



“Georeferencing is the process of assigning real world coordinates to a map so that it draws in its actual geographic position”

The screenshot shows the QGIS desktop environment. The top toolbar contains various icons for map navigation and editing. The 'Layers Panel' on the left shows a single layer named 'maseru_geo'. The main map window displays a detailed map of Maseru, Lesotho, and the border with the Republic of South Africa. The map uses a color-coded system to distinguish between different types of land use and infrastructure. A legend on the right side of the map provides a key for these symbols, including major routes, roads, railways, and various public facilities like hospitals and schools. The map also shows the Orange River and the Maseru Dam, which is a significant landmark in the area.

Goal: To learn how to georeference a scanned map. This will enable overlay with other existing layers in the same CRS or different CRS

- Once you have finished georeferencing export the raster and it should overlay the layers loaded in QGIS

Name	Expectation
CRS	4326
Reference Layer	Vector from natural earth

RasterOperation	Georeferencing
Operation	On the fly projection
RasterOperation	Lesotho.jpg



More about

It is important to understand that when you georeference a map you should use the CRS of the original map (if you know it). Georeferencing, when done correctly, will enable layers with different projections to be overlain together when on the fly projection is activated.



Check your knowledge:

1. Georeferencing flows us to:
 - a. *Assign real world coordinates to a map*
 - b. *Enable map layers to be overlaid together once a raster image has been georeferenced.*
 - c. *Only raster layers can be georeferenced*



Further reading:

- qgistutorials.com: http://www.qgistutorials.com/en/docs/advanced_georeferencing.html
- docs.qgis.org: https://docs.qgis.org/2.14/en/docs/training_manual/forestry/map_georeferencing.html
- ordnancesurvey.co.uk: <https://www.ordnancesurvey.co.uk/support/understanding-gis/georeferencing.html>

Download the sample data for the lesson from http://staging.changelog.kartoza.com/media/images/lesson/worksheet/external_data/496ad1b3c77e7d825972b8a15379620d10687d40.zip.