Geo-TA Assignment-1

Data Curation

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Date:- 14th February 2024

Project Topic :-

We have selected the topic **Construction Site Suitability Analysis**.

This topic involves assessing various factors to determine the most suitable locations for construction projects. The use of advanced technologies like Geographic Information Systems (GIS) and machine learning algorithms enhances the accuracy and efficiency of site suitability assessments, making this topic crucial for optimizing resource allocation and mitigating risks in construction projects.

Motivation :-

The motivation behind selecting the topic of construction site suitability analysis for the GeoTA data curation project lies in its direct impact on urban planning and infrastructure development. By analyzing factors such as land topography, soil composition, and environmental considerations, the project aims to optimize resource allocation, minimize risks, and enhance sustainability in construction projects. The interdisciplinary nature of the project provides a holistic learning experience, while its real-world relevance ensures that the outcomes can benefit both academia and industry.

List of Layer contributed by me :-

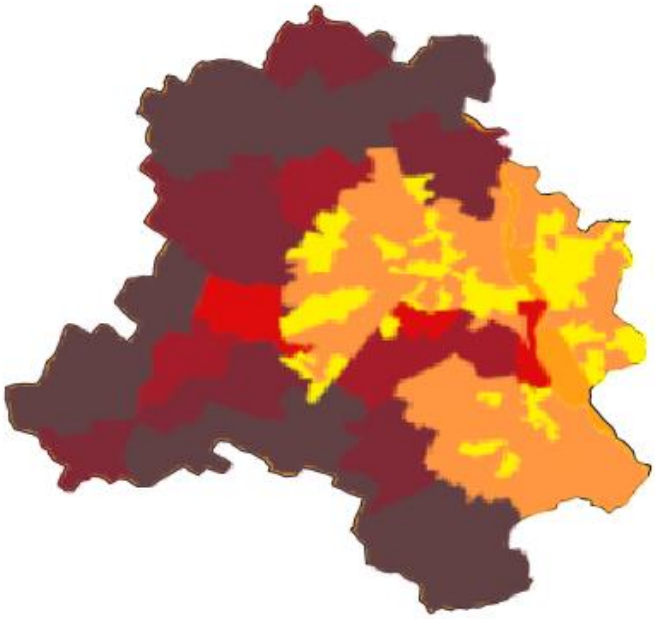
1). Delhi Boundary :-

→The Delhi boundary layer represents the administrative boundary of the National Capital Territory of Delhi, delineating the area under the jurisdiction of the Delhi government.

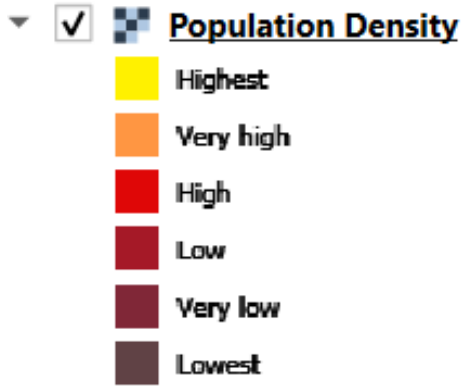
Type:- Vector

Use:- Providing the project with a spatial context and boundary reference for analysis and visualization.

2). Population Density :-



Legend:-

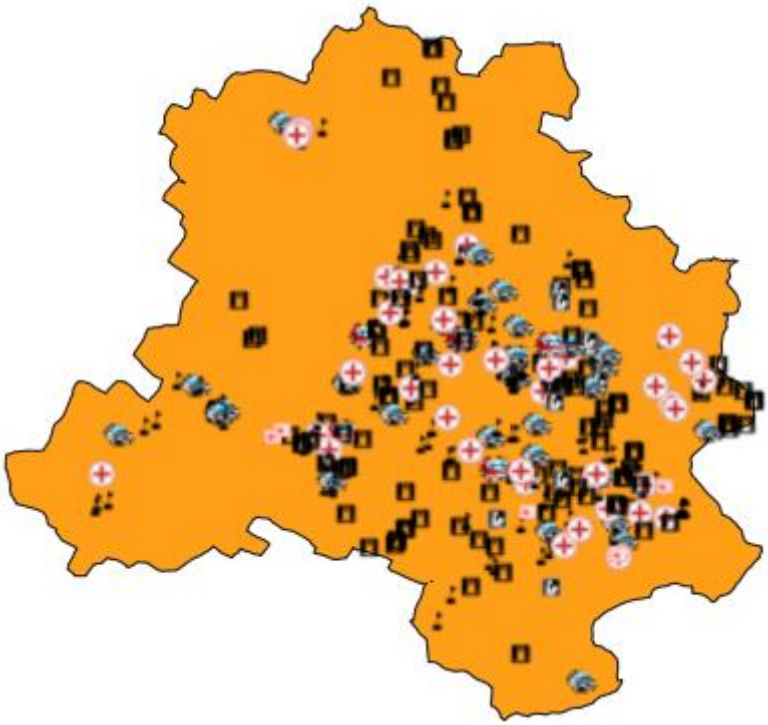


→The population density layer provides information about the distribution of population across different areas of Delhi, helping in understanding the density of population clusters.

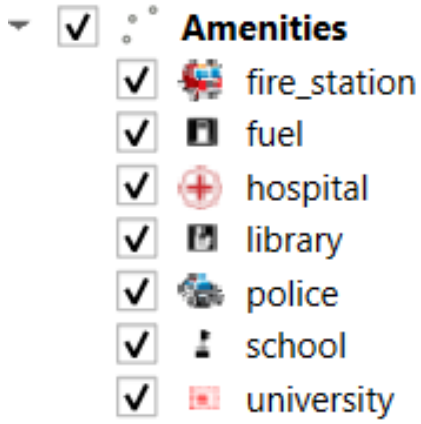
Type:- Raster

Use:- Aids in identifying densely populated regions for infrastructure planning and resource allocation.

3). Amenities :-



Legend:-

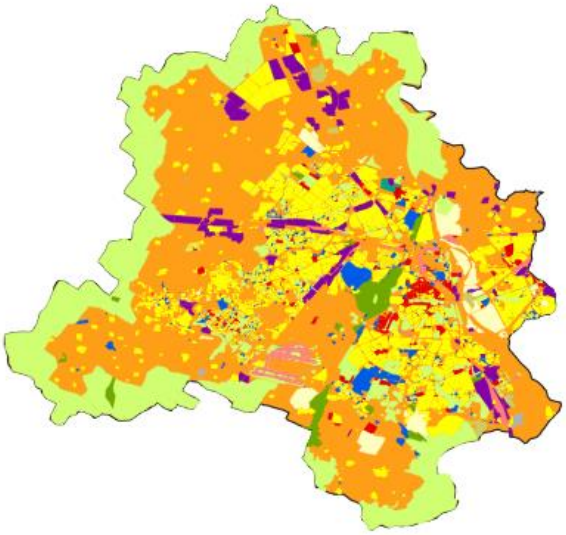


→The amenities layer includes locations of key facilities and services in Delhi, such as schools, hospitals, fuel stations, fire stations, universities,library and police stations.

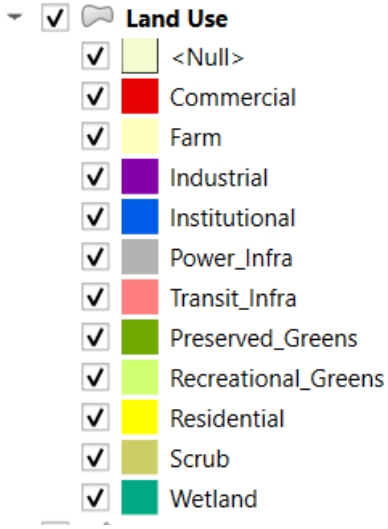
Type:- Raster

Use:- Indicates the locations of key facilities and services in Delhi, such as schools, hospitals,etc, which are essential for assessing the quality of life and accessibility in different areas.

4). Land Use :-



Legend:-

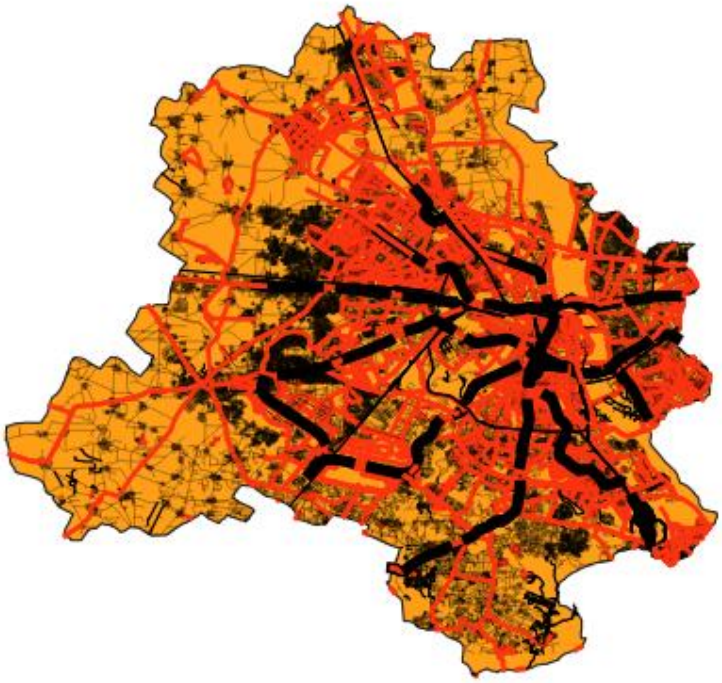


→The land use layer categorizes land in Delhi into different classes such as residential, commercial, industrial, and recreational, providing insights into the utilization of land for various purposes.

Type:- Raster

Use:- Categorizes land in Delhi into different classes (residential, commercial, industrial, etc.), aiding in urban planning, environmental assessment, and land management decisions.

5). Transit Lines:-



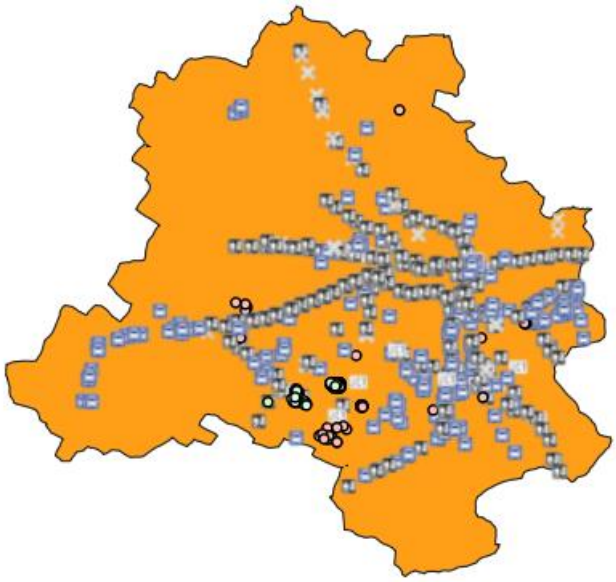
Legend:-

→ The transit lines layer includes information about the subway, rail, pathway/neighbourhood road and road routes in Delhi, facilitating transportation planning and analysis of connectivity across the city.

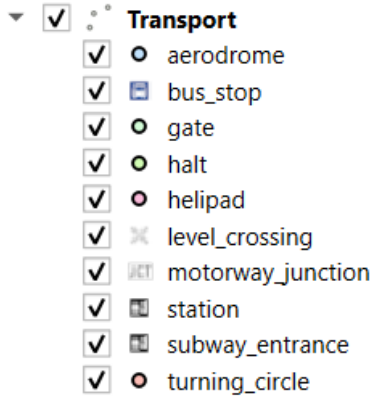
Type:- Vector

Use:- This layer helps in assessing the accessibility of different areas, identifying transportation corridors, and optimizing public transportation routes for efficient movement of people within the city.

6). Transport :-



Legend:-



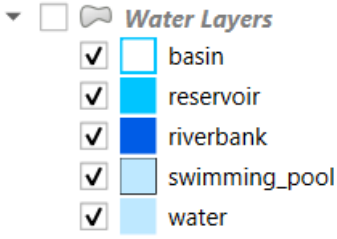
→The transport layer includes information about bus_stops, motor junction and other transportation infrastructure in Delhi, crucial for analyzing accessibility and connectivity within the city.

Type:- Vector

Use:- Provides information about subway entrances, aerodrome, helipad and other transportation infrastructure in Delhi, crucial for analyzing accessibility, traffic flow, and transportation network optimization.

7). Water Bodies:-

Legend:-



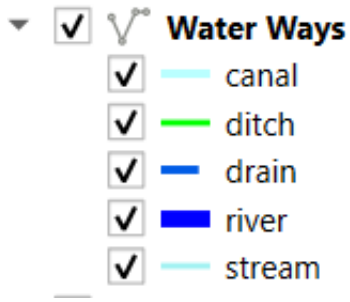
→The water bodies layer includes information about riverbank, reservoir, and other water bodies in Delhi, providing insights into the city's water resources and environmental health.

Type:- Vector

Use:- Indicates the location and extent of riverbank, reservoir, swimming pool and other water bodies in Delhi, aiding in water resource management, environmental conservation, and flood risk assessment.

8). Water Ways :-

Legend:-

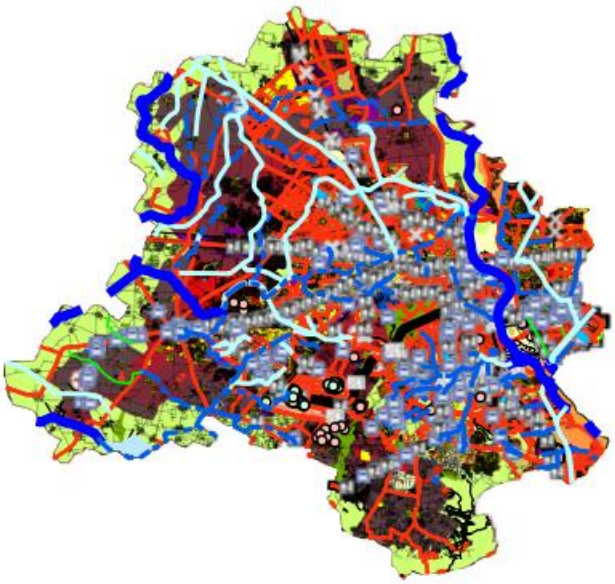


→ The waterways layer includes information about canals, drains, and other waterways in Delhi, which play a vital role in drainage and flood management within the city.

Type:- Vector

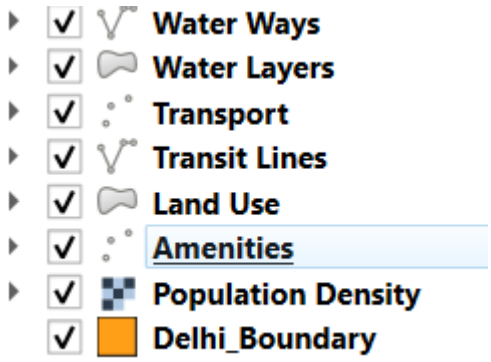
Use:- This layer is essential for drainage, flood management, and water transportation planning within the city, as it helps in identifying water flow patterns, managing drainage systems, and planning for water-based transportation routes.

Final Output :-



This is the final output with all the layers represented visually on the map.

Complete list of Layers :-



These are the list of layers contributed which I contributed for the project.

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