Workflow QGIS —>

Static Figure Maps

From downloaded data (raster LULC file) convert raster tiles to polygons (slow)

Use biophysical table (in folder with raster) and select appropriate polygons for layer of interest (agriculture, mining, tourism, timber)

Export selected polygons as geoJSON layer (WGS 84 for setting, make sure you save to a location, did this for each individual layer of interest)

Merge polygons into one larger one

If sectioned too much, for visual purposes did 0.0001 degrees buffer, and dissolved results. Repeated this until sufficiently merged

If needed clipped layer by using LULC section as input, CMCC area region as clip shape

Layer is saved as a GeoJSON file and can be used

Shapefiles —>

Download shape file from drive (folder with about 5 files in each open)

Open data in GGIS

If needed clip data to only include selected region

If you want to put several layers as one use merge tool (i.e. timber data was an individual layer for each zone)

If needed add desired data field to attribute table (ex link to popup features)

If only looking at subset of field select fields in attribute table, export as separate layer

Convert file to GeoJSON by exporting it, set WGS84 (can export whole layer or just selected features)

Have geoJSON file which can be used in GIS or web

Raster Layers —>

Only used for mapping

Source was web - already in usable format

Others were converted to shapefiles using methods described in static figure maps method above

Mining Layer —>

Points layer,

Transferred data to google sheets

converted to longitude/latitude coordinates

Imported .csv file to QGIS

Plotted points as layer

Exported layer as geoJSON with method used for other shapefiles

## Methods for Converting .tif file to .geojson files on QGIS 3.12:

Time estimate: depends on machine and file size. Can take 20 min -3 hours per file. If working with larger files it is important to reduce resolution to be able to run functions in qgis.

1. download .tif file and open in qgis

2. Decrease raster resolution (raster-> export -> save as -> resolution -> add in the desired resolution)

3. go to properties of the .tif file

- once in properties go to symbology

- change render type of band from single band grey to single band pseudocolor

- choose color ramp (will get colors for styling from this)

- interpolation should be linear

- the mode selection depends. Because this is for visualization purposes to choose between equal intervals and quantiles I choose the one that most resembles the coloring on the report. I select number of classes based on how many colors I want to have (3 for carbon, 5 for water models)

- save and apply changes

4. Convert raster to polygons (raster pixel to polygon function)

5. crop raster polygon layer (file has some extents outside of Belize. Use clip function with the raster polygon layer as input file and Belize boundary as overlay file)

6. Select by expression function using values from the color classification

7. Export selected features for each layer (3 for carbon, 5 for water) as geojson

8. Once you have the new exported features for the range of values in layer use buffer function to dissolve geometry and simplify file to help with display (buffer, distance is 0.0001 degrees, dissolve layers)

9. export files, ready to upload as geojson files to viewer