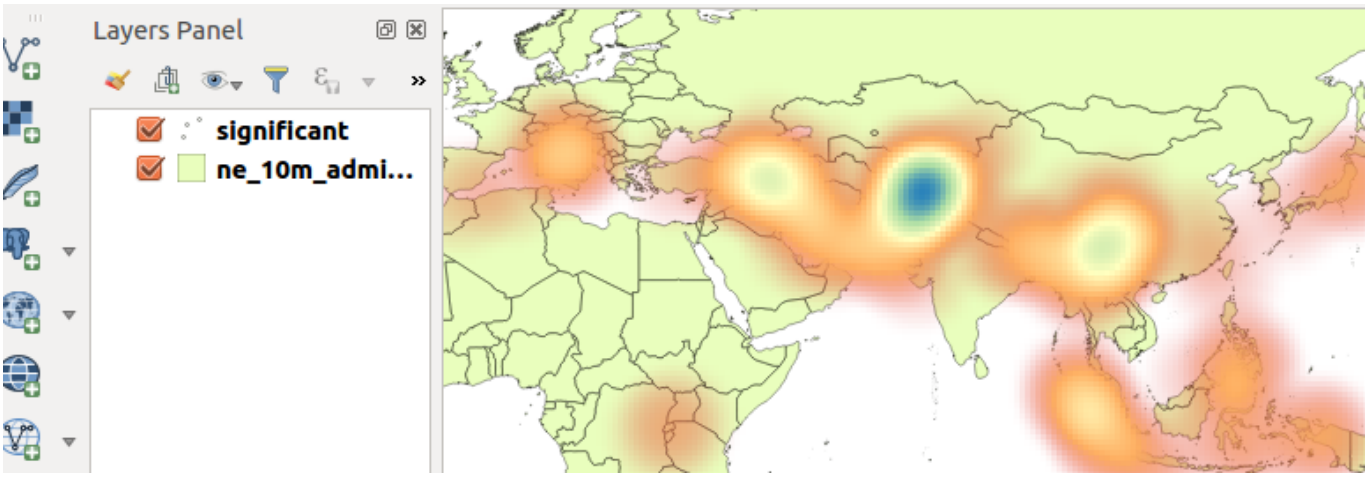
Section : . Symbology

Module : . Heatmaps

Heat maps in Context

"Heat map visualizes hotspots in the distribution of features on the map i.e. dense areas will be highlighted in a heat map, based on the parameters you use for processing it"

In this module, we explore heat maps as a point symbolisation technique.



You try:

Goal: To learn creating heat maps as a symbolisation technique

Data: heatmaps/earthquake.csv and *ne_10m_admin_0_countries* from heatmaps/ne.sqlite.

- Load the earthquake layer as a spatial layer.
- Load the ne_10m_admin layer
- Change the country layer transparency as specified
- Change the layer order to put the point layer on top
- Open the properties of the point layer and click the style tab.
- Change to the specified render type
- Choose the specified colour ramp
- Apply the changes and observer the map
- Why does the whole map colour change?
- Edit the colour ramp. Make colour 1 transparent.
- Apply the changes and observer.
- Open the properties of the point layer and change rendering quality to fastest. Observe the changes.
- Change the weight points by option to use the specified attribute.

NB: What can you infer about the intensity of the heat map in relation to deaths?

Name	Expectation
Render	Heat map

Country transparency	70
Colour ramps	Spectral
Attribute	Deaths

More about

Heat maps use colour to communicate relationships between data values that would be difficult to understand if presented numerically in a spreadsheet or attribute table. A colour ramp helps to visualise a heat map with low values having colours at the bottom of the colour ramp and high intensity values corresponding to darker values on the colour ramp.

Check your knowledge:

1. When would it be useful to use a colour ramp:
   a. *To depict how a player was behaving during a soccer match.*
   b. *To show that the layer being represented is a vector layer.*
   c. *Heat maps can also be applied to raster data.*
2. Which statement is false:
   a. *A colour ramp is used to show variation in a phenomena of interest*
   b. *Heat maps are extensively used by scientist*
   c. *Heat map points can be weighted by a discrete column*
3. A colour ramp is a type of vector analysis:
   a. *True*
   b. *False*

Module video tutorial:

- https://youtu.be/hAHJMOUgEko

Further reading:

- Heat-map-using-qgis: http://grindgis.com/software/heat-map-using-qgis
- Plugins_heatmap: http://docs.qgis.org/2.14/en/docs/user_manual/plugins/plugins_heatmap.html

Download the sample data for the lesson from http://changelog.qgis.org/media/images/lesson/worksheet/external_data/f25dbca4d158b19fe50a2ea59e76fe07490aadc6.zip.