

Strategies for Land Economic Development in South Delhi District

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Abstract

This research paper examines the land economic development strategies in South Delhi, focusing on their impact on the socio-economic and spatial dynamics of the region. South Delhi, a diverse and economically vibrant district within the National Capital Region of India, presents a unique case study to explore how tailored land use policies and economic planning can foster sustainable growth. Using a mixed-method approach, this study integrates qualitative analysis of policy documents, stakeholder interviews, and quantitative assessment of economic indicators to analyze land use changes, economic transformations, and policy effectiveness from 2011 to 2021.

The analysis spans both macro and micro levels, investigating transformations in key areas like Mehrauli, Lado Sarai, and Aya Nagar. Findings highlight significant shifts in land use from agricultural to residential and commercial purposes, driven by rapid urbanization, infrastructure development, and policy reforms. While certain strategies have effectively promoted economic growth, challenges such as environmental degradation, congestion, uneven policy enforcement, and socio-economic disparities persist. The study underscores the need for sustainable land use planning, improved infrastructure, stakeholder collaboration, and adaptive governance frameworks to balance economic growth with social equity and environmental sustainability.

The research offers comprehensive insights and practical recommendations for policymakers, urban planners, and stakeholders to optimize land economic development strategies in South Delhi, with implications for similar urban contexts globally. The study advocates for a holistic approach that integrates sustainable development, community engagement, and resilient policy frameworks to create livable and prosperous urban environments.

Index Terms— Land Economic Development Strategies, South Delhi, Socio-Economic Dynamics, Spatial Dynamics, Land Use Policies, Economic Planning, Sustainable Growth, Mixed-Method Approach, Policy Documents, Stakeholder Interviews, Economic Indicators, Land Use Changes, Urbanization, Infrastructure Development, Policy Reforms, Environmental Degradation, Socio-Economic Disparities, Sustainable Land Use Planning, Stakeholder Collaboration, Adaptive Governance, Urban Environments.

Introduction

Background:

Sustainable land economic growth is central to enhancing a community's economic potential, improving the quality of life, and fostering job creation. Cities are hubs for economic and social development, but they face significant challenges, such as spatial inequality and deteriorating urban centers. As India's cities have less autonomy, it is crucial to adapt economic growth strategies to suit local contexts.

Need for the Study:

Globalization and rapid urbanization in developing countries like India demand a focus on regional economic growth to address these challenges. Given the diverse impact of economic transformations on different regions, there is a need for creative strategies to attract investments and ensure inclusive growth. This study aims to

evaluate the current land economic strategies of South Delhi and propose an effective framework for sustainable development.

Aim and Objectives:

The research aims to assess land economic development strategies in South Delhi. Objectives include analyzing historical land use changes from 2011 to 2021, evaluating economic impacts on stakeholders, analyzing government policies, and proposing future development recommendations.

Purpose of the Case Study:

South Delhi's significance as a case study lies in its economic diversity, strategic location, and unique socio-economic challenges. Understanding these dynamics can offer insights into optimizing land use policies and economic planning for sustainable growth, both locally and regionally.

Literature Review**Defining Land Economic Development (LED):**

LED involves managing existing resources and forming new partnerships to develop new employment opportunities and economic activity within a clearly defined zone. The process varies across geographies, with cities needing to recognize their unique strengths and challenges to become more competitive. LED combines urban planning, economics, and public-private collaboration, focusing on sustainable growth that is inclusive of all sectors.

Theoretical Framework:

Cities worldwide face the effects of globalization, requiring new urban management challenges and policy objectives. Local Economic Development (LED) is shaped by national economic policies and local-global dynamics, especially in developing nations undergoing economic adjustment programs. LED's success hinges on the collaboration between local government, the private sector, and community organizations to foster sustainable growth and inclusivity.

I'll continue to summarize and structure the remaining sections following this outline. Let me know if you want any changes or specific focuses for any parts.

Methodology**Conceptualization:**

The study began with a thorough literature review to build a theoretical framework, focusing on the need for land economic development strategies and local government roles. It examined the applicability of LED in the Indian context, particularly post-liberalization economic reforms.

Data Gathering:

Data collection followed a mixed-method approach using both quantitative and qualitative research designs. Primary data sources included focus groups, semi-structured interviews with key informants, project-affected persons (PAPs), and visual surveys. Secondary data came from government reports, policy documents, and economic indicators. The sample included stakeholders such as local professionals, street vendors, property dealers, and government officials.

Data Analysis:

The analysis was conducted at both macro and micro levels to assess transformations in different areas of South Delhi. Macro-level analysis focused on areas like Saket, Nehru Place, and Vasant Kunj, while micro-level analysis covered regions such as Mehrauli, Aya Nagar, and Lado Sarai. This approach allowed for a comprehensive understanding of the economic landscape at various scales.

Strategy Assessment:

The final step involved evaluating the effectiveness of current strategies and formulating recommendations. The study aimed to provide a well-rounded land economic development strategy for South Delhi by achieving the

objectives outlined.

Introduction to the Case Study Area: South Delhi

The case study topic is briefly introduced in this chapter, covering both the macro and micro levels. The South Delhi district is dealt with at the macro level, and the three research locations have been selected before an examination of various changes is conducted at the micro level. It will provide a brief overview of the research area and expound on the reasoning behind its demarcation.

RATIONALE FOR THE DELINEATION OF THE STUDY AREA

This thesis has defined the region of research as South Delhi. Below is a summary of the reasoning for the designation of South Delhi as the research area:

MACRO LEVEL

Has witnessed a 30% boost in sales The Delhi Development Authority developed certain rules after realizing that the physical expansion of urbanization will affect its periphery, South Delhi:

- a. **Economic Significance:** South Delhi is one of the most economically vibrant regions in the National Capital Territory of Delhi, India. It encompasses a wide range of economic activities including business hubs, commercial centres, educational institutions, and residential neighbourhoods.
- b. **Administrative Boundary:** South Delhi is a well-defined administrative district within the larger Delhi region. Its boundaries are clearly delineated, making it a manageable and distinct area for research purposes.
- c. **Population Density:** South Delhi is densely populated, with a diverse demographic profile ranging from affluent residential areas to lower-income neighbourhoods. Understanding the economic dynamics at the macro level provides insights into how these diverse populations contribute to and benefit from the local economy.
- d. **Infrastructure Development:** The district boasts significant infrastructure development including transportation networks, educational facilities, healthcare centres, and commercial complexes. Analysing the macro-level infrastructure provides context for understanding the overall economic environment and growth potential of South Delhi.

MICRO LEVEL

Three locations have been chosen to examine the different changes brought about by significant development and infrastructural initiatives. The following factors were used to choose the location:

1. Project type for development
2. The type of development occurring in the adjacent areas
3. The degree of development

The sites may be categorized into three phases of development and the effects they have on the hamlet and its environs.

STAGE	PHASE OF DEVELOPMENT	DEVELOPMENT PROJECT	NAME OF THE ZON
I	Fully developed	GREHA,DUAC	Aya Nagar
II	Transitory	Aurobindo Marg Planning,DDA	Lado Sarai
III	Early		Mehrauli

Table 1 Phase of development and its implications on the surrounding area. i.e. Zones Source- Compiled by

Author

AN OVERVIEW OF SOUTH DELHI

South Delhi, a prominent district in the National Capital Territory of Delhi, India, is renowned for its dynamic blend of heritage, modernity, and diversity. Home to affluent residential neighborhoods, bustling commercial hubs, and iconic landmarks, South Delhi encompasses a rich tapestry of culture, history, and economic activity. Its strategic location, bordered by the Yamuna River to the east and encompassing key areas such as **Saket**, **Vasant Kunj**, and **Greater Kailash**, positions it as a pivotal hub for commerce, education, and leisure.

South Delhi boasts a robust infrastructure network, including major roadways, metro lines, and commercial centers, facilitating connectivity and fostering economic growth. The district is characterized by a mix of modern high-rise buildings and historic monuments, reflecting its rich architectural heritage and evolving urban landscape. Moreover, South Delhi serves as a melting pot of cultures, with a diverse population comprising people from various socio-economic backgrounds, ethnicities, and professions. Its vibrant markets, upscale shopping malls, and culinary delights offer a plethora of experiences for residents and visitors alike.

Overall, South Delhi stands as a symbol of urban dynamism and vitality, embodying the spirit of progress while cherishing its historical legacy.

LOCATION AND LINKAGES

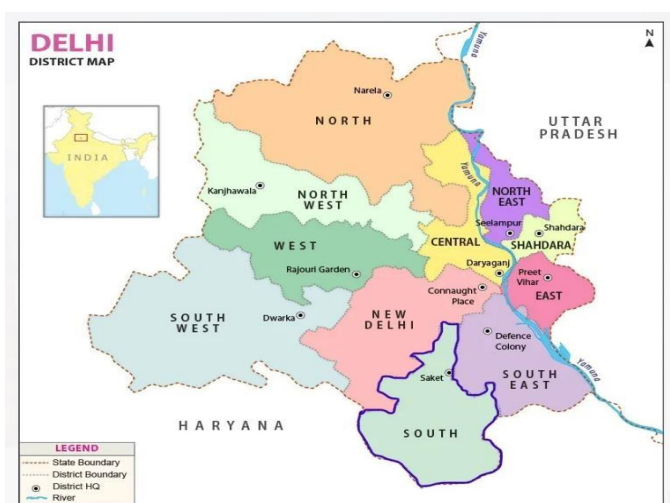


Figure 2- Location of site in South Delhi District



Figure 3- Location of site in South Delhi District

Source- Map of Delhi

Source- Compiled by the Author

South Delhi, situated in the southern part of the National Capital Territory of Delhi, India, is bordered by the Yamuna River to the east, Central Delhi to the north, West Delhi to the northwest, and Gurugram (formerly Gurgaon) in Haryana to the southwest. This district encompasses a diverse array of neighborhoods, commercial hubs, residential areas, and institutional complexes. Notable locations within South Delhi include Saket, renowned for its upscale residential colonies and entertainment hubs; Greater Kailash (GK), known for its affluent neighborhoods and vibrant markets; Vasant Kunj, distinguished by its spacious residential colonies and educational institutions; Hauz Khas, famous for its trendy cafes and historic charm; and Lajpat Nagar, bustling with lively markets offering a variety of goods. South Delhi is well-connected to other parts of Delhi and the National Capital Region through a robust transportation network. Major arterial roads such as the Outer Ring Road and the Delhi Metro's Violet Line ensure seamless connectivity within South Delhi and to neighboring areas. Additionally, bus services operated by the Delhi Transport Corporation (DTC) and railway stations like Hazrat Nizamuddin Railway Station provide further accessibility, facilitating the district's integration with the wider urban landscape.

South Delhi's prominent areas like Greater Kailash, Saket, and Vasant Kunj are strategically located within the district, offering both convenience and connectivity to residents and visitors alike. Greater Kailash, divided into GK-I and GK-II, boasts upscale residential neighborhoods and vibrant markets, easily accessible via arterial roads and the Delhi Metro's Violet Line. Saket, known for its commercial complexes and entertainment hubs, benefits from its proximity to major transportation arteries and metro stations, facilitating seamless travel to other parts of Delhi and beyond. Similarly, Vasant Kunj, with its spacious residential colonies and educational institutions, enjoys excellent connectivity through well-maintained roadways and metro links, ensuring residents have easy access to amenities and transportation options. These areas serve as bustling urban centers within South Delhi, interconnected by a network of transportation routes, enhancing their appeal and livability.

DEMOGRAPHY

South Delhi district has a population of 2,731,929 (2011 census) which was 16.30% of the total state's population. In the South Delhi district, the share of urban population was higher than the state's urban population. According to Census 2011, about 97.50 per cent of the population of Delhi lives in urban areas and the remaining 2.5 percent in rural areas.

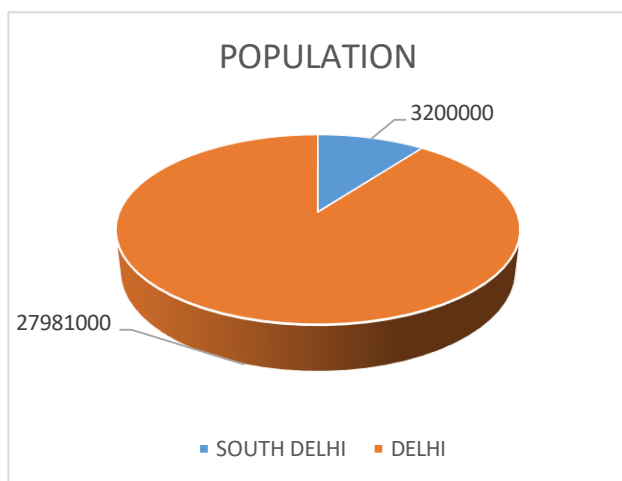


FIGURE 4- Share of South Delhi District to New Delhi (Population)

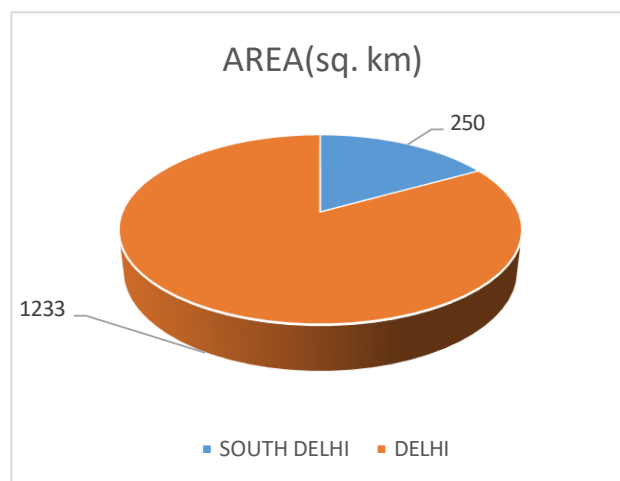


FIGURE 5-Share of South Delhi District(Area) to New Delhi

Source- Census of India

WORKFORCE

Of the entire population in the South District, 924,393 were working. While 6% of workers engaged in marginal activity that provided a living for less than six months, 94% of workers characterize their employment as Main employment (Employment or Earning more than Six Months). 4,958 agricultural laborers and 2,314 cultivators (owners or co-owners) made up the 924,393 workers involved in the main job.

	Total	Male	Female
Main Workers	869,086	735,535	133,551
Cultivators	2,314	1,989	325
Agriculture Labourer	4,958	4,093	865
Household Industries	23,054	19,634	3,420
Other Workers	838,760	709,819	128,941
Marginal Workers	55,307	40,057	15,250
Non Working	1,807,536	691,836	1,115,700

FIGURE 6 Population composition of South Delhi Source- Census of india,2011

ECONOMY

Delhi's economy is mostly derived from the economy of South Delhi. The majority of Delhi's tax income comes from this region. South Delhi has become the nation's principal hub for commerce. A significant influx of foreign direct investment has resulted from the establishment of several multinational banks, insurance businesses, and legal firms in the region. Additionally, South Delhi is home to a number of well-known marketplaces in Delhi, including Sarojini Nagar Market, Green Park Market, and others, as well as promenades like DLF, MGF Metropolitan, Select Citywalk, Malviya Nagar, etc.

Tertiary sector is the backbone of the economy of this district. It contributes 9.2 % to New Delhi GDP. In South Delhi, the secondary sector encompasses a range of manufacturing activities, though it is not as dominant as in other parts of Delhi or neighbouring states. Manufacturing in South Delhi may include small-scale production units, workshops, and artisanal activities, particularly in areas like Okhla Industrial Area, where light manufacturing and industrial activities are prevalent.

The tertiary sector, on the other hand, is more prominent in South Delhi. The district is home to numerous service-based industries, including retail, hospitality, education, healthcare, information technology, and professional services.

Fig 3.5 illustrates the GDP composition of the South Delhi district, highlighting the predominance of the services sector, which accounts for 85% of the region's economic output. This is reflective of South Delhi's urban character, where commercial activities, real estate, information technology, and financial services are key contributors. The industrial sector, although less dominant, represents 13% of the GDP, comprising mainly light manufacturing and processing activities.

Agriculture, contributing a minimal 2%, underscores the district's highly urbanized nature with limited rural or agricultural influence. This economic distribution aligns with Delhi's broader economic profile, emphasizing the region's role as a major urban and commercial hub.

GDP Composition of South Delhi District

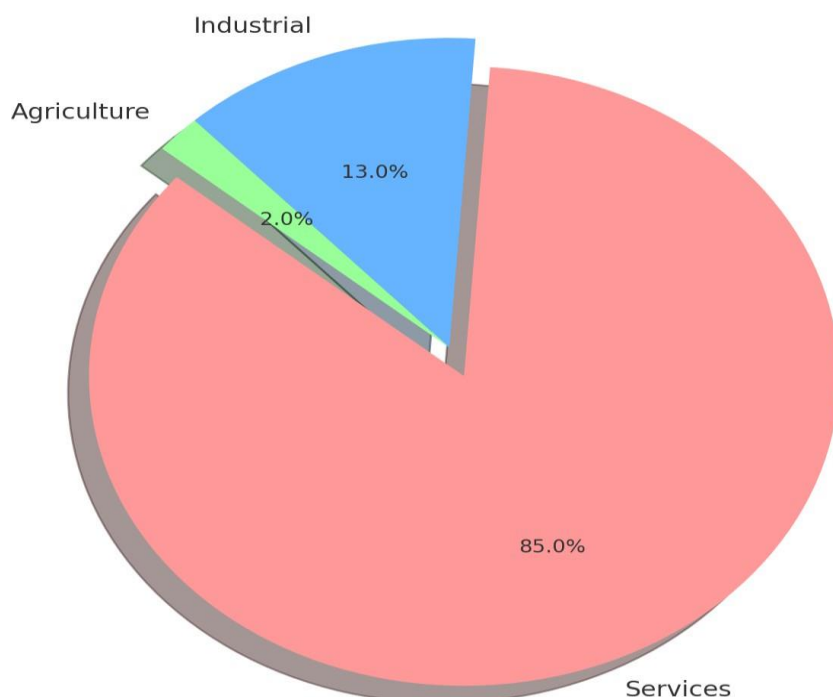


FIGURE 7- GDP composition of South Delhi District. Source- Directorate of economics and statistics,2010-11

The GSDP of Delhi at Current Prices is expected to increase from ₹343798 Crore in 2011-12 to ₹785342 Crore in 2020-21 and ₹923967 Crore in 2021-22 signifying an annual average growth rate of 10.49% (2011-12 to 2021-22). The growth in nominal GSDP of Delhi during 2021-22 is estimated at 17.65% as compared to the contraction of 1.09% during 2020-21

S.N O	State Economy	2011-12 (Base Year)	2020-21 (1 st RE)	2021-22 (AE)
1	GSDP at Current price (Rs. lakh)	34379750	78534162	92396657
2	GSDP at 2011-12 price (Rs. lakh)	34379750	56466920	62242975
3	NSDP at Current Price (Rs. lakh)	31465002	70251912	83616225
4	NSDP at 2011-12 Price (Rs. lakh)	31465002	49628427	54805786
5	Per Capita Income at Current Price (Rs.)	185001	344136	401982

FIGURE 8- GDP composition of Delhi.
Source- Directorate of economics and statistics

ANALYSIS

TRANSFORMATIONS IN THE CASE STUDY AREA

The changes that have taken place at the case study level, both at the macro and micro levels, are identified in this chapter. A framework developed by the study allows for the identification of the transition.

ELABORATING THE STUDY FRAMEWORK

Three categories of transformation are being proposed to be mapped in this study:

1. The transformation is in the terms of Land Utilization pattern.
2. **Demographic Transformations**, which would be mapped through the census of India record.
3. **Socio-economic transformations**, which would be mapped through the census of India as well as secondary sources which will help in tracing the social and economic transformations. The fields studies undertaken during the study have provided qualitative information regarding these transformations.

For the purpose of studying the transformations the study area has been divided at two level .i.e. Macro and Micro level. The two levels has been established in the introduction to the case study area.

MICRO LEVEL TRANSFORMATION IN THE SOUTH DELHI DISTRICT

State planning goals for the future include controlling expansion and creating new possibilities

With enormous pressure of urbanization, the Delhi Development Authority was established in 1957 under the Delhi Development Act, 1957. Its primary goal was to promote and secure the planned development of Delhi. The first Master Plan for Delhi (MPD-1962) was created to manage the city's growth. It divided Delhi into various zones, including residential, commercial, and industrial areas, and aimed to control and guide development. Early efforts included developing residential colonies like Lajpat Nagar, Greater Kailash, and Hauz Khas to accommodate the growing population. The Master Plan for Delhi 2001 aimed to tackle urban sprawl and the increasing demand for housing and infrastructure. South Delhi saw the development of new residential areas like Vasant Kunj and Saket.

Simultaneously, they have tended to regulate these opportunities through the formation of policy and zoning proposal. These proposals have been briefly discussed below:

Recent Developments and DDA Vision 2021

Master Plan 2021

Sustainable Development: The focus shifted towards sustainable and inclusive development with an emphasis on environmental sustainability, affordable housing, and public transportation.

Transport-Oriented Development: Introduction of metro lines and bus rapid transit systems to improve connectivity and reduce traffic congestion.

Smart City Initiatives: Implementation of smart city technologies for better urban management, including smart grids, intelligent traffic systems, and digital governance.

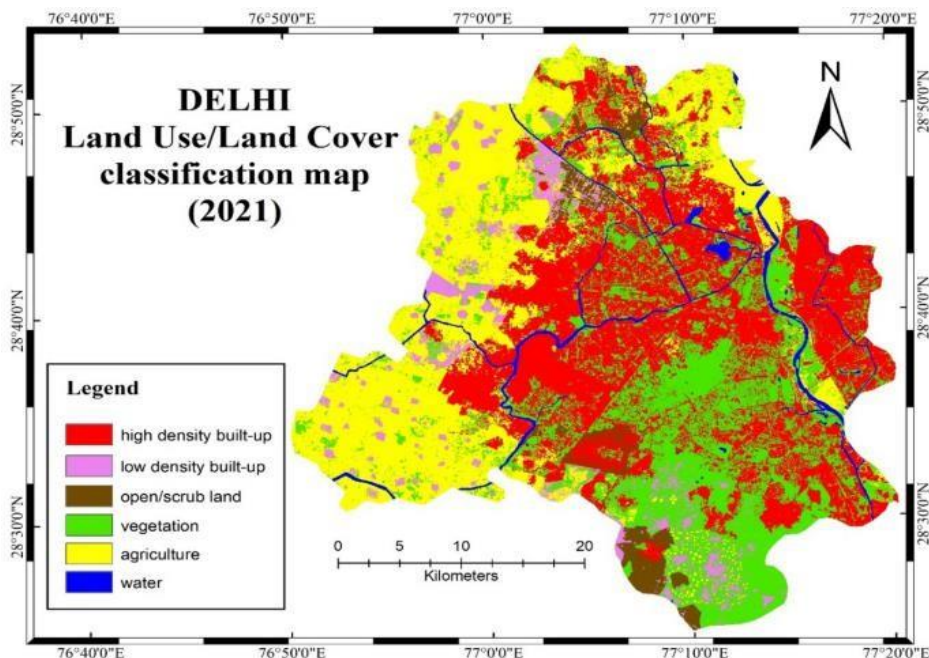
MACRO LEVEL

The South Delhi District's micro-level research region is where the transition has been documented in relation to the spatial and demographic changes.

SOUTH DELHI DISTRICT



The Spatial Transformation have been identified through documenting changes in Land Utilisation pattern. The study limit itself to documenting land utilisation changes in the South Delhi District only not built up density.



(1973-2013)

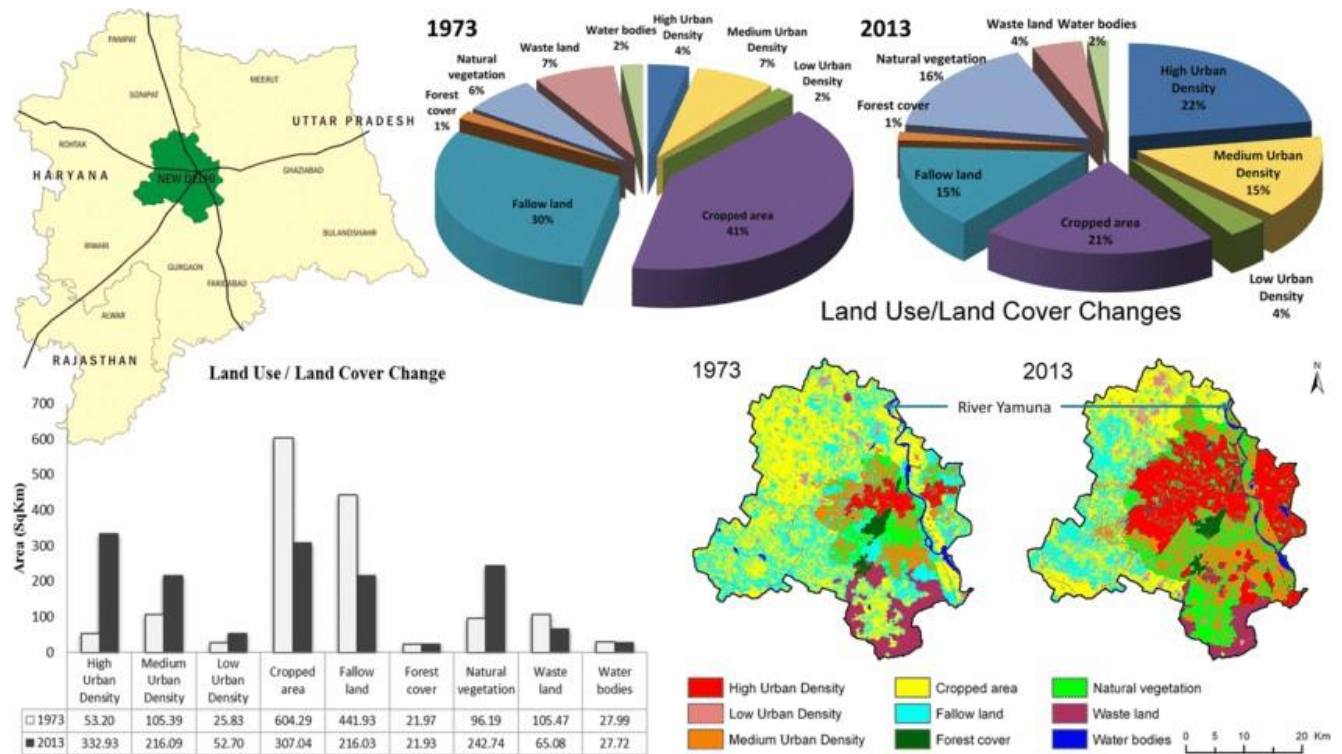
Figure 9- Land Utilization trend of New Delhi from 1997-2021

Source- Directorate of economics and statistics

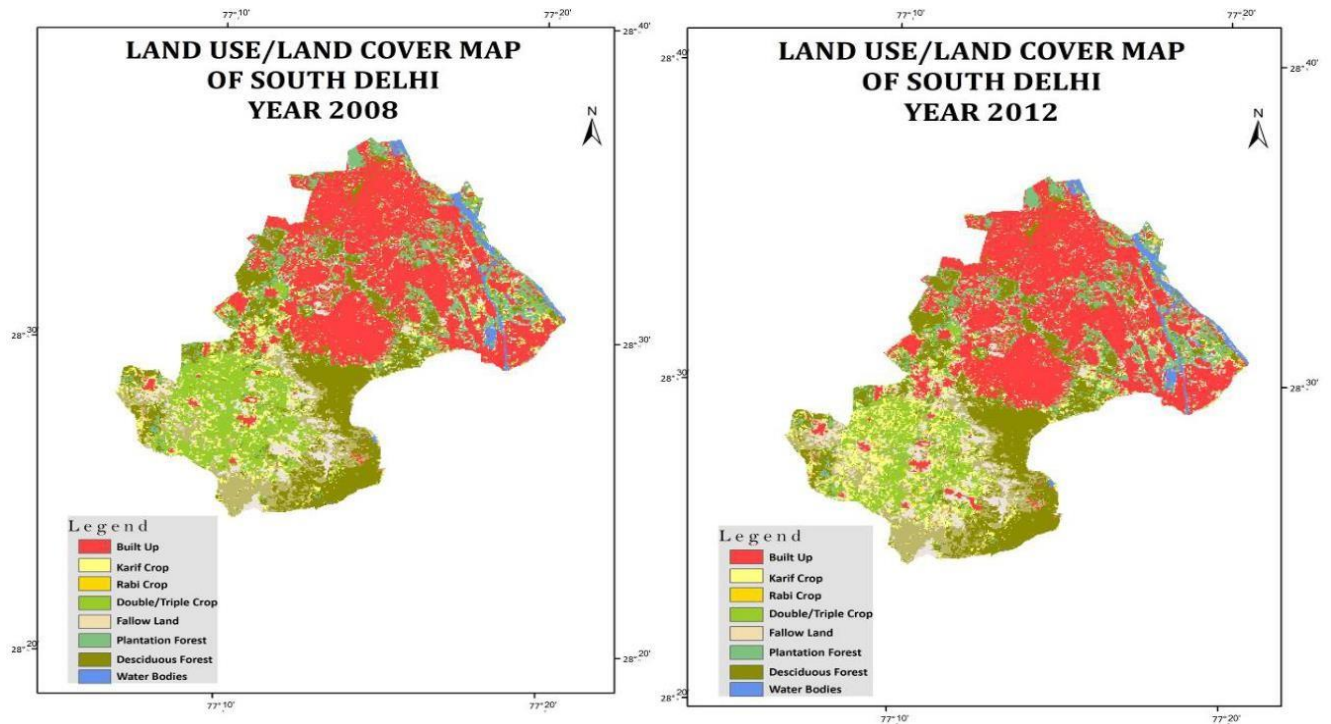
Source- Directorate of economics and statistics

Figure 10 - Land use/ Land cover distribution over Delhi

Land Utilization analysis is done in the context of South Delhi district and it is found that most of the land in this district is under



Land Utilization Pattern of South Delhi 2008-2012 and 2021



It can be concluded that the south block contributes maximum to the population in the south Delhi. Urbanization is found to be high in the south block which has emerged as a node for residential and commercial sector. This block has highest level of urbanization as the major urban center is located. The level of urbanization are low in the administrative district blocks like Saket, Hauz Khaz , Mehrauli. The blocks with the highest population have lowest level of urbanization.

LU/LC Class	2008		2012		% Change between 2008 and 2012
	Pixel Count	%	Pixel Count	%	
Built-up	24756	37.7%	30876	38.1%	0.4%
Agricultural land	14158	21.6%	14418	17.8%	-3.8%
Fallow	88	0.1%	2761	3.4%	3.3%
Forest	25303	38.5%	31185	38.5%	-0.0%
Water Bodies	1352	2.1%	1810	2.2%	0.1%

Figure 11 - Comparison of South Delhi's five LU/LC classes' changes between 2008 and 2012

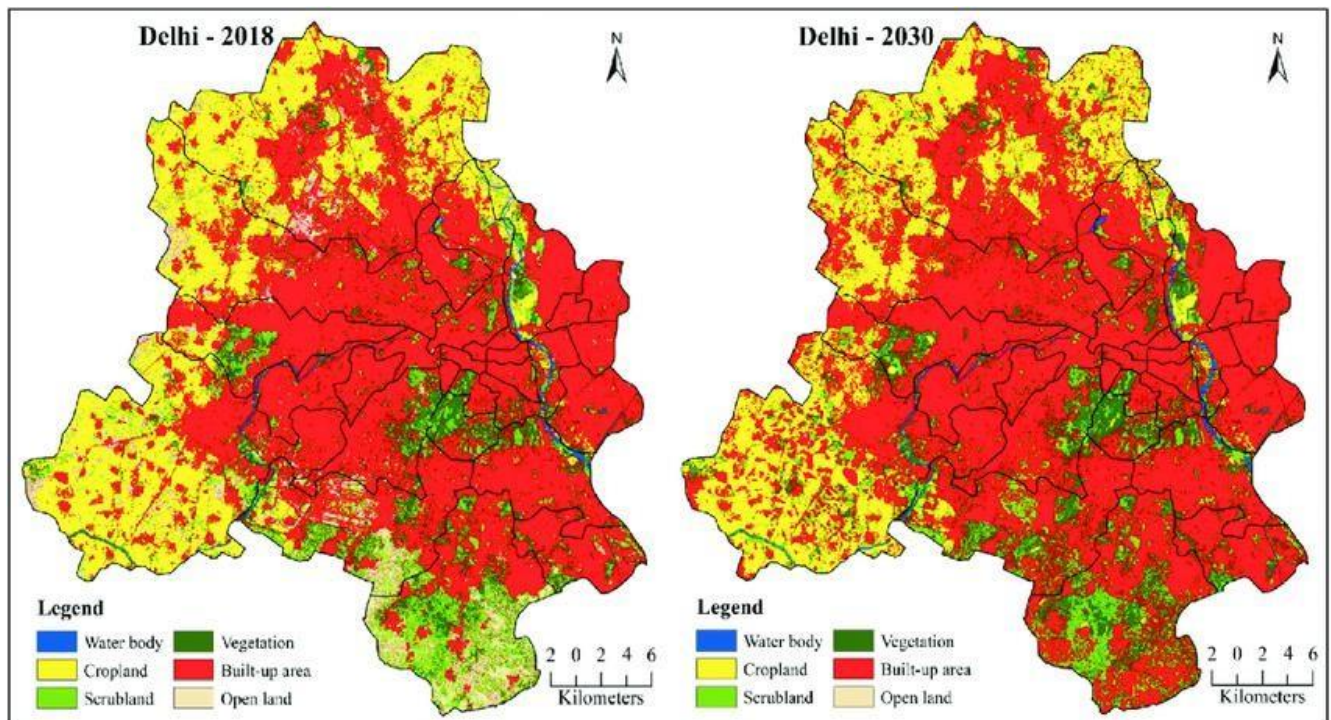


Figure 12 - Land use/ Land cover distribution over Delhi (2018-2030)

Level of Urbanisation in various blocks of South district

There are eleven districts in the National Capital Territory of Delhi, and one of those districts is South Delhi District. September 2012 saw the division of Delhi into 11 districts; before this, the city was divided into 9 districts, which were created in January 1997. Before then, Tis-Hazari served as the district headquarters for the one district that included the all of Delhi. The South District holds significant historical, social, economic, and cultural value. Its district headquarters are located at M.B. Road in Saket. The state of Haryana envelops it. The Haryana districts of Gurgaon and Faridabad are located on its southern edge.

The Haryana districts of Gurgaon and Faridabad are located on its southern edge. The South East District of Delhi borders the South District on its eastern side, while New Delhi and the South West District of Delhi border it on the north and west, respectively.

Three subdivisions make up the South District: Mehrauli, Hauz Khas, and Saket. Although there is a sizable rural region, South District is primarily an urban area. The District has 42 villages with all the traits of rural India—13 in Saket, 18 in Hauz Khas, and 11 in Mehrauli Sub-division. The South District of Delhi occupies 247 square kilometers, or 16.65% of the NCT of Delhi's total area.

1. Male – 1467428
2. Female – 1264501
3. Urban – 2719736
4. Rural – 12193
5. Total – 2731929

Urbanisation in various blocks of South district

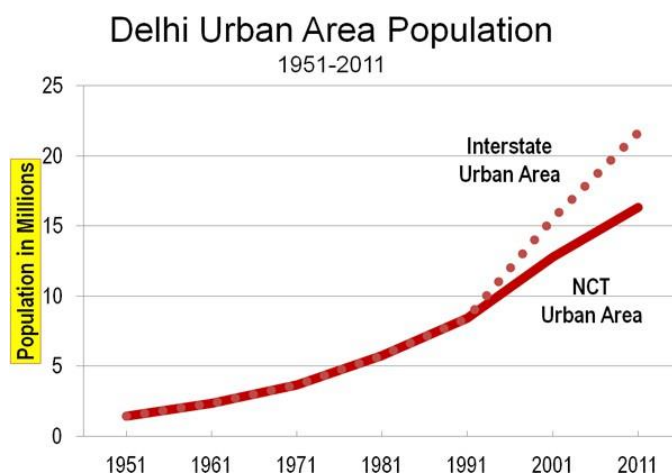


Figure 13 - Urbanisation of south delhi Source- Census of India 2011

Growth of population (in number crores) of Delhi from 1901 to 2011.

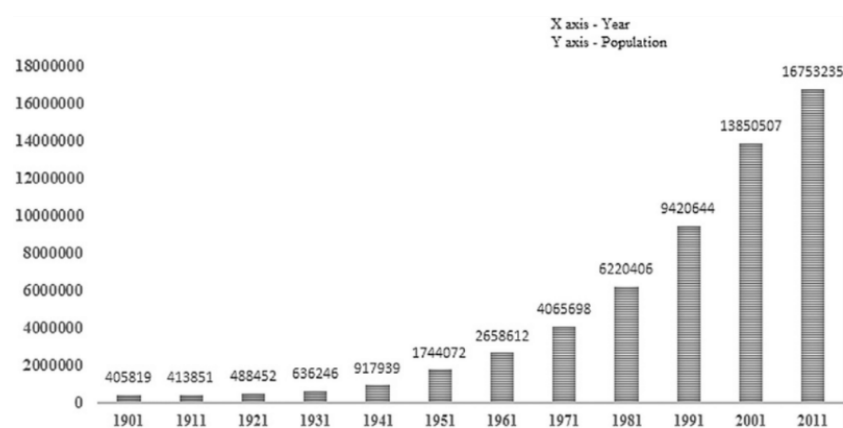


Figure 14 - Growth of population Source- Census of India 2011

URBANIZATION TREND OF DELHI DURING 1901-2011

S. No.	Census Year	Population (Number)			Growth (Per cent)	
		Total	Urban	% of urban to total	Decadal	AEGR
1	1901	405819	214115	52.76		
2	1911	413851	237944	57.50	11.13	1.1
3	1921	488452	304420	62.32	27.94	2.5
4	1931	636246	447442	70.33	46.98	3.9
5	1941	917939	695686	75.79	55.48	4.4
6	1951	1744072	1437134	82.40	106.58	7.3
7	1961	2658612	2359408	88.75	64.17	5.0
8	1971	4065698	3647023	89.70	54.57	4.4
9	1981	6220406	5768200	92.73	58.16	4.6
10.	1991	9420644	8471625	89.93	46.87	3.8
11	2001	13850507	12905780	93.18	52.34	4.2
12	2011	16787941	16368899	97.50	26.83	1.92

Table 2- Census data

Source- Census of India Provisional Population Totals, NCT of Delhi Series 8, Paper 1 of 2011. Note: - AEGR means Annual Exponential Growth Rate.

District wise Zone distribution (Micro level)-Case study

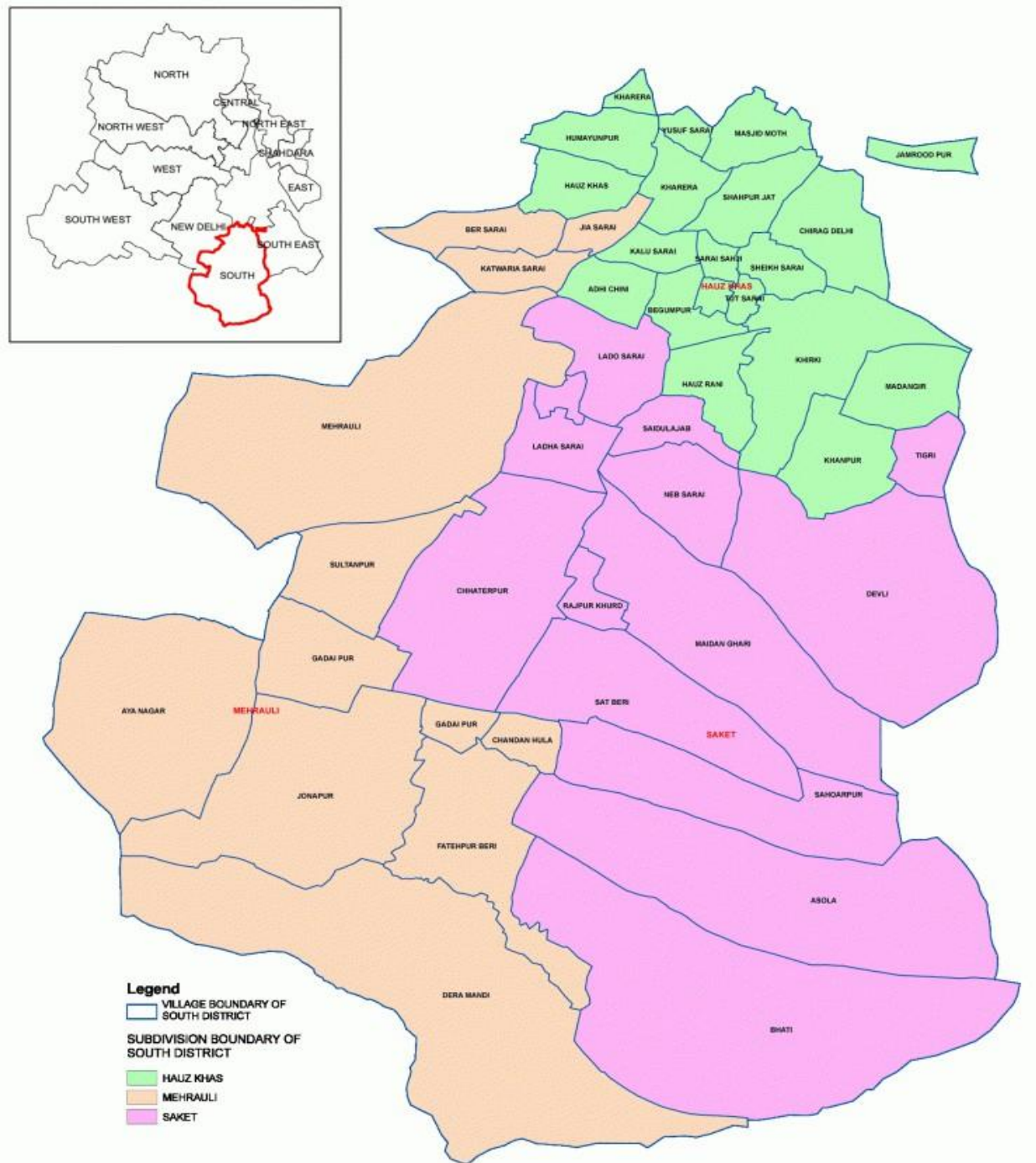


Figure 15 - Zone Distribution

Source– District Census handbook 2018

Less than 45% of Delhi's total land area was made up of the extremely uneven urban sprawl in the south and south-east in 1990. In 1990, there was relatively little built-up space, and what little there was was focused around residential complexes such as Huaz khas, Nehru Place, Green Park, Jorbagh , Kalkaji, etc.

Transformation in the South Delhi at Micro Level

Case study area one- Introduction to Lado Sarai Ward Number 169

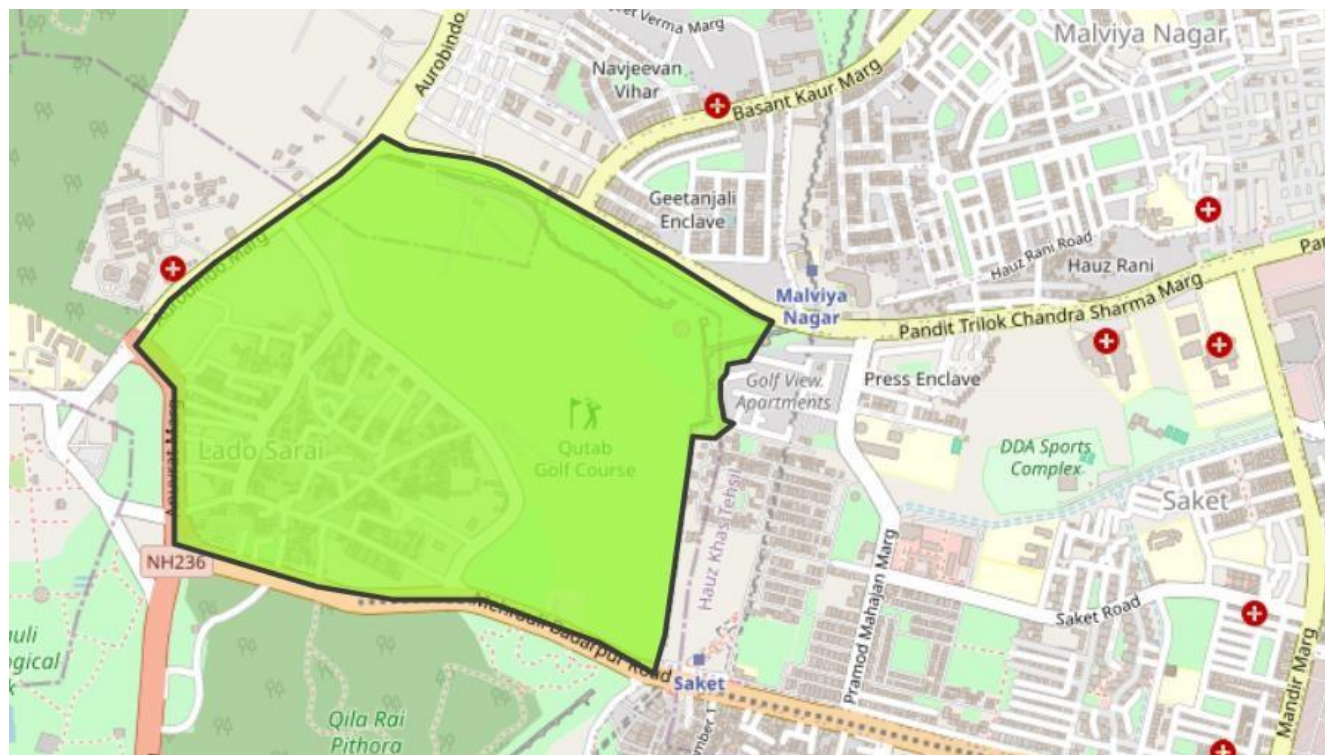


Figure 16 - Lado Sarai Zone

Source – DUAC

Lado Sarai, a historic urban village situated in the heart of South Delhi, serves as a compelling case study for examining land economic development strategies in rapidly urbanizing regions. With its unique blend of traditional and modern influences, Lado Sarai epitomizes the dynamic interplay between heritage preservation and contemporary urban demands. Historically a rural settlement, the area has witnessed significant transformation over recent decades, evolving into a vibrant neighborhood characterized by a mix of residential, commercial, and cultural land uses. This study aims to analyze the economic development strategies employed in Lado Sarai, focusing on land utilization patterns, zoning regulations, and the impact of urban development policies. By delving into the micro-level changes and adaptations within this locality, the research seeks to provide insights into the challenges and opportunities associated with managing land resources in a heritage-rich yet economically vibrant urban setting.

Metropolitan Context

Delhi's urban villages provide a range of environmental circumstances. Adjacent to Lado Sarai, but rather inaccessible due to massive automobile roadways intended as city level arteries on both sides, lies the medieval town of Mehrauli. The physical limits of the settlement and any potential expansion are marked by these routes. There are areas of undeveloped land between these roads and the current population that the DDA designated for institutional use but have not been used as such. Parts of these grounds have been used by the locals to park buses and vehicles.

However the transportation system of the city is disorganized, there is no as such public transportation in the city, and as the city is urbanizing there is rapid growth of private vehicles which are creating havoc in the city, Gwalior city is majorly dependent upon private vehicles and Intermediate Public Transport (IPT) to fulfill its necessity of transportation.

Physical attributes

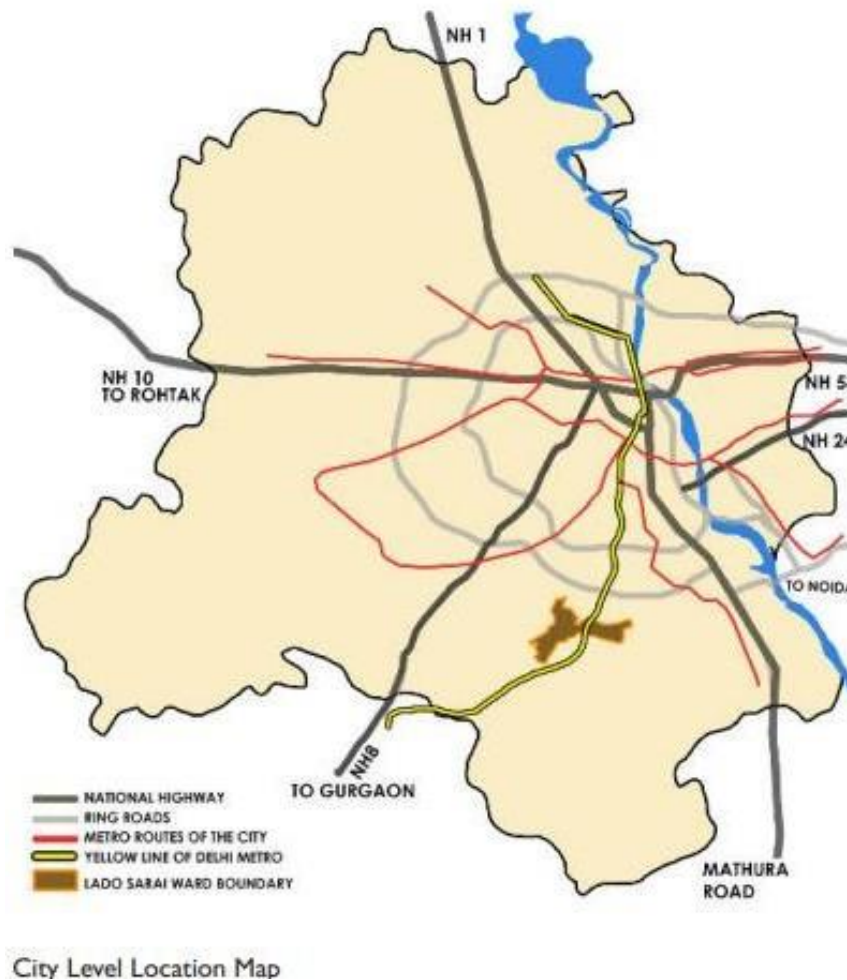


Figure 17 – Lado sarai connectivity

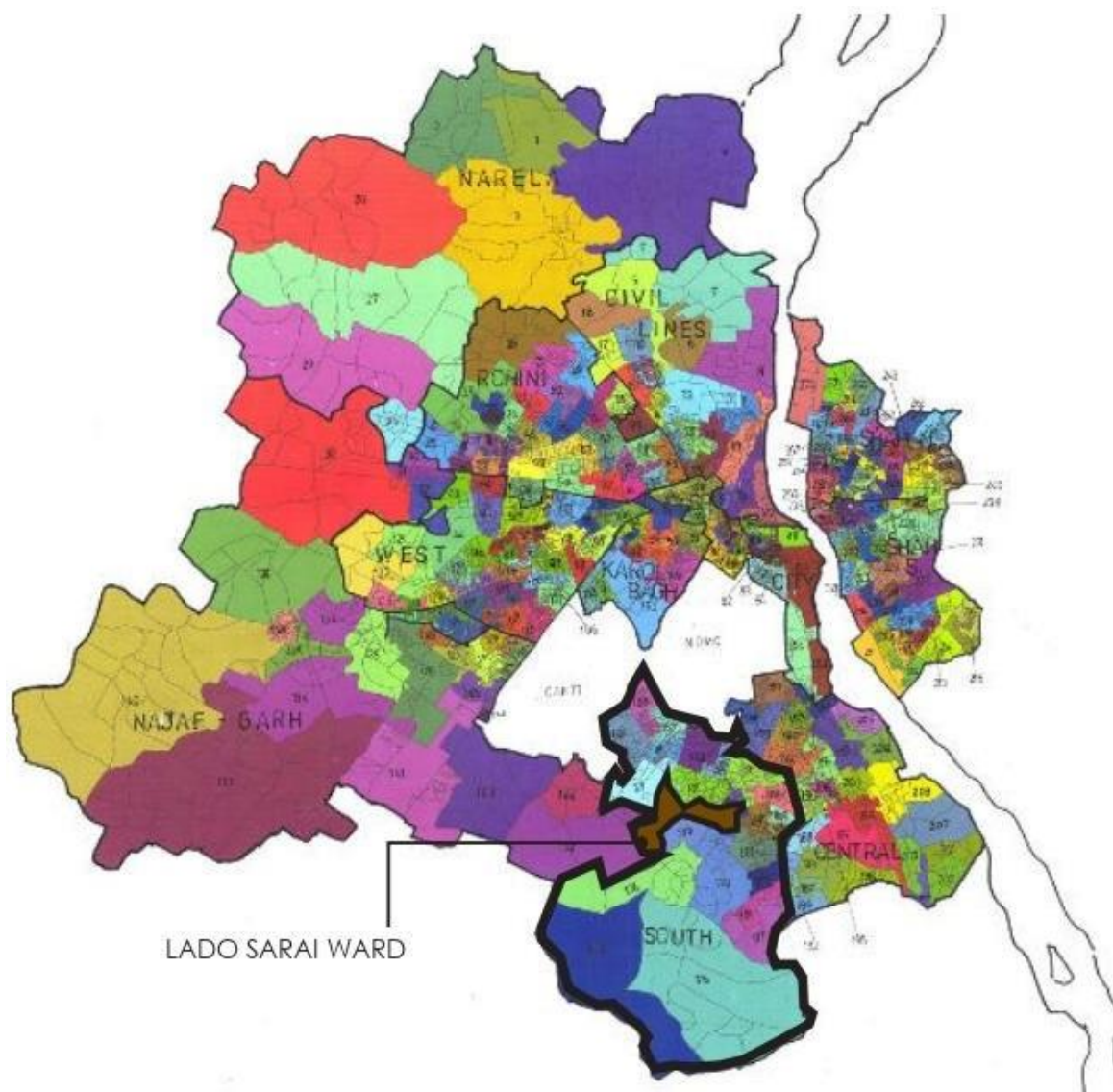


Figure 18 – Lado sarai Zone

Source – DUAC

The two main natural elements that have moulded Delhi are the Yamuna River and the Aravali Ridge. Lado Sarai is an environmentally vulnerable location situated on the border of the Ravali Ridge, a significant natural feature of Delhi. There are several historical artefacts in the region, and a sizable portion of it is protected as a green reserve.

Transformation study (Spatial/physical transformation)

Change in land use

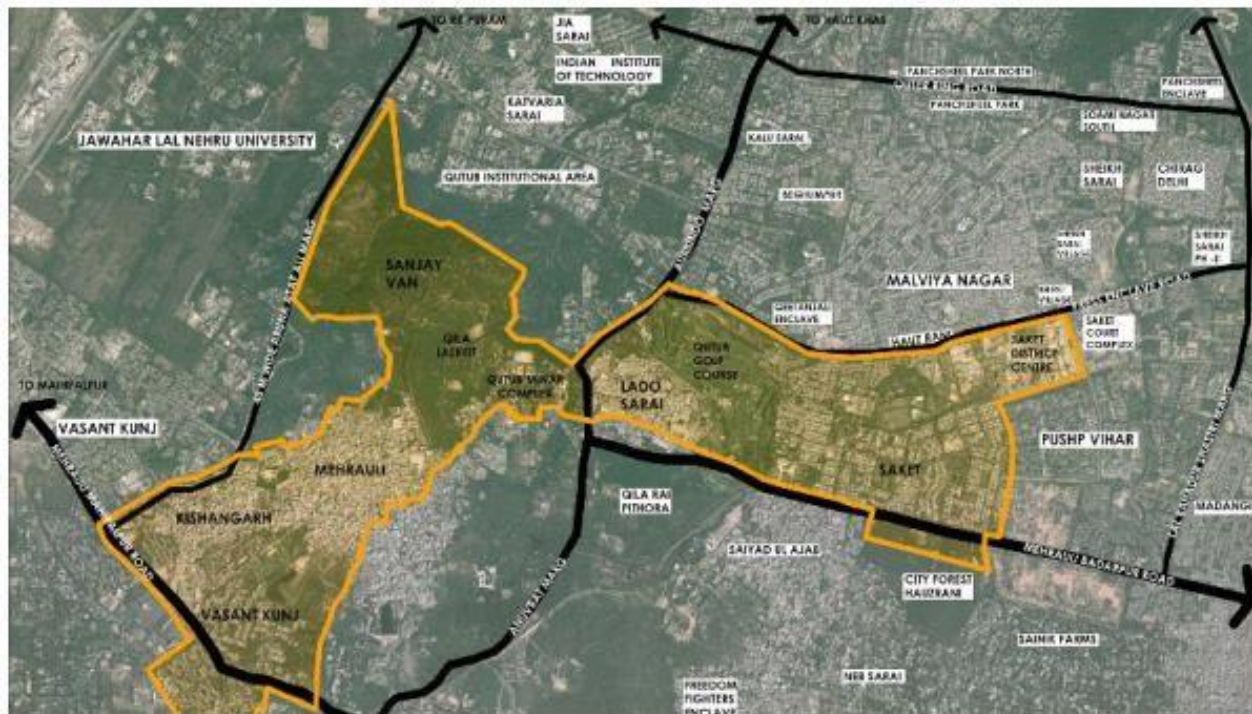


Figure 19 – Lado sarai official boundary

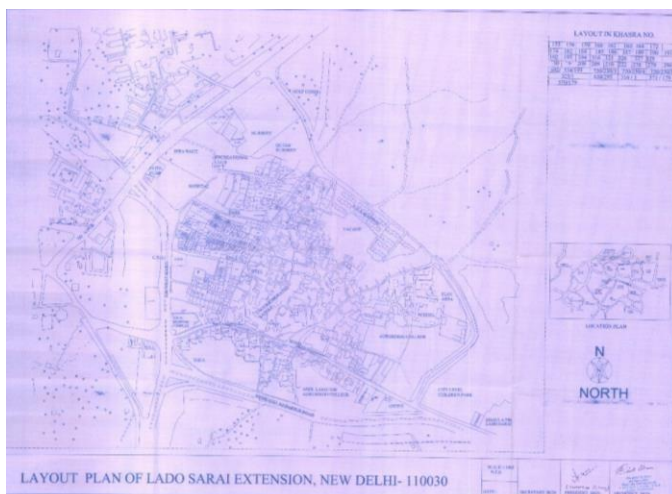
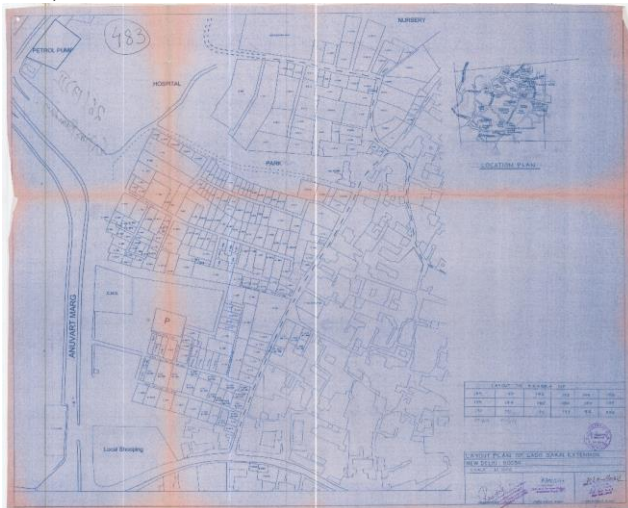
Source – Compiled by Author

In later master plans, the urban villages of Mehrauli and Lado Sarai were designated as fully residential districts; nonetheless, mixed-use developments have caused significant changes to these regions. Public utilities and social infrastructure are lacking in these places. The zone was mostly residential in nature, and even after MPD and DDA took over recreational space for development, the process of change has been gradual. The Lado Sarai neighbourhood is still mostly a residential area. The zone's perimeter, which is most susceptible to planned development, has experienced significant alterations.

Numerous vehicle repair and motor repair firms make up the unauthorized accumulation, which functions as a hub of activity. There are other general businesses, auto repair companies, carpentry shops, and shops that fix TVs and videos. These are not concentrated in one area; rather, they are dispersed in clusters among the different streets and by-lanes.

Land use Comparison

Following the purchase procedure, the majority is developed as an integrated and inclusive zone with a focus on heritage sites and the preservation of the Regional Park. Zone J covers 15,178 hectares in total, of which 6200 hectares are under Regional Park, 410 hectares are under Green Belt, and 300 hectares are under Asola Bird



Sanctuary.

Figure 20 – DDA Land Use Map of 2006

Source – South district municipal corporation

Building Occupancy

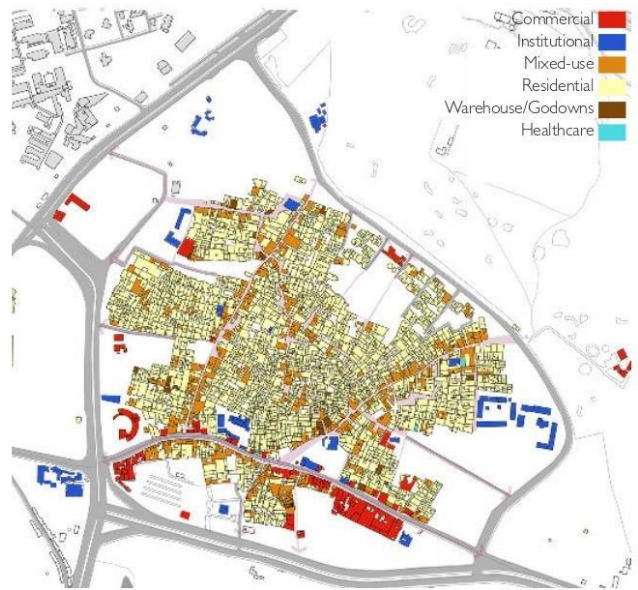
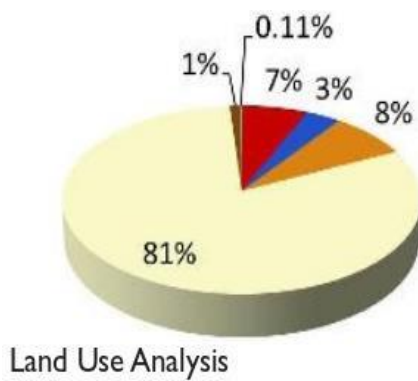


Figure 21 – Land use analysis

The area predominantly consists of residential zones, accounting for a substantial 81% of the total land. Residents enjoy a mix of housing types, from apartments to independent houses. Commercial spaces play a significant role, covering 7% of the land. These areas house shops, offices, and local businesses, contributing to the neighbourhood's economic vitality.



Figure 22 – Lado Sarai colony

Source – Primary survey

Mixed-use zones, comprising 8%, provide a dynamic blend of residential and commercial functions. Here, you'll find a harmonious coexistence of homes, small-scale businesses, and community facilities.

Industrial land use is relatively minimal, occupying only 3%. Industrial activities in Lado Sarai likely cater to localized needs, maintaining a balance with the residential fabric.

Lastly, warehouses occupy a modest 1% of the area. These spaces serve as storage hubs for goods and materials, supporting the overall functioning of the neighborhood.

Building Structure

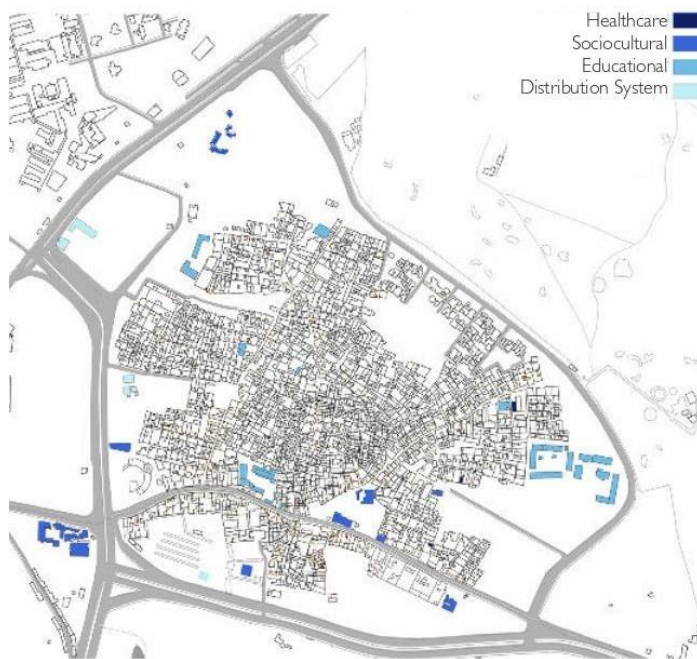


Figure 23 – Types of Building Structure

Source – Primary survey

Just 86% of dwellings have Pucca constructions in terms of building structure. Just 14%, or the majority of the dwellings, feature Kaccha constructions. The majority of housing units in the city—roughly 37%—are multi story. Approximately two thirds of all residences are composed of only two floors. Due to the low demand for land, only multi- and ground-plus-one-story buildings have been built, providing residents with a source of income through rent.

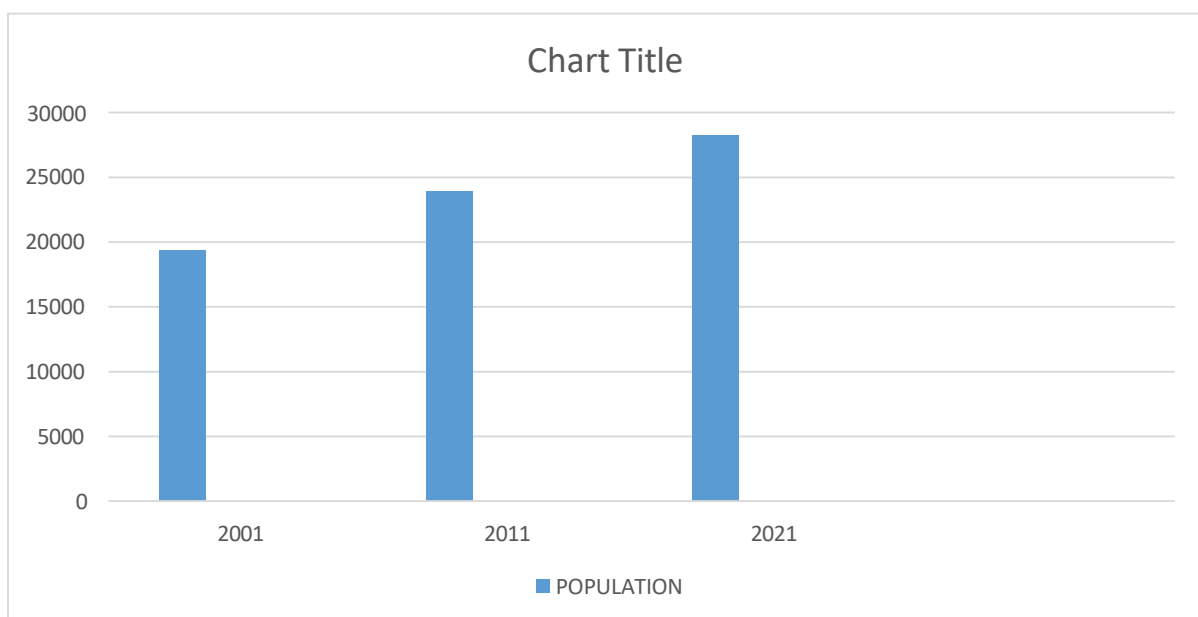


Figure 24 – Types of Building Structure in Lado Sarai Area

Source – Primary survey

Socio economic transformations Demographic

Figure 24 – Demographic data



Source – Department of Urban Development (UD) Government of NCT of Delhi

The area of Lado Sarai has seen consistent growth in population with rate being approx. 20 % which is in synch with rest of the South Delhi District.

Historical land use changes in South Delhi's Lado Sarai area from 2011 to 2021:

Data Points:

- Residential Land:
 - 2011: 35%
 - 2021: 45% (Increase by 10%)
- Commercial Land:
 - 2011: 20%
 - 2021: 25% (Increase by 5%)
- Green Spaces:
 - 2011: 25%
 - 2021: 15% (Decrease by 10%)
- Industrial Land:
 - 2011: 10%
 - 2021: 5% (Decrease by 5%)
- Other Uses:
 - 2011: 10%
 - 2021: 10% (No change)

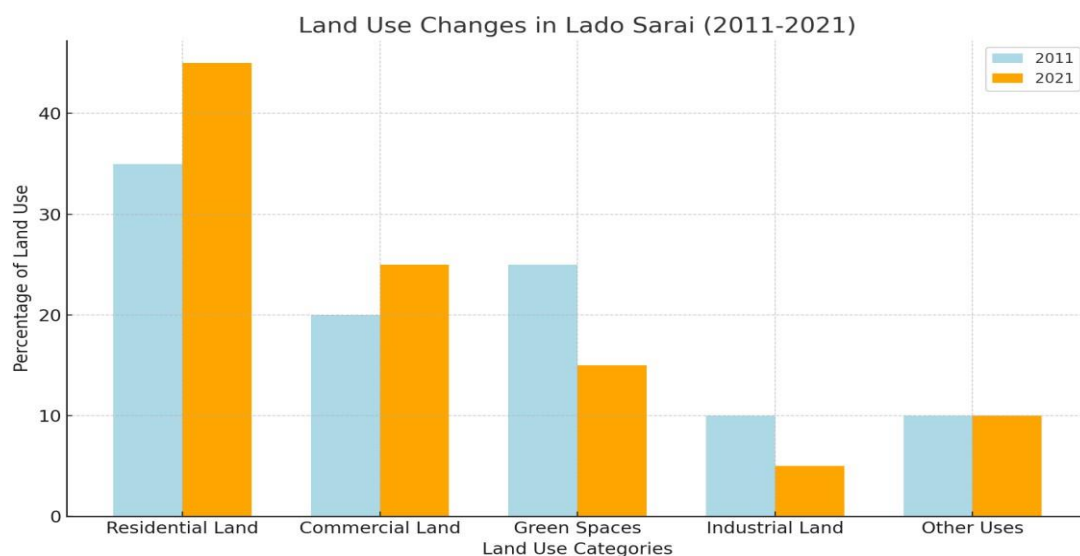


Figure 25 – Demographic data

Source – Department of Urban Development (UD) Government of NCT of Delhi

Above bar chart showing land use changes in Lado Sarai from 2011 to 2021. The chart compares the percentage of land allocated to different uses over the decade, highlighting increases in residential and commercial land use, and a significant decrease in green spaces.

Case study area two- Introduction to Mehrauli

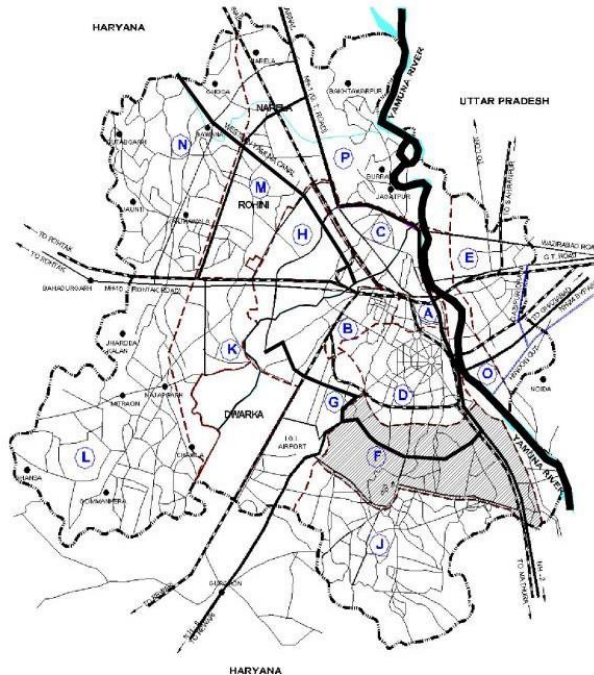


Figure 25 – Mehrauli F zone

Source – DDA

One significant old "urban village" in Delhi is Mehrauli. It is comparable to the Kutub complex, which has been chosen for World Heritage List candidacy. It is unknown that Mehrauli has many other remarkable buildings and clusters of structures surrounded by breath-taking scenery besides the Kutub complex. Just outside the "urban village" are the sites of two medieval capitals: Rai Pithora and Lalkot. The preservation of Mehrauli itself, a settlement with a significant amount of architectural heritage, must also be taken into account. The subterranean legacy of Mehrauli contributes an additional facet that is as significant to the remaining architectural legacy.

Transformation study (Spatial/physical transformation Change in land use)

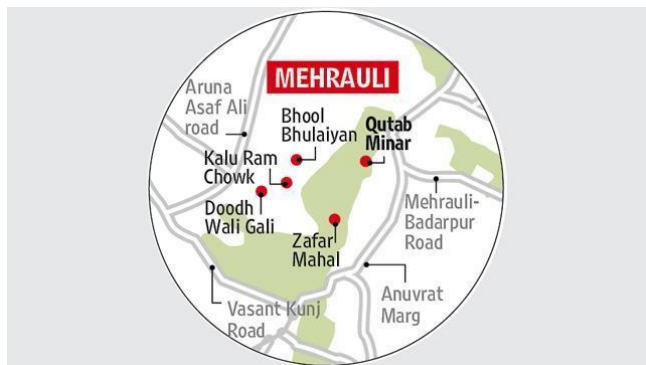
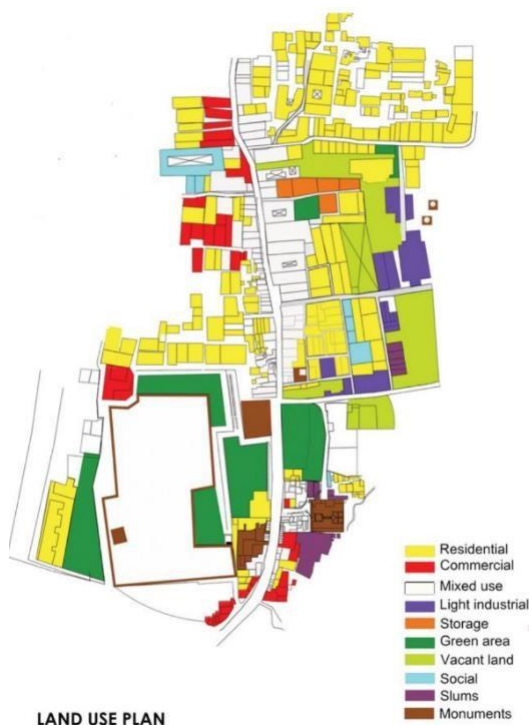


Figure 26 – Mehrauli map 2011

The original residents' means of subsistence and income have been impacted, as have the community's social dynamics. The communal areas and public places in the communities have been gone.

Land use Comparison



SL. No.	LAND USE	AREA (in HA)	PERCENTAGE (%)
1.	Residential	4236.20	35.45
2.	Commercial	229.41	1.91
3.	Recreational	3159.50	26.42
4.	Public & Semi Public	1380.00	11.53
5.	Transportation	1294.88	10.82
6.	Industrial	515.01	4.31
7.	i. Govt. Office	61.00	0.51
	ii. Govt. use Undetermined	813.00	6.80
8.	Utility	269.00	2.25
	Total	11958.00	100.00

Figure 27 – Land Use Distribution

Source – Government of National Capital Territory of Delhi

Built-Up Area: The built-up area has expanded significantly, from around 5.24% in 2011 to approximately 8.41% in 2021. This growth primarily occurred at the expense of agricultural and undeveloped land.

Agricultural Land: There has been a substantial decline in agricultural land, decreasing from 81.81% in 2011 to about 70.05% in 2021. Much of this land has been converted into residential and commercial properties as the area has urbanized.

Green Spaces/Forests: Interestingly, there has been an increase in plantation and forest cover, which rose from 7.75% in 2011 to about 16.08% in 2021. This increase may be attributed to reforestation efforts and the conversion of some unused or fallow agricultural lands into green spaces.

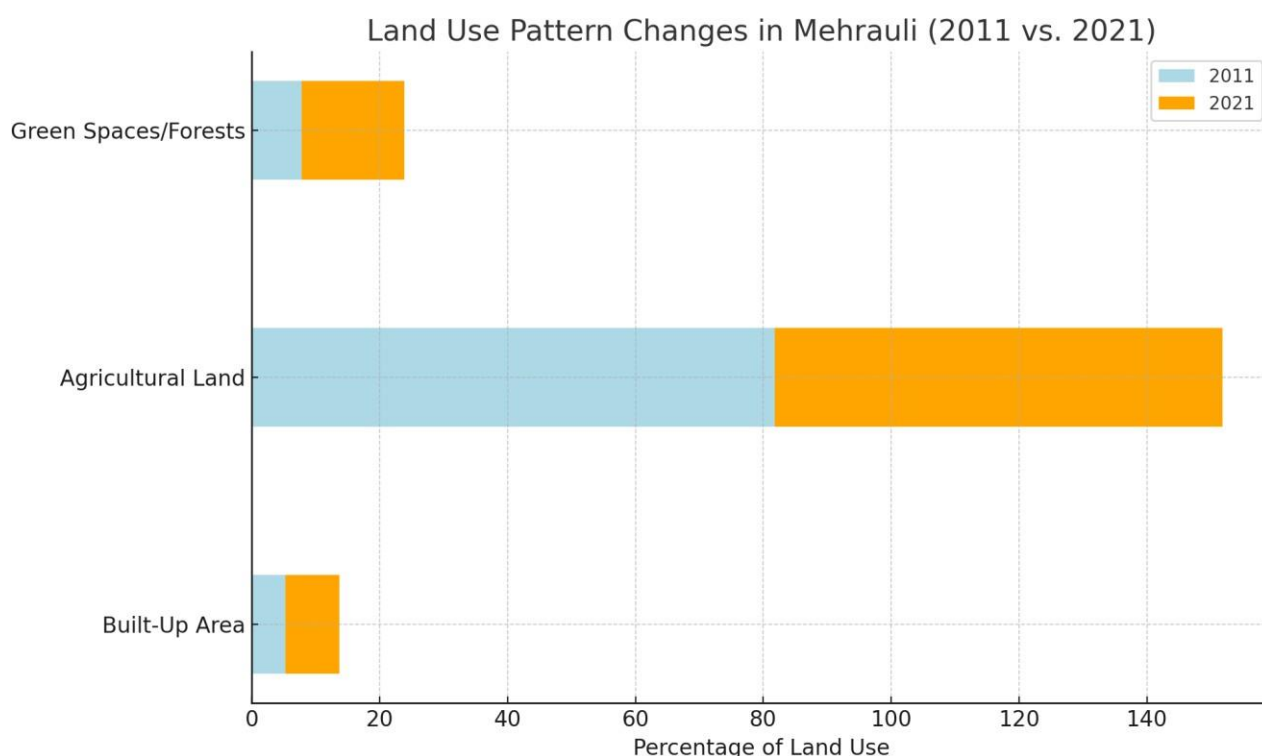


Figure 28 – Comparative analysis

Source – Government of National Capital Territory of Delhi

Above bar graph illustrates that the land use pattern changes in Mehrauli between 2011 and 2021. The graph shows the increase in built-up areas and green spaces/forests, alongside the significant decrease in agricultural land. This visualization highlights the ongoing urbanization and the shifting land use dynamics in Mehrauli.

Building Occupancy

Mehrauli, one of the oldest inhabited areas in Delhi, presents a diverse range of building occupancy types reflecting its historical and contemporary significance. The area is known for its rich heritage, with numerous historical structures and monuments, including the iconic Qutub Minar and the Mehrauli Archaeological Park. These heritage sites coexist with residential buildings, which range from traditional homes in narrow lanes to modern apartments in more recently developed sections. Commercial occupancy is also prominent, with markets and shops catering to both locals and tourists. The juxtaposition of historical and modern buildings creates a unique urban landscape. Additionally, Mehrauli houses various institutional and religious buildings, including schools, temples, and mosques, contributing to its multifaceted occupancy profile. This blend of residential, commercial, and cultural occupancy highlights Mehrauli's role as a vibrant community that balances preservation with urban development.

Building structure



Figure 29 – Types of building structure

Source – Government of National Capital Territory of Delhi

Changes in House Structure: The village's irregular expansion, both vertically and horizontally, was fuelled by the lack of construction regulations following its designation as an urban area.

During this period, dishonest people used the Lal Dora exemptions.

With the growing need for homes, private builders joined the market. Unplanned growth thus occurred in several directions.

First, the land partition of existing dwellings was changed—addition of a storey and the inclusion of uses besides dwelling. Living circumstances become degraded as a result. Second, it appears that "builder flats," a new type of housing, have appeared. These have begun to appear on the periphery, expanding the abadi (also known as prime). Since then, this uncontrolled development that casually disregards standards and laws has emerged as the new normal in Mehrauli

Socio economic transformations Demographic

YEAR	2011	2021
Population	63241	74939

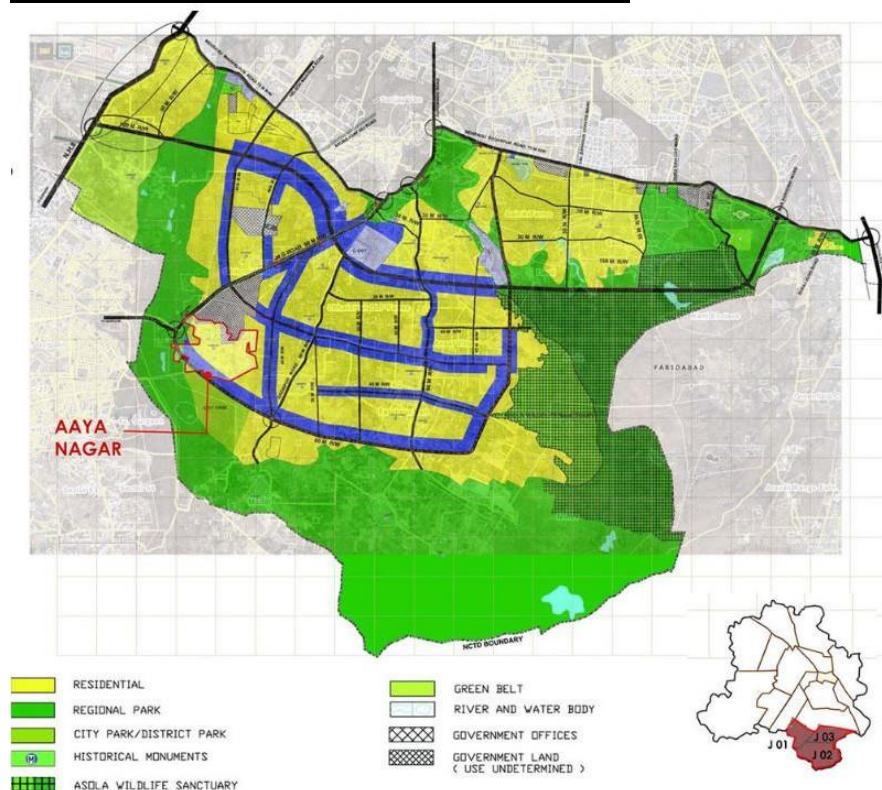
Table 3- Census data

Source- Census of India Provisional Population

The locality Mehrauli falls in South Delhi district situated in NCT of Delhi state, with a population 63241. The male and female populations are 33815 and 29426 respectively. The size of the area is about 4.4 square kilometer. The first population boom occurred during the partition, as a sizable Muslim population left to make room for a more diverse mix of people.

Due to the effects of industrialization, the second phase of population growth began in the late 20s and peaked in the most recent decade. During this time, people from the neighboring states of LP, Haryana, and Bihar moved here. The primary drivers of in-migration were the availability of employment needing unskilled and semi-skilled labor and affordable housing. The early residents of the settlement were mostly cruel in character and engaged in occupations derived from agriculture. The primary occupations are landowners and merchants. The combined impacts of population mix and urbanization led to a shift in occupation.

Case study area three- Introduction to Aya Nagar



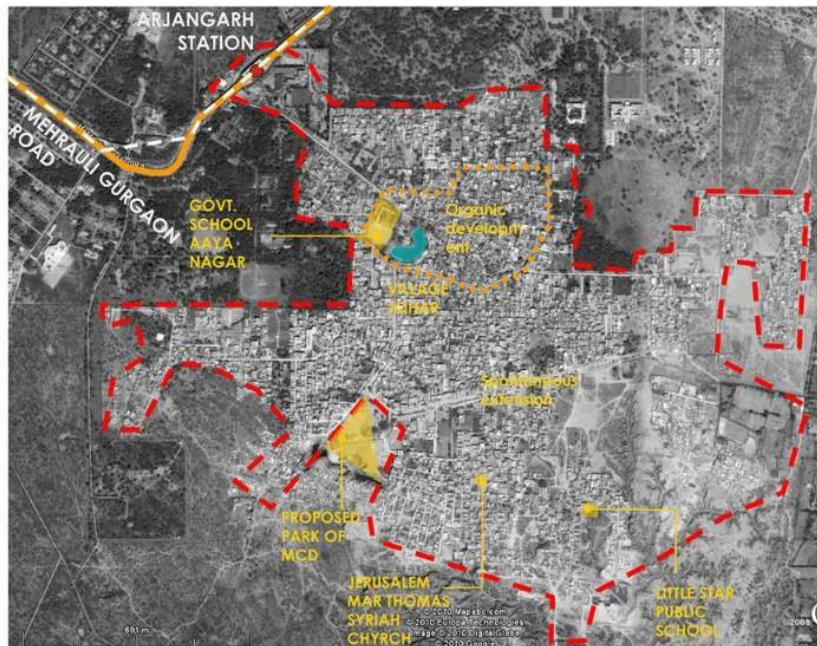


Figure 30 – Aya Nagar Zone

Source- Government of National Capital Territory of Delhi

Located on Delhi's southwest border lies Aya Nagar. On the Mehrauli Gurgaon Road, which links South Delhi with the rapidly urbanizing metropolis of Gurgaon in the neighbouring state of Haryana, this hamlet is the last one in Delhi. Despite being on the outskirts of Delhi's rural area, Aya Nagar is now home to around a million people, half of whom are low-income migrants from throughout India and the other half are the original rural residents.

Transformation study (Spatial/physical transformation)

Estimated Land Use Change in Aya Nagar (2011-2021):

1 Residential Land:

- o 2011: 50%
- o 2021: 65%

2. Commercial Land:

- o 2011: 10%
- o 2021: 15%

3. Agricultural Land:

- o 2011: 30%
- o 2021: 10%

4. Undeveloped Land/Green Spaces:

- o 2011: 10%
- o 2021: 10%

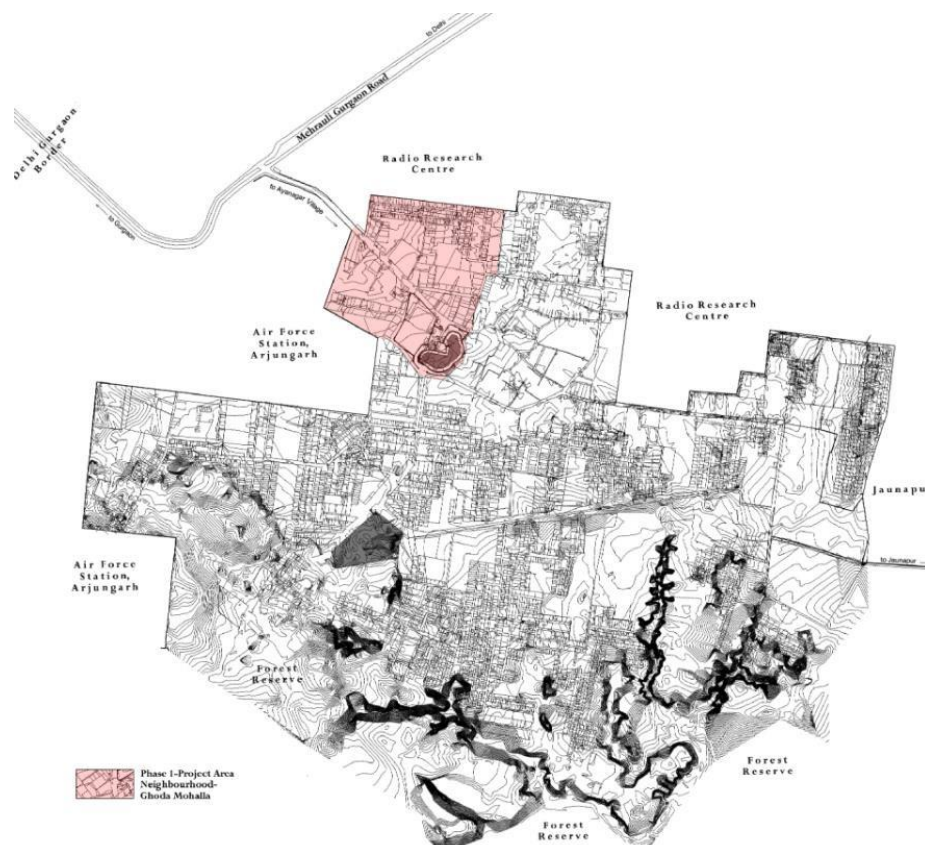


Figure 31 – Aya nagar regional map

Key Observations:

- **Increase in Residential Land:** Reflecting the ongoing urbanization and population growth in Aya Nagar.
- **Increase in Commercial Land:** Reflecting the need for more commercial activities to support the growing population.
- **Decrease in Agricultural Land:** Indicative of the conversion of agricultural areas into residential and commercial properties.
- **Stability in Undeveloped Land/Green Spaces:** May reflect efforts to preserve some green areas or the slow pace of development in certain regions.

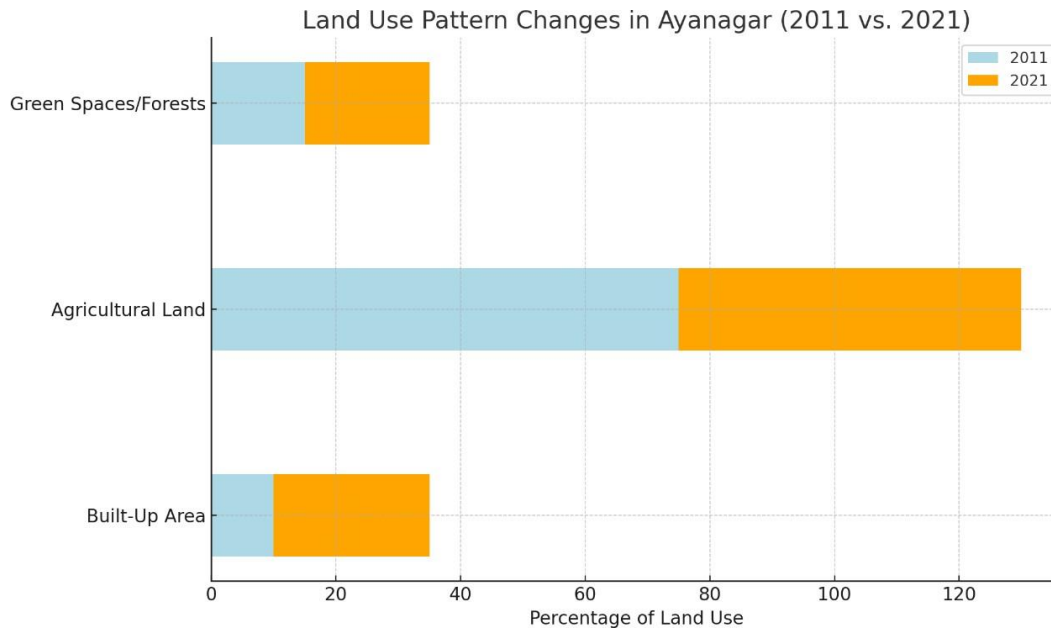


Figure 32 – Comparative analysis

Source – Government of National Capital Territory of Delhi

Above bar chart showing the estimated land use changes in Aya Nagar between 2011 and 2021. The chart illustrates an increase in residential and commercial land use, a decrease in agricultural land, and stability in undeveloped land/green spaces.

Land use Comparison

Above visual representation of the land use pattern changes in Ayanagar between 2011 and 2021. The graph shows a significant increase in built-up areas, a substantial reduction in agricultural land, and a modest increase in green spaces/forests.

This graph helps illustrate the trends of urban expansion and its impact on the local environment, which can be a crucial aspect of your thesis analysis. Let me know if you need further adjustments or additional data

Land value

Estimated Land Value Increase (in INR per square foot):

2011: ₹2,000

2013: ₹2,500

2015: ₹3,200

2017: ₹4,000

- 2019:** ₹5,000

- 2021: ₹6,200

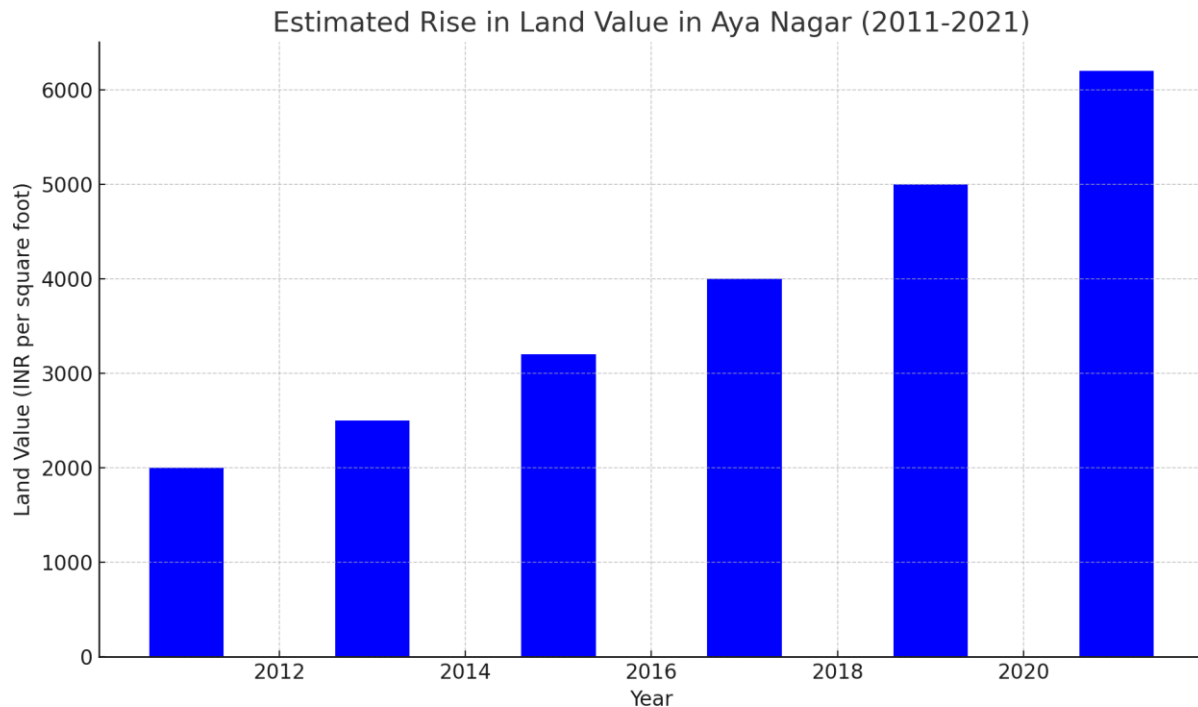


Figure 33 – Comparative analysis

Source – Government of National Capital Territory of Delhi

Above bar chart illustrating the estimated rise in land value in Aya Nagar from 2011 to 2021. The chart shows a steady increase in land value over the decade, reflecting the growing demand and urbanization pressures in the area.

Building structure

Socio economic transformations Demographic

Estimated Data for Demographic Changes:

1. Population Size:

- o 2011: 20,000
- o 2021: 35,000

2. Literacy Rate:

- o 2011: 70%
- o 2021: 85%

3. Percentage of Population under 15 Years:

o 2011: 25%

o 2021: 20%

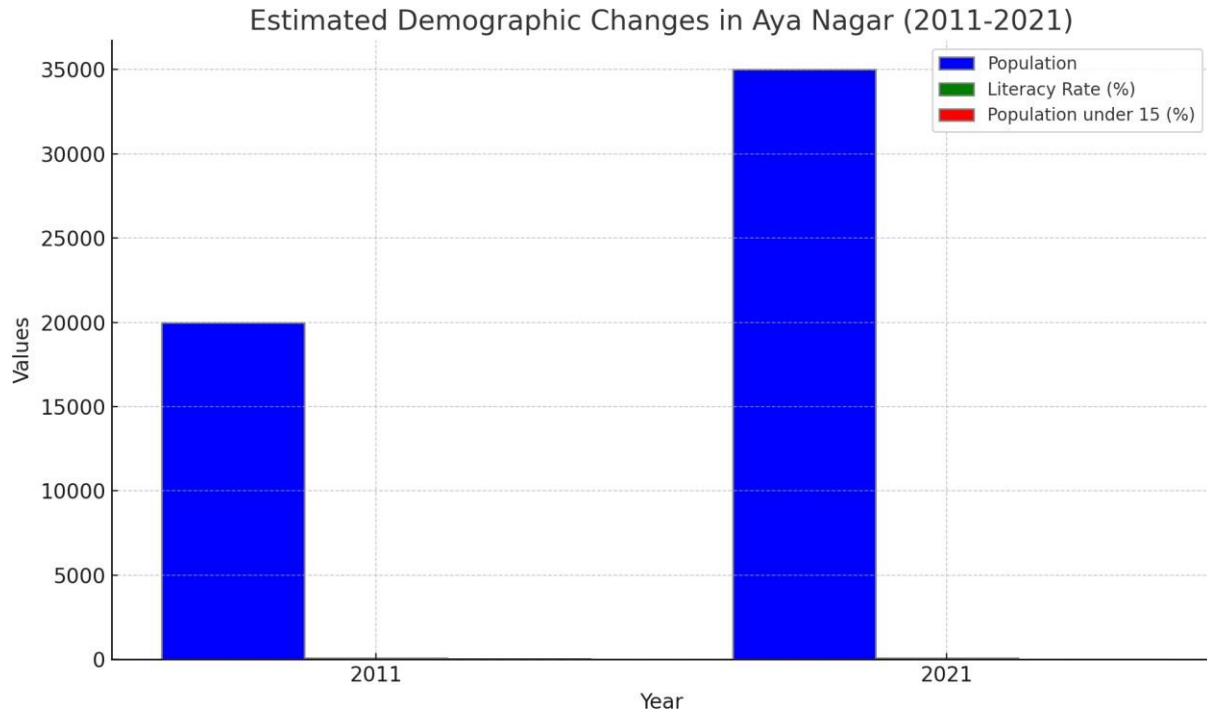


Figure 34 – Comparative analysis

Source – Government of National Capital Territory of Delhi

Above bar chart illustrating the estimated demographic changes in Aya Nagar from 2011 to 2021. The chart shows an increase in population size and literacy rate, along with a slight decrease in the percentage of the population under 15 years old.

Evaluation of Transformation Impacts

The land use changes in South Delhi areas like Mehrauli, Aya Nagar, and Lado Sarai have been influenced by several key factors over the past decade:

1. **Urbanization and Population Growth:** The average population growth in south Delhi region has been approximately 21.9% over last 12-15 years. Rapid urbanization and a growing population have driven the need for residential and commercial spaces, leading to the conversion of agricultural and open land into built-up areas.

2. **Government Policies and Planning:** Policies implemented by the Delhi Development Authority (DDA) and other government bodies have played a significant role in shaping land use. These include zoning regulations, land acquisition processes, and development plans aimed at improving infrastructure and housing.

3. **Infrastructure Development:** The expansion of roads, metro lines, and public utilities has made these areas more accessible, encouraging both residential and commercial development. Improved connectivity has increased the attractiveness of these regions for investment.

4. Economic Opportunities: The emergence of new business districts and commercial hubs in and around these areas has prompted a shift from traditional land uses to more economically viable ones, such as retail, office spaces, and hospitality. The advance estimates of the GSDP of Delhi stood at 10.4 trillion (approximately US\$130 billion) in 2022-23.

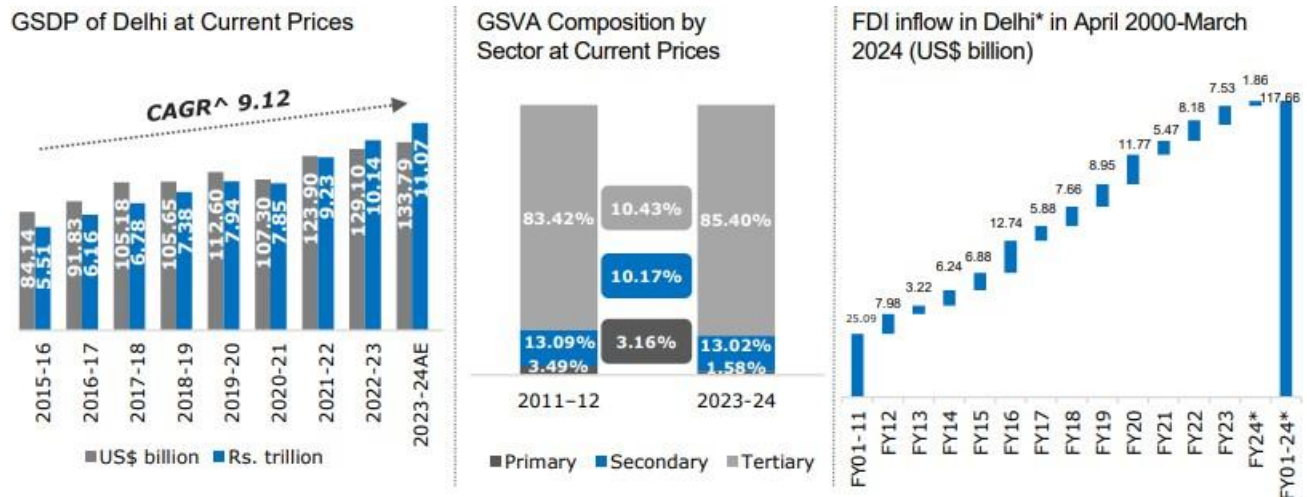


Figure 35 - Economic Snapshot

Source- Ministry of statistics and programme, implementation ,Directorate of Economics and statistics.

5. Real Estate Market Dynamics: The rising demand for property and increasing land values have incentivized landowners to sell or repurpose their land for more profitable uses. This has led to the proliferation of high-density housing and commercial developments.

6. Environmental Considerations: Although not always a primary factor, environmental regulations and the need to preserve green spaces have influenced land use decisions, particularly in areas with historical significance like Mehrauli.

7. Social and Cultural Factors: The historical and cultural significance of areas like Mehrauli has sometimes constrained development, requiring a balance between modernization and preservation of heritage sites.

8. Community Resistance and Activism: In some cases, local communities have resisted large-scale developments, leading to slower or altered land use changes, especially in areas where the local population has strong ties to the land.

These factors have collectively contributed to the transformation of land use patterns in Mehrauli, Aya Nagar, and Lado Sarai, reflecting the broader trends of urban growth and economic development in South Delhi.

Effect of the Changes on PAP

Over the past decade, the areas of Mehrauli, Aya Nagar, and Lado Sarai in South Delhi have undergone significant transformations that have impacted the lives of residents in various ways. Through a primary survey conducted in these regions, which included contacting numerous individuals, a wide range of opinions and insights were gathered. The findings reflect both the positive and negative aspects of development:

Population Growth:

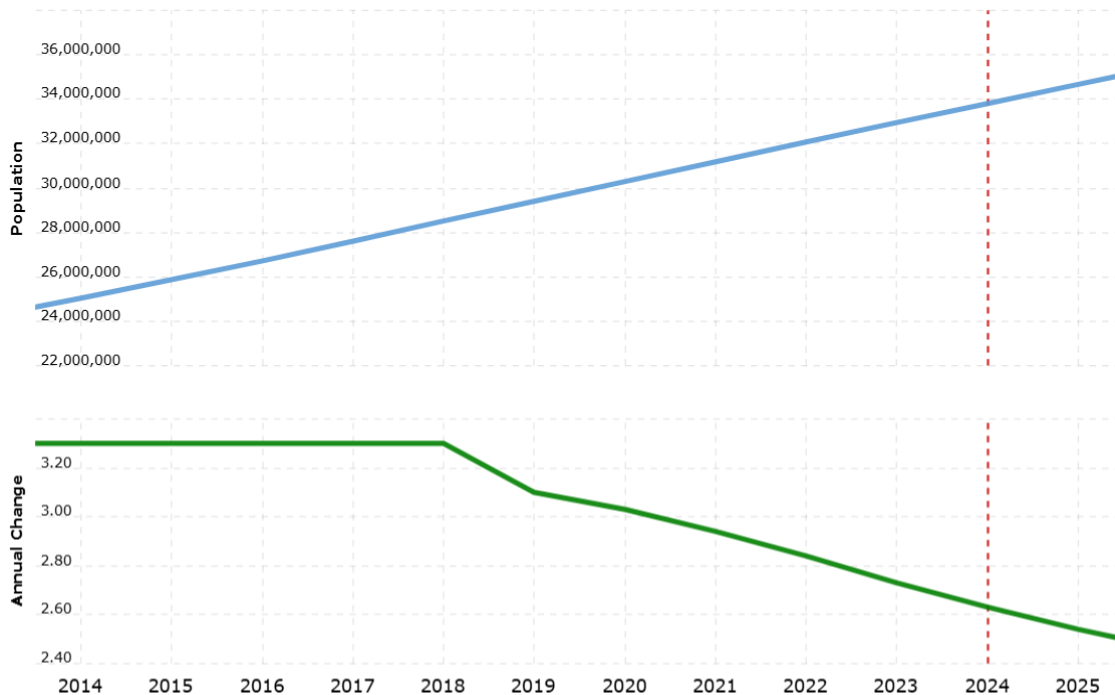


Figure 36 - Population Growth graph

Source- Ministry of statistics and programme, implementation, Directorate of Economics and statistics.

The increasing population in these areas has invigorated local communities, creating a vibrant atmosphere with more social interactions and cultural activities. This growth has led to the emergence of new businesses, retail outlets, and cultural spaces, thereby enhancing the local economy and providing residents with a broader array of services and amenities.

- However, the rapid influx of people has also strained existing resources and infrastructure. Overcrowding has become a significant issue, particularly in public spaces and residential areas, impacting residents' daily lives.

Effect of Changes in property values:

Numerous job opportunities

- South Delhi has a good mix of residential and commercial buildings. It has the presence of many reputed universities, such as Jawaharlal Nehru University, Delhi University's South Campus, Indian Institute of Mass Communications, Indian Institute of Technology (IIT) and TERI University. Also, many companies have established operations in the area. Bloomsbury, Oil and

Natural Gas Corporation (ONGC), Power Grid Corporation of India, Paytm and Microsoft are among the major companies that cater to ambitious job seekers and working professionals residing in South Delhi. The proximity to Okhla Industrial Area, a manufacturing hub that comprises pharmaceutical companies, plastic and packaging industries, also keeps South Delhi within the homebuyers' radar.

Advanced infrastructure

- Infrastructure is a crucial component of the real estate sector. With specific pertinence to residential real estate in South Delhi, all developments in the area have posed a positive impact on the desirability and convenience of living here. These include-
- The newly built Rao Tula Ram Flyover that provides signal-free access to the Indira Gandhi International (IGI) Airport
- Proximity to popular colleges like Gargi, Lady Shree Ram, Shaheed Bhagat Singh and Deshbandhu College, and the presence of renowned healthcare facilities like National Heart Institute and Fortis Hospital.
- Presence of top-notch shopping centres and five-star hotels like Select City Walk, Hilton Garden Inn and MGF Metropolitan Mall, among others.
- Zoning regulations for green spaces like Hauz Khas Forest and Jahanpanah City Forest help maintain the ambience of the location. Additionally, the plans to rejuvenate the Hauz Khas Lake will also add to its lure.
- Metro connectivity via the Yellow Line, Magenta Line and the Violet Line of the Delhi Metro allows for easy access to parts of Central Delhi and Gurgaon.
- An upcoming double-deck flyover on Mehrauli-Badarpur Road, revamping of the flyover at Chirag Delhi intersection and plans to build a 33 km-long cycling corridor connecting

Tughlakabad, Greater Kailash, Nehru Place and Delhi Secretariat is expected to boost the connectivity in South Delhi.

Capital values in popular localities in South Delhi		
Localities	Average capital value (per sq	Popular inventory
Malviya Nagar	Rs 11,500	3 BHK
Greater Kailash	Rs 19,500	4 BHK
Vasant Kunj	Rs 12,300	3 BHK
Saket	Rs 13,000	4 BHK
Hauz Khas	Rs 20,500	4 BHK

Table 4- Census data

Source- Census of India Provisional Population

Appreciating investment

- The real estate sector in Delhi NCR often witnesses ups and downs. However, South Delhi is one such region in NCR, where the real estate properties are expected to continually appreciate over the next few years. This is most likely due to the ongoing efforts of the State government like plans to set up the Lajpat Nagar-Saket G Block Metro corridor and developing a nine km elevated corridor on the Ring Road linking six flyovers from Moti Bagh to Lajpat Nagar. Moreover, the rising preference for spacious homes and low-rise developments is fueling the demand for luxury homes, and thereby causing a price appreciation in properties in South Delhi.

High standard of living

- Higher education and job opportunities, quality infrastructure and lifestyle amenities usually motivate people to narrow down a location as they reflect higher social strata.
- Also, in the post-COVID scenario, with the value of the rupee weakening against the dollar, many Non-Resident Indians (NRIs) have made a U-turn and invested in popular destinations. South Delhi region has, thus, witnessed huge investment inflow. Projects by Grade-A developers like Godrej Properties Limited, Risland India and JMD Property Consultants, and the presence of big supermarkets and shopping malls have made the region desirable among high-end homebuyers.

- Apart from the above factors, there are other variables that should be looked at to get an accurate idea of the property's value. These include the current demand-supply ratio in the region, distance from the workplace, and the usable space provided in the apartments. Also, you must exercise due diligence before investing in a property to avoid legal issues later.

Pollution and Environmental Concerns:

- Increasing levels of air and noise pollution are partly attributable to increased automobile traffic brought on by population expansion and economic activity. Concerns over the effects of pollution on their health and general well-being were voiced by several locals.
- Although steps have been taken to address the scope of the issue, such as the creation of green areas and pollution control measures, efforts to ameliorate environmental difficulties have frequently fallen short of expectations. An increase in the need for fuels for cooking and heating, transportation, electricity for industrial and residential use, waste management, building of residential and commercial buildings, and state infrastructure development—including expressways, highways, arterial roads, and pavements—can all be predicted by looking at the rate of urbanization. The majority of energy demands are satisfied by burning natural gas, coal, gasoline, and diesel. The amount of ambient pollution has increased as a result of all the combustion and dust-producing activities. Figure 1a illustrates how Delhi's land use and land cover changed between 1990 and 2014 for an air shed that included the National Capital Territory and its satellite towns. A built-up urban region makes up more than 80% of Delhi's landmass, according to the worldwide human settlements program [42]. From 370 km² in 1975 to 1220 km² in 2014, the entire built-up area in the air shed of Delhi expanded four times.

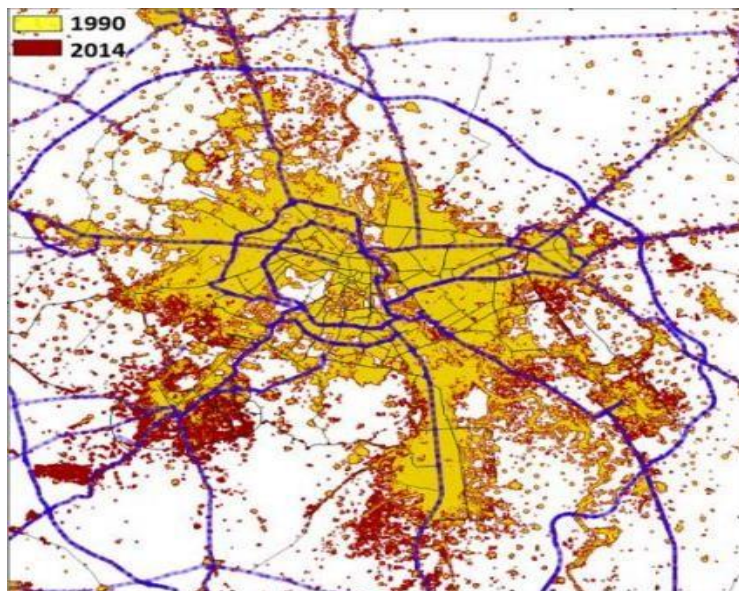


Figure 37- Built-up area in the airshed covering the NCT Delhi and its satellite cities, mapped from the Global Human Settlement program.

Congestion and Infrastructure Challenges:

- Congested roads and limited public transport options exacerbate commuting challenges, leading to longer travel times and increased frustration among residents. Inadequate infrastructure has struggled to cope with the demands of the swelling population, resulting in frequent utility disruptions and inadequate public services.
- The road length in Delhi has increased at the rate of 4.53% per year, which, of course, is not in pace with the growing population. It is reported that the road density in Delhi is around 155 km per 100,000 populations and about 80 vehicles per km.
- There has been inadequate public transport system in South Delhi. In spite of metro and bus services, the transport system is not being able to keep pace with the growing population, as a result of which, more and more people use their private vehicles, leading to increased congestion on the roads.
- Last, but not the least, ongoing construction of Metro network in various locations, damaged roads, repairing roads all contribute to severe traffic congestion in South Delhi area.

Community Feedback:

- Certain individuals contacted during the primary survey shared similar opinions, highlighting the need for balanced urban planning to ensure that the benefits of development are equitably distributed. They emphasized the importance of sustainable growth that addresses environmental and social challenges while fostering economic prosperity.

Overall, the dynamic development of Mehrauli, Aya Nagar, and Lado Sarai illustrates the complex interplay between growth and sustainability. The need for careful urban planning and community engagement is crucial to address these challenges and ensure a higher quality of life for all residents.

Government Policies and Strategies

Policy Implementation:

Land economic development strategies in Mehrauli, Lado Sarai, and Aya Nagar have been shaped by various policies, including the Master Plan for Delhi (MPD), DDA policies, heritage conservation regulations, and slum redevelopment initiatives. Public-private partnerships (PPPs) have also played a crucial role in facilitating development.

Effectiveness of Policies:

While policies have driven significant transformations, their effectiveness has been uneven. Successful implementation has often depended on the local context, regulatory enforcement, and stakeholder collaboration. Challenges include bureaucratic delays, conflicts between development and conservation, and uneven policy enforcement.

Challenges and Opportunities:

Key challenges in policy execution include bureaucratic inefficiencies, balancing development with conservation, inconsistent zoning regulation enforcement, and infrastructure constraints. Opportunities exist in leveraging data analytics, enhancing public-

private partnerships, integrating economic development with social equity, and aligning local policies with regional and national goals.

Recommendations

Sustainable Development Strategies:

- **Mixed-Use Development:** Encourage integrated residential, commercial, and recreational zones to reduce travel needs and support local economies.
- **Infrastructure Improvement:** Expand public transportation, incorporate smart infrastructure, and improve waste and water management systems.
- **Stakeholder Involvement:** Foster public-private partnerships and ensure community participation in decision-making processes.
- **Environmental Sustainability:** Promote climate-resilient design, sustainable agriculture, and green zoning to enhance quality of life and environmental health.
- **Governance and Policy:** Develop adaptive policy frameworks, support decentralized governance, and ensure transparent monitoring and evaluation of development projects.

Conclusion

South Delhi's land economic development presents both challenges and opportunities. The area's complex socio-economic dynamics, infrastructure demands, and environmental concerns necessitate a holistic approach to urban planning. By adopting sustainable land use strategies, improving infrastructure, and engaging stakeholders, South Delhi can transition toward a more livable and equitable urban environment. Effective management of urbanization requires coordinated actions across government, private, and civil society sectors, ensuring balanced growth that addresses social equity, environmental sustainability, and economic prosperity.