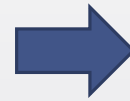




Map Enhancement

Viewing DEM as Hillshade

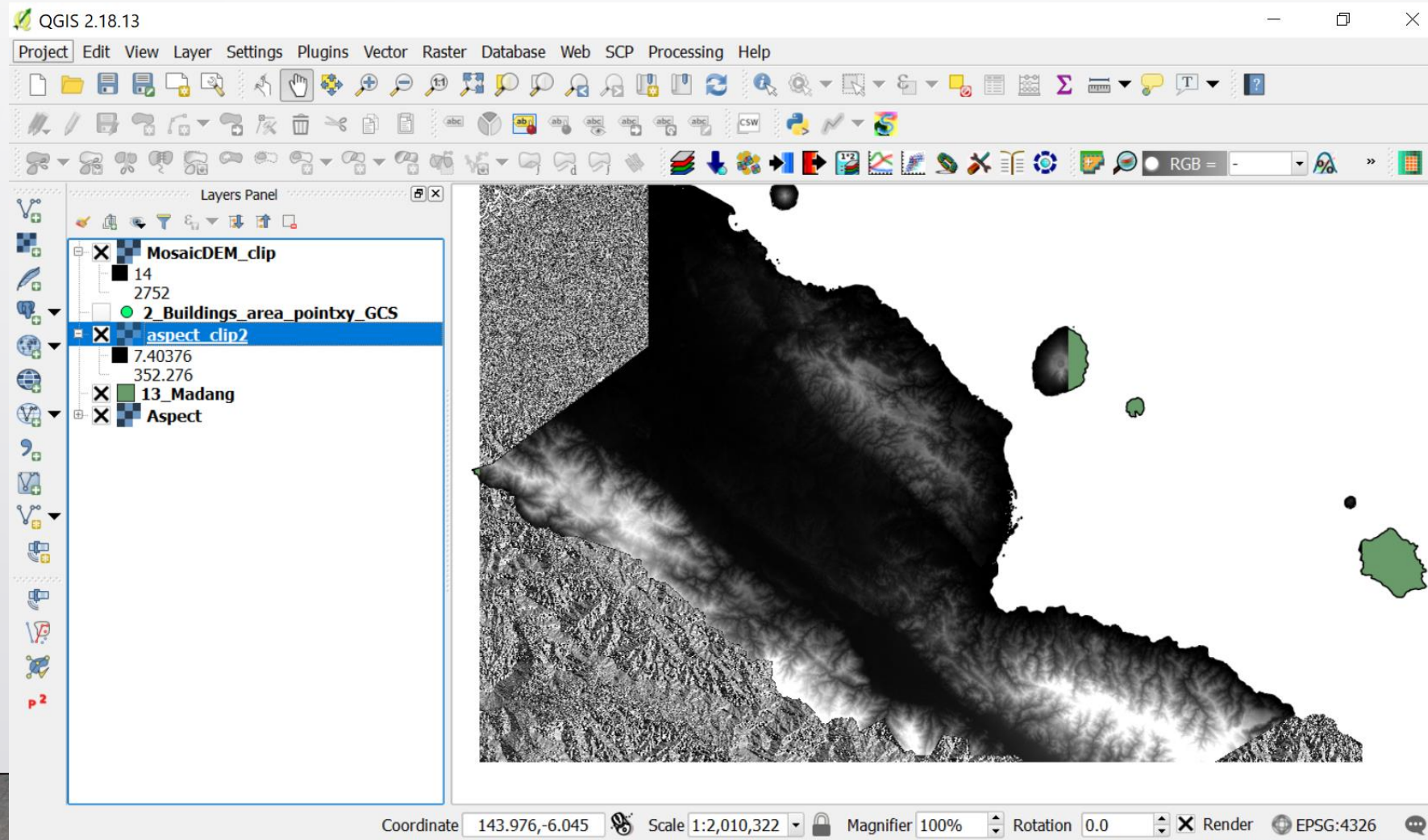




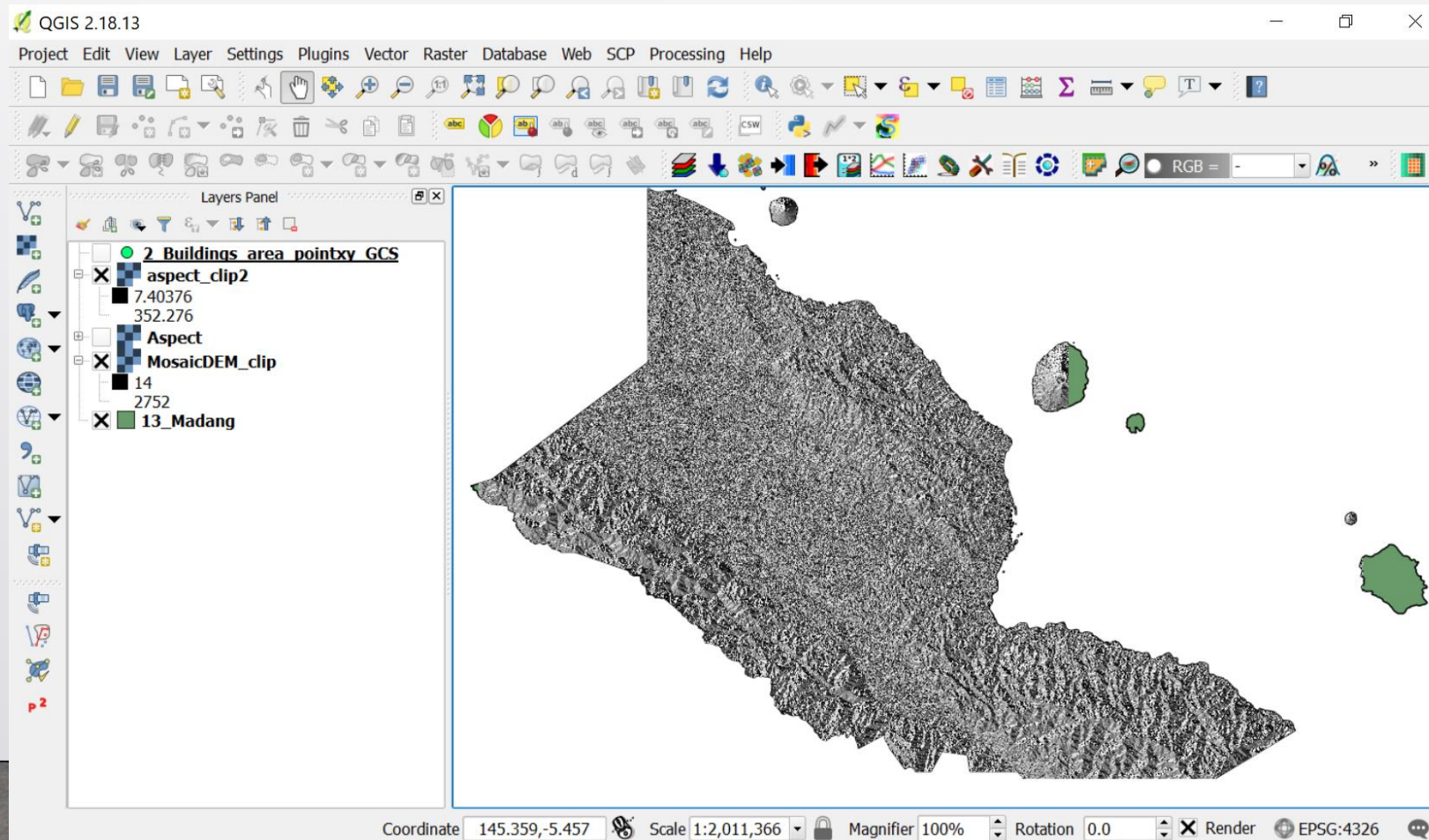
Data Needed:

- **MosaicDEM_clip** (raster)- inside folder Result of Day3_Jannet
- **Aspect** (you can use DEM viewed as hillshade as well, but for this exercise we will use “aspect”)
- **Madang admin** (polygon feature) – inside folder Day3_Jannet
 - Filename: 13_Madang.shp
- **Buildings** (point feature) – inside folder Day 1
 - Filename: 2_Buildings_area_pointxy_GCS.shp

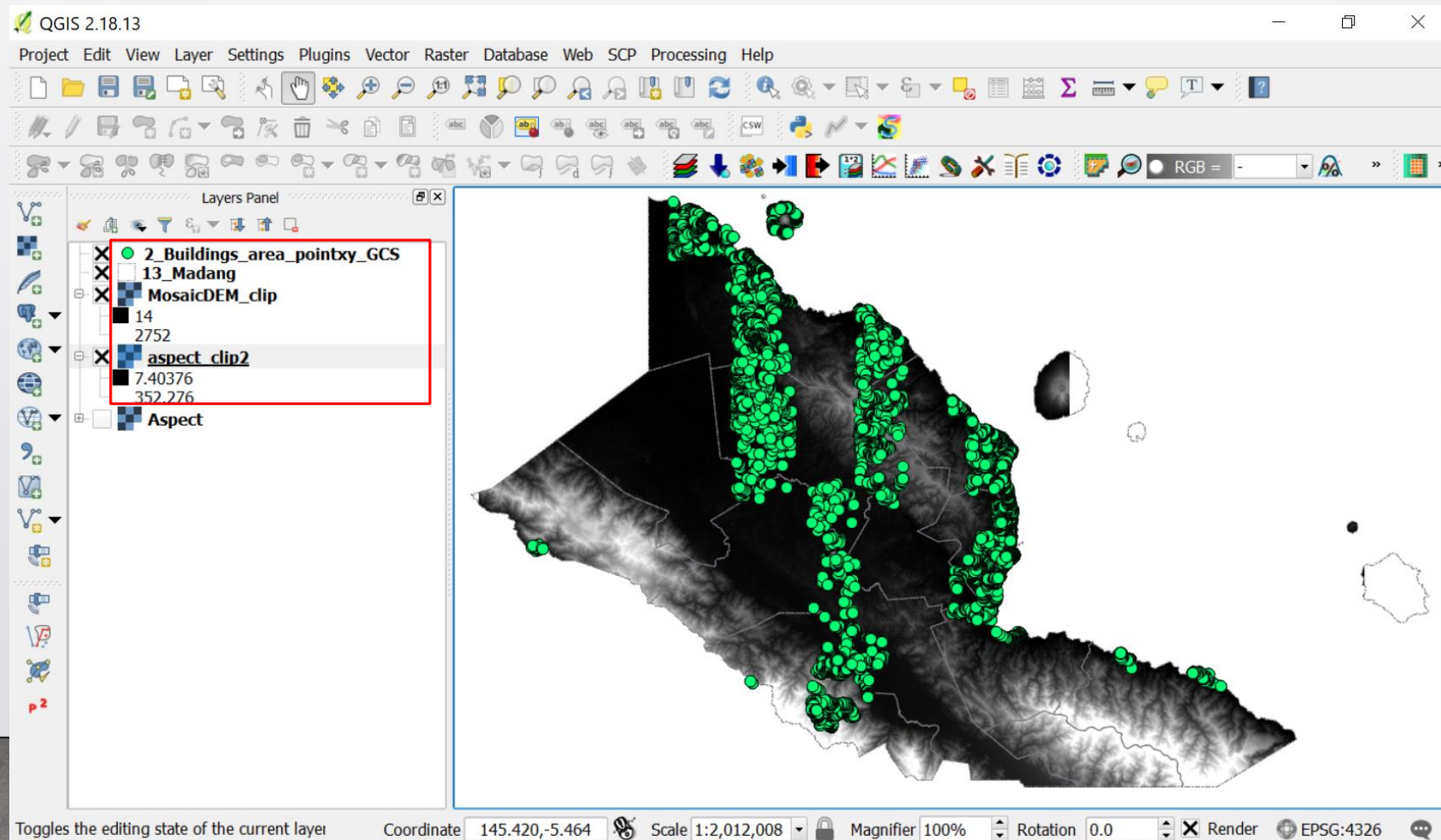
1. Load all the layers in the project



2. Clip all raster files (e.g aspect) with Madang
Similar step: → Raster→Extraction→ Clipper



3. Put on top of raster files ALL shapefiles by dragging. Also, aspect must be below DEM.



4. Symbolize DEM by Single Pseudocolor

The screenshot shows the QGIS 2.18.13 interface with the 'Layer Properties - MosaicDEM_clip | Style' dialog box open. The 'Style' tab is selected, and the 'Band rendering' section is expanded. The 'Render type' is set to 'Singleband pseudocolor'. The 'Band' is 'Band 1 (Gray)'. The 'Min' value is 14 and the 'Max' value is 2752. The 'Interpolation' is set to 'Linear'. The 'Color' is set to 'BrBG'. The 'Label unit suffix' is empty. The 'Min / max origin' is 'Estimated cumulative cut of full extent'. The 'Value' column in the 'Load min/max values' table is highlighted with a red box, showing values 14, 698.5, 1383, 2068, and 2752. The 'Color' column shows corresponding color swatches. The 'Label' column shows values 14, 698.5, 1383, 2068, and 2752. The 'Mode' is set to 'Continuous'. The 'Classes' are set to 5. The 'Color rendering' section is also visible at the bottom of the dialog.

QGIS 2.18.13

Project Edit View Layer Settings Plugins Vector Raster

Layers Panel

- 2_Buildings_area_pointxy_GCS
- 13_Madang
- MosaicDEM_clip
- aspect_clip2
- Aspect

Layer Properties - MosaicDEM_clip | Style

General Style Transparency Pyramids Histogram Metadata Legend

Band rendering

Render type: Singleband gray

Gray band: Multiband color, Paletted, Singleband gray, **Singleband pseudocolor**, Hillshade

Color gradient: Singleband gray

Contrast enhancement: Stretch to MinMax

Load min/max values

Interpolation: Linear

Color: BrBG

Label unit suffix:

Min / max origin: Estimated cumulative cut of full extent.

Value	Color	Label
14		14
698.5		698.5
1383		1383
2068		2068
2752		2752

Mode: Continuous

Classes: 5

Classify

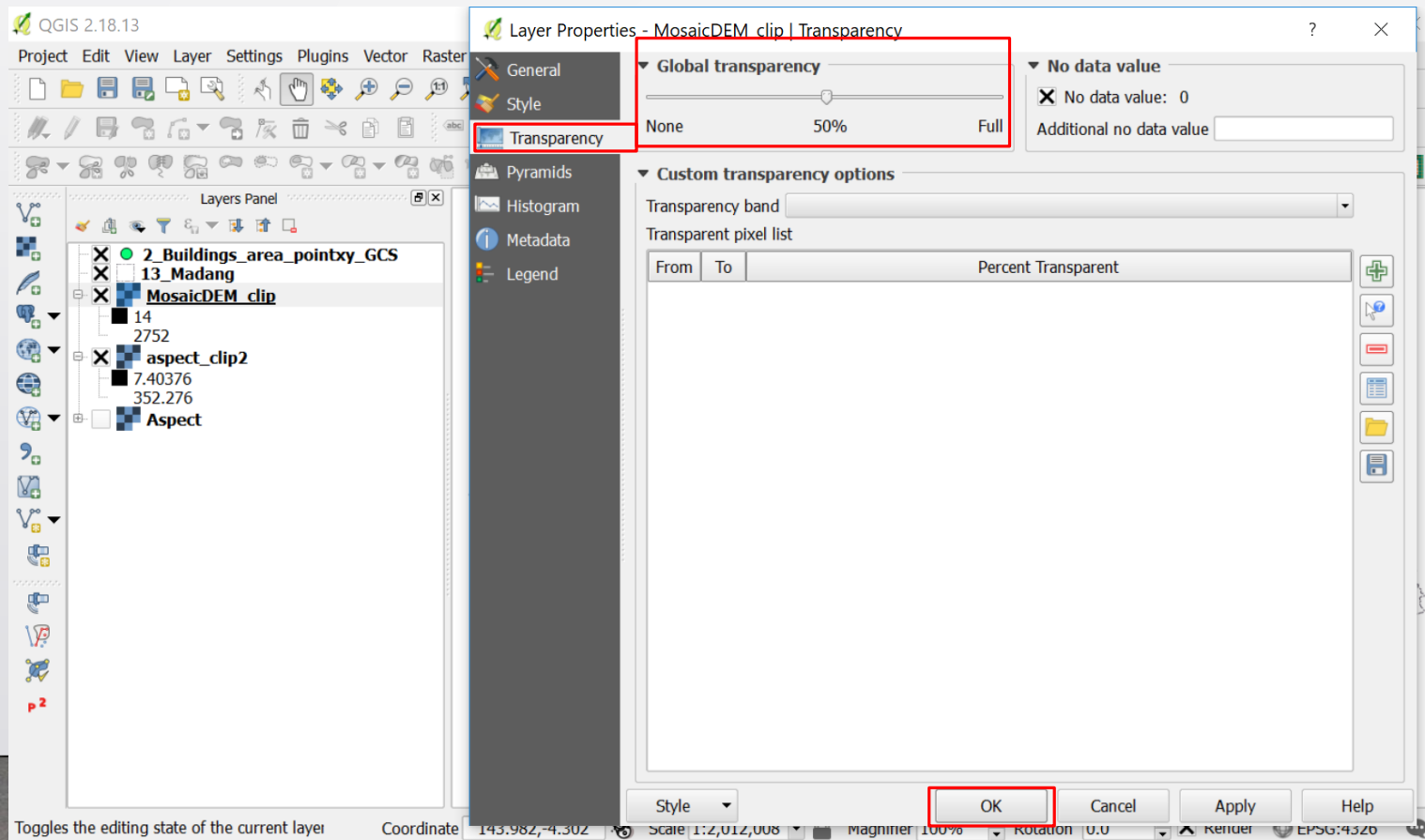
Clip out of range values

Color rendering

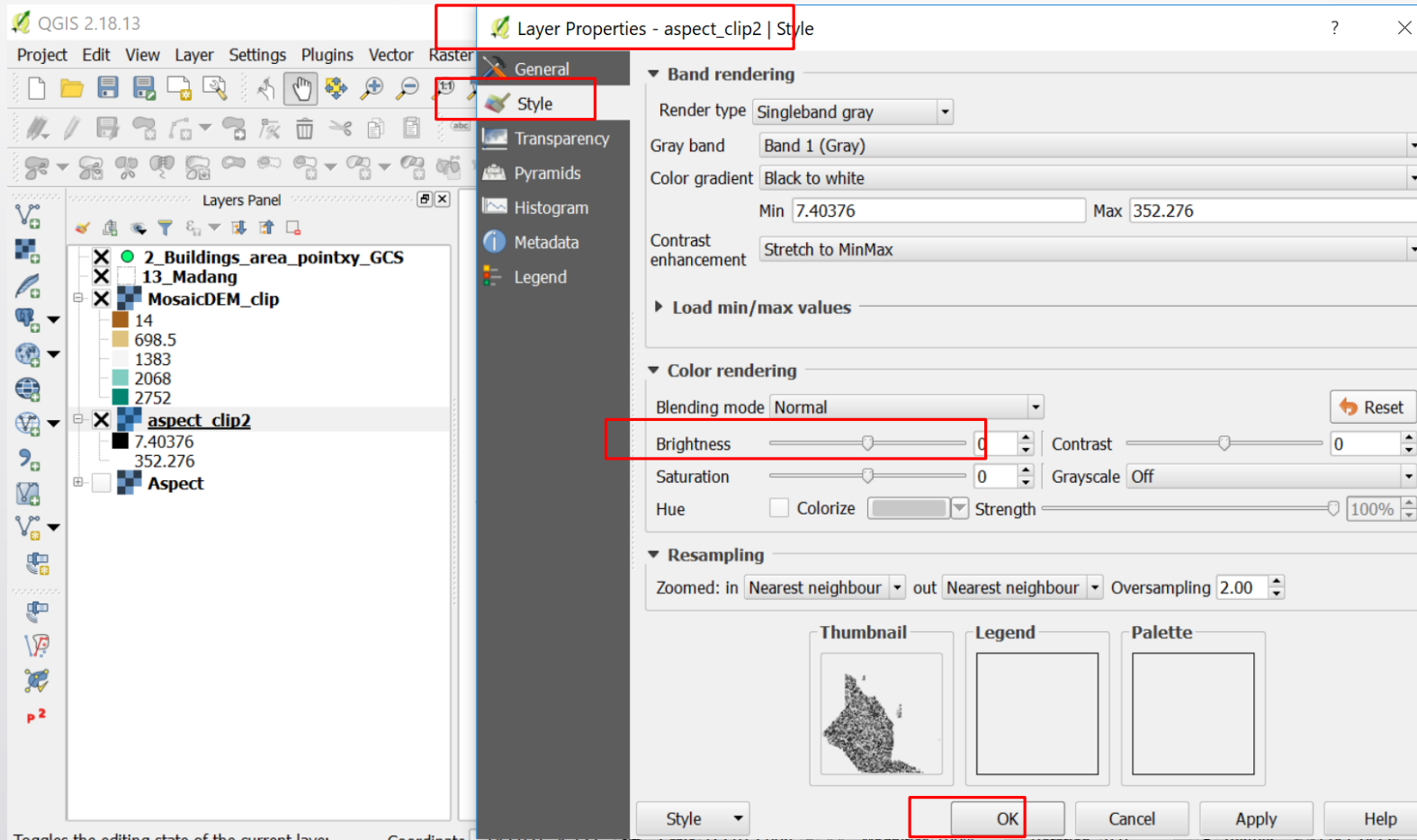
Style

OK Cancel Apply Help

5. Set transparency of DEM so that Aspect will be visible by clicking “Transparency” tab. Set 50%

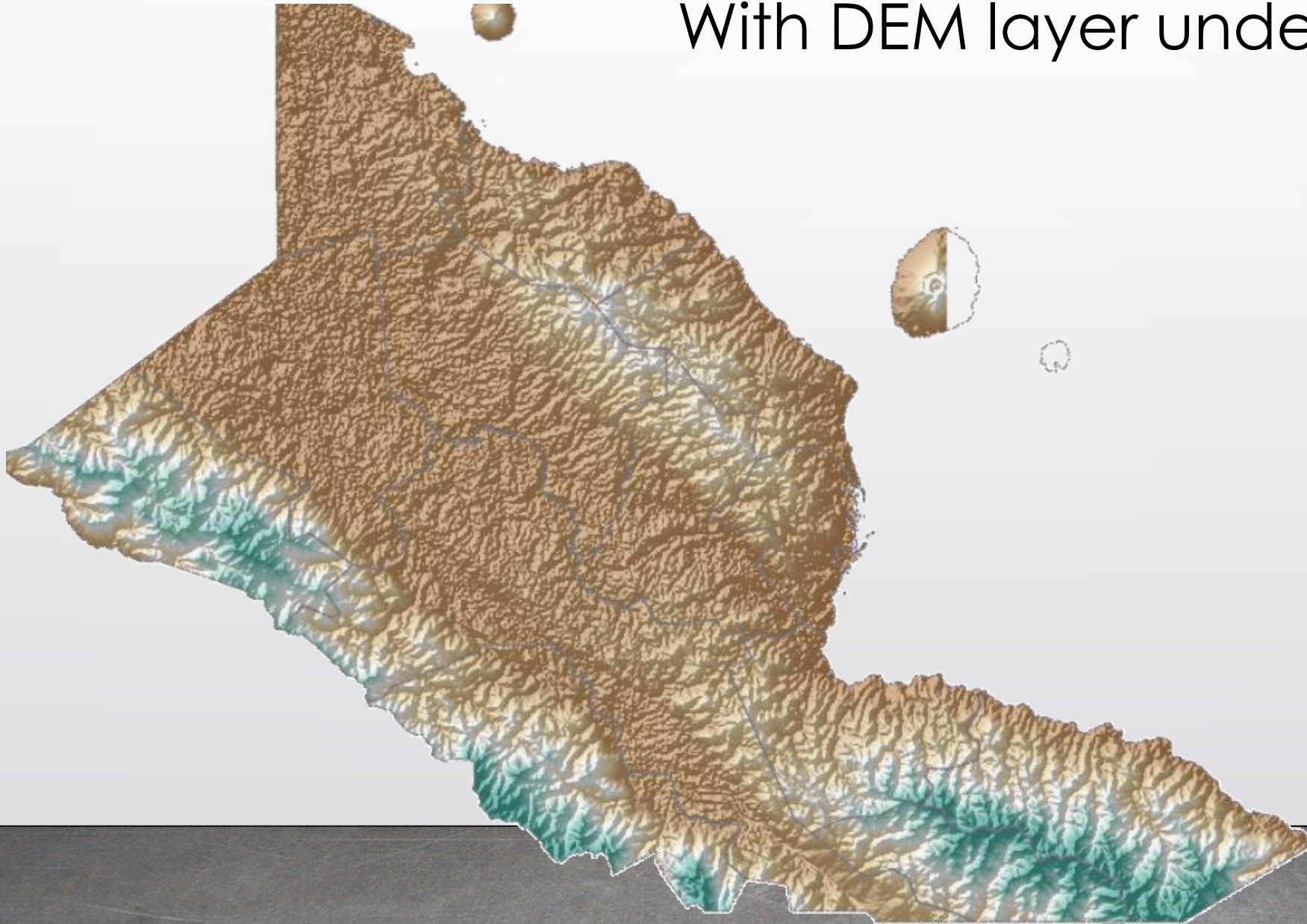


6. You can also adjust brightness of “Aspect”



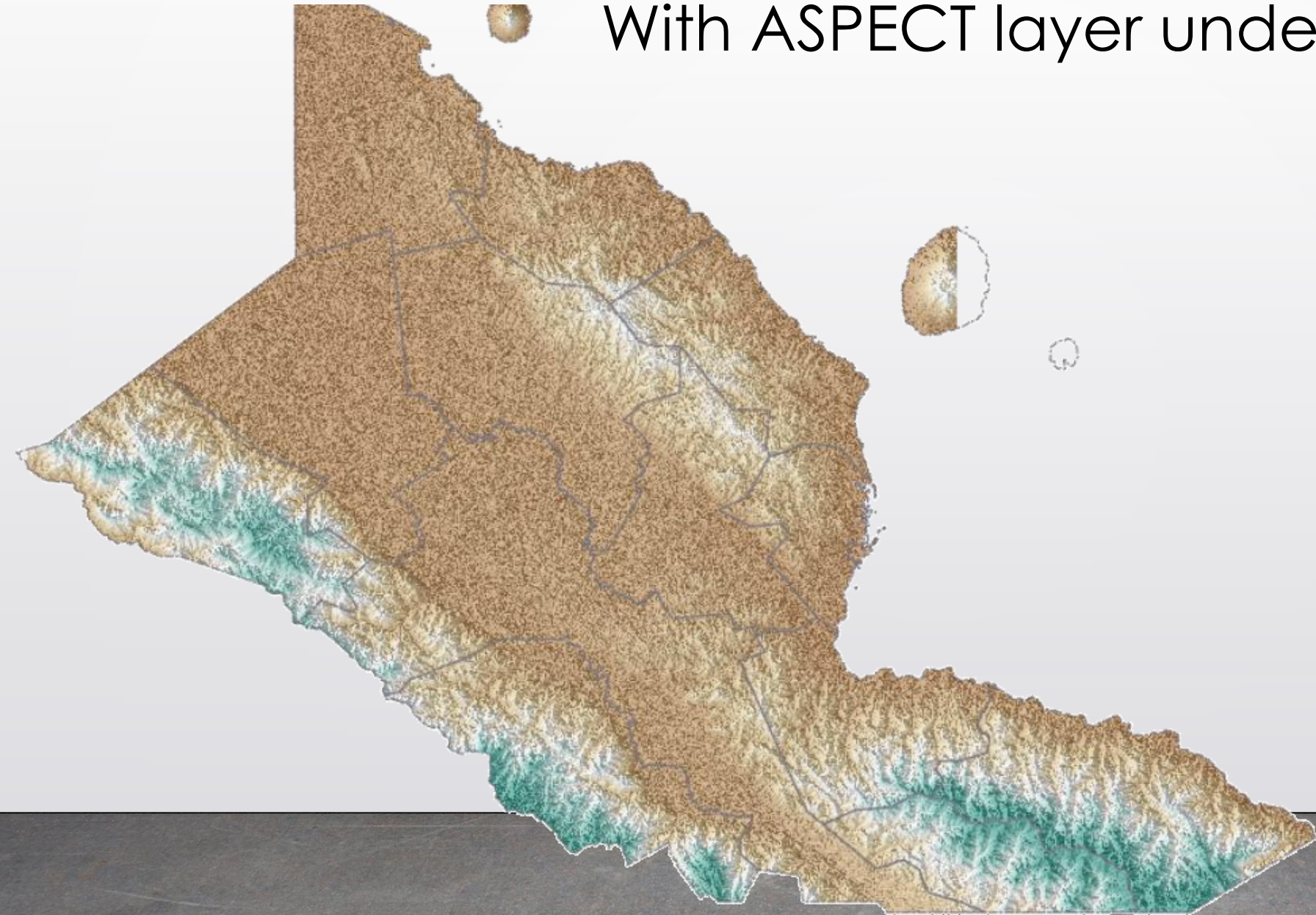
PS. DEM can be used also instead of aspect. If this the case, DEM must be **loaded twice** in the project and symbolized as hillshade.

With DEM layer under DEM layer

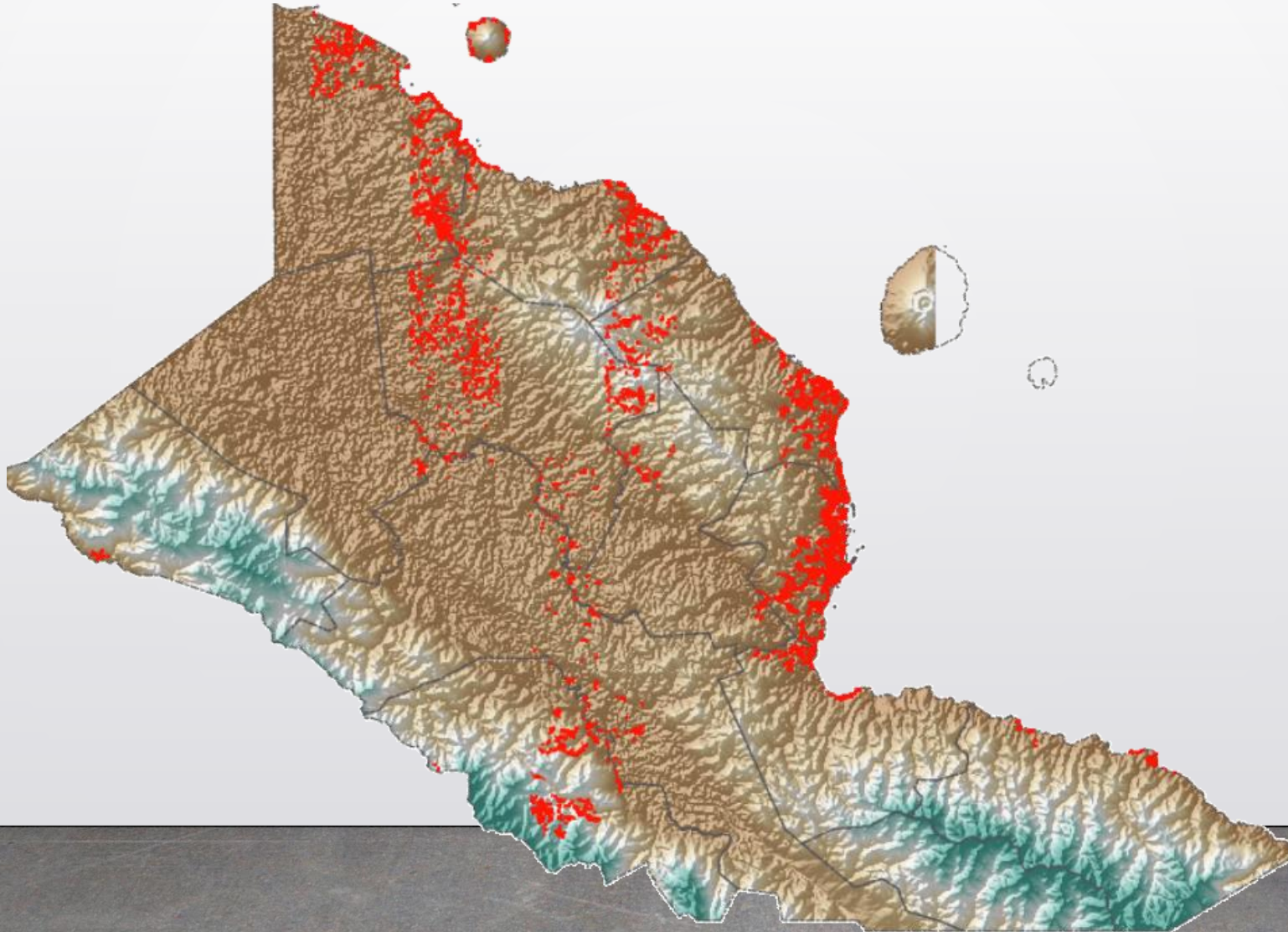




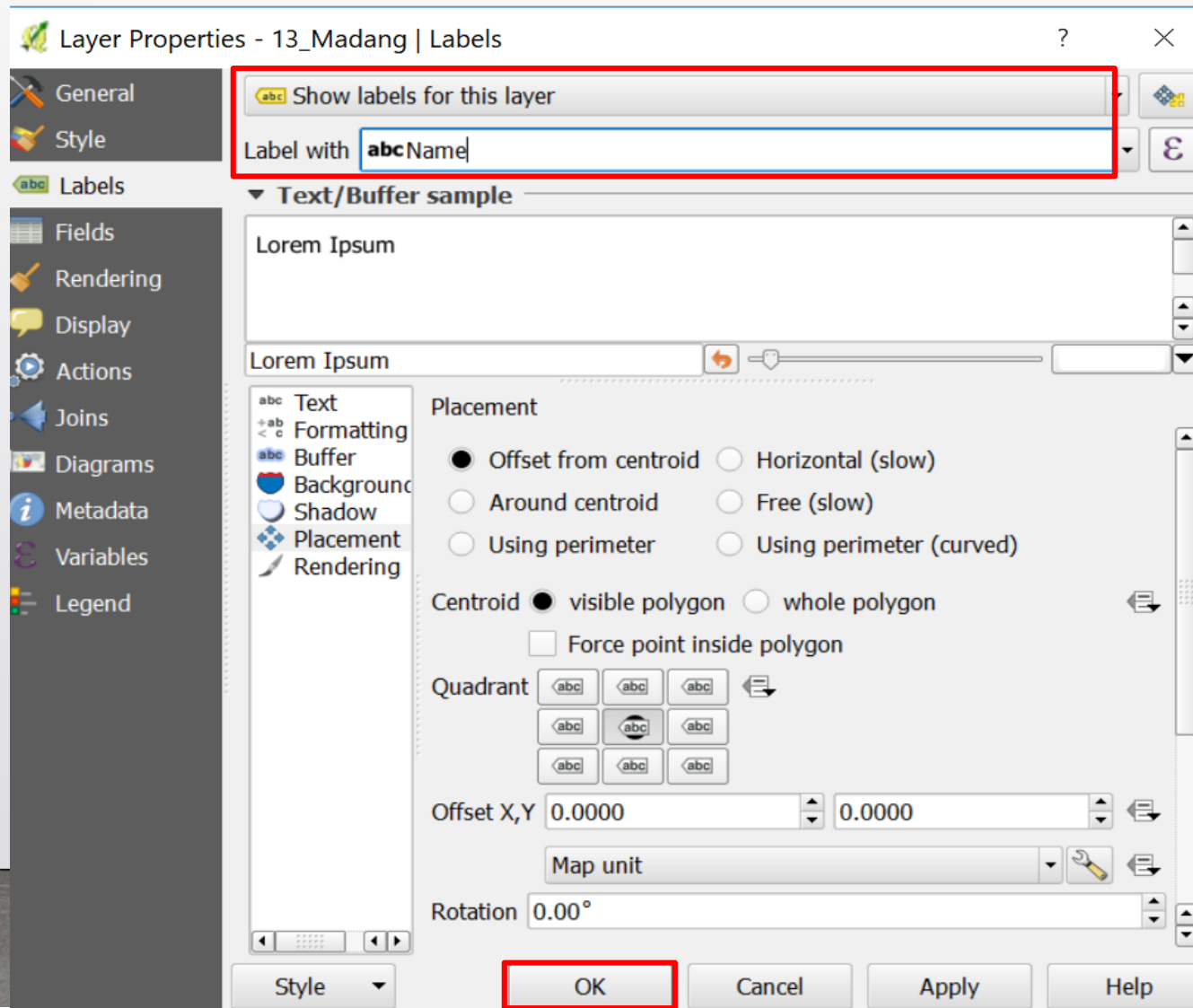
With ASPECT layer under DEM layer

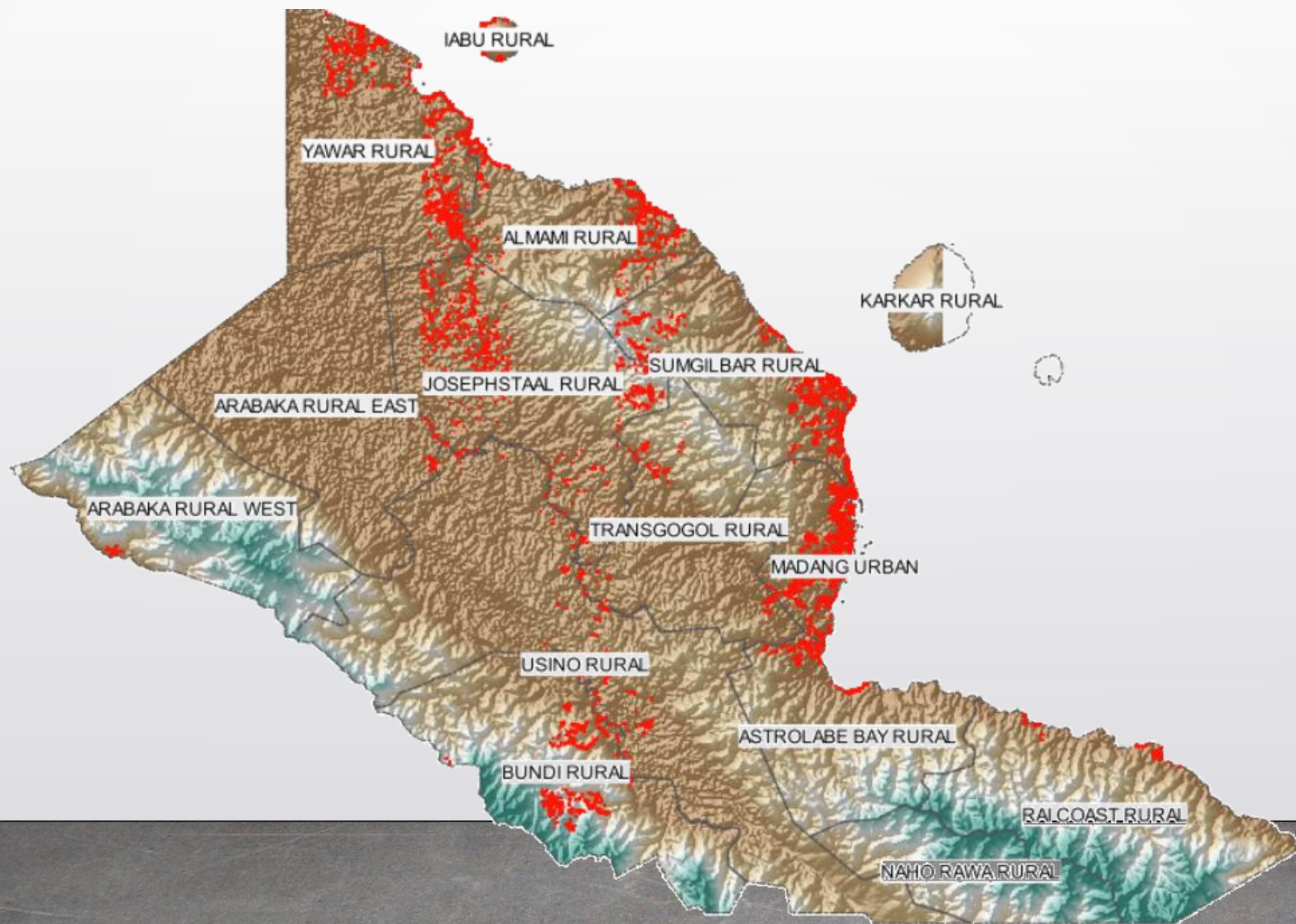


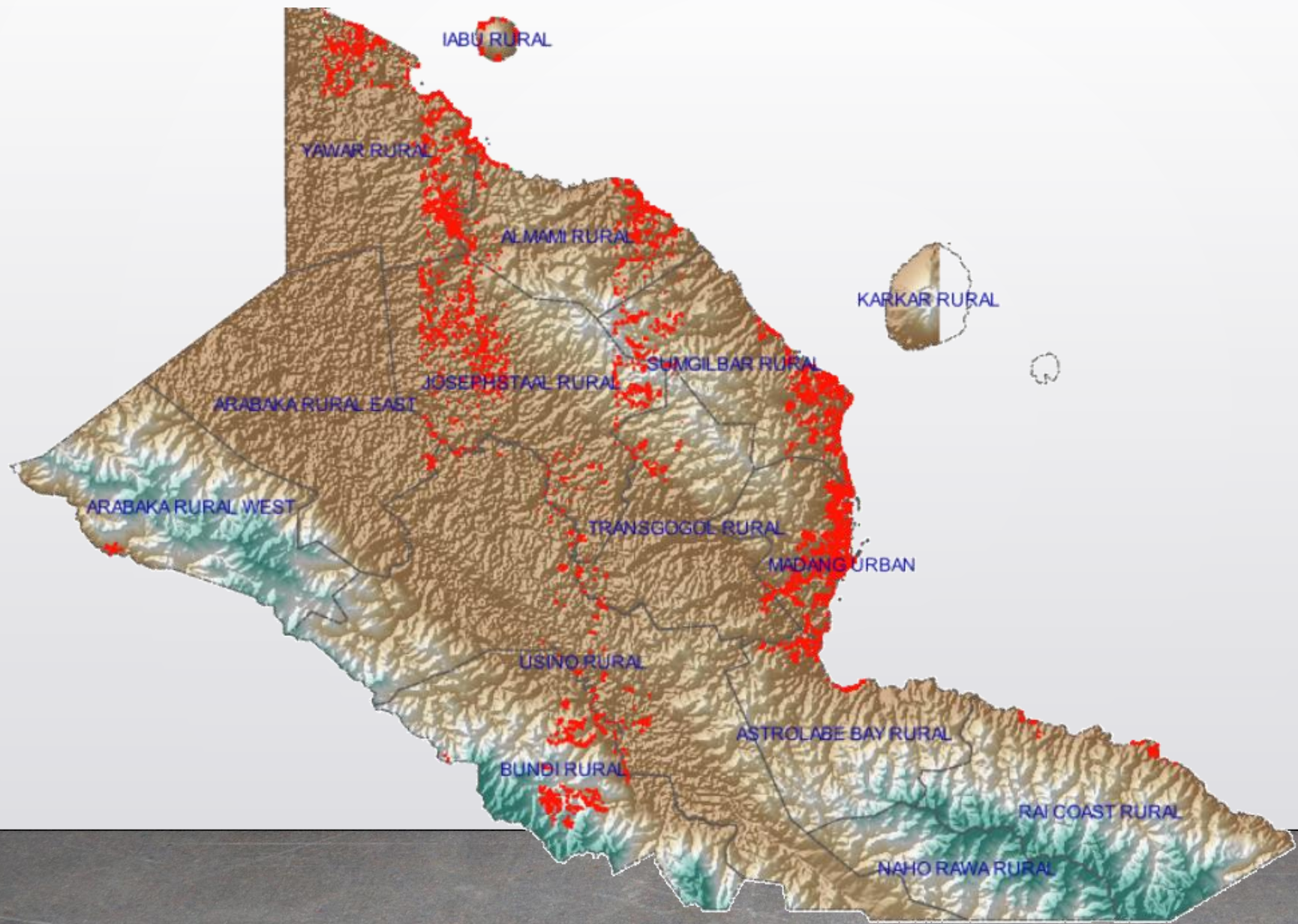
7. Change symbology of building, & Madang

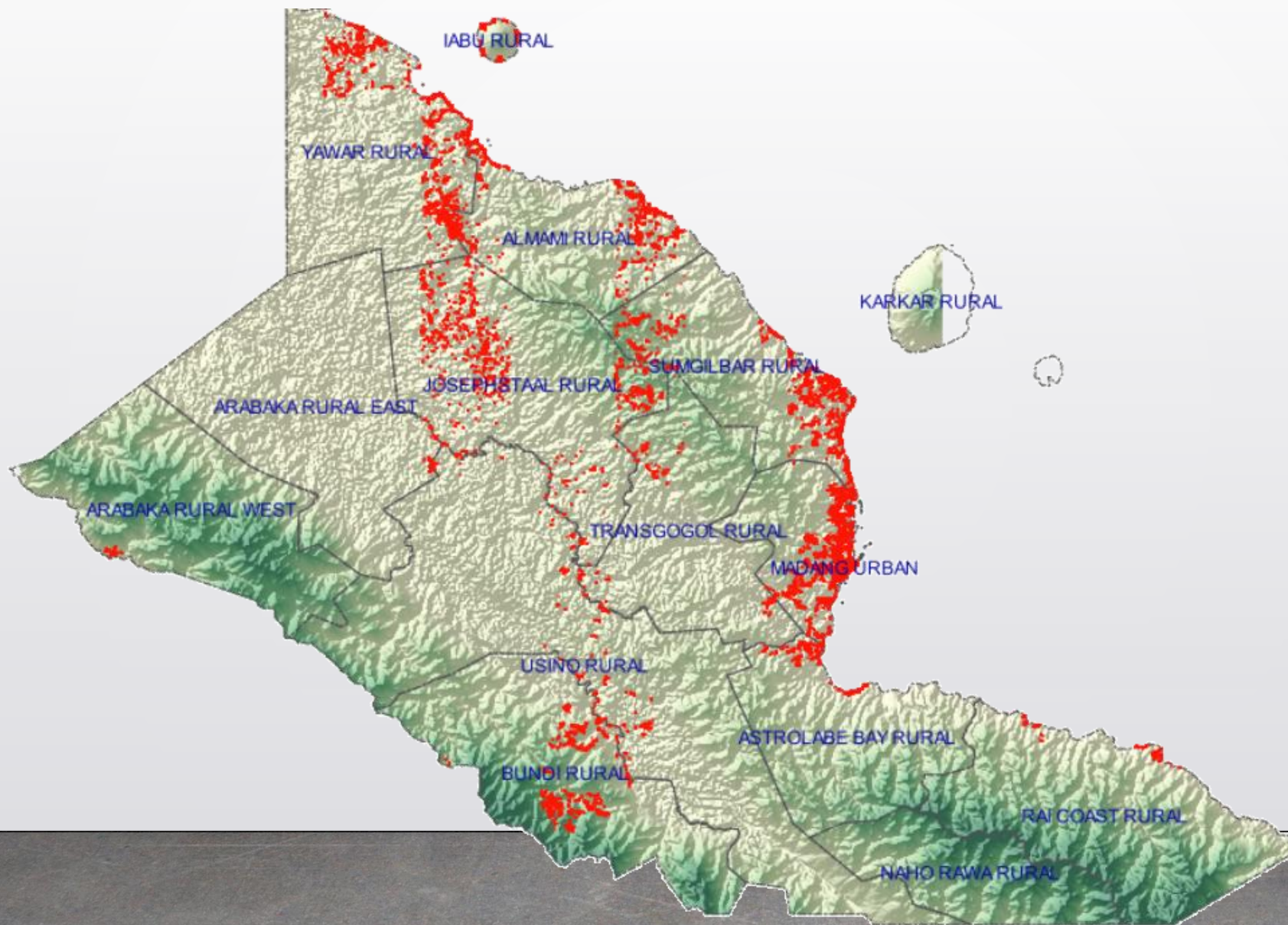


8. Add labels (local-level govt name) to Madang











Thank you!