Connections to Mumbai's Water Access

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India Water Treatment by State

India Treated Drinking Water

State
- 83.9 - 100 % of households
- 59.8 - 83.9 % of households
- 35.7 - 59.8 % of households
- 11.5 - 35.7 % of households
- 0 - 11.5 % of households
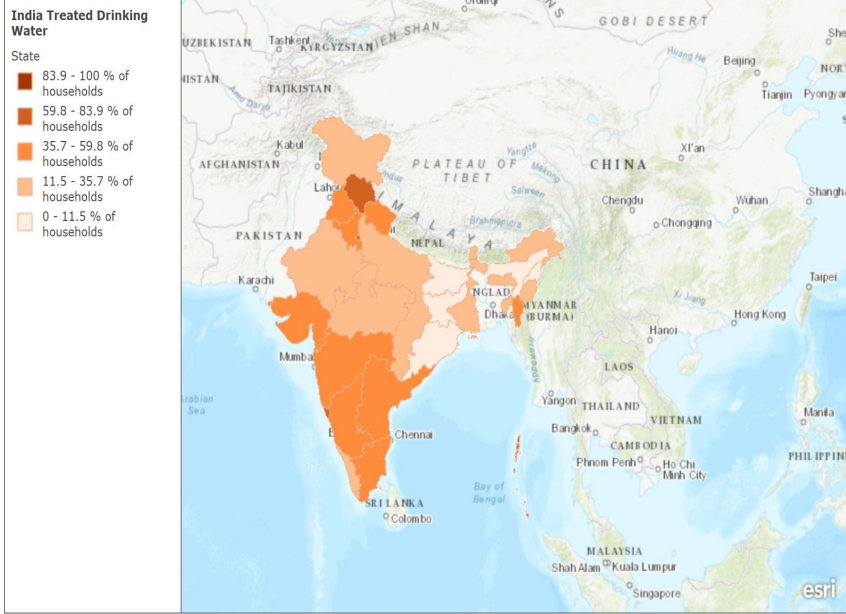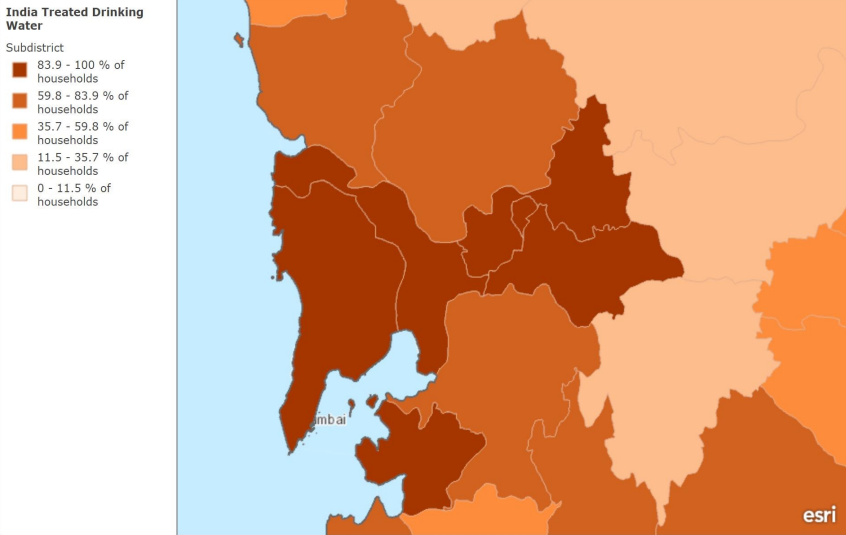

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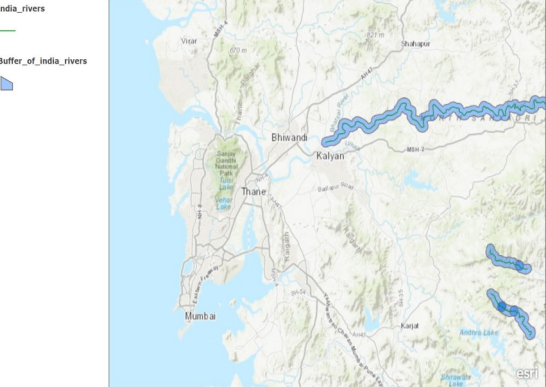
India Water Treatment by State

India Treated Drinking Water

Subdistrict
- 83.9 - 100 % of households
- 59.8 - 83.9 % of households
- 35.7 - 59.8 % of households
- 11.5 - 35.7 % of households
- 0 - 11.5 % of households

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India River Buffers

india_rivers

Buffer_of_india_rivers

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India Rivers

india_rivers

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Water Treatment In India by State

And Subdistrict

mapping water insecurity in the state of Maharashtra has close ties with the number of water treated homes that exist in the area. What is not defined within this case of study, is what a "household" is classified as within the country. It is difficult to imagine how this data correlates with wealth and housing without knowing this information specifically.

While we look at the state of Maharashtra in relation to the rest of the country, we see that the highest concentration of reported "water Treatment" within households is in the city of Mumbai.

Below, the mapping of River Tributaries throughout the country is meant to illustrate two points. The first is that no river tributaries flow into the city of Mumbai. All water treatment in this case is manmade, as noted in Anand's texts.

Techniques:

In order to illustrate the water access closest to rivers, I've created a 1 km buffer around the water. This is not meant to point to specific water plants, data which I found difficult to locate and project onto a spatial data representation, It is simply to illustrate that any projected data that could be added to this research in regards to water plants would be derived from far away water sources, not direct ones within the city of Mumbai itself, as constant flow of water is not present naturally.

Pulling from ESRI data, I layered Mumbai's Housing density with population density in order to see the Correlation between the two sets.

Project Question: How can we connect India's general Water Treatment Data to the data available on Urban Density and Population Density in Mumbai?

In this Analysis, I've decided to examine the limitations that exist in the data. While I could not find specific data that mapped water treatment facilities spatially into this project, I chose instead to examine the conditional data, or the data that comes before specific location points.

The background for this project comes from Anand's book entitled *Hydraulic City: Water and the Infrastructures of Citizenship in Mumbai.* It is here that Anand writes of Mumbai, "During the hours of water supply, some pressured water hydrates the lives of known publics. The rest silently seeps out of pipes to unknown (human and nonhuman) others. As a result, the water infrastructure is full of contests and controversies." (p.17).
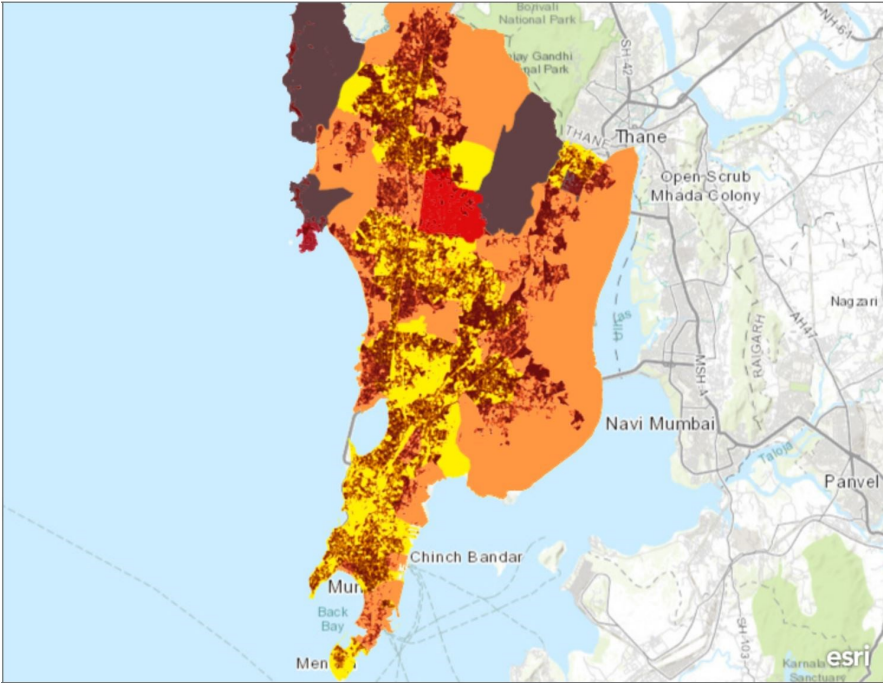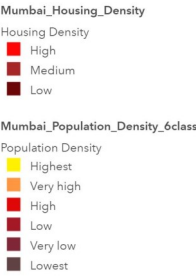
Deductive Conclusions:

I want to call attention to the red zone of the map directly below this description, which is one of the "highest population" but has one of the most sparse "housing densities". This points to an informational discrepancy between recorded informal communities/slums in the city, and who are actually housed. Therefore the data available that suggests which "households" have treated water does not account for the entire city's population.

Mumbai_Housing_Density

Housing Density
- High
- Medium
- Low

Mumbai_Population_Density_6class

Population Density
- Highest
- Very high
- High
- Low
- Very low
- Lowest

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