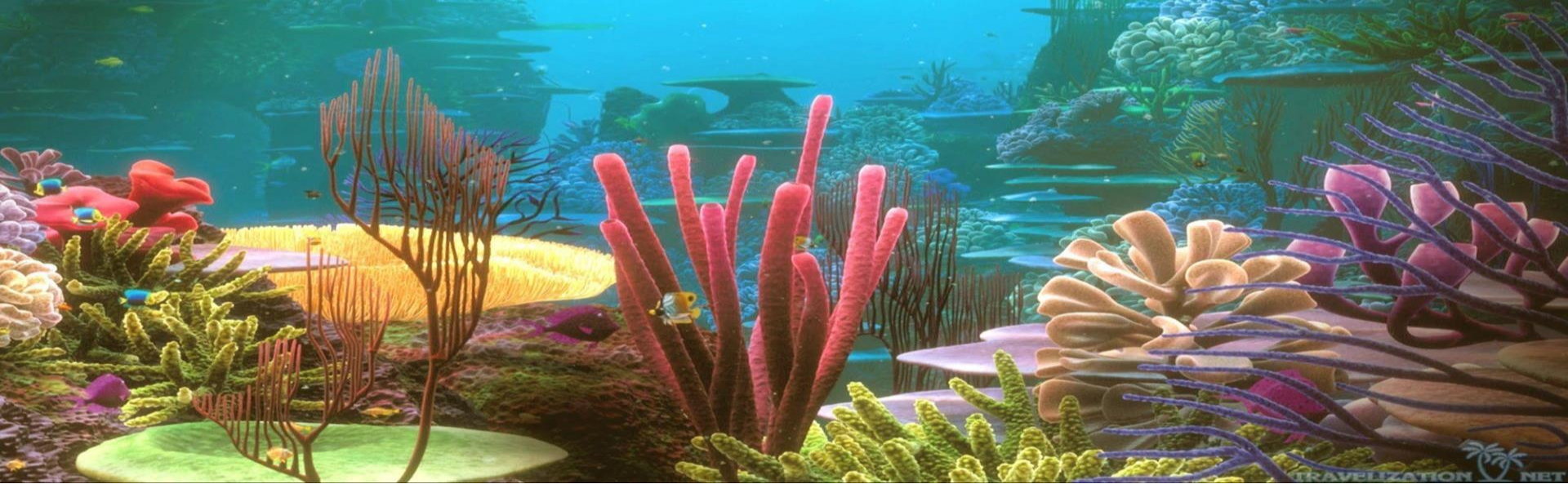
- Click on Toggle editing
- Click on select features by area or single click → Select miss classified feature
- Click on open attribute table → Select show selected features
- Click on toggle editing mode → move in to the right class with rename



Vector data editing

- If we found any miss classification and wrong shape of feature using vector editing Tools we can modify.
- After finishing all the edits click on toggle editing>stop editing window opens click on save





Thank you

