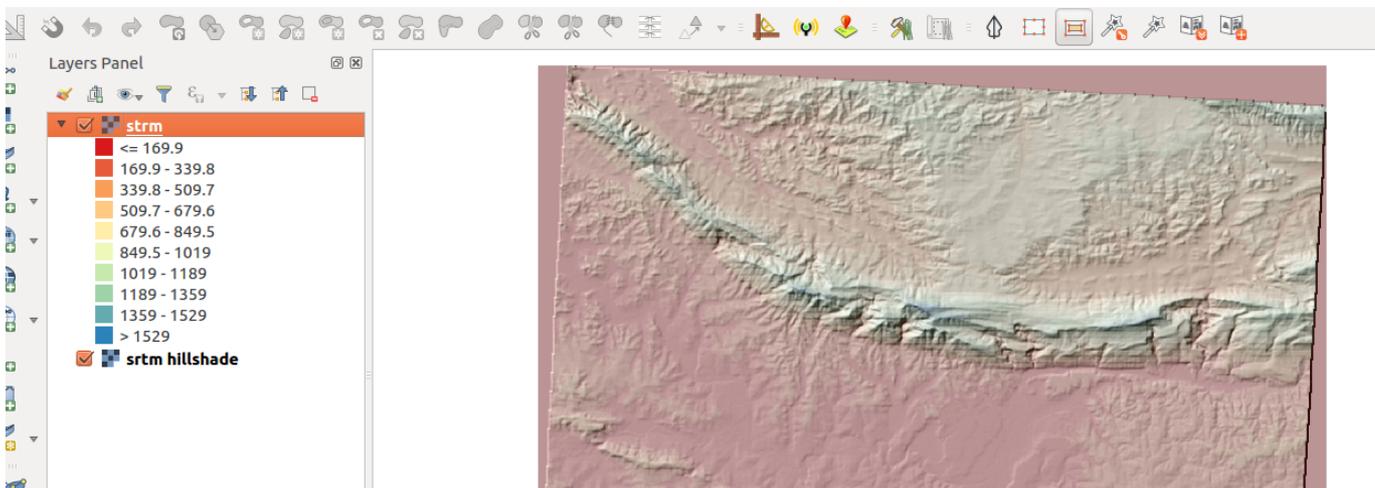




Raster symbology in Context

“Raster symbology involves assigning colours to pixel values of an image”

This is so that they appear visible and you can easily differentiate between the pixels, thus making it easy to interpret the meaning of each pixel. In this module, we look at the various ways in which pixel values can be assigned colours. We will also look at the properties of raster and the effects produced by changing them. We will look at how rasters can be blended with different colours so that we highlight particular features.



You try:

Goal: To learn to symbolise raster layers and generate DEM products on the fly.

- Load the data twice into QGIS and rename them as srtm and srtm_hillshade.
- Style srtm using the specified render type and choose an appropriate colour ramp.
- Observe the results and change the **render type** back to single band.

Give an explanation of what has just happened.

- Symbolise the srtm using any of the colour ramps available.
- Symbolise srtm_hillshade using Hillshade render
- Change the rendering order of the rasters. Put srtm on top of srtm_hillshade.
- Change the transparency for the **srtm layer to 50%**.
- Observe the results and what features can you see from the overlain rasters.

Name	Expectation
Render Type	Pseudo-colour
Terrain analysis	Hilshade render

data	appendix3-local-data/STRM/ srtm_41_19.tif
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More about Raster symbology in Context

A raster image can be differentiated with the number of bands it consists of. They are single band image and multispectral images. Single band image usually have pixel values that range from 0-255 and are represented by a grey band. In order to symbolize the raster layer with 1 band, the layer needs to be rendered using a single band pseudocolour render.

Multi-spectral images consist of 3 or more bands. These bands can be used to create a three-band colour composite also known as an RGB. Satellite imagery consists of multiple bands which can be combined in different combinations to give a visual representation and also highlight particular features from the imagery.

When styling raster layers it is important to look at the range for the pixel values. Aerial photographs cannot be symbolized because they consist of the bands red, green and blue which have been fused together.

It is also important to understand what kind of data is being represented by the raster so that you can allocate the correct colour ramp and choose the correct interpolation method and mode.

Check your knowledge:

1. A Raster is:
 - a. A type of musician that sings reggae.
 - b. A type of GIS data where a pixel is used to represent a phenomenon on the earth surface
 - c. A GIS data set that consists only of satellite images
2. Styling a raster entails:
 - a. Converting each individual pixel or group of pixels into a colour model
 - b. Making the raster pretty
 - c. Converting the pixel values into different categories
3. Raster pixels range from 1 - 255 only:
 - a. True
 - b. False

Further reading:

- docs.qgis.org: https://docs.qgis.org/2.14/en/docs/training_manual/rasters/changing_symbology.html