



# Section:VectorAnalysis

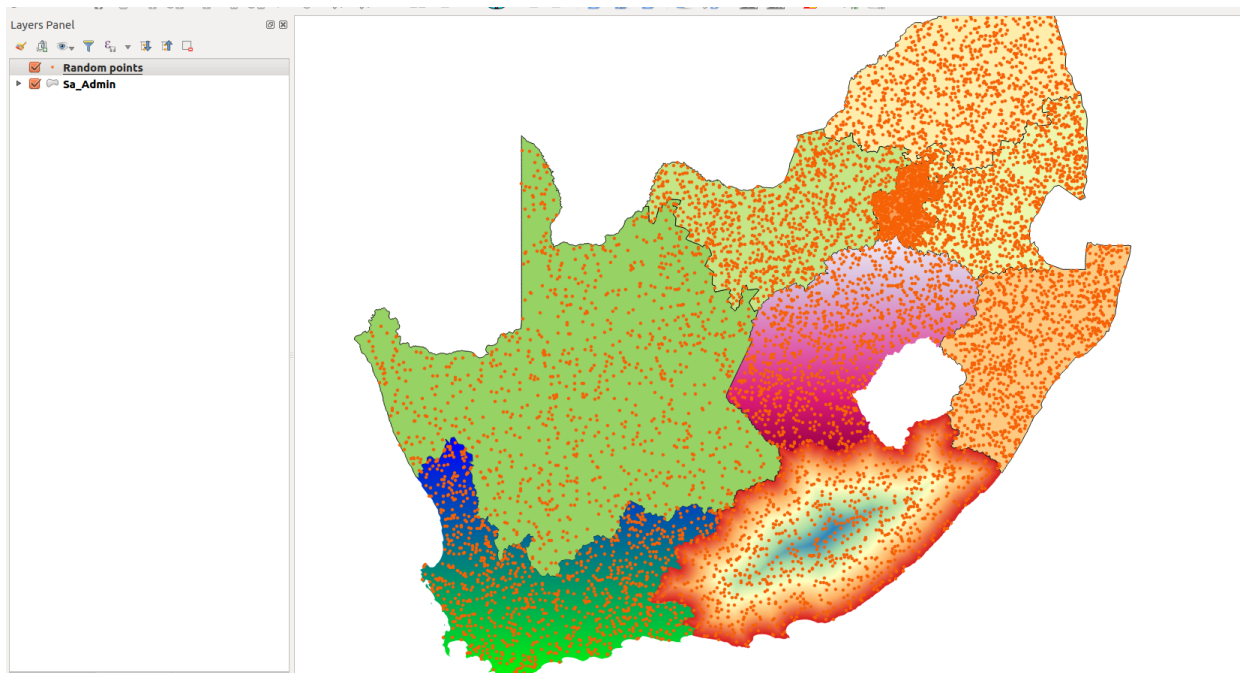
Module :Population Density



## Population dot density in Context

“Population distribution describes a way in which people are spread across the earth surface. Population distribution is usually shown by a dot density map where each dot represent a certain number of people.”

In this module we will learn how to create a dot density map.



### You try:

**Goal:** Create a dot density map where 1 dot represents 1000 people.

**Data:** appendix3-local-data-district.shp,kzn\_population.csv

- \* Load the layers into a new project.
- \* Right click on districts and choose properties.
- \* Select the join tab and create a join. Use the join field.
- \* Create a join using the specified join columns.
- \* Select which fields to join to. ( select area\_km,population\_2016,density)
- \* Activate custom field name prefix and give an appropriate name.

✓ Right click on district layer and choose 'Save As'.



- ✓ Change the CRS to the specified one and proceed to save the layer. Make sure the name correspond to new layer.
- ✓ Use the spatial algorithm to create the random points using the district\_hbk layer.
- \* Symbolise the resultant point layer and create a legend that shows your results.

Name	Value
CRS	South African CRS : HBK_NO_29
Join column	<b>District:code</b>
Spatial algorithm	Random Points
New layer	district_hbk

## More about dot density maps

Dot density maps are effective at showing density variations on geographic landscapes. Dot maps are advantageous when mapping phenomena that change smoothly over a space, as the dot maps will visually match the phenomena. There are mainly two type of dot density maps namely one-to-one and one-to-many dot maps.

Dot density maps can be used in conjunction with other thematic maps to understand phenomena that occurs across the earth surface.



### Check your knowledge:

**1. What is it useful to know population distribution:**

- a) Because it will interrupt human activity like a farming
- b) For planning purpose, resources use against people
- c) It does not matter as long as we know the population density

**2. What is population distribution and how is it represented in a GIS:**

- a) A type of gis dataset that shows how people behave
- b) The spread of people across the terrain
- c) Spread of points in a vector layer

**3. Is population distribution a type of dataset:**

- True
- False

Answers: 1b, 2b, 3f



### Further reading:

[http://docs.qgis.org/2.14/en/docs/user\\_manual/processing\\_algs/qgis/vector\\_creation\\_tools.html#random-points-inside-polygons-fixed](http://docs.qgis.org/2.14/en/docs/user_manual/processing_algs/qgis/vector_creation_tools.html#random-points-inside-polygons-fixed)

<http://smgis.co.za/qgis-population-density-tutorial/>