



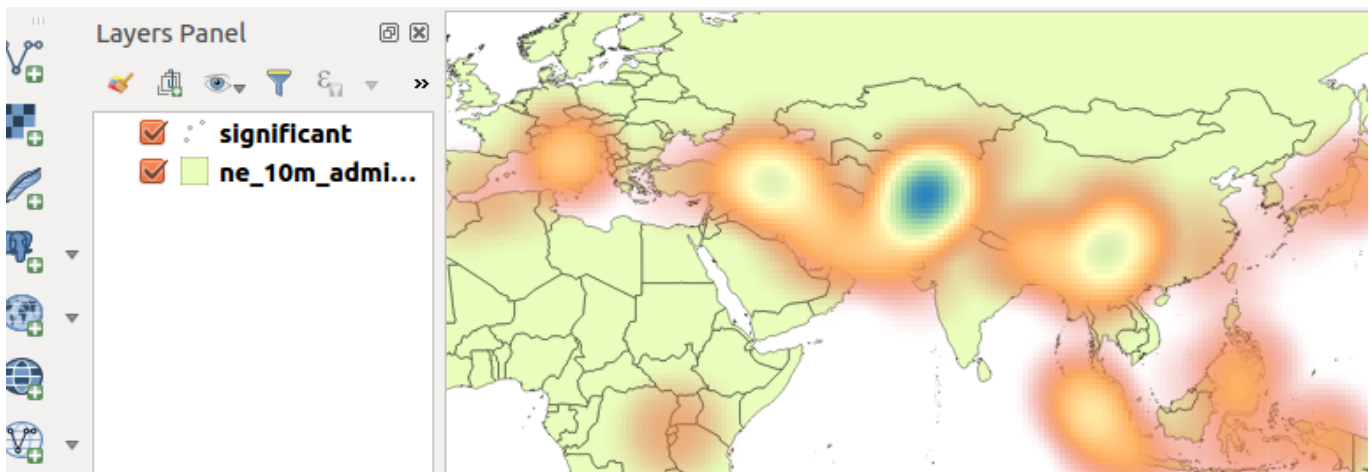
## Section : 3. Symbology

### Module : 3.11. 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 observe the map
- Why does the whole map colour change?
- Edit the colour ramp. Make colour 1 transparent.
- Apply the changes and observe.
- 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

### **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](http://docs.qgis.org/2.14/en/docs/user_manual/plugins/plugins_heatmap.html)

Download the sample data for the lesson from [http://staging.changelog.kartoza.com/media/images/lesson/worksheet/external\\_data/4859179676a5fe2fde4d1a1141f2ee530a46ea0e.zip](http://staging.changelog.kartoza.com/media/images/lesson/worksheet/external_data/4859179676a5fe2fde4d1a1141f2ee530a46ea0e.zip).