

# Hospital site suitability Analysis model for Nyeri constituency

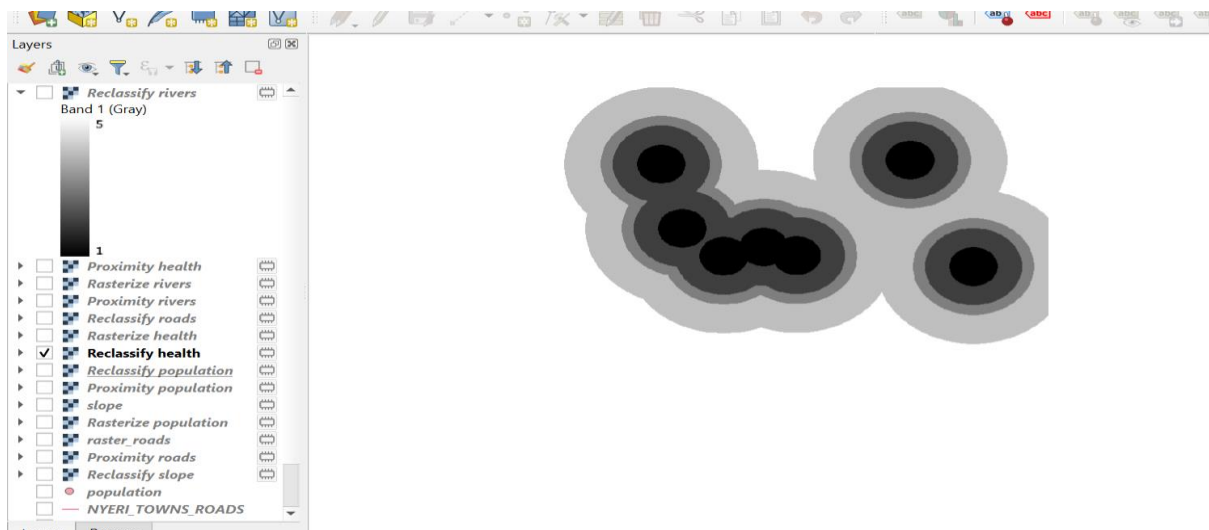
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## Criteria for Hospital site selection

- 1) Slope -Hospitals should not be constructed on a steep slope to reduce the cost of production.
- 2)Accessibility -Hospitals should be near roads for some reasons
  - i)Easy delivery of medicines and medical equipment.
  - ii)Handling patients with emergency medical treatment.
  - iii)To make it easy for patients to access the hospital.
- 3)Population-Hospitals should be established in areas with high population since population is directly proportional to medical needs.
- 4)Rivers- Hospitals should be established away from rivers in order to avoid the pollution of rivers.

Criteria for our suitability analysis screenshots

## Reclassified health



## Reclassified population



## Reclassified slope



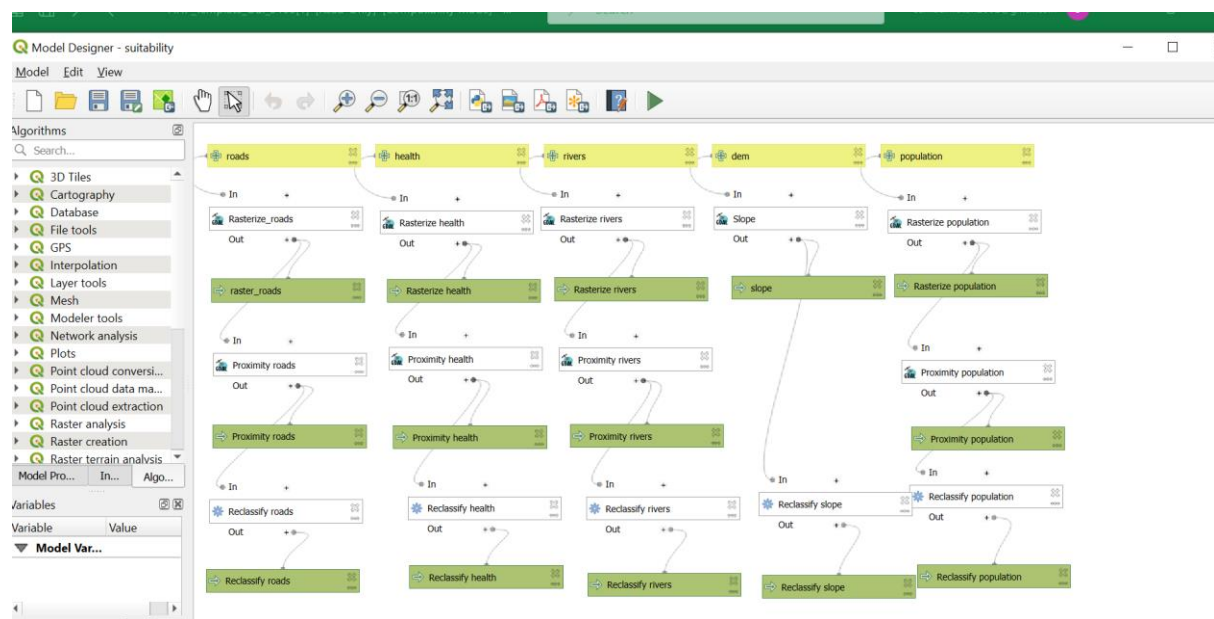
## Reclassified rivers



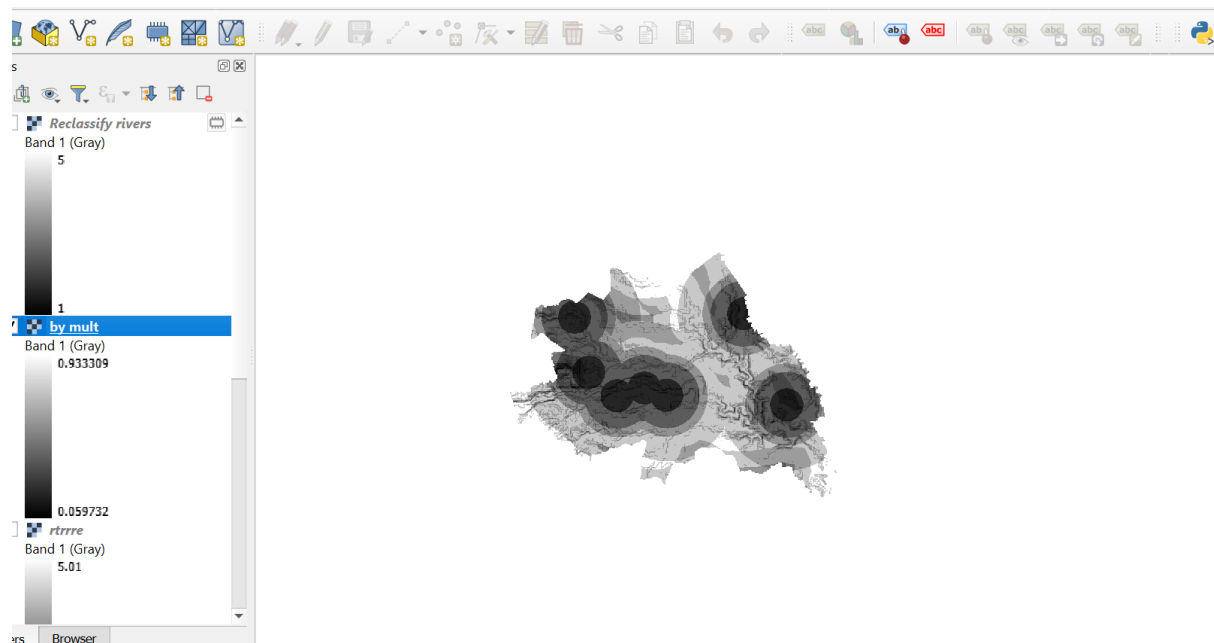
The screenshot shows the QGIS desktop environment. The top menu bar includes 'Project', 'Edit', 'View', 'Layer', 'Settings', 'Plugins', 'Vector', 'Raster', 'Database', 'Mesh', 'Processing', and 'Help'. Below the menu is a toolbar with various icons for map navigation and processing. The 'Layers' panel on the left lists the following layers from top to bottom: 'Reclassify rivers' (Band 1 (Gray) 5), 'Proximity health', 'Rasterize rivers', 'Proximity rivers', 'Reclassify roads' (checked), 'Rasterize health', 'Reclassify health', 'Reclassify population', 'Proximity population', 'slope', 'Rasterize population', 'raster\_roads', 'Proximity roads', 'Reclassify slope', and 'population'. The map view on the right displays a grayscale map of a region, likely representing the output of the 'Reclassify roads' process.

	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	
	AHP FOR SOLID WASTE DISPOSAL																					
Pairwise Comparison Matrix																						
	roads	sewer	health	slope	population	Requirement 6	Requirement 7	Requirement 8	Requirement 9	Requirement 10	Requirement 11	Requirement 12	Requirement 13	Requirement 14	Requirement 15	AHP					Consistency check	
roads	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.245	25.00%	Consistency OK		
sewer		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.221	22.10%			
health			1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0.196	19.60%			
slope				1	2	2	2	2	2	2	2	2	2	2	2	2	2	0.143	14.30%			
population	1/3	1/2			1	1	1	1	1	1	1	1	1	1	1	1	1	0.195	19.60%			
Requirement 6						1	1	1	1	1	1	1	1	1	1	1	1	0.000	0.00%			
Requirement 7							1	1	1	1	1	1	1	1	1	1	1	0.000	0.00%			
Requirement 8								1	1	1	1	1	1	1	1	1	1	0.000	0.00%			
Requirement 9									1	1	1	1	1	1	1	1	1	0.000	0.00%			
Requirement 10										1	1	1	1	1	1	1	1	0.000	0.00%			
Requirement 11											1	1	1	1	1	1	1	0.000	0.00%			
Requirement 12												1	1	1	1	1	1	0.000	0.00%			
Requirement 13													1	1	1	1	1	0.000	0.00%			
Requirement 14														1	1	1	1	0.000	0.00%			
Requirement 15															1	1	1	0.000	0.00%			
Column totals	4.3333	4.5000	5.0000	8.0000	5.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
1	See (Worksheet)																					
2	0.230769231	0.222222222	0.2	0.375	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.245	1.95258	Lambda		
3	0.230769231	0.222222222	0.2	0.25	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.221	0.99269	0		
4	0.230769231	0.222222222	0.2	0.125	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.196	0.92799	5		
5	0.076923077	0.111111111	0.2	0.125	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.143	1.45085	4		
6	0.230769231	0.222222222	0.2	0.125	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.195	0.97799	6		
7			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0	0		

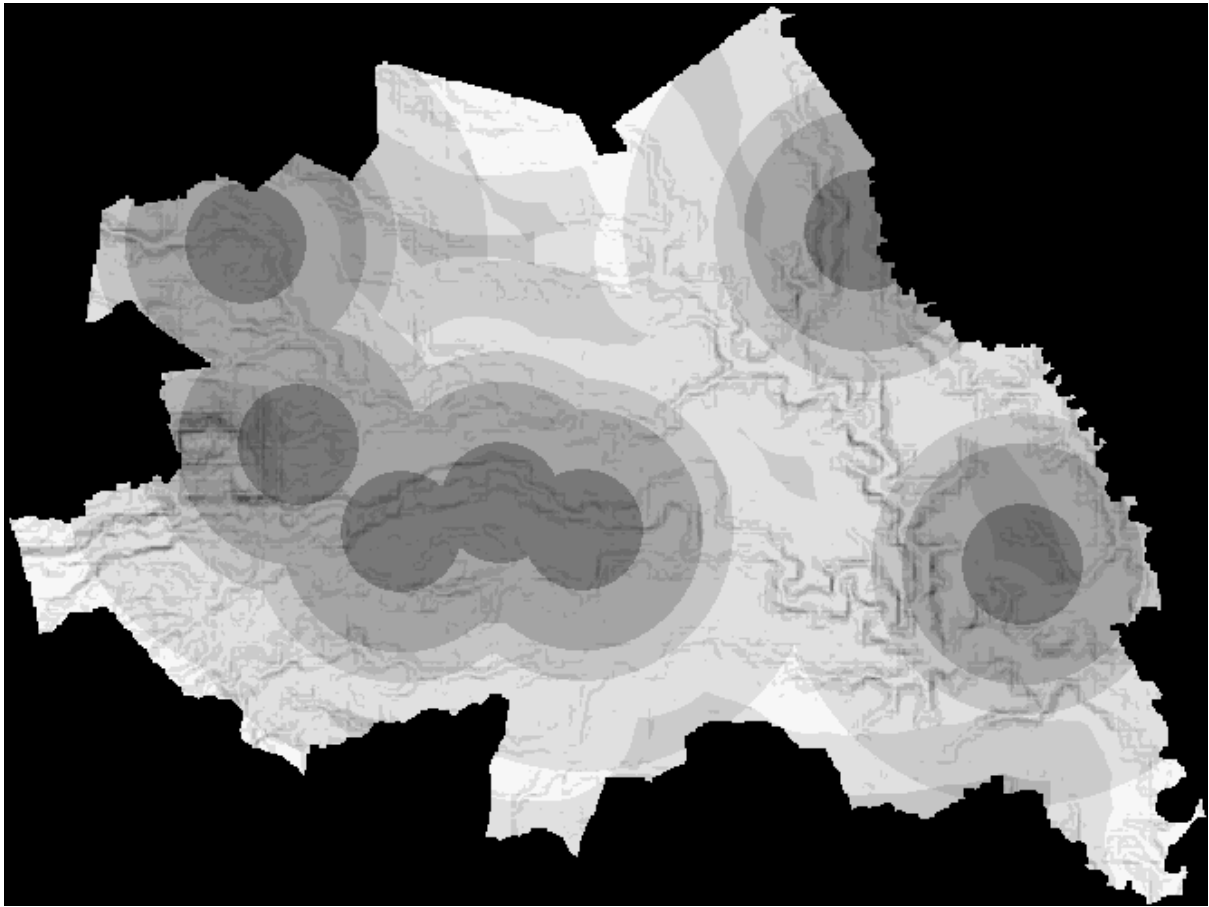
# Model



## OUTPUT by multiplication



OUTPUT by addition



The darker the area the better the site