

How to Create Transect and Reference Shoreline Files GeoJSON in QGIS

1. QGIS

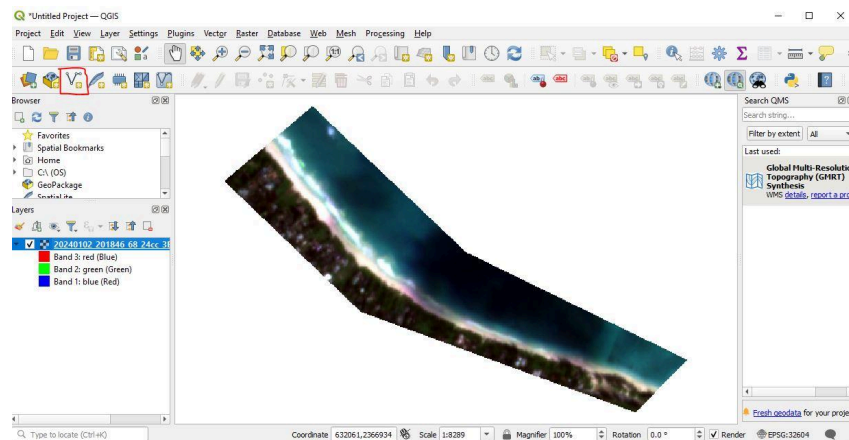
QGIS is an open-source geospatial information system software. It can be downloaded [here](#). QGIS can be used to create both the transects and reference shoreline GeoJSON saved in `user_inputs/<region>/<sitename>` as `<sitename>_transects.geojson` and `<sitename>_shoreline.geojson` respectively.

2. Transect GeoJSON

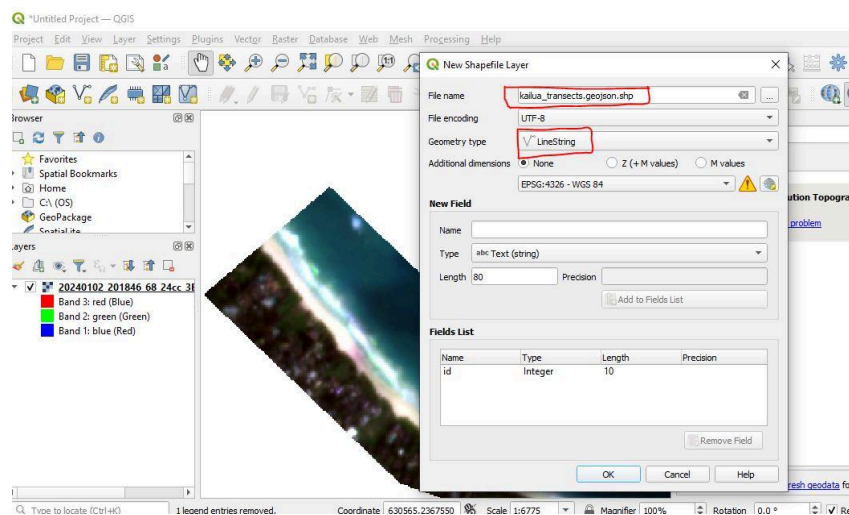
2.1. Create Layer

First, Drag and drop a tiff file (downloaded by the API here: `data/<region>/<sitename>/*_3B_AnalyticMS_toar_clip.tif`) of your choosing into QGIS.

Next, click the "create shapefile layer" button shown below.

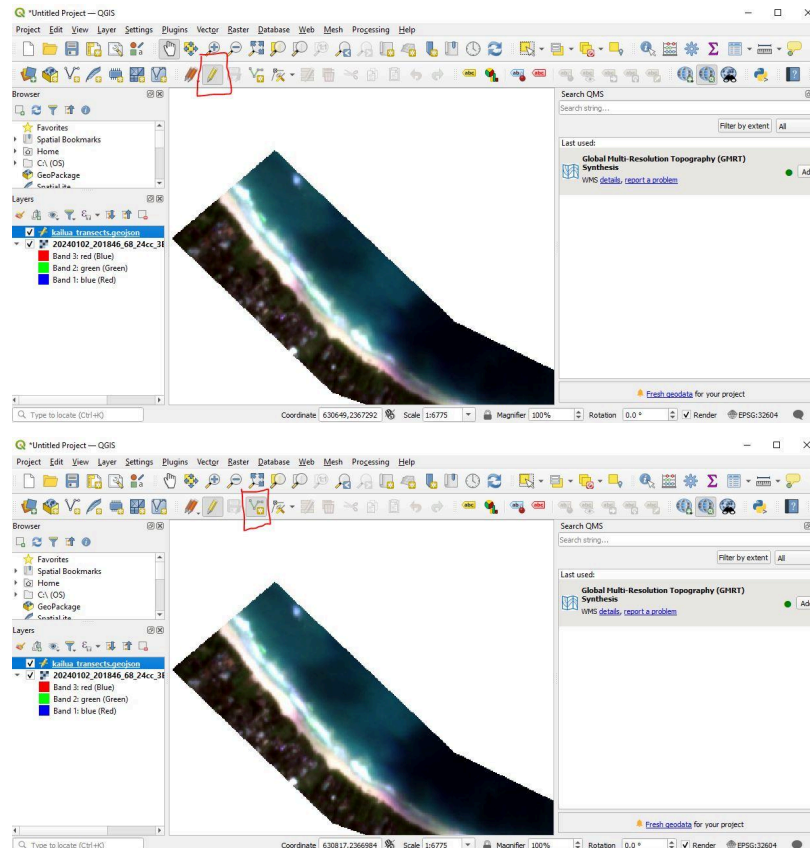


Once clicked the dialog below will appear. Select LineString for geometry type and write filename (the filename will not be the final name so it is arbitrary).

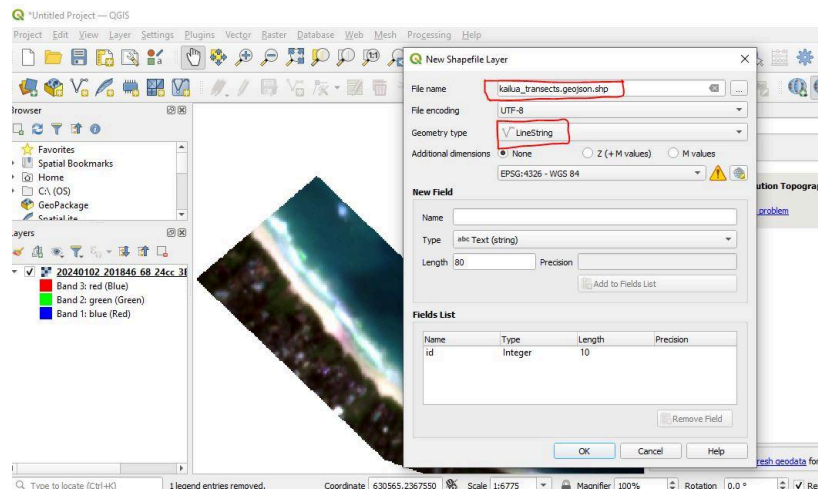


2.2. Draw Transects

Select the pencil button and then the digitizing toolbar button to the right of it to begin drawing.

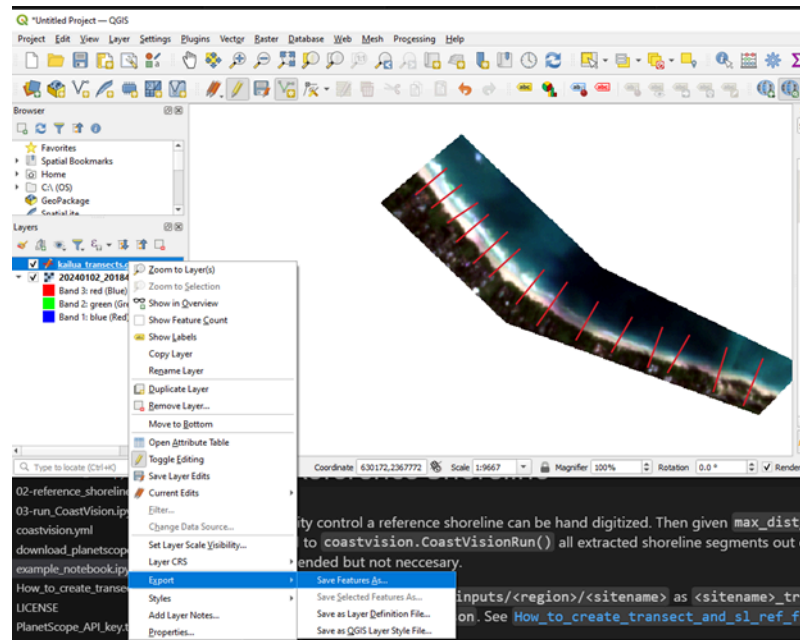


For each transect left click at the desired *landward* end of the transect then again at the seaward end. Then right-click to complete the transect.

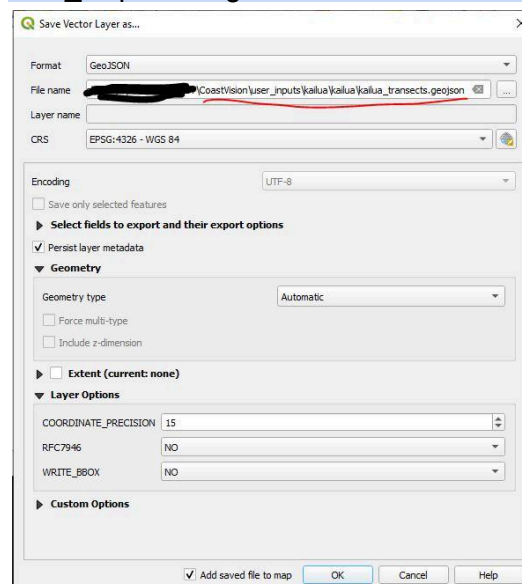


2.3. Export File

Once all transects have been drawn right-click on the layer on the left-hand menu. Then select "Export" and then "Save Features As..."



After selecting this save a save file popup will open. Save the file `user_inputs/<region>/<sitename>/<sitename>_transects.geojson`.



⚠ When Choosing CRS choose the projection that the TIFF image you are using is in. ⚠

Save Vector Layer as...

Format: GeoJSON

File name:

Layer name:

CRS: Project CRS: EPSG:32604 - WGS 84 / UTM zone 48N

Encoding: UTF-8

☐ Save only selected features

► Select fields to export and their export options

☒ Persist layer metadata

▼ Geometry

Geometry type: Automatic

☐ Force multi-type

☐ Include z-dimension

► ☐ Extent (current: none)

▼ Layer Options

COORDINATE_PRECISION: 15

RFC7946: NO

WRITE_BBOX: NO

► Custom Options

☒ Add saved file to map OK Cancel Help

3. Reference Shoreline

For the reference shoreline the steps are the same except instead of making multiple line segments (transects) just create one line string that is the entire reference shoreline and save it as `user_vinputs/<region>/<sitename>/<sitename>_shoreline.geojson`.

Save Vector Layer as...

Format: GeoJSON

File name: C:\CoastVision\user_inputs\kailua\kailua\kailua_shoreline.geojson

Layer name:

CRS: EPSG:4326 - WGS 84

Encoding: UTF-8

☐ Save only selected features

► Select fields to export and their export options

☒ Persist layer metadata

▼ Geometry

Geometry type: Automatic

☐ Force multi-type

☐ Include z-dimension

► ☐ Extent (current: none)

▼ Layer Options

COORDINATE_PRECISION: 15

RFC7946: NO

WRITE_BBOX: NO

► Custom Options

☒ Add saved file to map OK Cancel Help