Exploratory Geospatial Analysis of Urbanicity
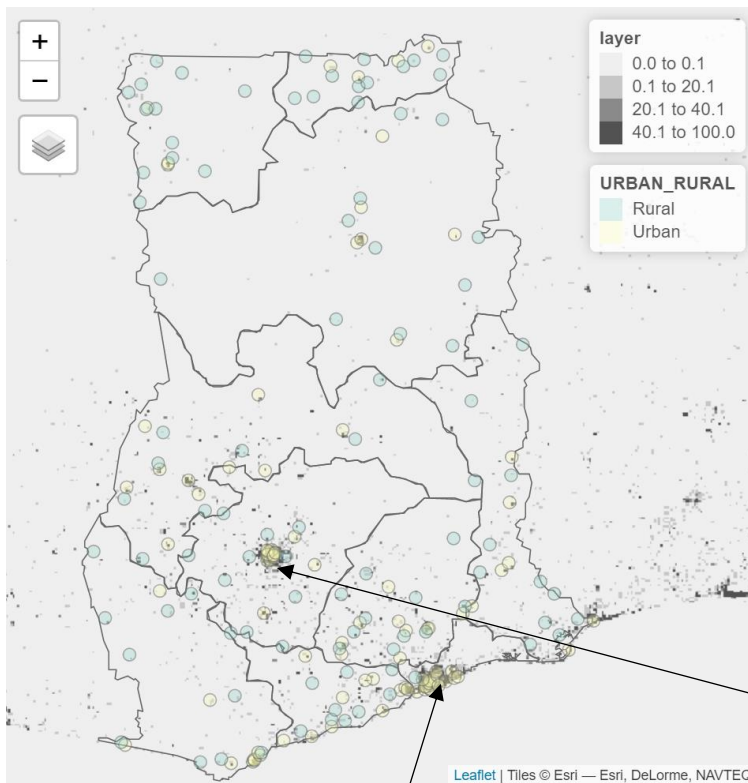
By: Ama K. Owusu-Darko

Background

This exploratory analysis was done using vector data form the 2019 Ghana Malaria Indicator Survey and raster data of built up areas from the 2014 Global Human settlement data from the European Commission Repository.

The goal of this analysis was to determine if the urban/ rural designation given to geographic clusters in the Ghana Malaria Indicator Survey correlated with the built up environment (presence of constructed buildings) of the geographic clusters.

This is to tackle one objective of the research question to investigate the relationship between urban living and the prevalence of childhood anaemia in Ghana.

layer
0.0 to 0.1
0.1 to 20.1
20.1 to 40.1
40.1 to 100.0

URBAN_RURAL
Rural
Urban

Leaflet | Tiles © Esri — Esri, DeLorme, NAVTEQ

Methods

The map was created using tmap package in the R statistical software 4.0.3.

Results

Accra and Kumasi, Ghana's largest cities have a cluster of yellow circles (urban areas according to the Ghana Malaria Indicator Survey) and black shaded areas showing that there are a lot built up areas that is constructed buildings from the 2014 Global Human settlement data

Kumasi is Ghana's second most industrial city with a lot of constructed buildings

Accra, Ghana's capital is a highly urban area with a lot of constructed buildings