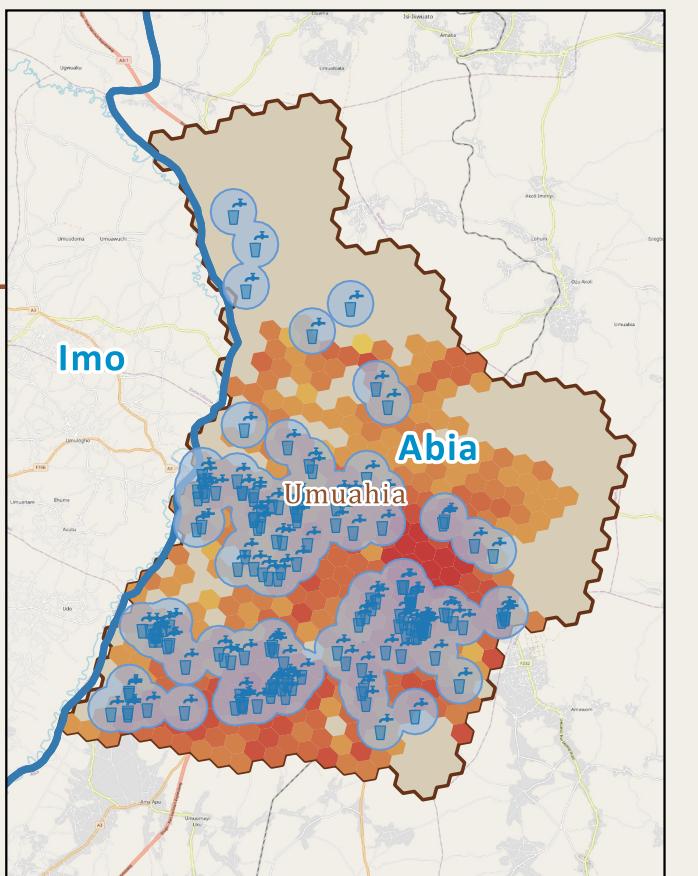
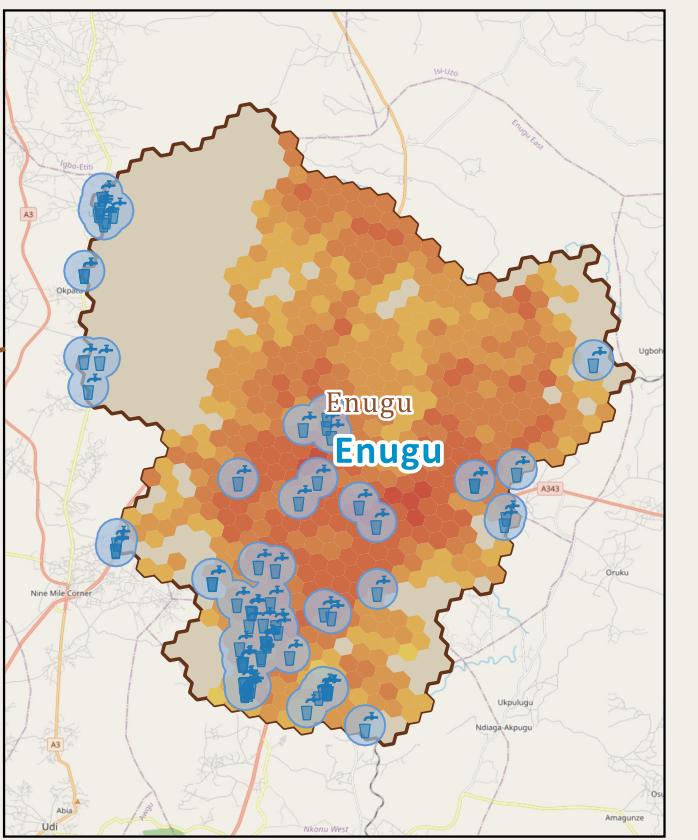
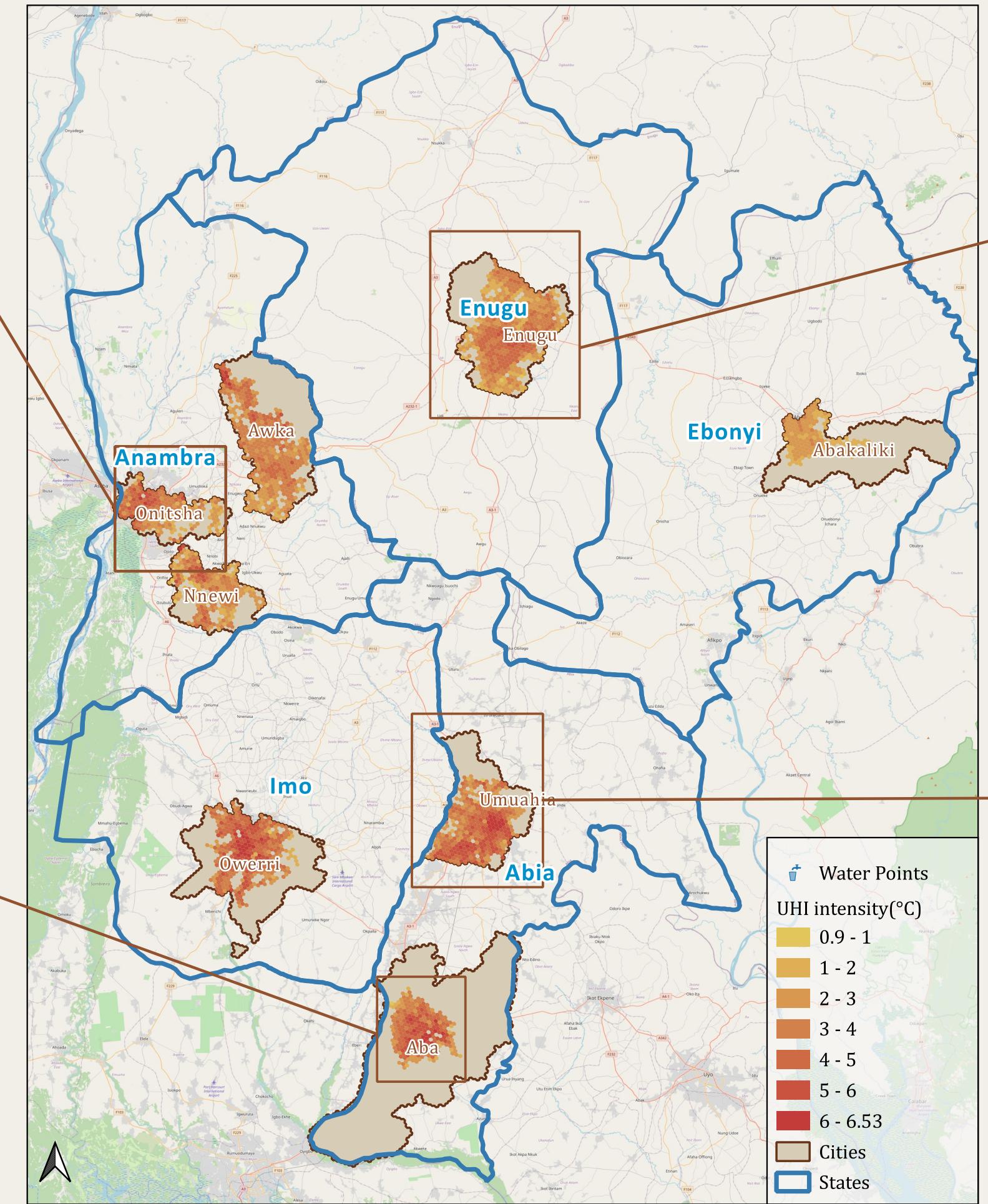
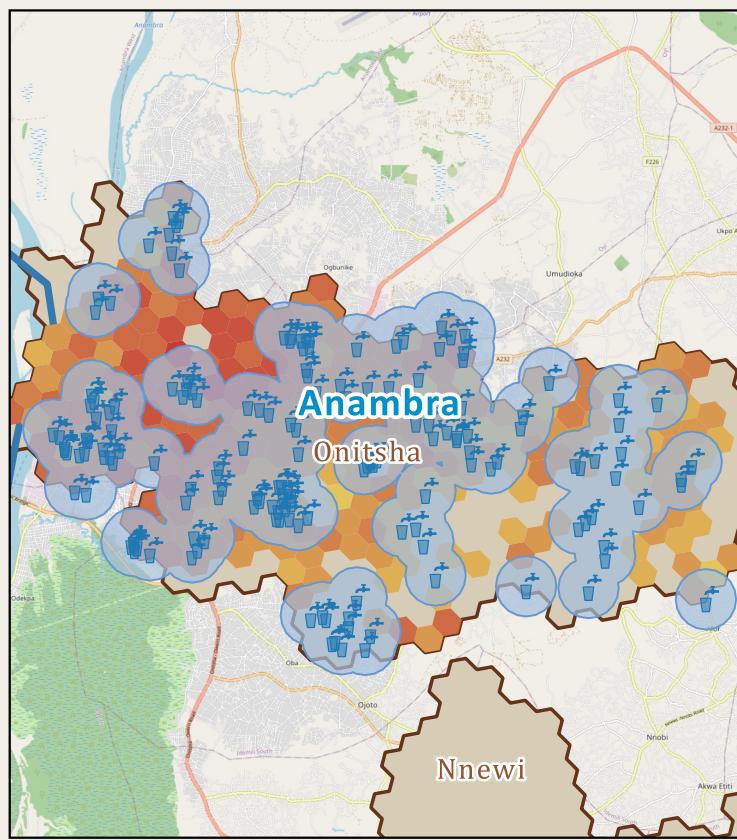


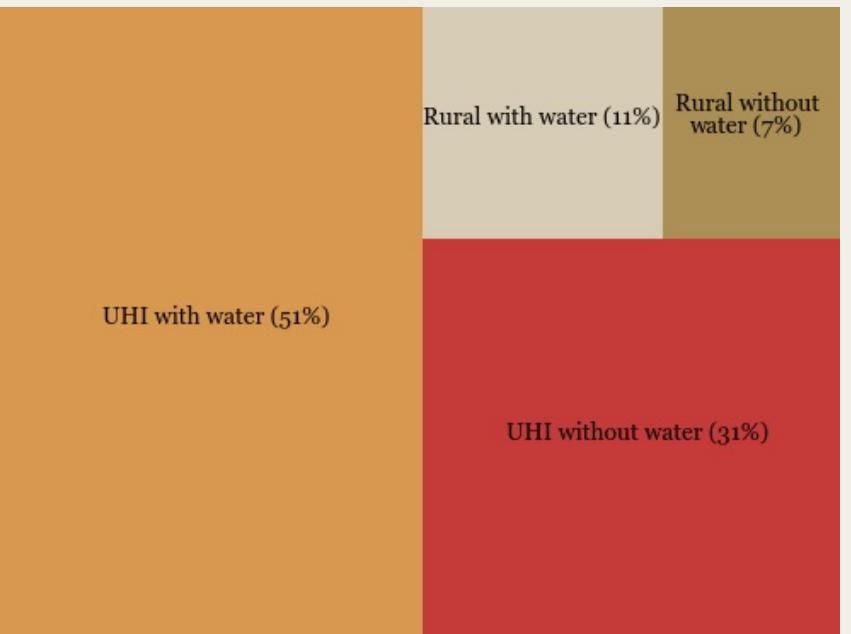
Urban Heat Islands and Water Crisis in South East Region of Nigeria

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As a developing country with rapid urbanization, the Nigerian population faces the stress of living in urban heat islands(UHIs) while with limited access to safe water.

Using satellite and spatial data in the South East of Nigeria, we delineated the population living in UHIs in its largest eight cities. We found that 82% of the total population is experiencing UHI effects, while 31% of the total population do not have access to water points within 1km.



(Fig. Water Access in the South East Major Cities of Nigeria)

The water points are unevenly distributed in the largest four cities: Aba, Enugu, Onitsha, and Umuahia.

Using spatial relationship functions, we calculated the percent of the population in these four cities who are living not only with no water points within 1 km, but also in UHIs with temperature variance larger than 3 degree Celsius.

City	Percent
Aba	61%
Enugu	37%
Onitsha	1%
Umuahia	5%

Data Sources: Landsat 8(USGS), HRSL(Facebook), GRID3, Open Street Map