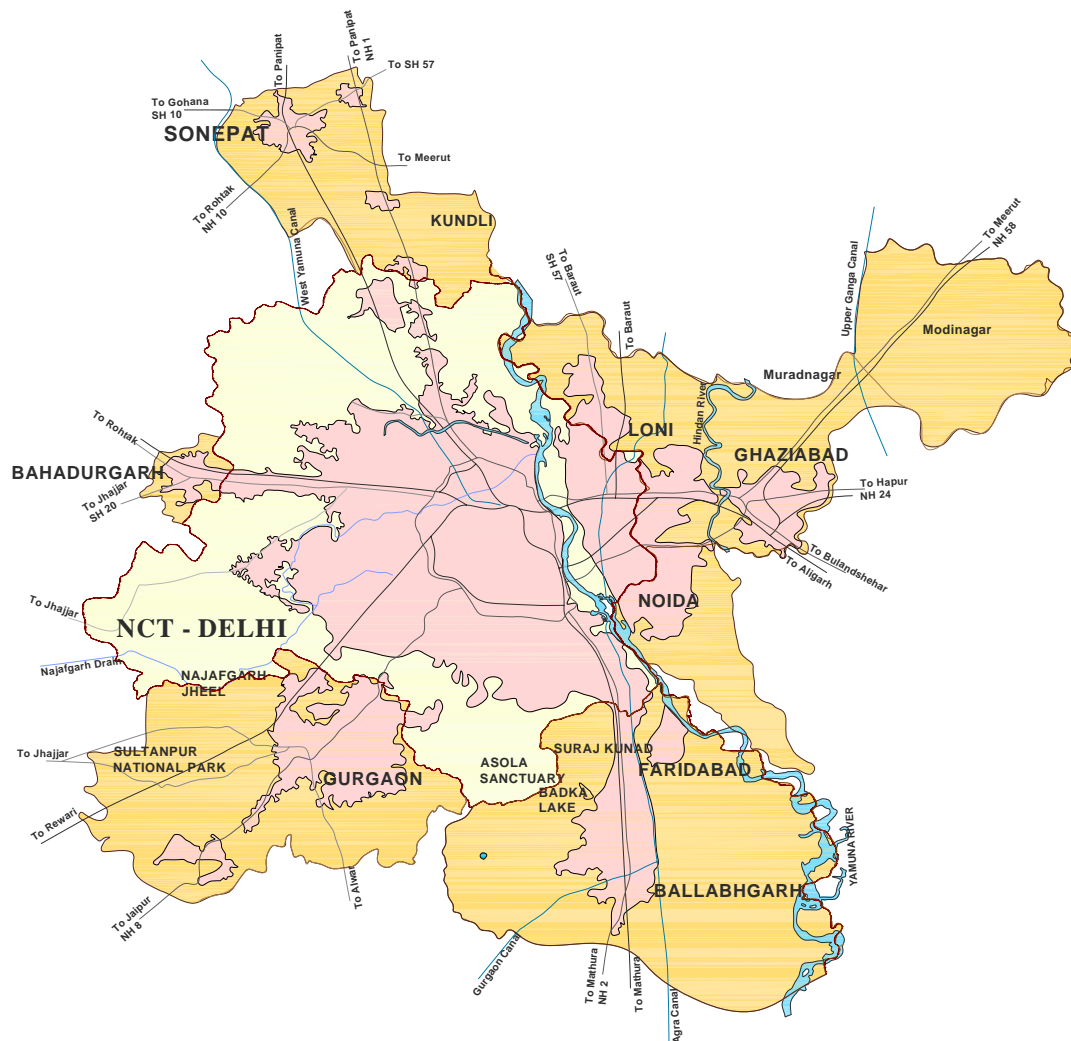


EVALUATION STUDY OF DMA TOWNS IN NATIONAL CAPITAL REGION (NCR)



TOWN AND COUNTRY PLANNING ORGANISATION
GOVERNMENT OF INDIA
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PREFACE

It has been more than two decades that the National Capital Regional Plan was formulated for decentralizing economic activities from National Capital Territory of Delhi to Delhi Metropolitan Area (now called CNCR) and other towns of NCR. Gaining from the experience of planning National Capital Region (NCR), this evaluation study of DMA Towns attempts to assess their role in achieving the overall objective of the NCR Plan. The NCR is already witnessing boom in real estate development and with efforts of the State Governments concerned to develop Special Economic Zones, Hi-Tech Cities, Industrial Estates etc., are bound to have spread effect on the vast hinterland.

The success or failure of the NCR Plan can not be assessed merely in quantitative or qualitative terms, as the vast scale changes in the development scenario in terms of economic liberalization, globalization and above all carrying out urban reforms definitely act as a role model for the State Capitals. The study also emphasizes the role of DMA (CNCR) Towns in reducing the burden on NCT Delhi and the operational problems in implementing the provisions of NCR Plan and brings out policy recommendations.

The Study was conducted by the *Metropolitan and Union Territories Planning Division* of TCPO under the guidance of Sh.R.Srinivas, Associate Town & Country Planner. He was assisted by Dr.S.KHusain, Dr.A.K.Banduni, Smt Raj Rani and Smt Shaswati Bhadra Research/Planning Assistants who conducted the primary surveys in DMA Towns and compiled the collected data. The secretarial work was done by Sh. Dharmendra Nandanwar, Senior Stenographer. Sh. Trilok Sharma, B.Planning student of SPA also assisted in preparation of graphs and analysis of primary survey data while undergoing practical training in TCPO.

TCPO acknowledges the financial assistance made available by Ministry of Urban Development which enabled it to carry out the study. Thanks are also due to Commissioner (Planning), DDA and Chief Regional Planner, NCRPB and PHD Chamber of Commerce and Industries for giving valuable comments on the draft report.

It is hoped that the study would be useful for Urban and Regional Planners, Policy makers, Academicians and Researchers.

September, 2007

(Jay B. Kshirsagar)
Chief Planner

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INTRODUCTION

1

1.1 INTRODUCTION

Ever since the NCR Plan - 2001, was formulated, the development of 'Delhi Metropolitan Area Towns' (DMA) has been receiving attention as important urban centers in the National Capital Region. Almost 20 years have passed since the formulation of NCR Plan - 2001 and now, the NCR Plan - 2021 has also been notified. Hence, it is pertinent to explore the developments in DMA towns - whether they have been helpful in fulfilling the objectives of NCR Plan, what has been their overall role in contributing towards the economic development of NCR and also how far they have offset the role of NCT Delhi in terms of urban primacy.

NCT Delhi has been experiencing rapid population growth and there has been no respite from unprecedented migration from small and medium towns and rural areas of the vast hinterland. On an average about 3 lakh persons are added every year to total population of NCT Delhi. It attracts number of migrants largely due to better employment opportunities, better infrastructure / services and above all better governance. In the past four decades, the population growth of NCT Delhi has been exceeding 50% per decade and has today resulted in a large population base of 13.85 million. Recent projections have indicated that population of NCT Delhi is slated to reach 18 million in 2001 and is likely to cross 23 million by 2021. At this pace of population growth, the entire NCT Delhi may have to be declared as 'urban' with very limited scope for horizontal expansion as the situation has reached saturation level. Hence, there is every possibility of catastrophic effect on the basic infrastructure / facilities, traffic and transportation and natural environment. To manage 23 million population in NCT Delhi by 2021 will be a challenging task for all concerned.

NCT Delhi cannot be viewed as the sole center of development in entire NCR. The Delhi Metropolitan Area Towns have to share the burden of NCT Delhi especially in terms of population redistribution, easing strain on infrastructure / services and effective transportation and communication linkages. Of late, with the emergence of new economic order in terms of globalization, liberalization and privatization, the emerging 'new development scenario' is likely to influence the urbanization pattern, which may alter investment decisions. This means that with the increasing innovation in information

and communication technology (ICT), the forces of decentralization may gather momentum and thereby benefit relatively smaller urban settlements.

The Delhi Metropolitan Area Towns are those, which are located in the Delhi Metropolitan Area as delineated by NCR Plan - 2001. These towns are Ghaziabad and Noida in Uttar Pradesh Sub Region of NCR and Faridabad, Gurgaon, Bahadurgarh-Kondli in Haryana Sub Region of NCR. As per NCR Plan - 2021, the Delhi Metropolitan Area has been redesignated as *Central National Capital Region (CNCR)*. Among the DMA Towns, Faridabad and Ghaziabad have already attained the status of million plus cities.

As mentioned earlier the new economic order is bound to alter the importance of towns and above all the dynamism of urban development coupled with factors like rapid population growth of DMA Towns. Their potentials and constraints give an opportunity to explore the following:

- What have been the major reasons behind the rapid population growth of DMA cities/towns.
- Whether the DMA cities/towns have been able to absorb the immigrants who otherwise would have moved and settled down in NCT Delhi.
- Whether these towns actually offer infrastructure / facilities and services at par with NCT Delhi.
- Whether these towns have actually been able to develop on their own or they are just developing due to the proximity to NCT Delhi or they are developing under its shadow as NCT Delhi has urban primacy.
- In spite of rapid population growth in these towns, what are the probable reasons for them not achieving the assigned population as per the NCR Plan - 2001.
- Can these towns play an important role in redistributing the population, which is likely to be added to NCT Delhi (about 90 million till 2021).

Realizing the importance these issues, a study has been undertaken. The study has been sanctioned vide Ministry's OM No. K-14011/12/2001-02/UD.I dated 25th December, 2004. The objectives of the study are:

1.2 OBJECTIVES

- To make an assessment of the existing development scenario in DMA Towns.
- To analyze the Regional Plan-2001 vis-à-vis the existing ground realities.
- To assess the growth and development perspectives of DMA Towns in terms of demography, economic activities and planning efforts.
- To assess the implications of NCR Policy on landuse control, growth and development of infrastructure.
- To ascertain DMA town residents and Builders perception in terms of planning and development of DMA Towns.
- To discuss operational constraints, SWOT analysis and development options.
- To suggest suitable policy guidelines for the development of DMA Towns in the regional perspective.

1.3 METHODOLOGICAL FRAMEWORK AND DATA BASE

The study has been evolved with focus on analysis of primary surveys and analysis of secondary sources of data. The primary surveys were conducted through a structured questionnaire to ascertain the perception of residents and builders of DMA Towns. Further, the study relies heavily on secondary sources of data viz. Census publications, Master Plan of the towns concerned and information / data collected from the State Government agencies. Broadly, the study is divided into seven chapters.

Chapter-1 gives an introductory background to the study, highlighting need for the study, objectives, methodological framework and scope and limitations of the study.

Chapter-2 explains the concept of Delhi Metropolitan area and efforts of planned development in the respective cities/towns.

Chapter-3 details out demographic aspects, landuse analysis and developmental problems of DMA cities/towns.

Chapter-4 brings out the analysis of primary survey findings to ascertain residents and builders perception.

Chapter-5 provides for appraisal of issues related to DMA cities/towns.

Chapter-6 attempts to give an overview of operational constraints, SWOT analysis and development options for DMA cities/towns.

Chapter-7 gives broad policy recommendations for effective implementation of NCR Plan.

1.4 SCOPE AND LIMITATIONS

The study has by and large been an attempt to evaluate the role of DMA Towns in NCR. There have been constraints in availability of data so as to draw a comparative picture among the DMA cities/towns based on selected development indicators. Further, it has not been possible to assess the parameters in time series. The study is limited to five cities/towns and due to time constraints; it has not been possible to cover priority or regional towns of NCR.

DELHI METROPOLITAN AREA: CONCEPT AND EARLY ATTEMPTS FOR PLANNED DEVELOPMENT

2

2.1 CONCEPT OF DELHI METROPOLITAN AREA (DMA)

The concept of *Delhi Metropolitan Area* was well recognized in the first Master Plan of Delhi (MPD-1962), which had defined DMA as an area of 800 sq km comprising the entire Union Territory of Delhi and the Ring Towns of Loni and Ghaziabad in Uttar Pradesh, Faridabad, Ballabgarh and Gurgaon of erstwhile State of Punjab and Narela in Delhi. The MPD -1962 duly recognized the fact that to achieve a rational growth of Delhi, which was expanding in a most haphazard way, it was necessary to plan the whole area as a composite unit and have an integrated and balanced overall programme of development. It was also stated that the 'Ring Towns' must be developed not only to deflect some of the population that would otherwise come into Delhi and jeopardize the planned growth of Delhi but also to help these towns to grow in a planned manner.

The MPD-1962 visualized a compact orderly growth of urban Delhi, with six ring towns, self-contained in matters of work and residential places but with strong economic, social and cultural ties with the central city. The plan also mentioned that the development of the ring towns can be ensured by strengthening their economic base which was to be done by planning industrial development and locating government offices in these towns.

The first NCR Plan (NCR-2001) defined Delhi Metropolitan Area as the area comprising of controlled area of contiguous towns of Ghaziabad including Loni and NOIDA in UP, Faridabad – Ballabgarh Complex, Gurgaon, Bahadurgarh, Kundli and the extension of Delhi ridge in Haryana. The NCR Plan 2001 stated that 'ring towns' identified in MPD-1962 subsequently known as 'Delhi Metropolitan Area' with Delhi as the core. They have become more and more attractive for development of industries mainly due to proximity to Delhi with marketing and other support facilities and policies of the State Governments. The development has become intensive particularly among the major transport corridors, which led to a form of ribbon development all along transport routes, lacking in adequate infrastructure / facilities and also shelter.

It was also recognized that Delhi being limited in its territorial extent and opposed to it, the ring towns having relatively extensive areas for expansion, the unabated pouring migrants into Delhi, brought in manifold problems in the form congestion and inadequacy of the basic services. This was further accentuated as the ring towns were developed for industries and allied activities but not with adequate residential development.

The interaction between Delhi and the adjoining towns within Delhi Metropolitan Area has become more and more intensive and has shown increasing interdependence with each other. Services both economic and social and also job opportunities to a great extent serve the floating population from the DMA Towns and the migrants.

Although the concept of Delhi Metropolitan Area was evolved way back in 1960's, since then, the NCT Delhi has witnessed unprecedented increase in built up area, in migration and above all population growth between 4% to 5% yearly. It would also be necessary to examine how the concept of NCR in overall terms has been able to disperse the economic activities in NCR and specifically in DMA Towns.

The NCR Plan 2021 notified recently aims "to promote growth and balanced development of the National Capital Region". The plan has a used different nomenclature for Delhi Metropolitan Area i.e. 'Central National Capital Region' (CNCR)* which comprises the notified controlled/development / regulated areas of contiguous towns of Ghaziabad- Loni, NOIDA, Gurgaon-Manesar, Faridabad-Ballabhagarh, Bahadurgarh, Sonapat-Kundli and the extension ridge in Haryana. The controlled / development areas measuring 1696 sq. km have undergone vast changes in the recent past. In many cases new areas have been added. The total area of the CNCR would be about 2000 sq. km As mentioned in NCR Plan 2021 the opportunities offered by CNCR need to be maximized to enable it to compete effectively by offering economic activities, comprehensive transport system, housing, social infrastructure and quality of environment at par with the NCT Delhi.

**Although NCR Plan-2021 has renamed DMA Towns as CNCR, the study persist to use the acronym- DMA Towns*

2.2 NATIONAL CAPITAL REGION – EXAMPLE AND CONCEPT OF RING /SATELLITE TOWNS/DECENTRALISATION CONCEPT IN OTHER COUNTRIES

If we examine the process of urbanization, especially since World War I, it has been so rapid that it is often called a revolution of urbanization never experienced before. The urban population in the world increased 25 times in only three decades from 712.1 million in 1971 to 2000 million in 2001. It would be noted that both the developing and developed world are seriously concerned about social, economic and environmental problems caused by excessive urbanization. However, the stage and process of urbanization are quite dissimilar among the countries in the developing and developed world.

The proportion of urban population to total population in developing countries as a whole was only 35% in 2001, which was less than half of that of developed countries as a whole (78%). However, as per UN estimates, the tempo of the urbanization process will rapidly accelerate in the next two decades reaching a little over 45% by the year 2011 in the developing region. These nations are seriously concerned about urban congestion, poor housing, lack of basic services, health and education as well as unemployment, underemployment and so forth. Urban problems have become one of the most crucial challenges to policy makers not only to tackle but also pave the way for all-round development of cities and towns.

On the other hand, urbanization has already reached a remarkably high level in developed countries, 78% of the population was considered urban in 2001. However, it is observed that the urbanization process will slow down in forthcoming years. Nevertheless, both urbanization and development are also important issues for the advanced countries. The level of urbanization in the highly urbanized societies is not expected to decline in the future but the urban system may be modified due to change in the spatial distribution of the urban population. Even in the developed countries urban problems like traffic congestion, environmental degradation, housing shortage have confronted the urban planners and policy makers.

Beside India, the example of *National Capital Region Plan* concept can be found in various countries as it was by and large envisaged as need for decentralization of economic activities. However, there has been number of instances in the world wherein efforts were made to develop settlements outside the metropolitan cities mainly due to factors like congestion of city centers / downtown areas, traffic and transportation problems, high rental values in these areas, prevalence of urban blight, etc. Some of the concept / examples of decentralized development especially in each continent are given in the following sections.

UK: NEW TOWNS AND GARDEN CITY CONCEPT

The development of satellite towns, ring towns or new towns within the ambit of metropolitan region / area is not a new concept and was propounded way back in early 20th Century. In UK after World War II, Government realized the need for large scale rebuilding. The concept of *Garden City* was evolved. In 1944, the county of London had an area of 117 sq. miles with a population of 4 million and Greater London had a population of 8 million with an area of 700 sq. miles. The plan for Garden City was prepared under the overall guidance of Prof. Patrick Abercrombie and F.J. Foreshaw with twin objectives, rebuilding the war torn city and relieving the intolerable over crowding and congestion.

The essential concept of the Abercrombie Plan for Greater London (1946) was reduction of the population within the congested center, creation of green belt ring to contain Greater London and shifting of industry to an Outer Ring. The plan envisaged a region of 2600 sq. miles and a series of four rings surrounding the county of London. The population within the heavily urbanized areas and the Inner Ring was to be reduced by 1 million people by dispersal within the suburban and Outer Rings. The urban conurbation (concentration) of the region was extended to the boundaries of the suburban Ring beyond the limits of the plan and had forced attention to the preservation and expansion of the green belt. The regional sphere was also extended to 4600 sq. miles.

The planned deconcentration of London, by reducing population density within the inner core of the metropolitan area and dispersal of people and industry from center was implemented by the *New Towns Programme*. Of the 33 New Towns in England, Scotland and Wales, eight were located within the London region.

The concept of '*New Towns*' emanates from the fact that they were conceived as *self-contained communities* seeking a balance between employment, social facilities and recreation. In new towns, each neighbourhood had a subcentre for shopping, school, playfields and other social facilities.

Further in Great Britain one of the major evils consequent upon indiscriminate development has been unrestricted growth of the large towns. These have expanded by constantly increasing their spatial expanse and encouraging ribbon like development along the major roads. Disturbed by the haphazard growth and unhealthy conditions in the cities, Sir Ebenezer Howard had set forth an idea of *Garden City* (1893). He described a town in which the land would remain in the single ownership of the community. The dwellings would be distributed

about a large central court in which public buildings would be located. The Shopping center would be on the edge of the town and industries on the outskirts. The city would have a population of about 30,000 persons in an area of 5,000 acres.

One of the examples of the Garden City is Letchworth, which was designed for a population of 35000 with an agricultural belt of 3000 acres. Similarly, Welwyn was planned for a population of 40000 with an area of 2400 acres. Both, these cities followed the principle of Ebenezer Howard, with the agricultural belt as permanent protection. The New Towns and Garden Cities were planned with different objectives. The latter was situated close to a large city in which the residents may have their work places and places of business while latter was intended to be a self –contained and self-sustaining township.

Of late, there has been growing realization in Great Britain that one of the major evils consequent upon indiscriminate development has been the unrestricted growth of the large towns. These have expanded by constantly increasing their circumference, and sending ribbon-like tentacles along the main roads. This means that the country is driven further and further from the inhabitants and a nucleus intended for, and suited to, a reasonably compact city has to serve as a centre for a population far in excess of the capacity of the nucleus and the carrying power of its transport facilities.

Now the urban planners of Great Britain have realized and recognized that a limit should be set to the growth of a city, and the difficulty elsewhere has too often been that the cities (e.g., London, Glasgow, Birmingham) are already too large and unwieldy when the problem of limiting its size first came under consideration, and by the time the requisite margin of growth was allowed for, things would become worse. Hence, satellite townships need to be developed to ease the burden on large cities.

CHINA: PLANNING INITIATIVES FOR BEIJING

China also faces many formidable tasks as it modernizes. Urbanization, especially the growth of large- and medium-sized cities is a major concern for policy makers. China's population of 1.2 billion remains predominantly rural with 70 percent living in the countryside. As observed in China, rural resources are insufficient to support such a large population. The governmental efforts have been to expand urban areas so as to provide the jobs for rural migrants who cannot find work in their home provinces.

In accordance with the requirement of basically achieving modernization during the tenth Five-year Plan period, an urbanization

strategy is being implemented. The urbanization of its suburban areas will be speeded up, and the modernization level of the urban area will be enhanced. The National Capital Beijing will further improve its pattern of development, markedly strengthening its service functions and enhancing its loading capacity, improve municipal administration, build the basic framework of a modern international metropolis, and create a new image for itself for the rest of the country and the rest of the world.

A strategic shift with regard to priorities of the municipality's development and construction has been envisaged. Beijing will have a pattern of development where the city center, green buffer belts, fringe groups, satellite towns and small towns are developed in a coordinated way. Priority has been given to develop the southern part of the municipality by completing the construction of green buffer belts, strengthening the development of satellite towns, and speeding up the construction of small towns in suburban areas. These are intended to improve urban systems and optimize the municipality's space arrangement

The Beijing Municipal Commission of Urban Planning contemplated an urban green buffer belt with imposition of strict control on the amount of land to be used for urban construction; prevention of urban sprawl and the principle of giving priority to ecological improvement to be adhered to through tree planting, green areas covering 125 square kilometers to be built on the outskirts of the city. It will form a buffer belt encircling the city. This is expected to improve the overall ecological environment of Beijing.

The policy of development of satellite towns aims to let such cities share functions of Beijing and promote local economic and social development. Efforts have been made to strengthen the planning of satellite towns, and improve overall designing levels and construction quality. Further, in a step-by-step way, some institutions of higher learning, research institutes, government departments, primary and secondary schools, health care institutions and cultural and sports facilities are encouraged to spread and move to satellite towns.

During the Tenth Five-year Plan period, priority has been given to the development of the following six satellite towns: Tongzhou, Changping, Yizhuang, Huangcun, Liangxiang and Shunyi. The goal is to turn them into bases for a modern processing industry and high- and new-tech industries and enable them to function as hosts to institutions of Greater Beijing in the areas of science and technology, education, culture, health care and logistics. They should become major areas to which population of the urban center moves. Other satellite towns such as Yanqing, Huairou, Miyun, Pinggu and Mencheng are going to

become comprehensive economic centers and tourist service bases for their respective areas, and they will promote the industrialization and urbanization of their respective areas.

In strengthening the construction of infrastructure for satellite towns, focus has been placed on solving the problem of fast traffic linkup between the urban center and the satellite towns. Efforts are being made to complete, as soon as possible, the construction of the First Ring Highway, the Second Ring Highway and the Beijing-Miyun Expressway. A rail transit system connecting the satellite towns and the urban center has been planned. Efforts will also be made to strengthen the development of facilities in the fields of energy, water conservancy/utilization and environmental protection as well as public facilities to increase supply capacities and enhance the quality of services. Measures will be taken to solve problems concerning household registration administration and housing system that may arise when population and industries move into satellite towns.

Speeding up the development of small towns in suburban areas should fully play the role of attracting the rural population and assimilate with the rural labor. The level of urbanization in the suburban areas is to be enhanced with the development of small towns. During the tenth Five-Year Plan period, in accordance with the principles of scientific planning, rational distribution, availability of matching facilities, beautiful environment and enhancement of features, development of a total of 33 central towns have also been envisaged. These include Xiaotangshan Town in Changping, Shayu Town in Shunyi, Songzhuang Town in Tongzhou, Xihongmen Town in Daxing and Yangsong Town in Huairou. Development of secondary and tertiary industries in small towns will be speeded up. The towns will develop suitable industries in accordance with their respective advantages and characteristics and attract township enterprises and productive factors of all kinds. A new policy for household registration administration will be adopted to guide the rural population to converge in small towns. Development of infrastructure and environmental protection in small towns should be strengthened.

USA: BOOMBURBS-BOLD NEW METROPOLIS, OR UPDATED SATELLITE CITIES?

USA is one of the most urbanized countries in the world. About 77% of the population lives in towns and cities. The urbanization pattern has been dominated by large metropolitan cities and with their tremendous growth, the majority of cities have experienced suburbanisation especially New York, Chicago, Los Angeles and San Francisco. The process of suburbanisation started mainly due to excessive congested conditions in CBD, high land / property values

and as a result, decentralization processes took place with provision of infrastructure services in suburban areas. A new type of large, rapidly growing suburban city ("*Boomburb*") emerged in the later part of the 20th Century along with the Sunbelt and the suburban-dominated metropolis. During late 19th and early 20th Centuries, the satellite cities reached a large scale and developed as dense urban cores. But as Boomburbs grew into big "cities," they remain essentially suburban in character. Just as satellite cities reflected the dominant urban pattern of their time, Boomburbs became the ultimate symbol of the sprawling metropolitan form.

Boomburbs are defined as places with more than 100,000 residents that are not the largest city in their metropolitan areas and have maintained double-digit rates of population growth in recent decades. The United States currently has 53 Boomburbs: four top 300,000 in population, eight surpass 200,000, and 41 exceed 100,000 population.

While Boomburbs may be found throughout the USA, they occur mostly in the southwest, with almost half in California alone. Many Boomburbs, especially in the West, are products of master-planned community development and the need to form large water districts. Even a relatively small metropolis such as Las Vegas, with its expansive master-planned communities and desert surroundings, contains two Boomburbs. By contrast, no big region in the Northeast and Midwest, except Chicago, has a single Boomburb. Even most large and rapidly growing Sunbelt metropolitan areas east of the Mississippi, such as Atlanta, lack Boomburbs. Thus a region can boom and still be without Boomburbs.

The South's suburbs are comprised of mostly small, fragmented municipalities that capture tiny fractions of metropolitan population. The different municipal structure in the east and west Sunbelts has important policy implications. The East's fragmented municipalities will produce more fragmented responses to regional problems. If, as many now argue, regional cooperation is becoming more essential to take on such problems as sprawl, then the South's lack of Boomburbs may put the region at a disadvantage.

Because of their exceptionally fast growth rates, the Boomburbs face extreme degrees of development-related problems, such as traffic congestion, strained public services, and sprawl. However, because of their large size and their potential to cooperate with other large municipalities, Boomburbs may prove well positioned to participate in comprehensive regional solutions to these problems

Boomburbs are fast-growing suburban cities. They typically develop along the interstate beltways that ring large U.S. metropolitan areas. As highway exit ramps and major intersections gather the commercial elements of the new suburban metropolis: the office parks, big-box retail, characteristically result in strip development. Beyond these strips lie subdivisions, dominated by large-lot, single-family homes.

It has been a debate whether Boomburbs are merely developed as satellite cities. Economic activities particularly manufacturing have been decentralizing for many decades. One of the example of shifting of economic activities, in a publication titled, *Satellite Cities: A Case Study of Industrial Suburbs*, by Graham Taylor, describes an emerging metropolitan pattern in which heavy industry was rapidly shifting to the suburbs in search of more space and lower costs. More than 75 years ago, sociologist Ernest Burgess noted that there was already business growth at Chicago's edge, which he characterized as being "centralized-decentralized" in structure.

Early 20th century "satellite" and "centralized" suburbs followed big cities, although at slightly lower density and scale. *Satellites had all the places that defined a city: a main street shopping area, high-density residential neighborhoods, and, by the late 19th century, factory districts* (Borchert 1996). In the 1920s, it was even typical for larger satellite cities in the New York region, such as Newark, New Jersey, to have considerable functions of large metropolis like location of offices, business centers, commercial activities signifying an already decentralizing service economy.

Boomburbs, by contrast, do not resemble traditional central cities or, for that matter, older satellites. While Boomburbs possess most elements found in cities, such as housing, retailing, entertainment, and offices, they are not typically patterned in a traditional urban form. Boomburbs almost always lack, for example, a dense business core. Boomburbs can thus be seen as distinct from traditional cities-not so much in their function, but in their low density and loosely configured spatial structure. Boomburbs are in fact, urban but not in feel.

However, Boomburbs in regions such as Phoenix, Dallas, and Las Vegas are similar to their newer and less traditional Southwestern US central cities. Cities such as Mesa, near Phoenix, and Arlington, near Dallas, have comparable density and urban form to their respective core cities-except for a missing large downtown. Boomburbs in these metropolitan areas are an extension of the auto-dependent city building that has dominated the spatial structure of many Sunbelt metropolitan areas.

The emergence of Boomburbs that resemble their newer central cities shows that satellites tend to follow the general urban form of their metropolitan area. In this respect, Boomburbs are updated satellite cities-provided that they ring newer, auto-based central cities. They are touchstones of the new suburban-dominated metropolis.

Urban scholars have been attempting for the past three decades to characterize the big suburban cities that are referred to here as Boomburbs. As Sharpe and Wallock (1994) note:

In the early 1970s, as concern about the inner city crisis waned and the decentralization of the metropolis reached new proportions, "the urbanization of the suburbs" suddenly became a topic of national interest. The ensuing flurry of articles and books introduced neologisms such as "outer city," "satellite sprawl," "new city," "suburban 'city,'" "urban fringe," and "neo city" to describe this phenomena. Further, it was felt by urban experts that despite decentralized development around large metropolis the sprawling suburban metropolitan areas can no longer be judged by the standards of the old metropolis. This is due, in part, to the fact that the new suburban form "lacks any definable borders, a center or a periphery, or clear distinctions between residential, industrial and commercial zones

Boomburbs were identified by a two-step process. The first step identified cities with more than 100,000 people that are not the largest central city in their metropolitan areas. The second step screened out places that did not experience double-digit (10 percent or more) population growth rates in the ten-year periods between the Censuses in which they appeared since 1950.

TURKEY-ISTANBUL METROPOLITAN AREA

Istanbul is the largest city in Turkey. As per 2000 census, the population of Istanbul is 10 million. The total area of Istanbul Metropolitan Area is 5343 sq km comprising 17 town municipalities and 27 district municipalities. The Istanbul Metropolitan Municipality has made future projections that Istanbul will grow to 15 million in the next 10 years. It has an average yearly influx of 500,000 people. The city itself cannot sustain the burden on infrastructure. Hence, the development of satellite cities has been given a serious thought. The objective of the Satellite City plan for Istanbul is to relieve tension from impending strain on the city. With the rise of telecommunications, the concept of a downtown business center is becoming optional. Satellite cities around Istanbul will provide technologically integrated economic network containing both living and working places. Development will be

directed to safer areas, while protecting the forested areas to the north.

Areas surrounding Istanbul have been considered for a potential Satellite City site with the criteria like maximal distance away from the vulnerable fault so as to avoid the area from earthquake hazard. In addition to distance from the fault, soil condition was considered in conjunction with location to determine the best areas with lowest shaking potential. It was recognized that satellite cities would need to have some existing infrastructure to aid their potential for growth. These areas were identified as having existing support for its community, including an economic base, or developed infrastructure network. Finally, sites were considered within reasonable proximity to Istanbul, to facilitate a feasible The selected locations for new cities around Istanbul are *Pendik*, on the Asian side which has the advantage of an already existing manufacturing industry and established infrastructure. Development would be directed away from the coastline, as the soil conditions are more optimal towards the north. Pendik would be planned to accommodate a future population of 500,000.

Secondly, *Riva*, on the Black Sea coast, is planned as a potential future financial subcenter and a thriving coastal community. Riva is planned to accommodate a future population of 500,000. *Kumkoy*, on the European side of the Black Sea coast, is currently a resort town with many existing local and international tourist destinations. This area would be expanded to include more tourism and in addition would provide a center for entertainment industries. Kumkoy is planned for a future population of 200,000. *Kucukcekmece*, is an already developing trade center. This borough would be included in the satellite city concept ensuring that all new buildings will be constructed according to seismic codes. Infrastructure is one of the most important aspects of the Satellite Cities concept. This concept requires that all proposed cities should be connected to each other, and to Istanbul, in a way that eases the aimed socioeconomic integration. For this goal to be reached, all cities should have direct transportation and communications systems with the core city, Istanbul, and, when viable, between themselves.

The satellite cities of Istanbul have been planned with a view to strengthen the infrastructure and encourage decentralization of economic activities from the mother city. Two of the cities have already established a set of connections with Istanbul: Pendik and Kucukcekmece. Both of these cities are located along, or relatively close, to the Sea of Marmara, thus benefiting of the heavy rail line that runs along the Sea of Marmara in two segments, one going East and reaching the rest of the country, and the other going West and further to Europe. These two cities also benefit from the two major Highways, E-

5 and TEM. The city of Pendik is served by one of the two International Airports in the region. Kucukcekmece is located close to the other Airport, the most important one. This last city is the closest to Istanbul. Currently, rail based transportation in Istanbul is being expanded in the direction of Kucukcekmece; Bus services are well established between these cities and Istanbul's center and other neighborhoods. In the case of Pendik, there is also the sea bus service to several locations within the metropolitan region. The proposed developments along the Black Sea, Kumkoy and Riva, suffer from a connection problem with the core city and between each other. There is currently a road service between them and Istanbul. Thus, it can be stated that all efforts are being made to develop the satellite cities around Istanbul wherein the special attention is being given to fast and efficient connectivity.

2.3 INDIA-NCT DELHI: METROPOLITAN DYNAMICS

The development of NCT Delhi and its metropolitan area characterizes major tendency in growing urbanization with an increasing concentration of urban population of ten million plus inhabitants. Further, it could be stated that Delhi has got all the features of a *Primate City*, which in actual terms constitute 66.2% of the total urban population of NCR. The second ranking city is Meerut with a population of 11,61,716 and third ranking city is Faridabad, which had a population 10,55,938 as per 2001 Census constituting 5.5% and 5.0% respectively to the total urban population of NCR. This shows that urbanization process has not been channelised in the National Capital Region clearly indicating predominance of NCT Delhi.

With regard to NCT Delhi, the demographic evolution is deeply marked by the country's turbulent history. In 1911, the capital was shifted to Delhi from Kolkata. Thereafter, the population of the city had increased from 4,13,851 in 1911 to 17,44,072 in 1951. The post independence scenario witnessed massive forced migration from Pakistan. Hence, the decade 1941-51 recorded the most rapid population growth in the history of the national capital with an increase of 8 lakh population and a growth rate of 90%. Nevertheless, the post-independence period has been remarkable in terms of population growth of an urban agglomeration of this size fluctuating between 4% to 5% per annum to reach 137 lakh in 2001. NCT Delhi ranks third overshadowed only by Mumbai UA and Kolkata UA.

Table 2.1: Population, Area and Density of NCT Delhi (1901-2001)

Year	Population	Growth Rate (%)	Population (Urban)	Growth Rate (%)	Area (Sq.Km)	Density (P.P. Sq.Km)

1901	405819	-	214115	-		
1911	413851	1.98	237944	11.13	43.25	5501
1921	488452	18.03	304420	27.94	168.09	1811
1931	636246	30.26	447442	46.98	169.44	2640
1941	917939	44.27	695686	55.48	174.31	3991
1951	1744072	90.00	1437134	106.58	201.36	7137
1961	26586122	52.44	2359408	64.17	326.55	7225
1971	4065698	52.93	3647023	54.57	446.26	8172
1981	6220406	53.00	5768200	58.16	540.78	10666
1991	9420644	51.45	8471625	46.87	624.28	13570
2001	13850507	47.02	12905780	52.34	888.74	14521

Source: Census of India, 2001 and other Census Reports

In 1901, the urban population of Delhi was 214115. In 1912, the capital was shifted from Calcutta to acquired land of 46 sq. kms south of the walled city called New Delhi for a self-contained designed seat of federal governance along with provision for housing. In 1937, a Delhi Improvement Trust (DIT) was created to arrest 'slum like conditions' and to encourage land development by private developers for urban expansion. In 1951, the urban population more than doubled to 1.43 million from 0.70 million in 1941 due to forced migration after partition. In 1956, a contiguous landmass measuring 1483 sq. kms was called the *Union Territory of Delhi (UT)*. However, from 1992, it has been renamed as the *National Capital Territory of Delhi (NCTD)*. As per the Regional Plan 2021, it has been indicated that the built up area of NCT Delhi has increased from 58,014 Ha. in 1986 to 70,162 Ha. in 1999 which is more than 47% of the total area of NCT Delhi.

As also observed from the above table, it can be stated that NCT Delhi has witnessed intense urbanization. The urban agglomeration area has increased from a mere 43.25 sq km in 1901 to 888.74 sq km in 2001 whereas during the same period density increased from 5501 persons per sq km to 14521 persons per sq km. However, as per MPD-2001, the urban area was 447 sq km i.e., area included in the urbanizable limits which has increased to 702 sq km as per MPD-2021. The spatial expanse of urban area and population growth has been concurrent in all the directions including sub-cities of Rohini, Dwarka, Narela and also in Trans- Yamuna Area.

The land policy of Delhi came into force in 1961, integrated with MPD-1962. Land assembly required large-scale acquisition of land, development and disposal on perpetual lease. This policy aimed to check speculation, stabilize land values, prevent concentration of urban land and ensure adequate supply of land for urban development. About 25,211 hectares of land was acquired as against the envisaged target of 55,000 hectares covering the plan period 1962-

82. Significant shortfalls between plan targets and actual achievements have been observed. There has been consistent backlog in the disposal of developed land to accommodate present population. This has often lead to haphazard and unauthorized development and number of residential colonies developed illegally without the provisions of basic infrastructure.

The total area of NCT Delhi is 1,48,300 hectares (1483 sq. km). The Delhi Urban area 1981 was 44,777 hectares. By 2001, about 24,000 hectares of land was added to the Delhi Urban area, 1981. Out of 12.8 million of urban population, about 11.25 million resides within MPD-2001 urban area. The projected population for 2021 is 22.50 million. In order to accommodate this additional population of 9 million by 2021, urban extensions are proposed to be developed. Considering the overall density @ 167 person per hectare (MPD-2001), the additional land required for 2021 would be about 43,000 hectares.

Since the end of the 1950's, the Delhi Development Authority (DDA) has been the chief developer for the land supply and the construction of housing and the related infrastructure, a role, which comes within the purview of Central Government. Upto 1983, DDA has acquired 18200 hectares of land. To the north of the city the most important project is Rohini, which has been planned to accommodate over a million population. Most of the land for Rohini was acquired from villages in Kanjhavala Block but it also included land from villages in Alipur block such as Badli, Haiderpur and Samaipur. Further, Rohini Phase-II and Phase-III and Narela sub-city, which is planned to stretch far into Alipur Block on the west side of the GT road has already taken shape. However, progress is very slow and the DDA is forced to incorporate the mushrooming spontaneous unauthorized neighborhoods developed by private developers, property dealers and settlers. A more recent plan is Dwarka sub-city in northern Nazafgarh Block, where all the necessary land has been acquired and development has already taken place predominated by presence of group housing societies.

In spite of the ambitious new developments at Rohini and Dwarka, the housing supply does not come anywhere near the actual demand exerted by the growing population .The gap of housing for the poor and the lower income is filled by the unauthorized sector that develops land illegally and becomes a bone of contention between the residents and MCD clamoring for regularization.

Urban expansion in the previous master plans has been based on policy of large-scale acquisition and disposal of land by DDA. There has been mixed results of this policy. The present process of acquiring, developing and keeping the land vacant till it is actually utilized is a

process offers incentives for encroachment and results in far more money being spent on improvement. Quite contrary to the intention of the policy, it has resulted in the creation of a large number of unauthorized colonies and J.J. clusters. Under the policy, as the farmers could only get the price of compulsory acquisition, they have tended to resist acquisition and in many cases, resorted to sell their lands for unauthorized colonization through the intermediation of colonizers and land mafia. When farmers could not escape acquisition they felt deprived of their share in the value addition that occurs upon conversion of agricultural land to urban land. Further the approach itself has drawbacks as substantial time gap elapses between acquisition, development and disposal of land, during which period it remains an invitation to encroachment. Aided by inadequate protection of the acquired land and weak enforcement of building regulations, a large number of unauthorized colonies and JJ clusters have come up which characterize a substantial part of the NCT Delhi today.

On comparison with planned national capitals such as Washington, Canberra, Brasilia and Islamabad, it has to be underlined that unlike them, the burgeoning growth of Delhi has been in direct confrontation with heritage and this to some extent restricts development on the use of land and built space.

In 1961, the NCTD comprised of 160 sq. kms of urban area with 2.36 million people and 1,323 sq. kms of rural area with about 0.26 million people in 315 revenue villages. It was in this period that the Master Plan (MPD-62) was enforced (1st September 1962), with a 20 year perspective. The 160 sq. kms of urban Delhi was to have redevelopment prescriptions by holding population levels through more compatible living. An equal number of people were to be on twice the land area (320 sq. kms) through planned development at medium densities all round the urban fringe of 1962. For this, land was to be acquired in advance for the DDA, who were then to provide services and sell plots or space for different uses through a revolving fund policy by a combination of auction, allocation at differential rates of interest and even at subsidy and no cost for certain uses.

The city was to be multi-functional with government, the distributive trade and industries (other than heavy industries) offering the main economic thrust; multi-modal public transport was to be given priority along with bicycles in a land-use pattern where work and home were to be largely segregated at zonal levels; social and physical infrastructure was to be at appropriate standards; and a hierarchy of open spaces was to be developed permeating through the urban fabric, incorporating protected monuments where feasible. MPD-62 for all purposes was a promotional plan through

predetermined orderly growth. It was the first experiment of its kind in India. To make it implementable, the plan eliminated the private land developer and kept the entire serviced land process within governmental systems. It was a top-down process that did not recognize the stakeholder at grassroots or neighbourhood levels. The plan relied on integrated co-ordinated growth through several agents of action in a pre-planned and pre-designed manner.

The metropolitan dynamics of NCT Delhi, particularly in land market, has also resulted in pushing out of low-income households and informal economic activities to distant areas. As a result, a degenerated periphery has emerged around the cities with a concentration of poor migrants, resulting in low quality of life and unhygienic living conditions.

Migration to NCT Delhi

Migration has played a major role in the demographic evolution of NCT Delhi. In 1947, Delhi population was about 9-10 lakh and it had received about 5 lakh refugees from Pakistan. In the post-independence era, migration continued to have a significant contribution to urban growth although it has slowed down a bit from 58.16% during 1971-81 to 46.87% in 1981-91.

As many as 67.5% of the total migrants residing in Delhi UA were from rural areas. This emphasizes the specific pull effect of a big metropolis like Delhi in predominantly rural country. Over one half of all migrants living in Delhi during 1991-2001 were from neighbouring states in North India: Haryana, Punjab, Rajasthan and Uttar Pradesh. Delhi UA attracted very high number of migrants from other states in the last decade. The total number of migrants in Delhi UA during the last ten years was 1.99 million in number the largest among the UAs and out of which 1.34 million were from rural areas while the rest 5.82 lakh from urban areas. In terms of proportion of in-migrants to total population in other major UAs, Delhi UA was at the top, with in-migrants constituting 16.4% of the total population of Delhi UA followed by Greater Mumbai (15.1%) and Bangalore UA (13.4%). The number of out migrants from Delhi was only 3.92 lakh. Thus the total number of net migrants was 1.6 million in 2001 in comparison to 1.3 million in 1991. Major influx of population into Delhi was from Uttar Pradesh (8.16 lakh), Bihar (3.82 lakh) and Haryana (1.5 lakh). Migrations from these states were male dominated. Sex ratio of net migrants into Delhi was only 673 females per 1000 males. Migrants from all these states cited work / employment as the most important reason for migration during the last decade.

Table 2.2: Migrants classified by place of last residence

Place of last Residence	Migrants to Delhi (%)		
	1971-81	1981-91	1991-01
Uttar Pradesh	50.09	48.5	40.05
Haryana	12.93	11.51	7.87
Bihar	5.77	10.69	19.09
Uttaranchal	-	-	5.11
Rajasthan	7.63	6.00	4.06
Punjab	6.40	5.28	2.16
West Bengal	2.70	2.72	3.88
Madhya Pradesh	3.07	2.67	1.82
Others	11.41	12.91	15.96

Source: Migration Tables, Census of India, 2001

Table 2.3: Reasons for migration

Reasons	% of Migrants		
	1971-81	1981-91	1991-01
Employment	34.48	31.29	37.60
Business	-	4.07	0.5
Education	3.33	2.28	2.7
Family moved	39.43	41.45	36.8
Marriage	12.63	15.62	13.8
Natural Calamities	-	0.13	-
Others	10.14	5.16	6.3
Moved after Birth	-	-	2.4

Source: Migration Tables, Census of India, 2001

As per 2001 Census, migration towards NCT Delhi has revealed interesting results. The adjoining states like Haryana, Uttar Pradesh and Rajasthan together still constitute maximum number of migrants moving towards NCT Delhi. These three states contributed 51.98%, Uttar Pradesh (40.05%), Haryana (7.87%) and Rajasthan (4.06%) respectively to the total migrants. Further, as compared to 1971-81 and 1981-91, the trends of migration from these states have shown a decline. As per Table 2.2, the migration from Uttar Pradesh including Uttaranchal has declined from 50.09% in 1971-81 to 40.05% in 1991-01 excluding Uttaranchal. Similarly states of Haryana and Rajasthan have also shown declining trends. However, the migration from Bihar has increased by three times i.e. 5.77% in 1971-81 to 19.09% in 1991-01.

Hence, it can be seen that now migration from far off states have shown increasing trend in the last decade.

As per the Table – 2.3, it is clear that employment is still most important reasons for migration which constituted 37.6% of the various reasons stated by the migrants followed by movement of family (36.8%) and marriage (13.8%). Hence, NCT Delhi continues to be center of attraction wherein pull factors have been dominating as people by and large migrate for economic opportunities.

Table 2.4: Variation in Migration of people to Delhi between 1991-2001 based on migrants by last residence (0-9 years)

	2001 Census	1991 Census	Variation (1991-01)
Immigrants from other States	2172760	1543959	40.7
Immigrations from abroad	49281	43533	13.2
Total Immigrants	2222041	1587492	40.0
Out migrants	457919	281946	62.4
Net-Migrants (+/-)	1764122	1305546	35.1

Source: Migration Tables, Census of India, 2001

As observed from the above table, Delhi attracted large number of migrants from other states in the last decade. The total number of immigrants to Delhi during the last decade was 2.2 million while the number of out migrants from Delhi were 4.57 lakh and those who migrated from abroad was 49281 in the same period. Thus the total number of net -migrants was 1.7 million during 1991-2001 compared to 1.3 million during 1981-91. Thus the number of out-migrants has doubled during the same period. Here, it can be stated that, of late, the national capital has started to reach saturation point wherein perhaps housing is becoming an unaffordable proposition and people (second and third generation population) have started to look for housing in the DMA towns.

Another feature of migrations to NCT Delhi is that population growth within MCD area reveals that certain central areas have grown rapidly by absorbing a large number of rural migrants. Several low lying areas, tracts on the sides of railway lines, vacant plots where development projects could not be launched in time etc. have attracted a large number of migrants, right in the heart of the city. Notwithstanding this, the major migrants, who want to make Delhi their destination, reside in the peripheral areas. This has helped in decelerating population growth in New Delhi and Cantonment, as noted above where there is no scope for settling down for the poorer migrants. Understandably, this spatially differentiated growth has increased disparities in density within the urban segment. The rapid population growth in many of the wards in MCD area had an adverse impact on the quality of micro-environment since they already had high density and serious pressure on their infrastructure and basic amenities. The same is true for a large number of peripheral urban and rural settlements where population growth has been phenomenal. This sharply contrasts with NDMC and Cantonment wherein the developments have been fairly regulated, making illegal encroachments quite difficult.

In overall terms, it can be stated that migration to Delhi has been on increase, however, during the last decade the migration from other states like Bihar, and non-adjacent states have also shown increasing trend. The out migration has also shown an increasing trend thereby explaining the fact that the demographic characteristics of NCT Delhi have started showing signs of population redistribution.

DELHI METROPOLITAN AREA (DMA TOWNS) ROLE IN PLANNED DEVELOPMENT

3

In the shadow of National Capital Territory of Delhi, the Delhi Metropolitan Region has assumed significance. NCT Delhi with an area of 1483 sq. km cannot foresee massive development in terms of infrastructure / services and residential development. In fact, the burden of population coupled with strain on city's infrastructure has to be shared by the DMA cities/towns. With limited area, it can only hope for a completely urbanized Mega City. There has to be a saturation point beyond which the capital city carrying capacity may not be able to sustain population growth.

The Delhi Metropolitan Area cities/towns namely Ghaziabad, NOIDA (UP), Faridabad, Gurgaon, Bahadurgarh-Kundli have their own characteristics in terms of the growth and development. Further, it will have to be ascertained whether these cities/towns have been able to develop on the basis of induced growth or they have been developed only because of the close proximity and accessibility to NCT Delhi.

The slowing down of the population growth in the Delhi Urban Agglomeration during the eighties and nineties as compared to previous decades was not the result of decline in the rate of natural increase. There was deliberate planning from 1960's onward to develop towns on the periphery of Delhi to accommodate population growth; eventually these areas grew faster than the urban agglomeration of Delhi. The urban sprawl has followed the main roads and railway lines, hence connecting the built up area of the core city-Delhi with that of the peripheral (DMA) cities/towns leading to development of multi nodal urban area. Strictly speaking, although, Delhi Urban Agglomeration boundary (which is unique among all the metropolitan cities of the country restricts itself to the boundaries of NCT Delhi, however, the continuous urban spread overlaps state borders. The presently contiguous cities of Ghaziabad, NOIDA, Gurgaon and Faridabad located in other states still do not form the part of Delhi Urban Agglomeration whose assigned population was over estimated by 0.66 million.

Table 3.1: Population of Delhi UA and DMA Towns (1951-2001)

Cities/Towns	Population					
	1951	1961	1971	1981	1991	2001
Delhi UA	1437134	2359408	3647023	5729283	8419084	12877470
Ghaziabad	43745	70438	137033	287170	511759	968256
NOIDA	-	-	-	35541	146514	305058
Faridabad	37393	59039	122817	330867	617717	1055938
Gurgaon	18613	37868	57151	100877	135884	228820
Bahadurgarh	11170	14982	25812	37488	56524	131925
Kundli	-	-	-			8935*

Source: Census of India, 2001

*** Kundli, not declared a town as per 2001 Census**

The highest order settlement in the NCR Plan – 2001 were six DMA cities/towns. These towns were slated to grow to 37 lakh against which they actually grew to 30.33 lakh as per 2001 Census. The following table gives the assigned population of these towns as well as actual population attained in 2001 Census.

Table 3.2: Population, Growth Rate, Assigned Population and Actual Population as Percentage to Assigned Population

Cities/Towns	Population			Growth Rate(%)		Assigned Population In RP 2001	Actual Population As % to Assigned Population
	1981	1991	2001	1981-91	1991-2001		
NCT Delhi	6220406	9420644	13850507	51.45	47.02	11200000	123.67
Ghaziabad	287170	511759	968256	78.20	89.20	1100000	88.02
NOIDA	35541	146514	305058	312.23	108.21	550000	55.47
Faridabad	330867	617717	1055938	86.70	70.94	1000000	105.59
Gurgaon	100877	135884	228820	34.70	68.39	700000	32.69
Bahadurgarh	37488	56524	131925	50.78	133.39	200000	65.96
Kundli	-	-	8935	-	-	150000	-
NCR	19018909	26446180	37100266	39.05	40.29	32500000	114.15

Source: Census of India, 2001 and NCR Plan-2021

Of these six cities/towns, Ghaziabad and Faridabad have reached their targeted population, while the rest of DMA towns (CNCR) could not achieve their target. In fact Kundli, which was proposed to be developed into a town of 1.5 lakh, has hardly taken off or rather it is yet to be declared as urban as per Census. The table also

reveals that except NCT Delhi, all the cities/towns have shown upward trend in their population growth. NOIDA has shown three-figure growth rate during 1981-91 and 1991-2001 viz., 312.33% and 108.91% respectively. Similarly all other towns have also registered more than 50% growth rate during 1991-2001. With regard to attainment of assigned population as per the NCR Plan-2001, Ghaziabad, NOIDA, Gurgaon and Bahadurgarh have fallen short while Faridabad, NCT Delhi and NCR attained more than the assigned population viz., 105.59%, 123.67% and 114.15% respectively. Further, as per NCR Plan - 2001, wherein it was mentioned that the extraordinary growth of NCT Delhi is to be controlled at 112 lakh and that of the DMA excluding NCT Delhi to be moderated to a population of 38 lakh by 2001. The excess 19 lakh of urban population by 2001 would have to be diverted to and contained in the urban areas beyond the DMA. Since, the DMA towns lacked dynamism, it would have been desirable that this population should have redistributed in DMA towns itself and the same did not occur.

Another fact mentioned in the NCR Plan – 2001 regarding rate of in-migration in Delhi was estimated about 84000 per annum during 1991-2001 as against 1.79 lakh during 1981-1991. However, 2001 Census data clearly reveals that average in migration was 2.2 lakh and 1.58 lakh per annum during 1991-2001 and 1981-1991 respectively. This clearly explains that the in-migration estimates were below NCR Plan-2001 and also the DMA Towns failed to absorb the in-migrants as was expected.

3.1 UTTAR PRADESH SUB-REGION

The Delhi Metropolitan area in U.P. sub region comprises the area of Ghaziabad district and Gautam Buddha Nagar district. Both Ghaziabad and NOIDA are DMA Towns in UP sub-region with an area of 234.93 sq. km

3.1.1 GHAZIABAD

Ghaziabad is one of the most important cities of UP sub-region of NCR and can easily be termed as Gateway of UP. It is located at about 22 kms. from NCT Delhi and is an important industrial and trading center in DMA area. The city is located at 28 ° N latitude and 70 ° E longitude on National Highway 24 connecting the city with Delhi-Mordabad-Lucknow. Two other National Highways i.e. NH-58, Lucknow-Varanasi passing through Niti Pass and NH 91 to Bulandshahr also passes through the city. The State Highway (SH-57) connects the city to Baghpat and Sahaaranpur. The city is bounded by the NCT Delhi in the west and NOIDA in south.

Demographic Composition and Population Projections

Ghaziabad city has witnessed unprecedented growth of population especially during the last three decades. In 1911, it began as a small town near Delhi with a population of 11309, which grew to 9.6 lakh in 2001. During 1971-2001 the population of the city increased by 6.5 times and during 1981-2001 it increased by 2.37 times. The population growth of 89.25% during 1991-2001 in comparison to 62.46% population growth in urban areas of UP sub-region signifies that the city's population has been growing at a very rapid pace compared to other cities of UP sub-region. The rapid growth of Ghaziabad city is mainly due to vivid and multifarious reasons, which include proximity to Delhi, establishment of planned industrial estates, discouragement to the establishment of large-scale industries in NCT Delhi. Although of late, especially during the last decade, a number of small and big industrial units in the city were closed down and retail trade could not take off as expected. However, the territory sector (services) became the biggest source of employment and thereby city experienced rapid population growth. In addition to above there are two more reasons given as under.

- Due to the availability of fertile land the nearby villages wherein the population desired to improve their living conditions settled down in Ghaziabad.
- Due to close proximity to NCT Delhi, the middle class families, which were unable to purchase houses in NCT Delhi, preferred to purchase them in Ghaziabad.

The above reasons clearly reveal the prevalence of pull factors in Ghaziabad and push factor from NCT Delhi. The majority of people settled from in Trans-Hindon Area work in NCT Delhi, which is an indication of growing urbanization in the DMA area and to be part of Ghaziabad Urban Agglomeration.

Further, the post independence period witnessed establishment of industries and thereafter with the discouragement of large-scale industrial establishments in NCT Delhi, the city developed in all the spheres. It may be stated that till 1971 the development of city was self-induced, however, consequently due to spillover of population of NCT, Ghaziabad witnessed rapid population growth.

Table 3.3: Population and Growth Rate of Ghaziabad UA(1901-2001)

Year	Total Population	UP State Growth rate	National Urban Growth rate	Ghaziabad Growth rate
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1901	11275	-	-	-
1911	11304	-8.89	0.35	0.26
1921	12343	0.61	8.27	9.19
1931	18831	12.81	19.12	52.56
1941	23834	26.00	31.97	26.57
1951	43745	22.93	41.42	3.54
1961	70438	9.90	26.41	61.02
1971	137033	30.68	38.23	81.29
1981	287170	60.62	46.39	109.66
1991	511759		46.14	78.21
2001	968521		36.19	89.25

Source: Census of India

It may be observed from the above table that during 1921-31 and 1941-51 there was sharp increase in the growth rate of population mainly due to establishment of grain markets and oil mills, breweries and administrative offices during 1930's and influx of refugees. The planned development begun in 1961, which further attracted population contributing the growth of 81.29% during 1961-71 and 109.66% during 1971-81 and 78.21% during 1981-91. The growth during 1991-2001 again showed increasing trend i.e., 89.25%.

The factors responsible for rapid population growth as well as development of Ghaziabad are given as under:

- UPSIDC developed industrial estates like Sahibabad, Kavinagar, Bulandshahr Road, Loni Road, Meerut Road and G.T.Road whereas GDA developed residential and physical infrastructure.
- The fertile land coupled with widespread agriculture attracted labour due to the relative prosperity and displacement of labour in surrounding rural areas which became a "push factors" for the population migrating towards an employment generating area during 1950's and 1960's.
- High land values in the real estate market of NCT Delhi and availability of relatively cheaper land in Ghaziabad next to NCT Delhi.
- Transport corridors connecting NCT Delhi to the resource base of the Western Uttar Pradesh via Ghaziabad gave impetus to the trade and industrial activities.

As per 1981 Census, the density of Ghaziabad was 4366 persons per sq. km which increased to 7066 persons per sq. km. in 1991. However, in 2001, the same declined to 6702 persons per sq. km. This was mainly due to increase in the jurisdiction of Municipal Corporation.

The area of Municipal Corporation also increased from 63.94 sq. km in 1981 to 144.50 sq. km in 2001. However, in actual terms, it is observed that as per the land use pattern, the population density is about 13070 persons per sq. km (130 persons per hectare).

Ghaziabad Development Area and Early Planning Efforts

The planned development of Ghaziabad began way back in 1958, when the State Government issued notification to declare development (regulated) area and subsequently in another notification in 1977, Ghaziabad and 137 villages in its surroundings were declared as *Ghaziabad Development Area*. The development area of Ghaziabad today is 452 sq. km.

The development of Ghaziabad could be seen as the influence of nearby city/town. During 1950-60 decade, Ghaziabad was perceived as satellite town in MPD-1962 and it was envisaged to be developed as satellite town, however during 1960-80, the industrial development gave it as an image of industrial township. However, with the close proximity with Delhi, it has been deeply influenced by the developments of NCT Delhi. The development in Ghaziabad especially the trans-Hindon area can also be seen as metropolitanisation of fringe areas of a large city.

With the UP sub region, in addition to Ghaziabad, NOIDA and Greater NOIDA have also developed since 1980's and late 1990's. The development of these towns to some extent had distributed the population on one hand but also on the other hand there has been distribution of economic activities.

Ghaziabad is one of the important industrial center of UP sub region which has iron and steel manufacturing units, ceramics, pipe, vegetable oils, picture tube, medicine, beverages. The heavy and large-scale industries are developed in Trans Hindon areas abutting G.T. Karnal Road, center of Link Road/Bulandshahr Marg. The small and medium industries have been developed in the Industrial Estates at Meerut Road, Kavi Nagar Industrial Estate and Loni Road Industrial estate. The number of industrial workers in Ghaziabad was 5876 in 1961, which increased to 30338 in 1981 and 54558 in 1991. The number of industrial units was 124 in 2000 and declined further to 109 in 2003. Similarly, number of small and medium industrial units was 13720 in 2000 wherein 71245 workers were engaged and increased to 15848 in 2002 with 87832 workers. The main reasons behind increase in small and medium industrial units in Ghaziabad is due to recent Hon'ble Supreme Court Order for shifting of polluting industries from NCT Delhi.

Land Use Analysis

With the increase in population, the residential areas have seen tremendous increase, however, the pace of development could not match the provisions for both physical and social infrastructure and services as per the requirement of the growing population. It has been observed in the context of land use pattern that there is exorbitant increase in land prices (for plotted houses), which has led to the development of multistoried apartments (Group Housing) residential units. The Trans- Hindon areas especially Shalimar Garden, Ramprastha, Kaushambi, Vaishali, Rajender Nagar have witnessed large scale construction of group housing flats even on the plots with size of 500 sq.mt. –1000 sq.mt. This development has by and large been in an unauthorized manner thereby resulting in extreme strain on infrastructure / facilities and services. The areas meant for plotted development where 2 to 3 dwelling units are supposed to be developed has been converted into multiple dwelling units (15-20) on a plot of 500 sq.mt to 1000 sq.mt. The high rise high density not only alters planning principles drastically but have serious adverse repercussions on the overall city infrastructure and any up gradation or augmentation of the same is offset by multifold increase in the dwelling units and with consequent problems of low level of access to basic infrastructure like absence of drainage and sewerage, shortage of drinking water, absence of proper solid waste management etc. resulting in deteriorating quality of life.

The development Trans- Hindon areas without any consideration of planning for basic facilities have in fact led to mushrooming of large number of residential colonies at the periphery of NCT Delhi.

The decade of 1970's has also witnessed the decline of developed industrial areas due to economic liberalization and impingement of other uses on industrial areas have increased alarmingly with invasion of development of commercial activities like Shopping Malls and Multiplexes

With the increase of privatization of education, the educational and technical institutions have also sprung up all over in Ghaziabad. These institutions have largely come up on land acquired from agricultural use and some industrial areas have been converted into educational use.

Efforts of Planned Development in Ghaziabad

The first Master Plan for Ghaziabad was prepared in 1961 with a perspective of 1981. In 1961, the area of the city was 573.72 hectares.

In Master Plan-1981, 5853.50 hectares was proposed for development, however against this only 4365.35 hectares (74.60%) were developed. The next Master Plan notified in 1986 and according to same the total developed area was 5933.00 hectares while the Master Plan-2001 proposed 10039.23 hectares as developed land. In actual terms only 8455.00 hectares (84.21%) was developed area and the category wise breakup can be seen in the following table.

Table3.4: Existing landuse: Ghaziabad, 2003

S.No.	Landuse Category	Area(Hectares)	Percentage
1	Residential	4670.00	55.03
2	Commercial and Trade	274.00	3.22
3	Industrial	1710.00	20.16
4	Office	280.00	3.30
5	Community Facilities	253.00	3.00
6	Park, Open Space, Recreation including Green Belt	399.50	4.71
7	Undefined Areas	16.55	0.20
8	Railways	232.55	4.71
9	Roads/Bus Stands/Depots	520.30	6.13
10	Others	129.00	1.52
	TOTAL	8455.00	100.00

Source: Master Plan of Ghaziabad 2021

As per the Master Plan of Ghaziabad ,2021 the total development area of Ghaziabad is 8455 hectares, of which 4670 hectares is under residential use constituting 55.03% of the developed land. This is followed by industrial use (20.16%) and 6.13% use under the roads, bus stands. These three uses together constitute more than three-fourth of the total landuse of the city. Among the entire uses category both residential and industrial uses have witnessed intensive development. The land under residential use was 1648.37 hectares in 1961, which increased to 3160.39 hectares in 1984 and 4670 hectares in 2003. This signifies that that increase in area under residential use in about 40 years has been 2.8 times. As far as industrial development is concerned, the 1961-81 period witnessed expansion, as the city was perceived as industrial town with 91.60 hectares of land developed per year. However, the 1991-2001 period has not witnessed industrial development as many industrial units got closed down due to number of prevailing reasons like shortage of water and power and other supporting infrastructure facilities. Further, the focus of industrial development in UP sub region shifted to NOIDA and Greater Noida with the establishment of separate industrial development authorities for the two towns. There is further possibility of setting up of new industries as there has been shifting of polluting units from NCT Delhi following recent Hon'ble Supreme Court orders now.

The city has its own problems and often comes under the shadow of Delhi metropolis and unable to realize its own potential. Some of the problems are:

Major planning and developmental problems of Ghaziabad

- i) The separate identity of Ghaziabad is somewhat diluted under the shadow of NCT Delhi thereby the city has not been able to come up as self induced bustling urban center in NCR.
- ii) The economic base with declining industries and new economic activities coming up in unplanned manner has disturbed the physical development of the city.
- iii) Unauthorized colonization on agricultural land has resulted in unauthorized and uncontrolled development wherein there is an absence of basic infrastructure facilities and on the other hand it gives rise to numerous problems for planned development like regularization of colonies and augmentation of infrastructure services / facilities thereof. Further, lack of strict enforcement of Building Bye –Laws and Master Plan provisions has also been responsible for haphazard development.
- iv) Prevalence of non-conforming landuse mainly in terms of offices, schools, hospitals, shops located in residential premises
- v) Excessive congestion on major arterial road for example Ambedkar Road and GT Road. Further due to absence of planned parking spaces, on-road parking of trucks, buses and other vehicles has created serious traffic and transportation problems. Above all encroachment by rehris, kiosks and thelas have further worsened the intra-traffic movement in the city.
- vi) Absence of proper solid waste management has caused dumping of wastes into pits thereby resulting in pollution of land, air and water resources.
- vii) Uneven distribution of water supply, absence of sewage system and drainage system has added to the woes of city infrastructure.
- viii) Absence of common Effluent Treatment Plan in the industrial areas of the city has led to mixing of chemical effluents,

which has ultimately polluted the Hindon river and ground water resources.

- ix) Indiscriminate exploitation of ground water has led to drastic fall in the level of ground water.

3.1.2 NOIDA

NOIDA, adjacent to NCT Delhi in the southeastern part presents an example of population dynamics of a new town located in Delhi Metropolitan Area. NOIDA (the acronym for New Okhla Industrial Development Authority) is a relatively a new industrial center, founded in 1976, as a result of decentralized urban development policy and was created from clustering 20 villages. On April 17, 1976, the Government of Uttar Pradesh notified 36 villages on the periphery of NCT Delhi under Section 3(i) of UP Industrial Area Development Act, 1976 and constituted NOIDA to ensure planned development of the area for industrial and other uses.

The NOIDA Authority was entrusted with the task of preparing and implementing the Master Plan to ensure regulated development of the town with special emphasis on small-scale industry. The MPD-2001 had highlighted the need for shifting non-conforming industries to conforming zones. Perhaps, in order to encourage decentralization of economic activities from Delhi, NOIDA was established not only to attract industries but also to provide residential accommodation at cheaper prices in comparison to NCT Delhi. The notified Area of NOIDA comprises of about 20316 hectares and falls entirely in the newly carved district of Gautambuddha Nagar and covers 80 villages. The developed urban area of NOIDA including NOIDA Phase –II occupies the northern half of the area. The villages that existed in this part of the notified area have been engulfed by the urban area of NOIDA and are now urban villages. A total of 29 urban villages exist in the area

Demographic Profile and Population Projection

As per 1981 Census, the population of NOIDA was 36972 and during 1991 Census, it was declared a 'Census Town' with a population of 146514. The population of NOIDA grew by nearly 300% during 1981-91 and has been one of the fastest growing towns in the country. The town contained 68% of the total urban population of Gautam Buddha Nagar district completely overshadowing other towns like Dadri, Dankaur and Jewar. The 1991-2001 decade witnessed slowing down of growth, which was 108.21%. The decade 1981-91 was the take off stage of the new township.

Table 3.5: Population and Growth

Year	Population	Growth Rate %
1981	36972	-
1991	146514	295.98
2001	305058	108.21

Source: Census of India, 2001

It is interesting to note that the assigned population as per NCR-2001 plan was 5.50 lakh, which means in 2001 it was able to attain only 55.47% of the assigned population. There could be number of reasons explaining this as NOIDA has been growing in competition with other DMA cities/towns like Gurgaon and Faridabad. Of late, Gurgaon has also attracted large scale hi-tech industrial / commercial and residential development and relatively became an ideal place for investment for multinationals. It appears that NCR population assignment has been overestimated. Also, besides law and order problems and unstable governance also have been responsible for non-attainment of assigned population. Lastly 20% of the population in NOIDA lives in slums (jhuggi clusters) and 48% in the urban villages. Both areas are unplanned and suffer from serious deficiencies in terms of basic infrastructure like sewerage, piped water, drainage and power. Hence, it may be stated that NOIDA has not been able to grow as envisaged due to above cited reasons.

Landuse Analysis

The landuse pattern of NOIDA city is characterized by two distinct patterns, one, industrial use in terms of industrial development in three phases: *Phase I, Phase II and Phase III*. The other uses like residential, commercial, recreational, institutional have been developed in large parts of the township in the form of sectors. Three well-maintained green belts along the river Yamuna are located opposite Sectors 14A, 15A and 16. The other huge green space includes city forest in sector 54 and Golf course in Sector 38. Besides large agricultural fields also exist in an interspersed manner with rural settlements.

Table 3.6: Land use pattern in NOIDA city, 1998 and proposed 2011&2021

Sl. No.	Landuse Category	1998		2011		2021	
		Area	%	Area	in %	Area	in %

		(Hectares)		hectares		hectares	
1	Residential	1607	35.5	3240	38.5	5994	41.3
2	Commercial	36	0.8	660	7.8	524	3.6
3	Industrial	1092	24.1	1896	22.5	2235	15.4
4	Public/semi public	571	12.6	782	9.3	1344	9.3
5	Recreational	208	4.6	540	6.4	1776	12.2
6	Transportation	1013	22.4	1302	15.5	2644	18.2
	Total	4527	100.00	8420	100.00	14517	100.00

Source: **Revised Master Plan for NOIDA, 2021 (Draft)**

The landuse pattern of NOIDA amplifies its economic base and priorities / policies of the State Government. As per approved Master Plan of NOIDA, 2011, 7789 hectares of land was proposed to be developed, however, the existing (1998) landuse shows that only 4527 hectares was developed showing shortfall in development. As per above table, it is clear that in 1998, nearly one third of land was under industrial use. The residential use constituted 35.5% while commercial use was only 0.8%. This explains the fact the areas under commercial use might have been functional commercial areas as the city lacks properly developed Central Business District. Further, it is also observed that the classification of land use has not followed the conventional eight-fold classification; hence, it has not been possible to ascertain the land under open space / green / agriculture. The proposed land use for 2021 has envisaged development of 14517 hectares of land wherein 41.3% has been envisaged for residential use. However, the website of NOIDA Authority mentions that *"IMPLEMENTATION OF THE MASTER PLAN, covering the period up to 2021 and involving the entire 20316 hectares of Noida's land, is being carried out in a holistic manner. Planned in phases, it is in synergy with developments on other fronts to maximize availability with facilities when demanded. The Noida Authority has carefully planned and nurtured a self-sufficient Industrial township well endowed with requisite infrastructure and logistic support systems. Apart from the basic amenities the Authority and the State Government have offered attractive benefits and incentives to the Organizations that are functioning in NOIDA. In a nutshell, NOIDA can speak of physical and social infrastructure that fuels Industrial revolution. Not to mention, it is meticulously and futuristically planned and well laid - out township without compromising of aesthetics. NOIDA is one of the few cities in India to come near to the concept of 'Green and Eco-City'.*

In future, NOIDA is going to foresee massive residential development. With regard to industrial development, 15.4% of the land has been envisaged under the industrial use. Hence, this explains the fact that there may not be expansion of existing conventional industries, however, fillip will be provided for hi-tech and non-polluting industries. Also with the changing scenario of market economy, the city

has already been experiencing opening up of modern shopping malls, multiplexes, recreation centers, hotels and restaurants.

The development of NOIDA has taken all the advantages of proximity to NCT Delhi and also linkages in terms of commutation and transportation. It has immense industrial potential and may not simply be termed Satellite Town as it has grown in all respects whether industries, commercial establishment and both private and public sector offices. Over the years, it has become a major economic generator creating vast employment opportunities. Further, the Special Economic Zone (SEZ) and industrial development in Phase II & III has enabled the Gautam Buddha Nagar District to become one of the leading districts of Uttar Pradesh in terms of revenue and excise collection. Further, it is also a fact as the office and commercial spaces in NCT Delhi have become scarce, setting up of offices in NOIDA is becoming a lucrative proposition.

Developmental Problems of NOIDA

The city has witnessed all-round progress and has an overall image of a well-planned city. With major focus on industrial development since its inception, NOIDA Authority has attempted to make provisions for all the urban infrastructure facilities so as to achieve integrated development. The sector based residential development provides for water and power supply, convenience shopping centers, parks, sewerage and solid waste management and host of social facilities and services. However, with number of potentials present, the city is also plagued with numerous problems which may in fact hinder the overall development in coming years.

- i) Although NOIDA has well planned development, at the same time it also has number of villages, which have not been integrated with the overall planning framework and lack basic facilities. NOIDA appears an island of prosperity while the villages are pitfalls of neglect and apathy.
- ii) Due to close proximity to NCT Delhi, the Transport Authorities have allowed DTC Buses to ply in NOIDA*, but city clearly lacks in intra-city transportation. Also, with no well defined parking policy, the major arterial roads and commercial centers face severe parking problems which are likely to aggravate in view of anticipated future developments. Absence of rail link and transportation linkages to other DMA towns is other transportation problem hindering the development of the city.

- iii) Another perennial woe of NOIDA is the power problem, which always is in shortfall and has adverse impact on the existing industries. The use of alternative source of power only adds to production costs and industrialists find themselves in relatively disadvantageous position compared to industrialists of NCT Delhi.
- iv) There is over-dependence on ground water sources for drinking water and above all the quality of water is brackish which is not be good for drinking thereby forcing the residents to use bottled water.
- v) The NOIDA Authority has to resort to large scale land acquisition for future development and since NOIDA itself is located in fertile tract, conversion of rich agricultural land especially on the both sides of Gautam Buddha expressway (land between Hindon and Yamuna rivers) seem to be inevitable and also possibility of problems like compensation to be given to farmers and thereafter official apathy towards them may result in contentious issues.

**Due to impasse between the Transport Department of Government of Uttar Pradesh and Government of NCT Delhi the plying of DTC buses between UP and Delhi was suspended. However, the buses have started recently.*

- vi) The facilities like Hospitals, Schools and Colleges are plenty in private sector, however, there are very few under the State Government.
- vii) The developed sectors have underground sewerage, however, the ultimate outfall is through drains only contaminating the ground and surface water sources and also there is no proper sewerage treatment.
- viii) The law and order situation in NOIDA is sometimes perceived as a problem as it is not effective and due to this the prospective buyers are forced to think twice to invest in NOIDA. Above all, the political uncertainties like merging Gautam Buddha Nagar district with Ghaziabad District by the State Government recently evoked widespread protests among industrialists and residents. This had wider repercussions on the real estate market. Also frequent changes in the district administration and NOIDA Authority have also affected the progress of infrastructure development within the city.
- ix) Other facilities like Fire Stations, Post and Telegraph Offices, Bus and Truck terminals, Integrated Freight Complexes are

lacking and are not available as per the population requirement.

3.2 HARYANA SUB REGION

The Haryana Sub- Region comprises of districts of Gurgaon, Faridabad, Mewat, Panipat, Rohtak, Rewari, Jhajjar, and Sonapat. The DMA towns located in this sub region are Faridabad, Gurgaon, Bahadurgarh and Kundli. About 50% of the total Delhi Metropolitan Area lies in Haryana sub region.

3.2.1 FARIDABAD

Faridabad, the largest city in the Delhi Metropolitan Area. It is located 25 Kilometers south of Delhi at 28 ° 25' North Latitude and 77 ° 18' East Longitude. It is bounded by the National Capital Territory of Delhi on its north, Gurgaon District on the west, and of Uttar Pradesh State on its east and south. The National Highway No.2 passes through the centre of the district. The river Yamuna flows through eastern part of the district adjacent to the western part of the Gautam Buddha Nagar district of Uttar Pradesh. The city is also located on Delhi-Mathura broad gauge railway line.

The city has a history akin to the development of various residential colonies of Delhi. It was established in 1947 mainly to rehabilitate the migrants (refugees) from Pakistan due to partition of the country. It gradually developed as resettlement project mainly through labour and housing cooperatives with the objective of setting up of industries to generate employment as well as residential housing for refugees. The city started identifying itself as one of the major industrial centres of Haryana. The city has two advantages, one, close proximity to the national capital and other being located on National Highway and well connected with Rail.

The industrial oriented development began in late 1950's and a number of industrial units came up along the National Highway. The spatial expansion of the city was confronted with some limitation as it could not expand in all directions and had linear development. The presence of Aravalli hills on the western side and Agra Canal on the eastern side has been responsible for linear development of the city. The city has scope for expansion towards eastern part whereas the undulating tracts towards south restrict any future expansion while northward expansion is not possible due to NCT Delhi boundary.

Over a period of time the city has acquired the image of an industrial township which has grown into a bustling metropolis. The city

has taken all the advantages of close proximity to Delhi as well as State Government intervention in this regard.

Demographic Profile

The city grew from a population of 9815 in 1901 which increased to 37393 in 1951 and reached to a population of 1054981 in 2001, becoming the first metropolitan city of DMA area. The following table gives population and growth rate of city from 1901 to 2001.

Table 3.7: Population and Growth Rate(1901-2001)

Year	Population	Decadal Variation(%)
1901	9815	-
1911	8540	-13.00
1921	8058	-5.64
1931	9296	15.86
1941	11475	23.44
1951	37393	225.86
1961	59039	57.89
1971	122817	108.03
1981	330864	169.40
1991	617717	86.70
2001	1055938	70.94

Source: Census of India, 2001

The city till 1941 showed very slow population growth rate and thereafter became fast growing as it registered growth rate of 225.36% as large number of refugees from Pakistan settled down. The growth rate slowed down during 1951-61 i.e., 57.89% and again picked up thereafter and during 1961-81 growth rate was above 100%. The period 1981-2001 saw growth rate again slowing down, however, overall it still signifies that the city has been growing to its full potential as it attained 105.59% of the assigned population as per of NCR Plan - 2001. In fact the city has the potential for absorbing the in-migrant population as it

offers a variety employment opportunities. Further, the city constitutes 35.5% of the urban population of Haryana Sub –Region.

Planned Development in Faridabad

Earlier during 1950's Faridabad Board was established which was mainly responsible for rehabilitation of refugees after the partition. Faridabad NIT built after 1947 which lies west of the Railway tracks was home to refugees and they were allotted on the condition that they will hold these for 99 years and will pay lease each month. NIT was divided by areas called sectors e.g. Number 1, 2, 3 which in turn had blocks from A,B,C and so on. It was also realized that development should take place in a planned manner. The city was initially planned for a population of 3 Lakh. Thereafter, the city became a Municipality. In 1971, Faridabad Complex (Regulation and Development) Act was enacted so as to have a uniform law for regulated development of the Faridabad complex and the adjoining towns. Secondly, to integrate development of Faridabad-Ballabgarh area comprising multiplicity of local authorities of Faridabad Township, old Faridabad, Ballabgarh and revenue estates of Ballabgarh not falling in the municipality of Ballabgarh were added to check ill-planned and haphazard development in Faridabad Complex. As the population of the complex was 59,000 in 1961 and in consonance with the objective of first Master Plan of Delhi – 1962, Development Plan for the complex area was first published in 1966 with an urbanisable area of 8810 acres for a population of 3.50 lakh by 1981. Presently, the city has a Municipal Corporation. The Faridabad Urban Complex spreads over an area of 187.27 sq.km on the western side of Delhi –Mathura National Highway (NH-2). The city is developed in a planned way and the Master Plan provides for 56 sectors out of which 27 are residential. The total area of city is 187.27 sq. km.

Landuse Analysis

The Faridabad–Ballabgarh Complex was envisaged to have controlled moderate growth so that the spatial expansion of the city is well coordinated. The fast changing scenario of development of the city necessitated changes in the Development Plan prepared in 1974 and accordingly the city was planned for a population of 4.5 lakh by 1994. However, the city achieved a population of 6.17 lakh. The Development Plan-2011 envisaged developing 15680 hectares of area including the areas of old Faridabad, Ballabgarh and Faridabad NIT. The details of proposed landuse for 2011 are given below.

Table 3.8: Landuse of Faridabad, Existing and Proposed, 2011

Sl.	Landuse Category	Existing	Proposed
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No.		Area (Hectares)	%	Area (Hectares)	%
1	Residential	NA		7795	49.72
2	Commercial	NA		773	4.92
3	Industrial	NA		3136	20.00
4	Public & Semi Public	NA		530	3.38
5	Transport & Communication	NA		1554	9.91
6	Open Spaces / Parks / Green Belts	NA		442	2.82
7	Public Utilities	NA		155	0.98
8	Others	NA		1295	8.27
	TOTAL	NA		15680	100

Source: Development Plan of Faridabad, 2001

As per the above table, it may be mentioned that with the economic base of the city, the industrial character has been retained as 20% of the land has been proposed under the industrial use while nearly half (49.72%) has been envisaged under the residential use and other major uses like Commercial 4.92%, Transport and Communication 9.91% and Public and Semi Public 3.38% were proposed. As per the Development Plan-2011, it has been proposed to accommodate 17.5-lakh population by 2011 and accordingly keeping in view the land requirement, industrial development and above all employment potential, the proposed landuse was worked out with an assumption of city density of 112 persons per hectare. The NCR Plan-2001 had assigned a population of 10 lakh while NCR Plan-2021 has assigned a population of 16 lakh by 2011 and 25 lakh by 2021 which appears to be realistic keeping in view its growth and potential.

Further, the development work from Sector 7 to 11 has been carried out in accordance with the Master Plan. Now the emphasis is develop areas beyond the Agra Canal. The area between the Agra canal and the Yamuna river from Sector 66 and Sector 89 will be developed in future for both industrial and residential uses.

Developmental Problems of Faridabad

Although the city has locational advantages being very close to south Delhi, it is plagued with numerous problems, which may hinder its all-round development.

- i) Since the city is bordering south Delhi, there are serious traffic bottleneck on the highway as inter- state traffic passes through this stretch. The commutation on this stretch is very much time consuming and also lot of fuel is wasted due to stopping time. Further, within the city, most of the arterial

roads are congested. The road widths are the same as they were planned and population as well as traffic has increased tremendously. The Badarpur bottleneck is biggest hindrance that makes people think twice before coming to Faridabad. The absence of flyovers have also worsened the overall traffic scenario in the city.

- ii) The power and water supply is not very good and has not kept pace with the growing population and demand. As against the current demand for power to the tune of 150 MW, the current supply is only 100 MW whereas the water supply requirement is 131 million litres per day against the supply of 51 million litres per day. Moreover, there is 100% dependence on ground water sources.
- iii) The city is a sprawling home for industries, which are trying to match the development in the neighbouring cities of Gurgaon, NOIDA and Greater NOIDA. With the moving away of number of mother industrial units, the growth is not what it should have been. Although the traditional units are still continuing, the city has not been able to attract hi-tech industries as compared to NOIDA and Gurgaon.
- iv) Nearly 80% of the city has been covered by the sewerage system, the same covers however only 55% of the population living in planned areas. The present population of Faridabad is about 12.5 lakh, which produces a wastewater flow of about 115 mld including some industrial waste. Before Yamuna Action Plan, about 70% of the area of the town, falling mainly under the new industrial township area was covered by sewerage. But the raw sewage was being pumped into storm water drains which was ultimately carried through Gouchi drain to the river Yamuna. However, after the implementation of Yamuna Action Plan, three sewage treatment plants are operational in Faridabad with a capacity of 50 mld, 45 mld and 20 mld and their performance is being monitored by Hon'ble Supreme Court on a regular basis. Sewage from the eastern side of Delhi-Mathura road, i.e. from HUDA and old Faridabad areas was being pumped to an oxidation pond, which was overloaded and thus became non-functional. The effluent from the oxidation pond was being supplied to agricultural fields with the excess being pumped into Gurgaon canal.
- v) The pollution in the city of Faridabad has broken all records and surpassed all previous figures with the city being rated amongst the five most polluted cities of India as per the study

conducted by Centre for Science and Environment (CSE). The fact is that the both air and water have been polluted to an alarming extent. The city today is perpetually shrouded in a dense blanket of smog. Increased industrial and construction activity, heavy vehicular traffic, lack of a mass transit system and through traffic passing through the city on the G.T. Road have been some of the factors that have led to this dismal state of affairs. Vehicular pollution is almost 80 % of the total pollution. According to NHAI, the number of vehicles passing through the town on the road was 50,000 per day. At peak hours, the emission becomes equivalent to that of more than 1 lakh vehicles. The Suspended Particle Matter (SPM) level of the atmosphere in certain parts of the town and the district has crossed the permissible limit. And at some spots, the SPM level has reportedly gone up by 30 to 38 times above the permissible level, thus putting at risk the lives of a large populace. The SPM level severally crosses over 15,000-18,000 points against the permissible limit of 500. As per the Haryana State Pollution Control Board old three wheelers, phatphatis plying in the city and besides presence of industrial units with boilers and furnaces-particularly those using wood, rice, husk and coal for fuel and above all two thermal plants at Badarpur and within the city are largely responsible for air pollution.

- vi) Large-scale unauthorized constructions /colonies have already come up along Delhi-Haryana border on the east of Agra canal due to limitations of expansion on western side due to undulated topography and towards south due to provision /length of services have directed development towards east of Agra canal. Hence, the areas along the highways are very much vulnerable to unauthorized development and may come in the way of planned development thereby putting enormous constraints on infrastructure development. Unlike the flat topography of NOIDA and Ghaziabad, the city is slightly in disadvantageous position due to undulated topography.

3.2.2 GURGAON

Gurgaon has over a period has acquired the image of an industrial town and assumed significance in view of its location within National Capital Region (NCR) and close proximity to Delhi. Once a non-descript town, its potential was quickly realized since late 1980's due to economic liberalization and encouragement by the State Government for industrial development. The city is at a distance of 32 km from Delhi on Delhi-Jaipur road (NH-8) and is located at 75°35'E

longitude and 28°53' N Latitude. Unlike other DMA cities/towns the city has the distinct advantage of proximity to International airport and is often seen as the extension of south Delhi. The city is on a rolling plain dominated by the extensions of Aravallis. The remnants of oldest mountain system are along the western parts of the district and extend upto NCT Delhi in the north-east and south-west direction.

Over the last twenty years, the city has attained cosmopolitan outlook with the development of posh residential colonies, multiplexes, shopping malls and entry of large number of multinational companies involved in IT and BPO's industries. This has virtually changed the face of the city and made it one of the most attractive destinations for investment in entire NCR. Industrial activity here is well planned and other surrounding residential sectors being developed by HUDA as well as by the private colonizers have remained pollution free. This is also reflected by the fact that the real estate prices are one the highest among the DMA cities/towns. The city has also one of its first in real estate development i.e., involvement of private sector in housing. Gurgaon urban area can be broadly classified under two distinct parts viz., the HUDA (Haryana Urban Development Authority) area and the old town (municipal area limit). The area under HUDA can be further subdivided into (i) private colonizer area, (ii) HUDA sectors (iii) Institutional area and (iv) the urban villages. The current estimated population of Gurgaon including the urban area, the existing town, and the 17 village surrounded by urban development is 400,000 (HUDA 2001). The projected total population of the urban area for the year 2011 is around 16.0 lakh.

The city has enabled number of professionals to make their home in Gurgaon, buying apartments in newly constructed colonies and condominiums. With the involvement of large numbers of private builders, world-class residential colonies and commercial complexes have been developed attracting high profile professionals to migrate here. Some of the most affluent addresses in Gurgaon are ITC Laburnum and DLF Beverly Park. Owing to the numerous high-rise buildings existing and upcoming, the city has acquired the image of a modern and fast going hub for IT Sector. It is also called the mall capital of India due to the sprawling shopping malls that have mushroomed recently. The fast growing population with ever-growing purchasing power has created a huge demand for housing and property prices have escalated manifold in recent years.

Demographic growth of Gurgaon

Gurgaon started off as a small settlement with a population of 5461 in 1901 and experienced slow growth till 1941. The population grew to 18613 in 1951 and in 1961 the city became a Municipal Corporation

with a population of 37868. In comparison to Ghaziabad and Faridabad, the city has been a late starter and attained Class I status only in 1991 Census. The details of population growth are given in the following table.

Table 3.9: Population and Growth Rate, Gurgaon (1901-2001)

Year	Population	Decadal Variation(%)
1901	4765	-
1911	5461	14.61
1921	5107	-6.48
1931	7208	41.41
1941	9935	37.38
1951	18613	87.35
1961	37868	103.45
1971	57151	50.92
1981	100877	76.51
1991	135884	34.70
2001	228820	68.39

Source: Census of India, 2001

As observed from the above table, the population growth of Gurgaon has shown fluctuating trends. It was very high during 1941-51 and 1951-61 registering more than 70% growth, however, the decades 1971-81 and 1981-91 experienced slower growth rate of 50.92% and 34.70% respectively while during 1991-2001, the city has witnessed upsurge in the growth. The obvious reasons for fluctuating growth are impact of post partition developments and during 1991-2001, impact of economic liberalization and State Government's policies on industrial development, which enabled the city to attract large number of multinational companies. It can also be stated that the city took its time to become the leading industrial center in the entire NCR especially after setting of Automobile Industry like Maruti Udyog and Hero Honda.

Planned Development of Gurgaon

The early attempts for planned development took place in 1971, when the first Development Plan was published for an estimated population of 1.25 lakh by 1991. Subsequently, the Plan was amended in 1977 and 1982 for perspective population of 2.25 lakh and 10 lakh respectively for 2001. As per Development Plan, 2011, the total urbanisable area was worked out to 9881 hectares, excluding 275

hectares of land under village abadi falling under various sectors. Till 1971, the area of the city was 15.33 sq km, which increased to 24.13 sq km in 1991, and presently it is 30.2 sq km.

The urban development in Gurgaon has been the joint responsibility of the government and private sector. This model followed for the first time in northern part of the country which facilitated faster and better-organized urban growth due to the greater availability of financial resources. While the government urban agency, the Haryana Urban Development Authority (HUDA), is mostly responsible for the overall development of the city (including infrastructure, waste and water management) along with the State Town and Country Planning Department, which provides licenses to private developers who have acquired land within the stipulated Master Plan area. In other words, the private 'colonizer' purchases land from the open market and procures licenses for developing it from HUDA. The private developers then construct buildings according to their own designs within a specified buildings / regulatory framework. More than 45 private players are involved in Gurgaon's property market, of them three, DLF, Ansal, and Unitech are the major players dominating the real estate market. Together, these three private players own the majority of the land.

Besides HUDA and State TCPD, the other two government stakeholders in this urbanization process are the Haryana State Industrial Development Corporation (HSIDC) and the Housing Board, Haryana. The HSIDC is responsible for the development of Gurgaon's industrial sectors and the Housing Board constructs houses for allotment to the public in accordance with the guidelines issued by the State Government and emphasizes providing shelter to socially and economically weaker sections of society.

Landuse Analysis of Gurgaon

As per the Development plan, 2011,9881 hectares was envisaged as the urbanisable area including the existing areas. In this plan about 63.18% of area was proposed to be developed as residential use followed by industrial (13.65%), transport and communication (6.70%). The proposed landuse has been in consonance with the overall State Governments thrust on the residential and industrial development since 1990's.

The urbanisable area is divided into 57 sectors under various land uses. Haryana Urban Development Authority has so far acquired and developed most modern lines with a network of wide sector roads. In residential sector minimum 45% of area under a particular sector is kept for parks, open spaces, roads and community buildings including

community centers, dispensaries, schools, police post, post office, electric sub station, etc. As per the norms adopted by HUDA, even higher order facilities are provided for estimated population of one lakh persons include provision of colleges, hospitals, police stations, telephone exchange, fire stations. To meet the Commercial needs of the town, a City-Center in Sector No 29 covering 480 acres of land has been acquired and planned to provide for facilities like World Trade Center, Finance District, Commercial Office towers, Shopping Malls, Multiplexes, Hotels, Fire Station, Amusement Parks, etc. Three other District Centers in sector 23A, 56 and 47, serve a cluster of adjoining sectors besides the local convenient shopping centers in each residential sector. Three sectors viz. Sector 18(part), Sector 32 and 44 have exclusively been planned for institutional land use that include Corporate Offices of Multi nationals, Training, Research and Development Institutions etc. With the presence of these kind of functions, the city has the right potential to become city of international acclaim.

Table: 3.10: Proposed Landuse of Gurgaon, 2011

S.No	Landuse Category	Area in Hectares	Percentage
1	Residential	6243.00	63.18
2	Industrial	1349.00	13.65
3	Commercial	220.00	2.22
4	Transport & Communication	665.00	6.70
5	Public & Semi-Public	302.00	3.06
6	Defence Land	633.00	6.40
7	Open Spaces	363.00	3.67
8	Special Zone	106.00	1.07
	Total	9881.00	100.00

Source: Development Plan, 2011

Further, the city and its surrounding area are coming up very fast in the field of industrial development on account of close proximity to Delhi, a well known market for raw material, finished goods and a nerve centre of various commercial activities. As per the study “Population Explosion and Land Use Changes in Gurgaon City Region- A Satellite of Delhi Metropolis” by Rupesh Kumar Gupta and Sudesh Nangia, there have been considerable changes in land use during the last few decades. The change may be on the specific area or the entire region.

The change from rural to urban land use is so fast that the resultant need and complex uses coupled with shortage of land have led to speculation and increase in land values. The ever-growing difference between the demand and supply of house sites has

increased the cost of land in the city which has ultimately led to pressure on the fringe area which has given rise to proliferation of unauthorized development of land uses-residential, industrial and other land uses. Further, as per the study, it is stated that of the 126 sq. km. of area of Gurgaon and the surrounding 81% was under agriculture in 1971 which reduced to 51% in 1993 and 26.5% in 2003 and the area under 'built up land' category increased substantially from 11.36 sq kms. in 1971 to 84.2 sq kms. in 2002. This signifies that over a period of three decades, urbanization in and around Gurgaon has been unprecedented. With the population growth of NCT Delhi itself and efforts to redistribute the population, there is no doubt that Gurgaon will play an important role in absorbing migrant population, however, to what extent, it may not be possible to precisely make an estimate. Further, the city was not able to attain the population as per the assigned population by NCR Plan –2001 wherein the city was assigned a population of 7 lakh, while the actual population stood at 2.28 lakh in spite of rapid increase in the built up areas in and around Gurgaon.

Developmental Problems of Gurgaon

Gurgaon like any typical satellite town faces numerous problems, which comes in the way of its development. Growing in the shadow of giant metropolis, the city has dichotomous development wherein ultra modern residential and industrial development characterizes the cityscape on the one hand while on the other; the city is plagued with the problems especially the core areas which has not been integrated with the overall development of the city. Some of the crucial problems of the city are highlighted as under.

- i) The city especially the old areas lack basic facilities like proper drainage, sewerage and solid waste disposal whereas the new areas where private residential development and HUDA sectors have been developed have these facilities, however, absence of intra city public transport has not enabled the city to grow in a similar manner in all the directions. Hence, on one side one can observe island of prosperity and on the other side the villages and unauthorized growth colonies have assumed the character of slums.
- ii) The city does have railway station but unlike Faridabad, it has not taken the advantage of presence of railway link. In fact, even after the conversion of Delhi-Ahmedabad railway line from metre gauge to broad gauge, the city has not been able to encash the same. It may be recalled that during 1970's and 80's it used to be mentioned that Gurgaon has not been able develop due to the absence of broad gauge railway link. However, the city has only witnessed industrial

development in terms of IT and BPO industry. Further, the city has also not been able to develop as leading wholesale trade center especially for food grains.

- iii) The city can be accessed by National Highway No.8 and Mehrauli–Gurgaon road from Delhi- both of which are congested. The Dhaula Kuan-Gurgaon Expressway stretch is still under construction. The emergence of Shopping Malls has further aggravated the traffic problems and traffic conditions and commuting time to Gurgaon from Delhi has increased.
- iv) Gurgaon in the recent past has witnessed large-scale residential development in the private sector. It is often mentioned as the extension of south Delhi, hence commands very high price for both plotted houses and group housing flats among all the DMA cities/towns. The city offers attractive real estate market and people also indulge in buying property for speculation thereby leading to artificial hike in property rates.
- v) The city lacks organized solid waste disposal and problems are severe in the old areas. Further, in respect of power supply, the city is also experiencing long power cuts. It has also been observed that in some of the private residential colonies, once the private developer hands over the colony to the owners, what would be the status of operation and maintenance of power supply within the colony, whether the same will be the responsibility of builder or the concerned power supply agency i.e., Dakshin Haryana Bijli Vitaran Nigam (DHBVN). Ultimately, the owners have to suffer a lot due to this situation.
- vi) The majority of new developments in the city have to rely upon ground water resources. The city has surface water sources especially through canal, which helps in reducing the level of brackishness of water. But at the same time, due to over-exploitation the water table has gone down and the quality of water in some parts has turned brackish. The over dependence on ground water sources may not augur well with the future development and sources of surface water will have to be explored so as to match future demand besides making augmenting water supply with canal waters .

3.2.3 BAHADURGARH

Bahadurgarh is a Sub-Divisional Headquarter situated in Jhajjar district at a distance of about 35 Kms from NCT Delhi. It is located on

Delhi-Hissar National Highway-10 and located at 76°55' East Longitude and 28° 43' North Latitude. The town is very well linked with NCT Delhi and is a railway junction on Delhi-Ferozepur broad-gauge railway line. The town is an important industrial town in southern part of the State. As compared to other DMA cities and towns the town is relatively lesser known in terms of the importance as well as influence it exerts on the surrounding areas. In real terms the town is a late starter following planned industrial development by the State Government.

Demographic Growth of Bahadurgarh

Both in terms of area and population the town is one of the smallest towns in Delhi Metropolitan Area. The town had a population of 5947 in 1901 and till 1951 the growth rate was rather slow, below 20%. After 1941 the growth rate picked up i.e more than 30% since 1941. The following table gives population and growth rate since 1901.

Table: 3.11: Population and Growth Rate 1991-2001

Year	Population	Growth Rate(%)
1901	5947	-
1911	4990	-16.47
1921	5955	19.34
1931	6963	16.93
1941	8206	17.85
1951	11170	36.12
1961	14792	34.12
1971	25812	72.29
1981	37488	45.23
1991	56524	50.78
2001	131925	130.50

Source: Census of India, 2001

The decade 1991-2001 witnessed a rapid population growth as the town's population doubled from 56524 in 1991 to 131925 in 2001 registering 130.50% growth rate. This signifies the fact that with the encouragement by the State Government for setting up of industrial units backed by planned industrial development, the town has received tremendous inputs thereby making itself fastest growing town after NOIDA. The town attained the status of Municipal Corporation in 1961 and has an area of 9 sq. km (as per 1991 Census). However, as per the Development Plan-2021 (draft), the past trend of its population growth and spatial growth indicates that inspite its proximity to NCT Delhi, the town could not achieve high growth rate as envisaged in the final Development Plan of town and NCR Plan-2001 mainly due to local

problems like brackish water and weak urban infrastructure. The NCR Plan-2001 had assigned a population of 200000 while the actual population of 2001 was 1.32 lakh i.e., 66% of the assigned population. The town may not have attained the assigned population, however with growth rate of 130%, it cannot be straight away assumed that the town does not have potential for development and with the State Government intervention for the industrial development the town is bound to make progress.

Planned Development in Bahadurgarh

The early attempt for the planned development in Bahadurgarh began with the declaration of controlled area by the State Town and Country Planning Department whereby 7712 Hectares of land was incorporated in the Development Plan, 1991 which was published in 1978. Subsequently, the Development Plan, 2021 has been prepared in accordance with the provisions of NCR Plan - 2021. The Development Plan, 2021 has envisaged an average residential density of 200 persons per hectare. Further, the provision of 100 m wide green belt on both sides of proposed bye-pass, the overall density has been worked out to 77 persons per hectare.

The Development Plan 2021 has been prepared for a projected population of 3 lakh. An area of 1400 hectares has been reserved for residential purpose on the basis of average residential density of 200 persons per hectare. Further to cater to commercial needs of the town, an area of 140 hectare has been reserved for commercial purpose. The commercial use includes proposal for development for District Shopping Centers. Both the Grain market and Auto market, which are located in congested areas, are proposed to be shifted at new locations and to be established in a planned manner. The industrial character of town has further been strengthened by proposing industrial area of 815 hectare on prime locations on Delhi-Hissar National Highway or adjoining Bye-pass railway line. The town is specialized in manufacturing sanitary ware, chinaware, galvanized steel pipes and footwear.

The Development Plan-2021 has been phased in two parts for the future development and proposed as under.

Table: 3.12: Phasing of Development

Period	Sectors to be Developed	Development Activities to be taken up
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2001-2011	Residential Sector-1, 2,9,9A, 10,11 and 13 Commercial Sector-9 Part, 12 Part Institutional Sector-10 Part,12 Part,13 Part Industrial Sector – 16,17,18	Construction of bye-pass and proposed V-2 road of width-45 metres, shifting of dairies from the existing town, four laning of existing NH-10, Rapid Regional Rail Network as per NCR Plan-2021, Development of sewerage disposal and garbage disposal site in Sector 22 A and sewerage disposal site on Beri road
2011-2021	Rest of proposal in the final development plan	

Source: Development Plan of Bahadurgarh, 2021

Landuse Analysis

The landuse as per the Development Plan-1991 as well as existing landuse (1999) are indicated in the following table.

Table: 3.13: Proposed Landuse (1991) and Existing Landuse (1999) of Bahadurgarh

S.No	Landuse Category	Landuse as per DP-1991 (Proposed) in Hectares	Existing Landuse-1999 in Hectares	(%) of development attained
1	Residential	575.10	430.00	74.78
2	Commercial	89.91	60.00	66.73
3	Industrial	409.05	290.00	70.89
4	Transport and Communication	126.36	80.00	63.31
5	Public Utility	30.78	30.78	100
6	Public and Semi Public Uses	40.50	12.00	29.62
7	Open Spaces and Green Belt	123.12	36.00	29.23
	TOTAL	1394.82	938.78	67.30

Source: Development Plan of Bahadurgarh, 2021.

As observed from the above table, it may be mentioned that as per the Development Plan-1991, the town was proposed to be developed for 1395 hectare, however, it fell short of the target as only 938.78 hectare (67.30%) was developed as per the landuse of 1999. Both the major landuses – Residential and Industrial were short of the target and could achieve 75% and 66.63% respectively of the

proposed development. Among all the uses only land under Public Utility could be developed as envisaged in the plan to the extent of 30.78 hectare. All the other uses besides Residential and Industrial experienced shortfall. This elucidates the fact that inspite of rapid population growth the town has not been able to develop to its full potential and this may also been the reason that the town has not reached the assigned population of NCR Plan-2001 i.e., 2 Lakh.

Although the town could not attain the assigned population, the Development Plan, 2021 has envisaged a population of 3 Lakh for 2021 and accordingly the landuse has been proposed as per the following table.

Table: 3.14: Proposed Landuse of Bahadurgarh, 2021

Sl. No	Landuse Category	Proposed Landuse (in Hectares), 2021	Percentage
1	Residential	1400	36.89
2	Commercial	140	3.69
3	Industrial	815	21.47
4	Transport and Communication	510	13.44
5	Public Utility	115	3.03
6	Public and Semi Public Uses	140	3.69
7	Open Spaces and Green Belt	675	17.79
	TOTAL	3795	100.00
	Area of Existing City with old Municipal Limits	155	
	Total Urbanisable Area	3950	

Source: Development Plan of Bahadurgarh, 2021

As mentioned in the above table more than half the total urbanisable area is proposed under residential and industrial. It has been considered that old part of the town would accommodate about 60000 persons by 2021 while the rest of population of 240000 would be accommodated in all the residential sectors. Besides, this sizeable area has also been envisaged under Open Spaces and Green belt (17.79%) followed by Traffic and Transportation (13.44%). Provision for town level Park and Green Belt along the NH and Bye- pass has been made. No construction would be allowed along the green belts except Petrol Pumps. For augmenting Traffic and Transportation a network of 45 m and 30 m roads has been proposed at a distance of 1 km. to 1.5 km. on a gridiron pattern. An Inland Port cum Transport Nagar has also been proposed in Sector-17 A between Railway line and NH-10. It may be stated that the object of Development Plan-2021

is to make the town well planned and self-contained while retaining its industrial character.

Developmental Problems of Bahadurgarh

1. In spite of proximity to NCT Delhi, the town has not been able to grow as per its potential as it is supposed to be developed as industrial town and moreover the decentralization of economic activities from NCT Delhi to this town has not been the same as proposed in NCR Plan-2001.
2. The town lacks supply of water from surface water and the ground water quality has been brackish resulting in slow development of residential areas.
3. Perhaps not located on the trunk route of railway line like Delhi-Howrah and Delhi-Mumbai, the town has not been able to attract industries in comparison with Faridabad and Ghaziabad and also Delhi-Hissar NH-10 is relatively a low intensity highway when compared to NH-1 or NH-8.
4. Unlike Ghaziabad, NOIDA, Faridabad and Gurgaon, the town is not a district headquarters and the development impulses have rather been on a slower side and also the district headquarter-Jhajjar is a non-descript town and hence the location of the town is slightly disadvantageous when a number of factors for development are taken into consideration.
5. Since the town has rich hinterland in terms of agricultural land and also has considerable influence on the surrounding rural settlements, it has not been able to come up as a major agrarian center like a Mandi town.
6. The old part of the town suffers from absence of proper drainage and sewerage facilities and also congested roads and not well integrated with the newly planned residential and industrial sectors. The untreated sewage is either discharged into open drains or utilized for irrigation purposes. There is no provision for common effluent treatment plant in the industrial areas and no proper landfill site is available for solid waste disposal.

3.2.4 KUNDLI

The NCR Plan - 2001 had identified Kundli to be developed as a DMA town with an assigned population of 1.5 lakh. However, even in 2001 Census, Kundli has been recorded as a rural settlement. In order to have planned development, the State Government had taken a

decision in 2003 to develop an *Integrated Complex* comprising of controlled areas declared around Sonapat town and Kundli township known as a *Sonipat-Kundli Multi functional Urban Complex* for a population of 10 lakh for 2021.

Kundli is situated on National Highway-1 and is located about 30 kms from NCT Delhi in Sonapat District. Kundli is basically conceived as an industrial town and the State Industrial Development Corporation (HSIDC) is engaged in developing planned Industrial Estates.

Demographic Profile

Kundli is yet to get an urban status and as per 2001 Census, it is still a rural settlement. In 1991 the population of Kundli was 5360 and the same increased to 8931 in 2001 registering an increase of 67%. Perhaps the town may attain the status of urban settlement in 2011.

Planned development of Kundli Township

Kundli township was mainly proposed for planned industrial development by the HSIDC. Another reason for its development is to accommodate the non-conforming industries of NCT Delhi following the Hon'ble Supreme Court direction to shift the industries outside the national capital. In this context, the Supreme Court took note of provisions of MPD-2001, which asked all such units to give their relocation plan within one year of the notification of the MPD-2001 and shift thereafter in the next two years to NCR. Further, in view of NCR Planning Board thrust on the development of DMA towns and available development potential, the State Government took a conscious decision to attract entrepreneurs who were affected by the Supreme Court order to establish their industrial units.

To regulate the urban development on Delhi-Haryana border the State Government declared controlled area in and around Kundli village in 1981. A composite final Development Plan-2021 has been prepared as Sonipat-Kundli Multifunctional Urban Complex of the controlled areas.

The HSIDC has developed Industrial Estate- Phase-I (75 Acre), Phase-II (32.45 Acre), Export Industrial Promotion Park (Phase-III-107.95 Acres) and further expansion of the same to the extent of 383.08 Acres (Phase-IV) in Sector 56 and 57. Hence, the State Government intends to develop Kundli to the tune of 600 acres.

Landuse Analysis

The landuse proposals have been made for the entire Sonipat-Kundli Multi-functional Urban Complex. The total urbanisable area of the Urban Complex has been worked out by assigning a town density of approximately 80 persons per hectare. Hence, the total urbanisable area has been worked out to 12468 hectare. The detail of proposed landuse is given in the following table.

Table: 3.15: Proposed Landuse of Sonipat-Kundli Multi-functional Urban Complex, 2021

S.No	Landuse Category	Proposed Landuse (in Hectares), 2021	Percentage
1.	Residential	4186	33.57
2.	Commercial	1811	14.53
3.	Industrial	2790	22.38
4.	Transport & Communication	1257	10.08
5.	Public Utility	301	2.41
6.	Public and Semi Public Uses	1058	8.49
7.	Green Belts and Open Spaces	1065	8.54
	Total	12468	100.00

Source: Development Plan Sonipat-Kundli Multi-functional Urban Complex, 2021

Keeping in view the industrial potential of the Urban Complex, area under industrial use has been kept towards higher side i.e., 22.38% while 33.57% has been proposed under the residential use followed by 10.08% under the Traffic and Transportation use. It can be stated that the Multifunctional Urban Complex strives for integrated development with all the provisions for all the activities. In Kundli, Sector 58 has been developed as residential sector while commercial development has been envisaged in Sector 66 adjoining Western Peripheral Expressway (Kundli-Manesar-Palwal).

Further, HSIDC has developed the industrial estate and the detail of the same is given as under.

Table 3.16: Phased Development of Kundli by HSIDC

Phase	Use	Area(in Acres)
I (Already Developed)		
	Area under Plots	45.03
	Area under Open Space Public Use	2.86
	Area Reserved for Shopping Booths and Administrative Blocks	2.48
	Area under Roads and	25.63

	Parking	
Total Area Under Phase-I		75.00
II(Already Developed)		
	Area under Plots	19.80
	Area under Open Space Public Use	1.48
	Area under Undetermined Use	0.96
	Area under Roads and Parking	10.20
Total Area Under Phase-II		32.45
III Export Promotion Industrial Park(EPIP)		
	Area to be Planned later on	5.91
	Net Area Planned	102.00
	Area under Plots	61.83
	Area Reserved for HSIDC Office and Convenience Shopping	4.30
	Area Reserved for Utility	3.34
	Area under Roads, Parking, Open Space & Green Belt	32.53
Total Area Under Phase-III		107.91

Source: Office of HSIDC, Kundli

Developmental Problems of Kundli

In spite of the identification of the town as DMA town in NCR Plan-2001, the town has rather been slow to take off as a specialized industrial town even after the declaration of controlled area in 1981. The town should have become an ideal self-contained industrial town. The growth of town is sluggish in comparison to NOIDA and Greater NOIDA, which were also conceived as integral Industrial Township. The reasons behind this are given as under.

1. Predominantly, the town (Kundli village) had agrarian character and as stated earlier it is still a village. Probably, to shift to urban character with non-agricultural activities to fore may take some time.

2. The Western Peripheral Expressway (Kundli-Manesar-Palwal) was proposed to be developed in 1990's and now the State Government is taking action by notifying 62000 acres of land between Delhi and expressway as a global corridor.
3. Like Bahdurgarh, the town has not been able to encash the proximity to the national capital and the response of the non-industrial units is that they are reluctant to shift to Kundli inspite of proactive industrial policies of the State Government.
4. The development of Kundli could not be conceived on the lines of NOIDA and Greater NOIDA, as there has not been any provision for the constitution of Industrial Development Authority. Further, the provisions of the Punjab Scheduled Roads and Controlled Areas Restriction are supportive *as per se* of planned urban development only.
5. Delhi Development Authority has also developed industrial estate in Narela and Bawana, which are very near to Kundli at Haryana border. Due to this reason Kundli 's industrial growth has been slow.
6. HSIDC has been involved in planned industrial development and the residential development is the responsibility of HUDA and State Housing Board and preparation of Development Plan is the responsibility of State Town and Country Planning Department. Hence, it is quite possible that industrial development may take place in isolation. The absence of Integrated Development Authority could also be another reason for slow industrial development.

RESIDENTS & BUILDERS PERCEPTION IN DMA TOWNS

4

4.1 NEED

The success and performance of any development plan / programme /scheme depend on the perception of stakeholders involved. The NCR Plan assumes wide significance in view of achieving the objectives of sharing the burden of infrastructure and services of NCT Delhi. Hence, it becomes essential to assess the perception of residents of DMA cities/ towns and builders engaged in construction and development activities.

A primary survey of five DMA cities/towns viz., Ghaziabad, Noida, Faridabad, Gurgaon and Bahadurgarh was conducted in 2006 as a part of this study. This survey was mainly conducted in selected residential localities and among few reputed builders operating in these towns / cities. Analysis of the findings of the primary survey would help in understanding the problems and prospects of these cities/ towns in a better manner and be useful in recommending appropriate policy measures / interventions.

4.2 METHODOLOGY

Two types of structured questionnaires were designed to ascertain the perception / thinking of residents and builders. A few residential localities were selected from each of the aforesaid DMA towns/cities based on the following criteria:

- Residential locality / colony, developed during last 10-15 years.
- Located close to a major arterial road.
- Having a minimum 50% occupancy.
- Access to basic facilities/ amenities.
- Located at minimum distance from 25-35 kms from NCT Delhi.

An attempt was made to cover a minimum of 100 households in each town which gave some kind of representative / purposive sampling wherein general perception of residents was ascertained. Further it was also attempted in every possible manner to select

alternate/ every 5th or 10th house so as to eliminate biasness among the residents.

Table No.4.1: SAMPLE SIZE & CRITERIA OF SURVEY IN DMA CITY/TOWNS IN NCR

Sl. No.	Name of the City/Town	Locality Covered	Total No.of Respon-dents	Abutting Important Road	Year of Establi-ishment
1.	GHAZIABAD	Vasundhara Vaishali and Indrapuram	100	NH 58-Link Rd. Atal Chowk Agarsen Chowk	1982
2.	NOIDA	Sector 40, 51, 19, 62, 50, 34, 56,12 Royal Garden Estate and Arihant Residency	100	Bara Chowk Stadium Redlight Xing	1980
3.	FARIDABAD	Sector 15A,8,16,7A,28, 18,10	100	Unitech Estate Valmiki Park	1970
4.	GURGAON	Sector 31,40,15,20,7,46,4,5,10A Sanjay Gram, DLF City, South City, Model Town	100	Jal Vihar HUDA Apartment	1977
5.	BAHADURGARH	Sector 9,9A Arya Nagar, Bank Colony, Bus Stand, Defence Colony Road.	100	Main GT Karnal Road	1970

Source: Primary Survey, 2006 (TCPO)

With regard to builders perception a questionnaire was dispatched to all the leading builders in NCR area especially DMA towns. An effort was made to assess their perception with reference to the construction activities in NCR in terms of generation of housing stock, operation of building byelaws of DMA towns/cities, procedure of plan sanction and issuance of completion certificate thereof and availability of infrastructure facilities and services. The questionnaire was sent to about 30 real estate developers and builders, however only 8 of them responded.

The following paragraphs analyze the data collated from the questionnaire.

4.3 MAJOR FINDINGS

4.3.1 Occupational Pattern

The occupational pattern of any city/town signifies the major activity in which people are involved. The occupational pattern of five DMA cities/towns as observed from primary survey shows that the majority of respondents are from service sector with an average mix of respondents engaged in government and private service.

Table No. 4.2: Occupational Pattern

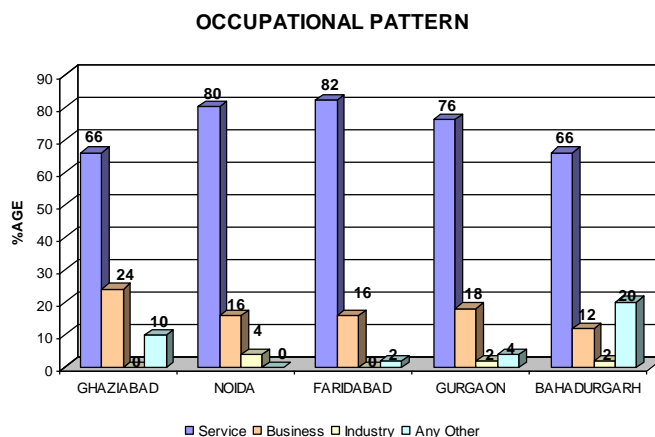
(In percent)

Sl. No.	Name of the City/ Town	Service	Business	Industry	Other	Total
1.	GHAZIABAD	66.0	24.0	-	10.0	100.00
2.	NOIDA	80.0	16.0	4.0	-	100.00
3.	FARIDABAD	82.0	16.0	-	2.0	100.00
4.	GURGAON	76.0	18.0	2.0	4.0	100.00
5.	BAHADURGARH	66.0	12.0	2.0	20.0	100.00

Source: Primary Survey, 2006 (TCPO)

The maximum percentage of respondents from service sector is in Faridabad i.e. 82% followed by Noida (80%), Gurgaon (76%), Ghaziabad (66%) and Bahadurgarh (66%). These people mostly belong to middle income group. People from service sector commute to NCT Delhi for work. Percentage of people belonging to business sector ranges from 12% (in Bahadurgarh) to a maximum of 24% (in Ghaziabad). This brings out the fact that persons recently settled in these areas are by and large engaged in service sector while cities/towns of NOIDA, Gurgaon and Bahadurgarh have shown participation in industry sector mainly because of the presence of industries. However, it can also be stated that although these towns offering employment in the industrial sector may attract people from other cities or those working in industrial units may be residing in Delhi. In the newly developed areas of DMA cities/towns, majority of people are engaged in the service sector. Further, towns like Bahadurgarh shows high percentage (20%) of the respondents engaged in other activities which signifies that the smaller the town more will be employment in individualized activities like practicing doctors, retail trade activities owning shops like groceries, medicines and other shops like tailoring, etc.

Figure 4.1 Occupational Pattern



Source: Primary Survey, 2006 (TCPO)

4.3.2 Year of Migration

One of the objectives of the survey was also to ascertain from the respondents, from where they have migrated and settled down in these cities/towns. The areas where the survey was undertaken have been developed during last two decades. Both in terms of population growth as well as basic infrastructure and overall economic development, Faridabad and Noida have been developed as industrial centres while Gurgaon has been developed as main hub for call centers, IT and BPO industries. It is quite evident from the survey (Table-4.3) that these localities of DMA cities/ towns have seen majority of respondents migrating during the period of 1990-2000. In fact in all the surveyed localities, majority of respondents of cities of UP are migrants while cities/towns of Haryana have less migrants compared to Ghaziabad and NOIDA. About 46% of respondents and 32% of respondents in Gurgaon and Bahadurgarh respectively are non-migrants. This supports the fact that Ghaziabad and NOIDA are growing faster than their counterparts in Haryana. Among the total migrants it is clear from the table, that in Ghaziabad and NOIDA 50% and 40% of the migrants settled down during the last 10 years respectively while in Faridabad, Gurgaon and Bahadurgarh, 14%, 36% and 28% of the migrants respectively settled down during the same period.

Table No. 4.3: Year of Migration

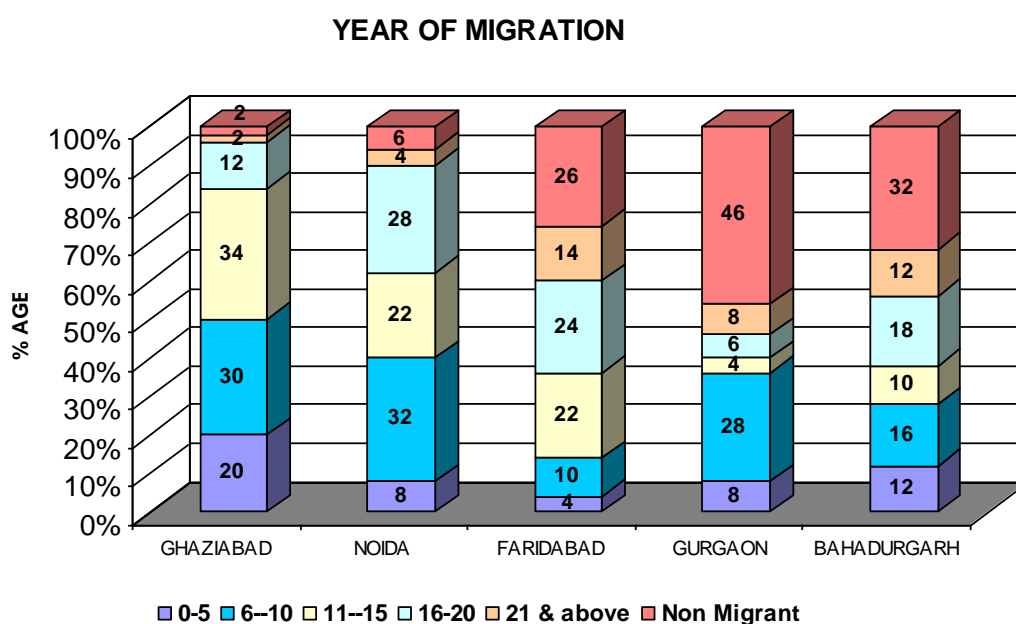
(In percent)

Sl. No.	Name of the City / Town	Year of Migration (SPAN)						Non Migrant	Total
		0-5	6--10	11--15	16-20	21 & above			
1	GHAZIABAD	20	30	34	12	2	2	100	
2	NOIDA	8	32	22	28	4	6	100	
3	FARIDABAD	4	10	22	24	14	26	100	
4	GURGAON	8	28	4	6	8	46	100	
5	BAHADURGARH	12	16	10	18	12	32	100	

Source: Primary Survey, 2006 (TCPO)

If a comparison among the DMA Cities/Towns is done in terms of above table, it can be concluded that Ghaziabad, NOIDA and Gurgaon have witnessed unprecedented addition in terms of residential development mostly in form of Group Housing built by private builders which has immensely helped in supplementing and accommodating the housing demand of NCT Delhi and that too at relatively lesser cost in compare to NCT Delhi.

Figure 4.2: Year of Migration



Source: Primary Survey, 2006 (TCPO)

4.3.3 Origin of Migrants

The majority of migrants to these DMA cities/ towns are from NCT Delhi. The states having migration not greater than 2 percent are taken under category as other states.

Table No. 4.4: Origin of Migrants

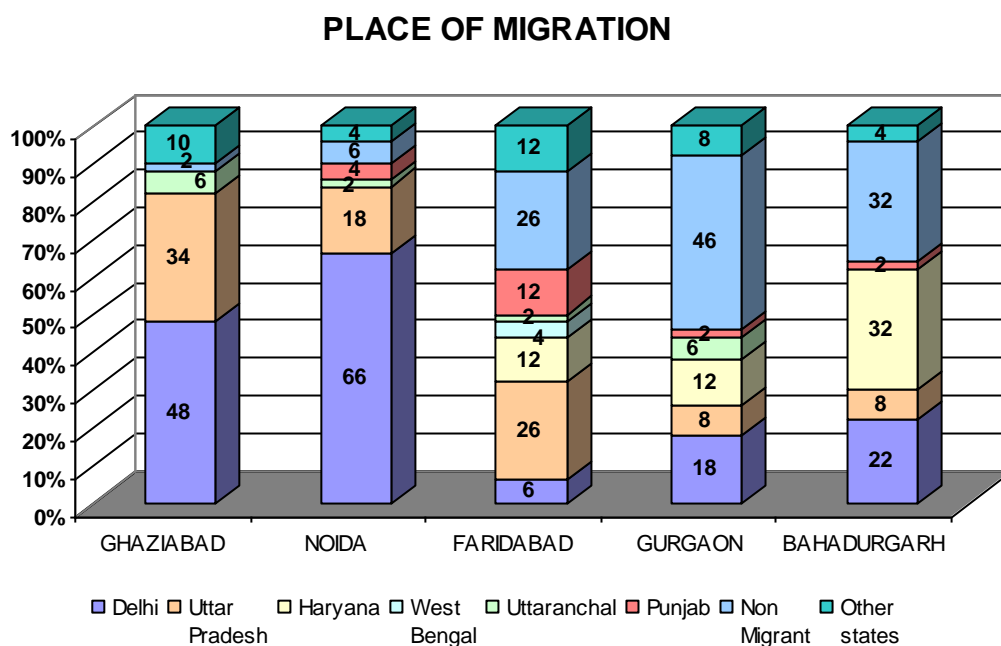
(In percent)										
Sl. No.	Name of the City/Town	Delhi	U.P	Haryana	W.B.	U.K	Punjab	Non Migrant	Other states	Total
1	GHAZIABAD	48	34	0	0	6	0	2	10	100
2	NOIDA	66	18	0	0	2	4	6	4	100
3	FARIDABAD	6	26	12	4	2	12	26	12	100
4	GURGAON	18	8	12	0	6	2	46	8	100
5	BAHADURGARH	22	8	32	0	0	2	32	4	100

Source: Primary Survey, 2006 (TCPO)

In Noida, 66% of respondents have migrated from Delhi. Among the 5 selected DMA towns, minimum migration from Delhi is to Faridabad i.e. just 6%. It is observed that people from same or adjacent state have also migrated to these towns in large numbers. Ghaziabad, NOIDA and Faridabad have 34%, 18% and 26% of respondents from Uttar Pradesh respectively. Gurgaon & Bahadurgarh have 12% & 32% of respondents from Haryana respectively. This explains the fact that the towns/cities of Haryana have attracted migrants from within the state as compared to DMA cities/towns of UP.

From the above Table, it can also be concluded that UP DMA cities have attracted more migrants, which further supports that they are growing at a faster pace. Overall, the obvious reasons for migration to these towns means availability of housing stock at relatively lower prices, proximity to NCT Delhi and above all the strategic location of Ghaziabad and NOIDA offering new options for settling down. Among the other states the respondents originally belonged to Uttarakhand and Punjab. In particular, in Faridabad, 12% of the respondents migrated from Punjab and 6% of the respondents are from Uttarakhand for both the cities-Ghaziabad and Gurgaon. However, the migrants from other states like West Bengal, and southern Indian states constituted a minimal percentage.

Figure 4.3: Place of Migration



Source: Primary Survey, 2006 (TCPO)

4.3.4 Transport Facilities

The mode of transport used by people indicates the modes of transport available. The majority of respondents are using their own transport for commuting to their work place. In Noida, 76% of respondents are using their own transport.

Table No.4.5: Transport Facilities

(In percent)

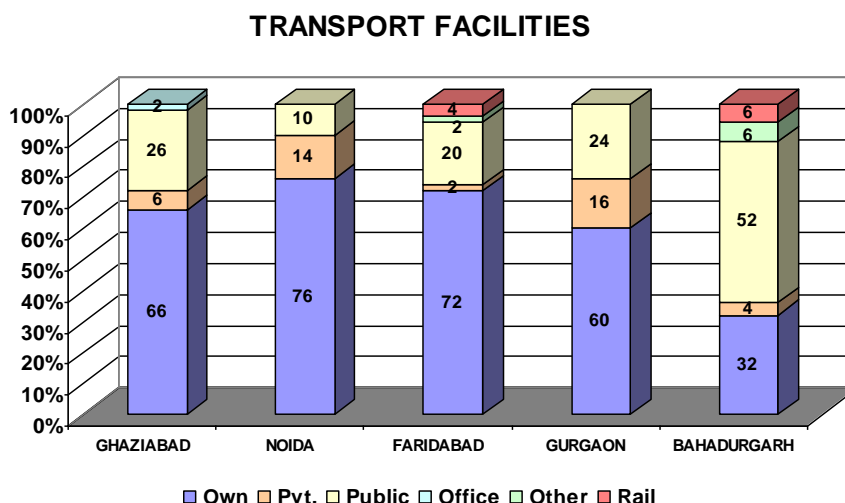
Sl. No.	Name of the city/town	COMMUTATION TO WORK PLACE							Total
		Own	Pvt.	Public	Office	Other	Rail		
1.	GHAZIABAD	66.0	6.0	26.0	2.0	-	-	100.0	
2.	NOIDA	76.0	14.0	10.0	-	-	-	100.0	
3.	FARIDABAD	72.0	2.0	20.0	-	2.0	4.0	100.0	
4.	GURGAON	60.0	16.0	24.0	-	-	-	100.0	
5.	BAHADURGARH	32.0	4.0	52.0	-	6.0	6.0	100.0	

Source: Primary Survey, 2006 (TCPO)

The situation is more or less same for Ghaziabad, Faridabad and Gurgaon where 66%, 72% and 60% of respondents are using their own transport. But, in Bahadurgarh people rely more on public transport as

almost 52% of the respondents have been using public transportation for commutation.

Figure 4.4: Transport Facilities



Source: Primary Survey, 2006 (TCPO)

The reason for majority of respondents using their own transport is the lack of dependable public transport facility from home to work. Further, in the absence of intracity public transport especially DMA cities like Ghaziabad, NOIDA and Gurgaon force the residents to travel by personalized modes. In fact lack of reliable public owned transport facilities in these cities/towns is responsible for congestion on all the National Highways emanating out of NCT Delhi. The NH-8 (Delhi-Gurgaon stretch), NH-24 (Delhi-Ghaziabad stretch), UP Link Road (Delhi-NOIDA stretch), NH-1 (Delhi-Sonepat stretch) generates maximum to and fro traffic. Although Haryana and UP Roadways and also DTC buses are available from these cities/towns, however, on point to point basis NOIDA is the only town where DTC buses are plying while other cities and towns do not have this kind of facility. This explains that public transport provides direct connectivity from home to work places.

4.3.5 Availability of infrastructure

According to the views of respondents about availability of infrastructure facilities, majority of the respondents are of the opinion

that public transport is inadequate which is also supported by preferred use of personalized mode. In Faridabad, the respondents are highly dissatisfied with the public transport and 92% of them termed it as grossly inadequate.

Table No.4.6: Views Of HH On Infrastructure

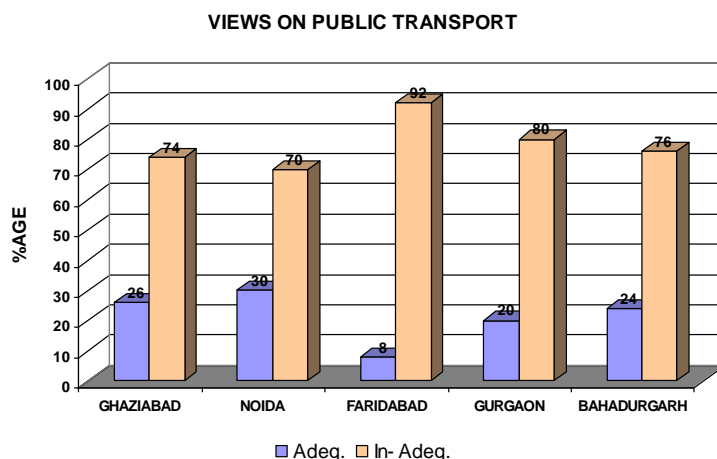
(In percent)

Sl. No.	Name of the city/ town	Public Transport		Intracity Transport		Educational facilities		Medical facilities		Water Supply		Power Supply	
		Adeq	In-Adeq	Adeq	In-adeq	Adeq	In-adeq	Adeq	In-adeq	Adeq	In-adeq	Adeq	In-adeq
1.	GHAZIABAD	26.0	74.0	20.0	80.0	60.0	40.0	34.0	66.0	40.0	60.0	4.0	96.0
2.	NOIDA	30.0	70.0	36.0	64.0	64.0	36.0	68.0	32.0	42.0	58.0	10.0	90.0
3.	FARIDABAD	08.0	92.0	06.0	94.0	20.0	80.0	16.0	84.0	36.0	64.0	08.0	92.0
4.	GURGAON	20.0	80.0	12.0	88.0	74.0	26.0	72.0	28.0	84.0	16.0	56.0	44.0
5.	BAHADUR-GARH	24.0	76.0	24.0	76.0	26.0	74.0	36.0	64.0	28.0	72.0	08.0	92.0

Source: Primary Survey, 2006 (TCPO)

The respondents of Gurgaon, Bahadurgarh, Ghaziabad and NOIDA echoed similar perception with 80%, 76%, 74% and 70% of them stating that public transport in their respective cities / towns is inadequate.

FIGURE 4.5α: PUBLIC TRANSPORT

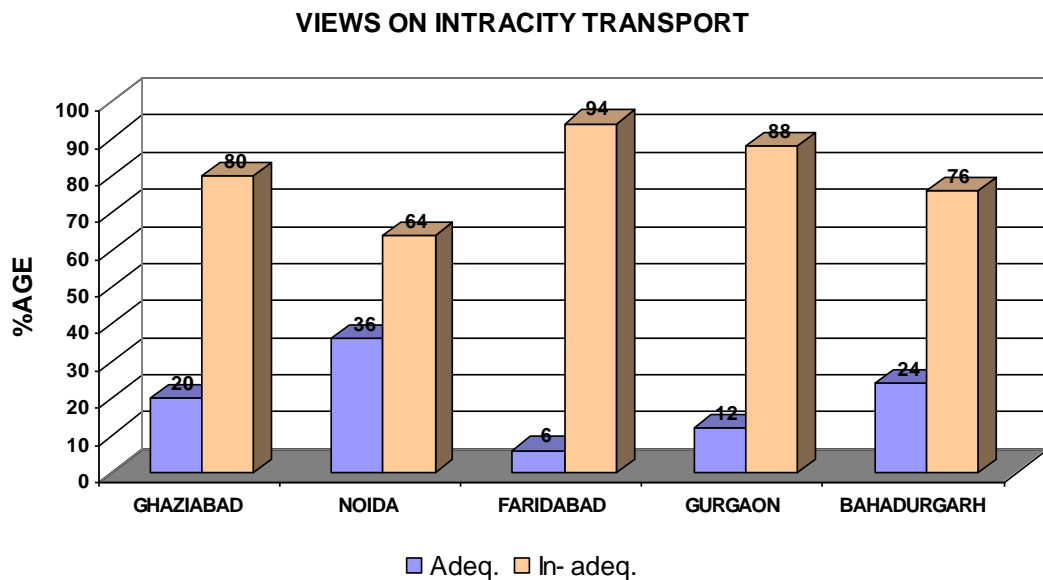


Source: Primary Survey, 2006 (TCPO)

The intracity transport is also inadequate as mentioned by majority of respondents. In Faridabad, 94% of people expressed the view that intracity transport is inadequate. The respondents in other cities also mentioned that intracity transport is inadequate. The responses range from 64% to 94%. NOIDA appears to have performed better in terms of public and intracity transport where 30% & 36%

respondents are of view that public transport and intracity transport are adequate. This signifies the fact that availability of DTC bus routes to NOIDA has enabled the city to have better connectivity as compared to other DMA cities/towns, however, at the same time the respondents are more inclined to use personalized mode of transport.

FIGURE 4.5b: INTRACITY TRANSPORT



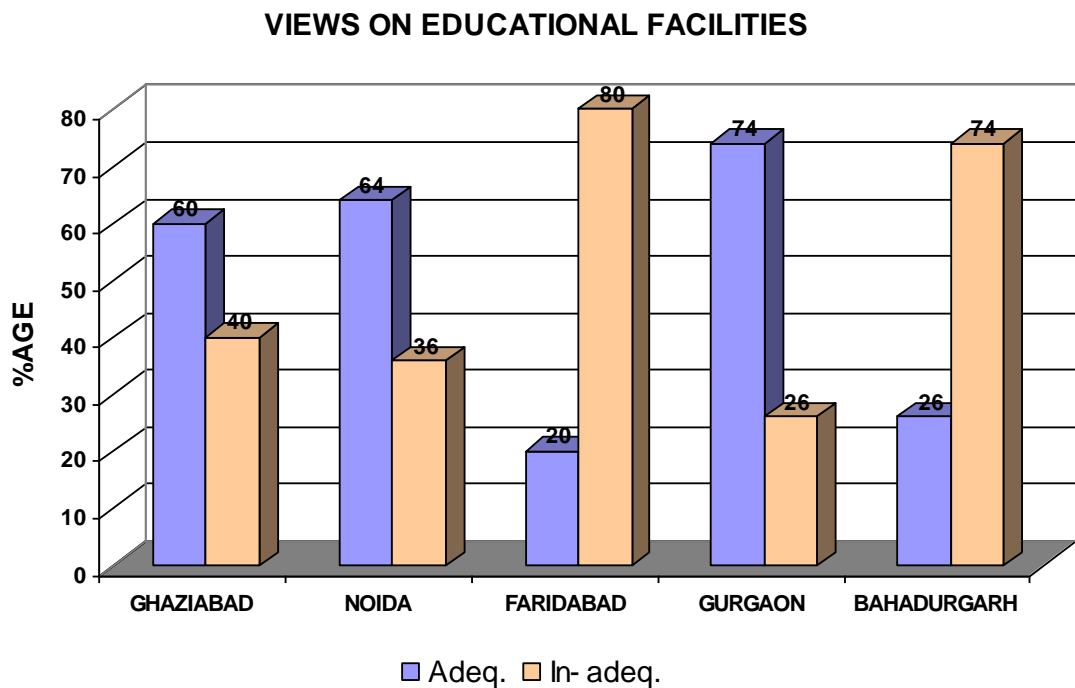
Source: Primary Survey, 2006 (TCPO)

With regard to perception towards the availability of educational facilities in Ghaziabad, NOIDA and Gurgaon, the respondents feel that the same are adequate as many 60%, 64% and 74% respectively are satisfied and term them adequate. The perception about educational facilities is rather bad in Faridabad and Bahadurgarh with 80% & 74% of respondents are not satisfied and the facilities are inadequate. This elucidates the fact Ghaziabad, NOIDA and Gurgaon have excellent educational facilities especially in the private sector where a number of Senior Secondary Schools, Management and IT Institutes and above all private Universities have been set up in these cities. However, Faridabad and Bahadurgarh are lagging behind in this regard.

The availability of medical facilities is far from satisfactory in Ghaziabad, Faridabad & Bahadurgarh where only 34%, 16% & 36% of respondents find them adequate. In NOIDA and Gurgaon, 68% and 72% of the respondents respectively say that medical facilities are adequate. This explains the scenario that NOIDA and Gurgaon have better medical facilities in comparison to Ghaziabad, Faridabad and Bahadurgarh. Health facilities of these two cities, of late, have witnessed the entry of private hospitals especially the branded ones, which claim to offer state-of-art medical facilities. Besides these

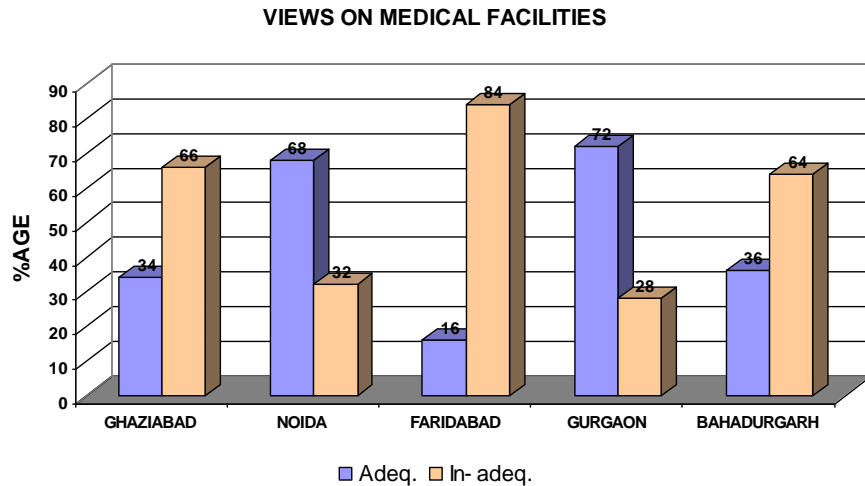
Hospitals, there are number of private clinics which have mushroomed in these cities. Due to these kind of facilities, the respondents perception in these two cities appear to be favorable towards the medical facilities and also support the fact that there is no dependency on the Government Hospitals as they are never found to be adequate in terms of delivering services.

FIGURE 4.5c: EDUCATIONAL FACILITIES



Source: Primary Survey, 2006 (TCPO)

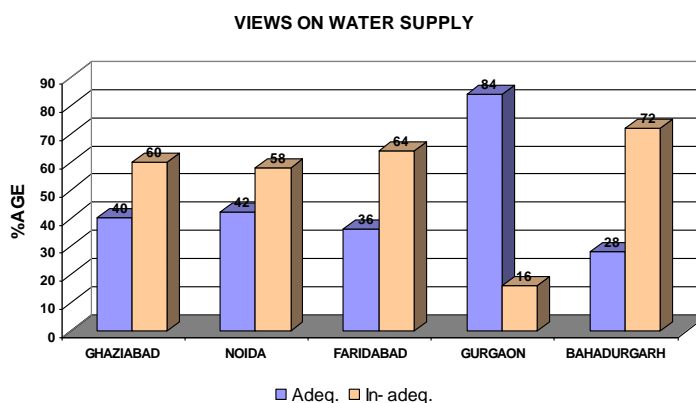
FIGURE 4.5d: MEDICAL FACILITIES



Source: Primary Survey, 2006 (TCPO)

As far as water supply is concerned, the respondents of Gurgaon feel that they have good water supply with 84% of them responding in favor of it. But in rest of DMA towns more than half of people expressed their dissatisfaction towards the availability of water supply. The level of dissatisfaction is proved by the fact that more than half of the respondents in Faridbad, NOIDA and Ghaziabad termed water supply as inadequate while 72% of respondents in Bahadurgarh feel that water supply is not satisfactory. It can be mentioned that the cities like Ghaziabad and NOIDA are relying heavily much on ground water sources and even the quality of water is brackish whereas the water quality of Gurgaon is relatively better as the water supply is augmented by surface sources (canal).

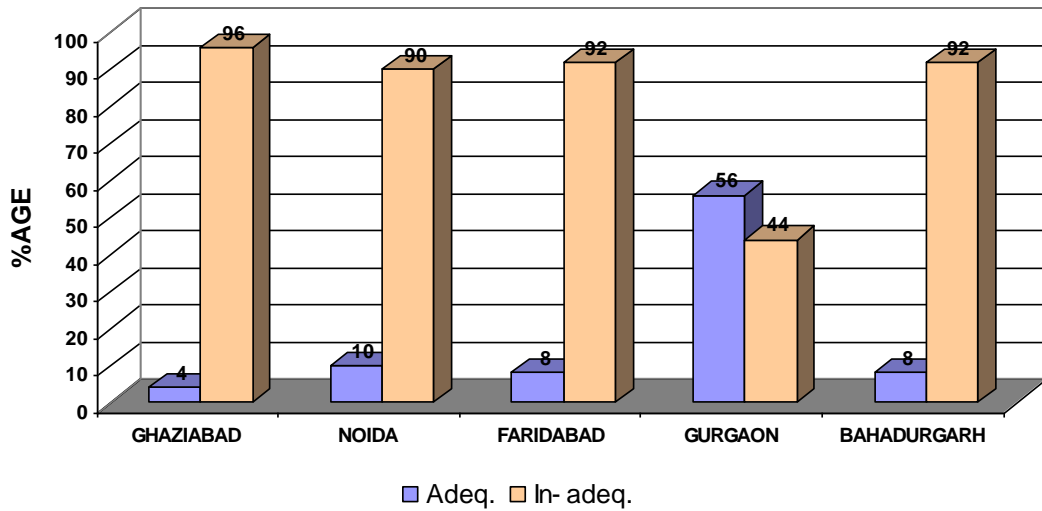
FIGURE 4.5e: WATER SUPPLY



Source: Primary Survey, 2006 (TCPO)

FIGURE 4.5f: POWER SUPPLY

Views on Power Supply



Source: Primary Survey, 2006 (TCPO)

With regard to availability of power supply, the respondents in all the DMA cities/towns overwhelmingly feel that there is a severe shortage of power except Gurgaon where 56% of them consider the same adequate. Ghaziabad has 96% respondents saying power supply is inadequate while the respondents of NOIDA, Faridabad and Bahadurgarh to the extent of 90%, 92% & 92% respectively expressed the view that power supply is extremely inadequate. The power situation in these cities is really grim as the State Power Corporations resort to daily long power cuts between 8-10 hours.

4.3.6 Level of Satisfaction in terms of Housing and Infrastructure

The response in terms of level of satisfaction among the respondents of DMA cities/towns appears to be positive in terms of housing and infrastructure. In all these cities/towns except Bahadurgarh where respondents consider the same to be unsatisfactory as these views are held by 54% of them. In Gurgaon, 68% of respondents consider their city to be good in terms of housing and infrastructure. But only 32% of respondents from Bahadurgarh consider it good. It is interesting to observe that 14% of the respondents in NOIDA believe they are extremely satisfied. This is mainly due to planned development of NOIDA. From the Table 4.7, it can be stated that Bahadurgarh has not been favored positively among the other DMA cities/towns in terms of level of satisfaction for Housing and Infrastructure.

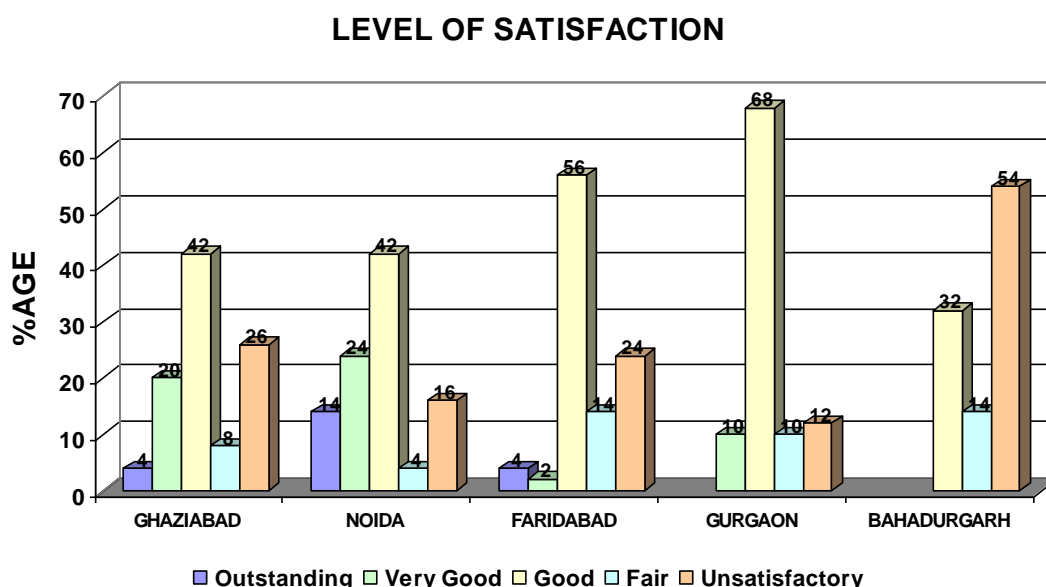
Table No. 4.7: HOUSING & INFRASTRUCTURE

(In percent)

Sl. No.	Name of the city/town	Level of Satisfaction					Total
		Out- Standing	Very Good	Good	Fair	Un- Satisfactory	
1.	GHAZIABAD	4.0	20.0	42.0	8.0	26.0	100.00
2.	NOIDA	14.0	24.0	42.0	4.0	16.0	100.00
3.	FARIDABAD	4.0	2.0	56.0	14.0	24.0	100.00
4.	GURGAON	-	10.0	68.0	10.0	12.0	100.00
5.	BAHADURGARH	-	-	32.0	14.0	54.0	100.00

Source: Primary Survey, 2006 (TCPO)

FIGURE 4.6: HOUSING & INFRASTRUCTURE



Source: Primary Survey, 2006 (TCPO)

4.3.7 Sources of House Purchase

In 3 DMA cities/towns, respondents by and large have purchased their houses from the Development Authority like NOIDA and HUDA. In Noida, 74% of respondents stated that they purchased their house from NOIDA Authority. In Faridabad and Gurgaon, 82% & 74% of respondents respectively purchased their houses from HUDA. But in Ghaziabad majority (66%) have purchased their houses from State Housing Board and in Bahadurgarh majority (86%) have purchased their houses from private developers.

Table No.4.8: AUTHORITY FROM WHICH HOUSE BEING PURCHASED

(In percent)

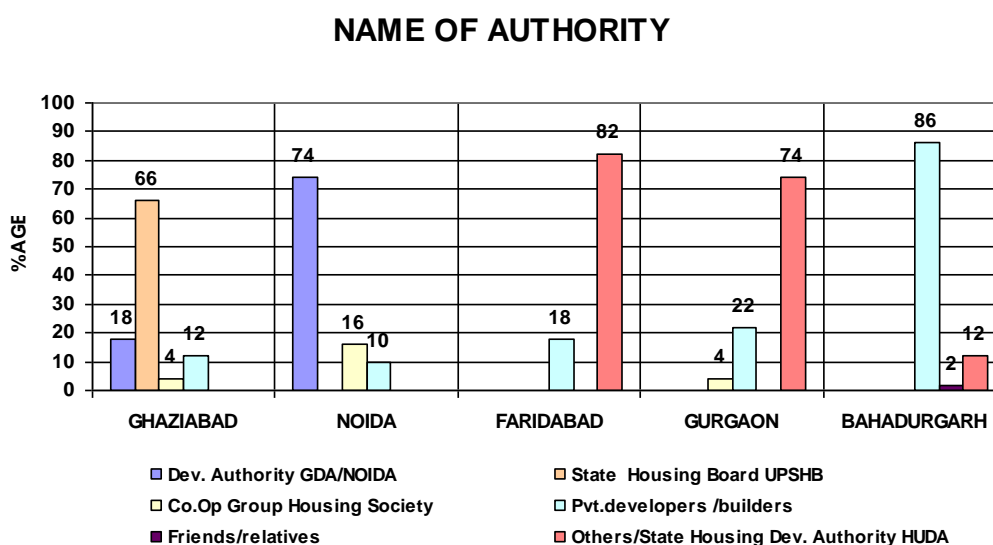
Sl.	Name of the	Name of the Authority

No.	City/ town	Dev. Authority GDA/ NOIDA	State Housing Board	Co. Op Group Housing Society	Pvt. developers/builders	Friends/relative:	Others/ State Housing Dev. Authority HUDA	Total
1.	GHAZIABAD	18.0	66.0	4.0	12.0	-	-	100.00
2.	NOIDA	74.0	-	16.0	10.0	-	-	100.00
3.	FARIDABAD	-	-	-	18.0	-	82.0	100.00
4.	GURGAON	-	-	4	22.0	-	74.0	100.00
5.	BAHADURGARH	-	-	-	86.0	2.0	12.0	100.00

Source: Primary Survey, 2006 (TCPO)

This explains that in NOIDA houses/plots have been purchased from the Government agency while in Gurgaon 22% of the respondents purchased from private developers. The plotted houses are mostly in the areas developed by the Development Authority while private builders have constructed apartments. It may be stated that private developers have share in all the cities in the construction activities and in future also they are expected to be involved in a big way in most of these cities/towns adding to the overall availability of housing stock in NCR and offering alternatives to NCT Delhi in residential housing.

FIGURE.4.7: AUTHORITY FROM WHICH HOUSE BEING PURCHASED



Source: Primary Survey, 2006 (TCPO)

4.3.8 Type of Housing

The majority of respondents in Faridabad (94%), Gurgaon (70%) and Bahadurgarh (60%) live in plotted housing. In Ghaziabad, most of the respondents i.e. 72 % live in MIG housing. But NOIDA has an average mix of LIG (12%), MIG (44%), HIG (20%) and plotted (20%) with maximum from MIG. A very low percentage of respondents are from

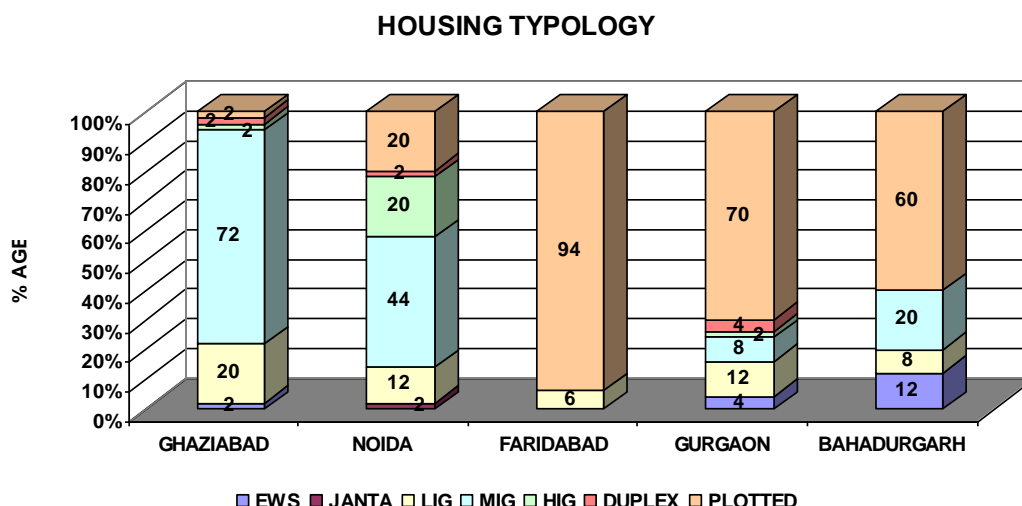
EWS in newly built localities. The income category wise housing are by and large constructed by the Development Authority /State Housing Board in NOIDA and Ghaziabad while the surveyed respondents in Faridabad and Gurgaon comprised of largely plotted houses.

Table No 4.9: THE TYPE OF HOUSING IN THE DMA CITY/TOWNS OF NCR
(In percent)

Sl. No.	Name of the City/Town	Type of Houses							TOTAL
		EWS	JANTA	LIG	MIG	HIG	DUPLEX	PLOTTED	
1	GHAZIABAD	2	0	20	72	2	2	2	100
2	NOIDA	0	2	12	44	20	2	20	100
3	FARIDABAD	0	0	6	0	0	0	94	100
4	GURGAON	4	0	12	8	2	4	70	100
5	BAHADURGARH	12	0	8	20	0	0	60	100

Source: Primary Survey, 2006 (TCPO)

FIGURE.4.8: THE TYPE OF HOUSING



Source: Primary Survey, 2006 (TCPO)

4.3.9 Accessibility to Social Infrastructure Facilities

The primary survey regarding social infrastructure facilities revealed that in Ghaziabad, majority i.e. 50 % to 70% of the facilities are located within a distance of 5 kms. In NOIDA, most of the facilities are at a distance range of 7 kms whereas in Faridabad, this range increases to 10 kms. In Gurgaon, 85% of facilities are within range of 10 kms and same is the case for Bahadurgarh except for college & professional institutions. All the DMA cities/towns have good facility of market within the distance of 3 to 5 kms. Among all the DMA cities/towns, in NOIDA, the respondents felt that all the facilities are available within the walking distance as 96% of them don't have to go beyond 1 km to avail market facilities and more than half the respondents avail school education within 3 kms. In overall terms, it can be stated that NOIDA and Ghaziabad are better placed than the cities in Haryana in

terms of accessibility to facilities. Bahadurgarh appears to be lowly placed as most the respondents felt that they have to travel more than 3 kms. To avail the facilities like for Hospital, 90% of them stated that they have to travel more than 3 kms and for professional college 76% of the respondents mentioned that the same is located at a distance more than 7.5 kms.

Table No. 4.10: DISTANCE IN RESPECT OF SOCIO ECONOMIC FACILITIES

(In percent)

Sl. No.	Name of the City/Town	Infra-Structural Facilities	Distance (in Kms) from Home						Total
			< 1	1.5-3.0	3.5-5	5.5-7	7.5-10	10 >	
1	GHAZIABAD	*Educational							
		*School	26	44	22	4	4	-	100
		*College	-	28	36	14	14	8	100
		*Prof.College	8	36	28	14	4	10	100
		*Hospital	20	30	22	8	4	16	100
		*Dispensary	18	26	26	10	8	12	100
		*Pvt.Medical Pra.	96	4	-	-	-	-	100
		*Market	96	4	-	-	-	-	100
2	NOIDA	*School	34	32	14	4	16	-	100
		*College	8	24	26	12	22	8	100
		*Prof.College	-	22	32	10	6	30	100
		*Hospital	28	26	10	6	4	26	100
		*Dispensary	-	10	26	32	8	24	100
		*Pvt.Medical Pra.	36	26	10	8	8	12	100
		*Market	96	4	-	-	-	-	100
		3	FARIDABAD	*School	30	16	32	4	18
*College	4			20	22	10	18	26	100
*Prof.College	4			16	18	12	14	36	100
*Hospital	6			10	16	32	16	20	100
*Dispensary	-			10	40	24	16	10	100
*Pvt.Medical Pra.	40			24	16	16	4	-	100
*Market	92			4	4	-	-	-	100
4	GURGAON			*School	74	16	10	-	-
		*College	6	12	32	20	20	10	100
		*Prof.College	4	16	36	28	8	8	100
		*Hospital	8	14	20	34	10	14	100
		*Dispensary	2	12	44	20	18	4	100
		*Pvt.Medical Pra.	50	20	14	10	6	-	100
		*Market	90	6	4	-	-	-	100
		5	BAHADURGARH	*School	50	10	30	4	6
*College	-			4	6	10	50	30	100
*Prof.College	-			2	4	18	40	36	100
*Hospital	-			6	70	20	4	-	100
*Dispensary	12			6	36	26	20	-	100
*Pvt.Medical Pra.	60			24	16	-	-	-	100
*Market	92			4	4	-	-	-	100

Source: Primary Survey, 2006 (TCPO)

4.3.10 Source of Finance for Housing

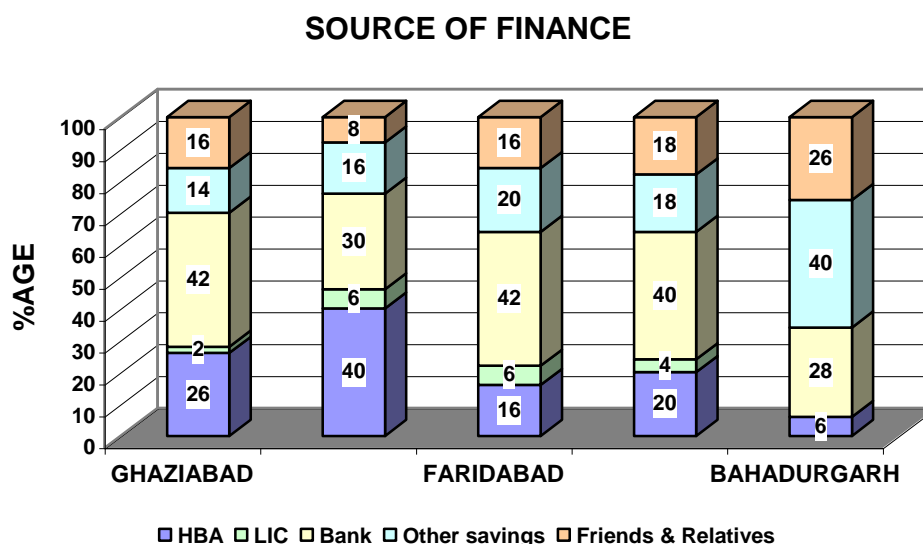
As observed from the above Table 4.11, it can be seen that except Bahadurgarh more than half of the respondents have availed loans/ finance for housing. In NOIDA and Ghaziabad 76% and 70% of the respondent's respectively availed loan for acquiring the house. In Bahadurgarh only 34% of respondents have availed loans, which explains that in smaller towns people still depend on the informal sources of financing. For availing loans, bank is the most preferred source as 42% of the respondents in Ghaziabad and Faridabad and 40% in Gurgaon approached Bank to avail the loan while in NOIDA 40% of the respondents also availed loan from their Departments where they are working in form of House Building Advance (HBA).

TABLE No.4.11: SOURCE OF FINANCE

Sl. No.	Name of the City/town	Loan Availed		Total	HBA	LIC	Bank	Other savings	Friends & Relatives	Total
		Yes	No							
1	GHAZIABAD	70	30	100	26	2	42	14	16	100
2	NOIDA	76	24	100	40	6	30	16	8	100
3	FARIDABAD	64	36	100	16	6	42	20	16	100
4	GURGAON	64	36	100	20	4	40	18	18	100
5	BAHADURGARH	34	66	100	6	-	28	40	26	100

Source: Primary Survey, 2006 (TCPO)

FIGURE .4.9: SOURCE OF FINANCE



Source: Primary Survey, 2006 (TCPO)

4.3.11 Affordability

As observed from the Table 4.12 the respondents in these cities/towns have migrated from various places due to number of reasons. In order to find the major reasons, which forced them to

migrate to these DMA cities/ towns, respondents were asked to give major factors, which made them to stay in these cities/towns. Majority of respondents (60% to 95%) opined that low price of house / land in these cities makes it affordable to stay. About 40% of the respondents in Gurgaon felt that adequate infrastructure attracted them to make their homes in the city. However, very few respondents believed that availability of better educational facilities and pollution free environment influenced their decision of settling down in these cities. Overall, it can be stated that more than half of the respondents surveyed in all the cities (71% of the total surveyed respondents) opined that it is the market forces which influence the choice of place to settle down as these cities/towns offer residential housing at an affordable price in comparison to NCT Delhi.

Table No. 4.12: AFFORDABILITY

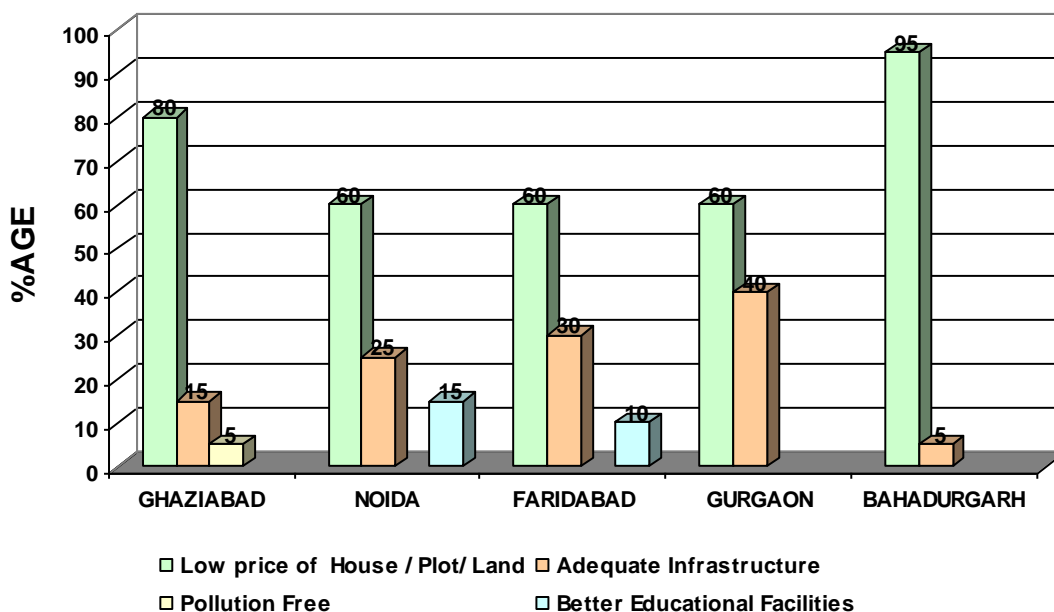
(In percent)

Sl. No.	Name of the city/town	FACTORS				Total
		Low price of House / Plot/ Land	Adequate Infrastructure	Pollution Free	Better Educational Facilities	
1	GHAZIABAD	80	15	5	-	100
2	NOIDA	60	25	-	15	100
3	FARIDABAD	60	30	-	10	100
4	GURGAON	60	40	-	-	100
5	BAHADURGARH	95	5	-	-	100

Source: Primary Survey, 2006 (TCPO)

FIGURE 4.10: AFFORDABILITY

FACTORS TO STAY



Source: Primary Survey, 2006 (TCPO)

4.3.12 SUGGESTIONS BY RESPONDENTS FOR IMPROVEMENT

The respondents from different cities/towns in DMA Area of NCR have different priorities and viewpoints as per the problems faced by them and it is quite clear from the suggestions given by respondent that city authorities are required to intervene for the overall improvement of their cities in NCR.

Ghaziabad

In Ghaziabad, first priority of respondents (90%) is the improvement of power supply, which continuously ails the city. The city also requires drastic improvement in the public transport system. Secondly, the respondents perceive that medical facilities on the lines of AllMS should be provided. They also opined that strict law and order should be maintained. Around 40% respondents think that metro rail should be introduced in DMA cities/towns for overall improvement in the connectivity whereas 20% of them felt that pollution in the city is grave as the presence of industries, plying of trucks on National Highway and Vikram Tempos have adversely affected the environment of Ghaziabad and need to be controlled.

NOIDA

As observed from the Table 4.13, in NOIDA, 80% of the respondents expressed that NOIDA Authority must take adequate steps

to provide potable water as the quality of water is brackish and they have to depend on 'bottled water' for drinking water purposes. The respondents were also of the view that there is a need for extension of Delhi Metro to NOIDA and half of the respondents felt that NOIDA Authority should focus on improving the medical facilities and law and order situation. As mentioned in earlier section the respondents felt that NOIDA has been adequately served by the medical facilities, however while giving suggestion to improve the same they perhaps thought that the facilities extended by the Government needs to be improved, as there is only one District Hospital, which need to be further strengthened. Further, the respondents also felt that law and order situation need to be improved.

TABLE NO.4.13: SUGGESTIONS BY RESPONDENTS FOR IMPROVEMENT

Sl. No.	Suggestions for improvement of standard of living	(In percent)				
		Ghaziabad	Noida	Faridabad	Gurgaon	Bahadurgarh
1	Power system should be improved	90	-	20	20	90
2	Condition of Road should be improved & well maintained.	-	-	40	10	90
3	Sewerage & drainage system should be Improved & properly maintained by the Municipal Corporation	-	-	90	50	100
4	Medical (Govt.) facilities should be improved.	50	-	50	-	70
5	Strict Law & Order should be maintained	50	20	-	-	100
6	Public transport network should be widened	90	-	80	90	50
7	Land for burial Ground should be earmarked/allocated by the Municipal Corporation	-	-	-	-	30
8	Metro Rail should be introduced in DMA Towns	40	20	-	-	20
9	Potable Water in sufficient quantity should be provided by the Municipal Corporation	-	80	-	-	90
10	Educational facilities should be improved	-	-	70	50	20
11	Pollution should be checked	20	50	50	-	-
12	Traffic rule should be strictly enforced	-	-	40	-	-

Source: Primary Survey, 2006 (TCPO)

Faridabad

In Faridabad, 90% of respondents are of the opinion that sewerage and drainage system of the city needs vast improvement and have to be properly maintained by the Municipal Corporation. About 80% of

respondents are of the view that there is need for widening of roads and improvement of public transport network. Around 70% respondents expressed the view that educational facilities should also be improved. Half of the respondents felt that medical facilities provided by the State Government should be improved and level of pollution should be brought down by introducing non-polluting vehicles and closing down the polluting factories and brick kilns. About 40% of the respondent stressed that condition of road should be improved and traffic rules and regulations need to enforce strictly whereas 20% of them felt that overall power supply of the city should be improved.

Gurgaon

In Gurgaon, majority of respondents (90%) believed that the city clearly lack organized public modes of transport. About half of the respondents opined that sewerage and drainage system should be improved and properly maintained by the Municipal Corporation. Further, the respondents also believed that availability of educational facilities is not upto the mark and is required to be made at par with Delhi. In overall, respondents are more or less satisfied in terms of Power Supply in the city and also have fewer complaints towards the roads and traffic conditions. This indicates that the city is relatively well off with regard to these facilities in comparison to other DMA cities/towns.

Bahadurgarh

In Bahadurgarh, almost all the respondents are unanimous in their viewpoint that sewerage and drainage system needs to be improved drastically. They specifically stressed that strict law and order should be maintained. Unlike Gurgaon, the town suffers from acute power shortage and almost 90% people felt that power supply should be improved so that the town's industrial development does not suffer. The respondents are also not satisfied with the condition of roads and felt that the same require upgradation and strengthening. Further, the town authorities need to take adequate steps to improve drinking water supply as the water quality is not good. Some of the respondents felt that the town has no proper burial / cremation ground.

4.3.13 Annual Increase in Cost of Housing

The real estate prices in the DMA cities/towns are by and large dependent on the operation of market forces. It is interesting to note that real estate prices in these cities/towns has shown unprecedented increase in the prices during the last 20 years or so. It can be observed from the table given below that among all the towns/cities, Ghaziabad and NOIDA command higher prices as compared to their counterpart

cities / towns in Haryana. However, it is observed from the table that cities in Hayana have also shown higher growth rate in terms of price escalation.

Table: 4.14: Annual Percentage Increase in Cost of Housing (in 20 years)

Ghaziabad

Type of housing	Ave. Current year cost (Rs. In lakh)	Ave. Purchasing cost (Rs. In lakh)	% Increase in cost
EWS	2	0.7	285.71%
JANTA	-	-	-
LIG	9.5	3.82	248.69%
MIG	18.86	5.28	357.20%
HIG	25	9	277.78%
DUPLEX	40	9	444.44%
PLOTTED	20	7	285.71%
Average Increase of Cost			316.58

NOIDA

Type of housing	Ave. Current year cost (Rs. In lakh)	Ave. Purchasing cost (Rs. In lakh)	% Increase in cost
EWS	-	-	-
JANTA	6	4	150.00%
LIG	17.33	4.31	402.09%
MIG	44.6	18.27	244.12%
HIG	45.5	17.55	259.26%
DUPLEX	40	30	133.33%
PLOTTED	65.5	24.9	263.05%
Average Increase of Cost			241.97

Bahadurgarh

Type of housing	Ave. Current year cost (Rs. In lakh)	Ave. Purchasing cost (Rs. In lakh)	% Increase in cost
EWS	4.13	1.21	341.32%
JANTA	-	-	-
LIG	7.13	1.2	594.17%
MIG	5.18	1.5	345.33%
HIG	-	-	-

DUPLEX	-	-	-
PLOTTED	7.87	1.75	449.71%
Average Increase in Cost			432.63

Faridabad

Type of housing	Ave. Current year cost (Rs. In lakh)	Ave. Purchasing cost (Rs. In lakh)	% Increase in cost
EWS	-	-	-
JANTA	-	-	-
LIG	27.67	7	395.29%
MIG	-	-	-
HIG	-	-	-
DUPLEX	-	-	-
PLOTTED	31.72	8.23	385.42%
Average Increase in Cost			390.35

Gurgaon

Type of housing	Ave. Current year cost (Rs. In lakh)	Ave. Purchasing cost (Rs. In lakh)	% Increase in cost
EWS	3.5	0.9	388.89%
JANTA	-	-	-
LIG	13.5	4.33	311.78%
MIG	21.75	6.48	335.65%
HIG	35	14.3	244.76%
DUPLEX	35	11.5	304.35%
PLOTTED	30.97	8.7	355.98%
Average Increase in Cost			323.56

Source: Primary Survey, 2006 (TCPO)

All the cities/towns viz., Faridabad, Gurgaon and Bahadurgarh have shown an increase of more than 300% in the prices of real estate. This explains the fact that the housing demand exceeded supply during the last 20 years in these cities compared to Ghaziabad and NOIDA. Another, fact to be explained is the spurt in residential development in Ghaziabad began in 1980's while Gurgaon and Faridabad witnessed the same in the late 1990's. The high growth rate in the cities of Haryana also brings out the fact that people have also invested on the properties for speculation.

4.4 PERCEPTION OF BUILDERS / REAL ESTATE DEVELOPERS

In order to assess the perception of builders and real estate developers, a separate questionnaire was designed and was sent to about 15 leading builders engaged in the construction activities in Delhi Metropolitan Area cities/towns. The response among the builders was not very encouraging as only following real estate companies responded and sent the questionnaire.

- i) M/s Ashiana Housing and Finance (India Limited)
- ii) M/s Eldeco Infrastructure & Properties Limited
- iii) M/s Ambience Infrastructure Private Limited
- iv) M/s Supertech Constructions Private Limited

In this regard, the National Real Estate Development Council also circulated the questionnaire of TCPO to all its members; however, it appears that the majority of builders are not in favour of sharing the experiences as well as information. Based on the feedback received from the above-cited real estate companies, the observations and findings are summarized in the following paragraphs:

4.4.1 Major Reasons for Undertaking Construction Activities in NCR

According to builders & real estate developers major reason for undertaking construction activities are: -

- NCR is well connected with Delhi.
- High demand for housing & non-residential development in DMA Cities/Towns.
- Good business opportunities in NCR with large market.
- Good infrastructure development has taken place in last few years.
- Pollution free environment as compared to NCT Delhi.
- Low cost of land/ housing as compared to NCT Delhi.
- Development of Shopping Malls, Cineplex's & other entertainment centers in NCR.
- Availability of reasonable water & transport facilities in NCR.
- Retired persons settling down from Delhi belonging upper middle income, middle income and lower income groups.
- Some builders agree that there is flexibility in rules & regulations concerning building plan sanctions, completion certificate, and water & power connections in DMA Cities/towns.

4.4.2 Awareness Regarding NCR Plan 2021 and its success in deflecting migration towards NCR towns.

All the builders are well aware of NCR Plan 2001 & 2021. As per the overall perception, it can be mentioned that NCR plan has been a limited success. In order to implement the same more effectively, the real estate developers opined that there is a need for development of means of transport at affordable cost and consuming less time for which integrated (Metro- Rail- Bus) transport system is required. There is a need for development of infrastructure, water, electricity, roads etc. It may also be stated that they felt that NCR Plan should have been implemented in true spirit with proper coordination among the State Governments. However in spite of some adverse conditions, these cities and towns are going to play vital role in redistributing the population growth of NCT Delhi and NCR as well.

4.4.3 Builders Perception Regarding Property Buyers

Builders feel that most of the buyers in NCR towns are end users with very small percentage of speculators. Buyers here are normally those who have sold their small houses in Delhi and are looking for large houses in NCR although the possibility of speculators cannot be ruled out. Generally, those who avail loan from financial institution are genuine buyers.

4.4.4 Major Bottlenecks in Terms of Infrastructure Development in NCR Towns

Most of builders expressed the view that the attitude and cooperation of State Government Agencies towards solving developmental problems needs to have proactive approach. Another factor they feel is absence of free flow of inter-state transportation and different policies of the State Governments, which hinders the development of NCR. Further, they have also felt that weak financial condition of city agencies also come in the way of development of infrastructure. Above all lack of coordination between various agencies of the State and Central government is also one the bottlenecks in terms of infrastructure development.

4.4.5 Potential of NCR Cities/ towns to Develop as Satellite Cities and absorbing in- migrants to NCT Delhi

According to builders these DMA cities/towns have the right potential to be developed as satellite towns and can stem the flow of migrants towards Delhi. This is possible only if low cost and time saving modes of transport are developed for commuting to Delhi and rest of NCR. Further, they expressed that subsidy granted to Delhi in terms bus fares, power and water tariffs and property taxation should also be extended to these DMA Cities / Towns so that they attract people.

4.4.6 Incentives to Builders /Real Estate Developers

The incentives expected by builders / real estate developers so that DMA towns can be developed at par with NCT Delhi are as under.

- Disparities regarding stamp duty should be removed and should be made minimum possible in the DMA Cities/Towns.
- Exemption in income tax by increasing distance limit from 25kms to 50kms from NCT Delhi & built up area of 1000 sq. ft. to 1500 sq. ft. at least till 2021.
- Availability of land by the Development Agencies at reasonable rates
- Transport subsidy to be provided.
- Easy and long term availability of funds for project.
- Exemption from State levies such as Sales Tax and Octroi with regard to construction materials.
- Exemption in electricity duty and tax on the sale of self-generated / purchased electricity.

4.4.7 Suggestions for all round Development of DMA Cities/Towns and NCR as a Whole

As per Builders survey the major suggestions for all round development of DMA towns & NCR as a whole are:

- Widening of congested roads, which are a result of unauthorized construction, and authorities need to effectively deal with traffic chaos, dirt, dust and old vehicles.
- Maintain / monitor law and order situation and remove political uncertainty.

- Modernization of security and safety systems at all levels.
- Obliteration of red tapism and developing professionalism in civic agencies.
- Development agencies to work as facilitators rather than developers.
- Defining clearly role of Govt. development agencies and developers.
- Development of social & physical infrastructure and integrated multi modal transport system.
- Timely preparation and review of Master Plans and Building Bye-Laws and enforce them in true spirit.

NCR PLAN 2001: APPRAISAL OF ISSUES RELATED TO DMA CITIES / TOWNS

5

It is now two decades since NCR Planning Board was constituted in 1985 and the first plan was promulgated in December, 1988. NCR Plan-2021 was approved and notified in September, 2005. It would be appropriate to appraise its issues with regard to DMA Cities and Towns. The various issues / strategies propagated in the NCR 2001 Plan need to be appraised in the context of the end result. This Chapter examines those chapters of NCR Plan-2001, which have highlighted the issues pertaining to development of DMA cities/towns.

Chapter 2, Page 10

- It is also recognized that any additional population in DMA towns, excluding Delhi will not to any extent moderate or reduce the problems of Delhi as their inter-dependence is intensive and necessarily mutual.
- The economic activities with potential for large scale employment should necessarily be located outside DMA, preferably at a distance which discourages daily interaction with Delhi.

There is no doubt that due to close proximity of all the DMA cities and towns interdependence will be highly intensive and also mutual dependency for the benefit of people at large is required. However, it cannot be ignored that these cities / towns have shared the burden of NCT Delhi as together they have a population of about 27 lakh. It also cannot be denied that the economic activities be located outside DMA, however, at the same time the DMA cities and towns have not reached a saturation point and hence the non-DMA towns will take some time to attract economic activities so that people start settling down there and avoid commutation to NCT Delhi.

Chapter 3, Page 18

- Control moderate growth of the DMA towns excluding Delhi so that volume and directions of growth are well coordinated.
- MPD-2001 has specified selected industrial units that are found non-conforming in residential, commercial and non industrial use zones to be shifted in such areas within a period of 5 to 10 years by

suitably developing industrial areas and wholesale markets in the towns beyond NCT Delhi, it should be possible to generate additional employment opportunities in the Regional Towns.

- Delhi Metropolitan Area Towns around Delhi have been growing faster and would soon become a large unmanageable urban agglomeration woefully short of essential services. Could this growth be regulated to relieve the pressure on Delhi's services?

On one hand NCR Plan - 2001 mentioned that there is a need for controlled moderate growth of the DMA towns, however looking into their population growth and spatial expanse, the DMA cities/towns (excluding Kundli) population taken together have grown by 94%, which is higher than both NCR as well as NCT Delhi during 1991-2001 and the geographical area of most of them has increased 2-3 times during the last three decades. Hence, it can be stated that these cities/towns have not experienced controlled moderate growth as envisaged in NCR Plan - 2001.

The shifting of non-conforming industries from NCT Delhi to DMA towns within 5-10 years has not been realized as the planned industrial estates like Narela and, Bawana are yet to take off in the sense that shifting of non-conforming industries has not been completed. The industrial development at Bawana is about 700 - 800 Ha and so far it has only 16000 plots, half of which have been allotted and on less than a hundred, construction is in progress, which is very slow mainly on account of incomplete infrastructure provisions. The Plan envisaged 1533 Ha spread over 16 L&S industrial estates (including 6 special industrial estates) and 265 Ha spread for two extensive industrial estates in three urban extensions. It is not clear what kind of industrial estate is being developed at Bawana and why so much industrial space is concentrated in one location.

The Master Plan of Delhi-2001 also recommended that the existing heavy and large industrial units shall shift to Delhi Metropolitan Area and the NCR. The Master Plan also provided for Industrial Area Redevelopment Schemes for three industrial clusters - Shahdara, Anand Parbat, Samaipur Badli. These schemes were to be prepared after 'proper survey and appraisal' and regularization of 'safe and compatible units' after 'upgrading the environment' and on the basis of 'individual merit'. Further, the non-conforming industries are by and large polluting industries and Hon'ble Supreme Court has issued orders for the closure of certain industrial units and asked them to move out of the NCT Delhi.

Hon'ble Supreme Court may have given directions to shift the polluting industries, however to shift these industries out of NCT Delhi,

then NCR cities/towns may also suffer from ills of pollution. With, the delay in shifting of non-confirming industries to conforming areas and the planned new industrial estate not taking off, it would be inappropriate to think that DMA cities/towns shall benefit from the shifting of the industries and also the respective State Governments are also reluctant to accept polluting industries of NCT Delhi, as the planned industrial areas of UP and Haryana encourage non-polluting industries.

There is no doubt that cities/towns in DMA are growing very rapidly and their growth may become unmanageable. The NCR Plan 2001 had infact assigned population for these cities and only among them Ghaziabad and Faridabad are able to attain the same while others have fallen short. This implies that fast growth is inevitable in these cities and if at all they have to share the burden on NCT Delhi, the cities may be for fast and dynamic growth, which has to be backed by strict enforcement. However, controlled monitored growth was perhaps not possible as contemplated in the NCR Plan-2001.

Chapter 3, Page 19

Recognizing the potential of DMA in relieving the population pressure of Delhi and also the problems Delhi would face in case of over growth of DMA, a moderate growth for DMA towns around Delhi is prescribed. The population forecast on the present trend of growth places the population size of DMA excluding Delhi at 38 lakh including 1 lakh rural population by 2001.

The population forecast of NCR Plan 2001 was 38 lakh for DMA cities / towns, however actual population was only 26.98 lakh. Further, it is also stated that NCR Plan - 2021 has assigned population of 97 lakh of these cities/towns taken together which means the total population is expected to grow by 260% during 2001-21. Hence, this contradicts the fact that DMA cities/towns will have moderate growth.

Chapter 4, Page 23

The extraordinary growth of Delhi is to be controlled at 112 lakh population and that of the DMA excluding NCT Delhi to be moderated to a population size of 38 lakh. The excess of 19 lakh of urban population of Delhi by 2001 would have to be diverted to and contained in the urban areas beyond DMA.

The DMA cities/towns did not attain the assigned population whereas the NCT population went above the assigned figure. This contemplation of NCR Plan - 2001 has also fallen short, as the

population had reached 138.50 lakh in 2001. It is rather difficult to set out a figure of population to be contained in the DMA cities / towns.

Chapter 6, Page 37 & 38

Based on the trends in terms of nature and concentration of activities in the recent years (1980's), the likely employment structure by 2001 has been worked out. Emphasis has been to derive location specific economic structure. The assumptions made in the forecast are: -

- Owing to the location of DMA towns adjacent to Delhi, the DMA towns would have economic participation rate much higher in 2001 than in 1981.
- These towns though initially specially planned for industrial development would continue to generate employment opportunities in industries. However, with a view to restricting the population increase to a moderate size, controlled growth of industries would be permitted in the DMA towns.
- All these towns have crossed the initial stage and entered the take off stage of potential for employment opportunities in construction, trade and commerce and transport activities.

It has clearly been mentioned that DMA cities and towns have crossed and entered the take off stage of potential for employment opportunities in tertiary sector. The following table gives workers participation ratio.

Table 5.1: Work Force Participation Ratio (in percentage)

Cities/Towns	1981	1991	2001	Proposed Participation Ratio (As per NCR Plan-2021)
Ghaziabad	29.0	28.0	27.6	30
Noida	-	32.7	34.9	35
Faridabad	33.8	30.4	31.1	35
Gurgaon	28.0	28.7	32.4	35
Bahadurgarh	29.7	31.8	31.0	35

Source: Census of India, 2001

It may be observed from the above table that Ghaziabad and Faridabad have shown declining trend in the work force participation ratio as for the former, in particular, the same has declined from 29.0% in 1981 to 27.6% in 2001 while in case of the latter the ratio was 33.8% in 1981, which further declined to 30.4% and slightly increased to 31.1% in 2001. Other cities like NOIDA and Gurgaon have shown an upward trend and it can be stated that they have become centers for employment generation. It cannot be straight away concluded that cities like Ghaziabad, Faridabad and Bahadurgarh will become major center for employment opportunities. However, as per the proposed participation ratio of NCR Plan - 2021, it appears that the ratio for most of the cities will more or less get stabilize by 2021.

Chapter 6, Page 40

The Central Government Offices and Public Sector Undertakings in spite of constraints like insufficient space, costlier land and costlier supervision of their regional units from Delhi prefer to cling on to Delhi and as of today, there appears no valid reason in sight for them to decide to move out.

In DMA cities/towns one can find establishment of number of public sector undertakings, however, no authentic information / data is available in respect of how many offices actually shifted out of NCT Delhi. This has also not been indicated in NCR Plan - 2021 or in MPD-2021. Although, it may be stated that some of the public sector undertakings like RITES, Indian Oil, HPCL, etc. have taken initiatives to open new offices in DMA cities/towns. However, offices of various Ministries viz., attached, subordinate, autonomous offices continue to operate from Delhi only and virtually none of the central ministries have made efforts to shift out of Delhi.

Chapter 6, Page 42

Some of the industrial activities, which are hazardous in nature and require extensive space, have also been recommended to be located in the DMA Towns. Keeping in view the fact that the relocation in Delhi would further generate more employment opportunities and create congestion in peripheral areas, thereby creating a contiguous expansion, it would be appropriate that alternative/additional wholesale markets are developed in the DMA towns.

With regard to shifting of hazardous industries, it may be appropriate to shift them to DMA cities / towns in the planned industrial estates. The respective State Governments have also taken steps for not encouraging these types of industries. Also when NCT Delhi's planned estates, old industrial areas like Anand Parbat and Wazirpur have failed to provide common effluent treatment plant, it is difficult to visualize that State Industrial Development Corporations will be able to provide the same facility. With the shift in focus of industrial development towards IT/BPO industries and Special Economic Zones, the polluting hazardous industries may not be allowed to operate in the entire NCR, however, it is quite possible that they may operate in a clandestine manner in DMA cities / towns where there might not be strict control on pollution. As far as the question of alternative / additional wholesale market is concerned, efforts have been made to locate vegetable wholesale market in Sahibabad and NOIDA in Uttar Pradesh while no efforts have been made to make agricultural wholesale produce market in these cities / towns.

Chapter 6, Page 44

In pursuance of the policies of the Master Plan for Delhi 1962-81 to disperse economic activities in the adjoining towns falling in DMA, the State Governments concerned developed large-scale industrial activities in these towns during the 1960-80. While undertaking industrial development in these towns, matching level of residential, commercial, telecommunications and other facilities have not been developed resulting in sizeable number of workers employed in the industries living in Delhi. This necessitates control on development of industries in Delhi Metropolitan Area. Besides, some of offices of the Government and Public Sector undertakings and the wholesale trade, which are essential for Delhi, can be suitably located in these towns.

There is no doubt that the State Governments concerned had developed large industrial activities in these cities/towns during 1960-80's and also the cities have been developed in all respect, sharing the burden of infrastructure of Delhi. However, the provision still lacks quality. The decentralization of economic activities viz., wholesale trade at Sadar Bazar and host of other economic activities present in the walled city still continue to function. The planning of NCT Delhi is

now more than four decades old and the decentralization of economic activities still a far cry from what was envisaged in MPD-62.

Chapter 6, Page 47

A similar control on the opening of new central Government and Public Sector Undertaking in the DMA Towns should be exercised. Relocation or expansion of government offices, which have ministerial, proposal or liaison functions which make it incumbent on them to be located in Delhi alone should be allowed to be located in DMA Towns. In so far as public sector undertakings are concerned, the restriction on their new offices or expanding the existing one should equally distributed to the DMA towns also.

The above cited policy of shifting of offices from Delhi in NCR Plan - 2001 has been restated in NCR Plan - 2021. However, in spite of availability of faster modes of communication and e-governance, there should not have been any difficulty in shifting of offices from NCT. In actual terms and also as earlier mentioned that there is no information on how many offices have been shifted out of Delhi and also how many new offices of PSU's/Central Government have started functioning from DMA Cities/Towns.

Chapter 6, Page 48

There are certain wholesale trade and storages in Delhi, which are hazardous because of their location in congested areas and also due to bulk handling activities relating to plastic and PVC goods, chemical, timber, foodgrains, iron and steel and building material. These wholesale trades in addition to new trades and related activities should be encouraged to be developed in DMA cities/towns. The possibilities of developing modern super markets should be explored in the DMA Towns.

While in the long-term perspective, the growth of large and medium scale industries in DMA Towns may have to be restricted, these industries may be permitted in the DMA Towns for a period of 10 years, thereafter the policy shall be reviewed.

The old and congested parts of Delhi continue to be plagued with presence of wholesale trading activities and also storing of hazardous materials.

Here it may be stated that none of the DMA cities/towns have emerged as centers for wholesale trading and while the focus has been on the development of IT/BPO industries/Special Economic Zones, it would be difficult to visualize how these cities/towns may become major wholesale trading center. Priority towns, however, may

have the potential to become the same and ideally be suitable for future development.

NCR Plan - 2001 rightly pointed out that the possibilities of developing modern super markets should be explored in the DMA Towns. This has infact become reality presently as number of Shopping Malls and Cineplex's have been developed in NOIDA, Ghaziabad, Faridabad and Gurgaon.

Chapter 7, Page 59-63

NCR Plan - 2001 had proposed up gradation/augmentation of road/rail links. It would be desirable to ascertain its current status.

S.No.	NCR 2001 Proposals	Current Status
1.	Up gradation of Delhi-Meerut and Delhi Panipat corridors, development of expressway (4 lane divided initially) with 100 m ROW.	The Delhi-Meerut corridor has been upgraded to 6 lane while Delhi-Panipat corridor has already been strengthened under National Highway Development Project
2.	Development of Delhi Gurgaon stretch to 6 lanes of NH-8.	This corridor is under completion and was taken up under National Highway Development Project.
3.	Development of Gurgaon Behror stretch to 4 lanes of NH-8.	This comes within the National Highway Development Project and is 4-laned.
4.	Development of Ghaziabad-Hapur stretch to 4 lanes of NH-24.	This stretch is now 4 lane
5.	Development of Bahadurgarh-Rohtak-NCR boundary to 4 lanes on NH-10	This stretch is still 4 laned upto Bahadurgarh.
6.	Development of Faridabad-Hodal stretch to 4 lanes on NH-2	This comes within the National Highway Development Project and is 4-lane
7.	Development of Inner grid i.e. strengthening and widening of existing alignments on Jhajjar-Gurgaon—Faridabad stretch.	The Jhajjar-Gurgaon-Faridabad stretch has not been completed.
8.	Provision of additional pair of lines on Palwal-Faridabad-Delhi Section	No provision has been made for additional lines on Palwal-Faridabad-Delhi route as the same is

		<i>double broad gauge line</i>
9.	Laying of single Broad Gauge line between Delhi-Rewari-Alwar	<i>This has been completed as a part of gauge conversion from Delhi to Ahmedabad</i>
10.	Additional pair of lines between Delhi-Ghaziabad-Khurja.	<i>No provision has been made for additional lines on Delhi-Ghaziabad-Khurja route.</i>
11.	After the implementation of the proposals of Railway Network in NCR Plan 2001 for augmentation of the rail network, the following towns in DMA would not have a rail link. Studies should be carried out to ascertain justification of such rail links: NOIDA 2) KUNDLI	<i>NOIDA and Kundli have not been linked to Rail and infact RITES in one study for railway link Tughlakabad-NOIDA-Bodaki (Greater NOIDA) has termed the link unviable while both NOIDA and Greater NOIDA still crave for rail link.</i>

Chapter 7, Page 64

The integration of the regional network with that of urban network specially for Delhi should be examined from point of view of accessibility to the four integrated metropolitan passenger terminals and freight complexes proposed in MPD-2001 which will also serve DMA.

Setting up of a Unified Regional Transport Authority for NCR.

With regard to metropolitan passenger terminals some success has been achieved in terms of opening up of new bus terminals at Anand Vihar and Sarai Kale Khan, which has to some extent reduced the burden on the old ISBT. Further, the bus services have also been segregated as direct connections have been provided to Ghaziabad from Anand Vihar, and Faridabad from Sarai Kale Khan. It can be stated that the DMA cities are well connected with two new ISBT's. As far as Integrated Freight Complex is concerned, sites for 4 Complexes were envisaged at Madanpur Khadar (NH-2), Patpatganj (NH-24), G.T. Road (NH-1) and Bharthal (NH-8) in NCT Delhi. While the status of these IFC's is still in various stages of planning and are far from complete so as to provide full fledged facilities like warehousing and wholesale markets. They are supposed to serve the DMA cities/towns as most of the traffic to IFC will come through these cities/towns. The proposal of setting up of a Unified Regional Transport Authority for the NCR has not been translated in to reality.

Chapter 8, Page 68

- Extension of subscriber dialing facilities to DMA Towns.
- Connection of DMA Towns with Delhi by reliable cable and radio media.
- Provision of reliable trunk services either by direct dialing or through demand services among the DMA Towns.
- Replacement of all the manual and mechanical exchange in Delhi/ DMA Towns by electronic exchanges.

With regard to proposals pertaining to Telecommunication sector, all the DMA cities/towns have been brought under common dialing code by prefixing 95 and calls are treated as local calls. Further, with the advent of mobile, cellular and WAP Technology, the communication to all the cities of DMA has become easy and all the telephone exchanges have been converted into automatic electronic exchanges offering even latest technologies like Wi-fi, Broadband Connectivity and CDMA.

Chapter 10, Page 76

To help develop the regional centres and the NCR uninterrupted power in adequate quantity.

The constituents of the Region (DMA Towns) have been continuously experiencing power shortage for quite some time and their actual demands have thus always been the suppressed ones.

All the cities/towns of DMA faces power shortage. Among them, Ghaziabad and NOIDA experience daily power cuts between 5-8

hours. Similarly, Faridabad, Gurgaon and Bahadurgarh also have power shortage but the overall situation is somewhat better than UP sub region as the power cut is between 2-3 hours. Provision of 24 hours uninterrupted supply in DMA cities / towns is still a distant dream.

Chapter 10, Page 83

The Delhi Metropolitan Area towns would need an integrated drainage system. It is therefore necessary that comprehensive proposals identifying the source of water supply are prepared in the region.

The DMA Towns should treat their sewage before it is dispersed into watercourses or on land for irrigation. Open drains, which are by and large sources of nuisance and pollution, should be discouraged and discontinued.

Areas should be identified in all the towns for sanitary landfill and all the towns above 1 lakh population should have arrangements to properly manage the waste disposal. The areas for dumping solid waste/garbage have to be identified while preparing the development plans for each urban center in advance so that the Municipal Authorities could utilize such pre-identified locations for disposal of solid waste. The derelict lands on account of brick kilns and quarrying may be suitable for such use.

The provision for integrated drainage system still not accomplished except in NOIDA where the drainage is in order as the pucca drains carry the sewage. With regard to underground sewerage, the coverage is 30% to 70% in UP and 60% to 80% in Haryana for DMA cities. Similarly sewerage treatment facilities to some extent are available in Ghaziabad, NOIDA, Faridabad and Gurgaon. Except NOIDA, majority of drains in other cities are by and large open drains.

In the perspective Master Plans of DMA cities / towns, sites have been identified for sanitary landfill / dumping grounds. Solid waste disposal in Ghaziabad, Faridabad and Gurgaon is still done in a haphazard manner without segregating degradable and non-degradable waste.

Chapter 11, Page 88

The DMA Towns excluding Delhi will contain more population in addition to their natural increase through the deflection of the Delhi bound potential migrants to them and they will need more education / health facilities in the perspective plan period. In addition, some of

them may have to cater to the regional requirements with institutions of specialization both for education and health care.

It is rather difficult to conclude that DMA cities / towns will contain more population in addition to their natural increase through the deflection Delhi bound migrants without any study backed by proper data on estimate of persons settling down. However, there is no doubt with the privatization of education and medical facilities the DMA cities /towns are offering specialized educational facilities in the field of Technology and Management. NOIDA has a full-fledged private university. Regarding medical facilities, private hospitals are offering all the latest diagnostic facilities.

Page 89

The NCR Plan *interalia* aims to provide healthy living conditions in priority and DMA Towns, at standards comparable to that prevailing in Delhi.

The DMA Towns will have 5.70 lakh residential units demand by 2001 (31.34% of the total demand in NCR).

There is no doubt that DMA cities / towns offer living conditions at par with Delhi, however, it has to be ascertained as to what extent migration from Delhi to these cities / towns has taken place or people have started settling down after moving out of Delhi not due to affordability factor but due to better living conditions. This has also not been highlighted in NCR Plan - 2021. Further, there has been no information / data base that how much additional dwelling units have been created in last two decades. Hence, it is difficult to conclude whether the requirement of 5.70 lakh dwelling units has been fulfilled. This has also not been discussed in NCR Plan - 2021.

Chapter 11, Page 99

The development activities in the secondary and tertiary sectors in DMA Towns have leap frogged leaving a wide gap in the development of physical and social infrastructure. The land uses are influenced by the aforesaid development activities.

With the adoption of new economic policies along with liberalization of policies for setting up of SEZ, IT/BPO industries and spurt in construction activities, there is bound to be increase in the proportion of participation ratio in secondary and tertiary sectors. This will also have implications on landuse, as more land will come under the non-agricultural uses. This is evident from the fact that land under agriculture in NCR was 87.64% in 1986 which reduced to 79.52% in 1999

(NCR Plan - 2021) and during the same period the built up area has increased from 3.26% to 8.71%. The city/town wise break up of land use change is not available. To what extent the land has been put to development activities or non-agricultural uses in the last 20 years is essential to ascertain the impact of the activities in DMA cities/towns.

Chapter 13, Page 100

To accommodate 37 lakhs population in DMA Towns additional urban land would be necessary. The additional land by and large will be met by conversion of agricultural land. The density norms suggested for urban centers upto 1 lakh are 80 persons per hectare and for urban centers between 1 to 5 lakh are 110 persons per hectare.

This has not been achieved, as even the total population of all the DMA cities/towns taken together was 27 lakh as per 2001 census. Even for accommodating the balance population of 10 lakh an area of 9000 hectares would have been required, however, this should have been done by ascertaining the details of future urbanisable area and potential areas for development. The NCR Plan 2021 has made reference only to priority towns without emphasizing on DMA towns to accommodate the additional population.

Chapter 14, Page 111

The Environmental Sensitivity Index (ESI) for industrial complexes in the NCR and for DMA Towns was assessed as.

- | | | |
|---------------|---|------------------------------------|
| - Gurgaon | - | Adverse Environmental conditions |
| - Bahadurgarh | - | Bad Environmental conditions |
| - Faridabad | - | Bad Environmental conditions |
| - NOIDA | - | Tolerable Environmental conditions |
| - Ghaziabad | - | Bad Environmental conditions |

The environmental sensitivity index for the above-cited towns was found to be unfavorable barring NOIDA in NCR Plan-2001. This was mainly due to high level of pollution in these cities/towns. Even then, it was mentioned that the polluting industries of NCT Delhi be shifted out and established in them. Among them Faridabad continues to be most polluted city. Hence, shifting of polluting industrial units to these cities/towns will further worsen the environmental conditions. Also, it may be stated that Hon'ble Supreme Court directions are only for the polluting industrial units operating from Delhi only. Due to this the DMA cities/towns may be placed in disadvantageous position.

Chapter 17, Page 129

To achieve moderate growth of DMA excluding NCR Delhi.

This was clear-cut strategy spelt out in NCR Plan – 2001. The moderate growth could be justified in view of the cities / towns not attaining assigned population as per the NCR Plan - 2001. However, this may not hold as the way these cities / towns have expanded in terms of residential, industrial and institutional use mainly due to their potential and host of other factors like proximity to NCT Delhi, availability of affordable housing etc.,. Further, the NCR Plan – 2021 has clearly indicated that the opportunities provided by CNCR (DMA) need to be maximized to enable it to compete effectively with NCT Delhi in offering jobs, expanding economic activities, comprehensive transport system, housing, social infrastructure and quality of environment, if not better at least at par with Delhi. All new economic activities wanting to get located in NCT Delhi should be located in the urbanisable areas planned in CNCR (DMA).

In overall terms, it may be stated that the implementation of NCR Plan – 2001 in terms of DMA has shown mixed results. These cities / towns have benefited especially with regard to transportation through better connectivity, communications, availability of housing and options for industrial development which have enabled DMA cities / towns to carve their own niche and also shared the infrastructure burden. However, at the same time some of the issues like uniform taxation, single transport authority, and differential tariff structure and property taxation have not enabled the DMA towns/cities to emerge as viable economic entities. This has also lead to non-fulfillment of the objectives of NCR Plan – 2001.

OPERATIONAL CONSTRAINTS, SWOT ANALYSIS AND DEVELOPMENT OPTIONS FOR DMA CITIES/TOWNS

6

The Delhi Metropolitan Area occupies an area of 2000 sq. km. The DMA (CNCR) Towns have indeed shared the burden of the NCT Delhi especially in terms of population distribution. It would be a big challenge to the policy makers/administrators and planners to ensure that both NCT Delhi and DMA cities/towns play a complementary role so that they do not function in isolation.

In fact NCT Delhi has grown to such an extent and keeping in view future growth, the entire DMA would emerge as a mammoth conurbation encompassing all the cities/towns. Politically speaking the DMA cannot be envisaged as a single administrative entity, however, on account of operation of "market forces" influencing the redistribution of population along with availability of land, connectivity and infrastructure facilities/services could make it as a single spatial unit.

There are some operational problems, which are due to more of politico-administrative reasons and may easily be solved by institutional interventions to be taken at central level. It may also be not possible to make NCR whole as a single entity, however efforts can be made that DMA can function as single entity wherein stakes of citizens and administrators of both DMA Towns and NCT Delhi are involved and provided the functionalities are mutually dependent.

It would be pertinent to examine those issues, which are not only impediment to smooth implementation of the policies of NCR Plan but also impose limitations on the DMA cities/towns to develop at par with NCT Delhi.

6.1 Differential Pricing policy of Petroleum, Diesel, CNG and LPG.

The pricing of four essential commodities i.e., petrol, diesel, CNG and LPG do have nation wide repercussions especially when the prices of the same are increased. The comparative pricing of these can be observed from the following table.

Table 6.1: Prices of Petroleum Products in DMA Towns as on March, 2007.

Petroleum Product	NCT Delhi	DMA Cities/Towns (Haryana)	DMA Cities/Towns (Uttar Pradesh)
Petroleum	42.85	43.00	46.50
Diesel	23.15	28.00	28.00
CNG	19.50	22.00	24.00
LPG / Kg	29.50	29.80	29.20

Delhi being the national capital always derived the benefits of huge subsidy. However, keeping the prices of the petroleum products lower in Delhi, invariably has an adverse impact on the pricing of public transport. The intra city mode of public transport both bus and metro is far cheaper than the travel from DMA cities/towns to NCT Delhi. Further, given the political stakes in national capital, which are high, rise in the bus fares is vehemently opposed while bus fares of both the State Road Corporations –Haryana and UP are regularly revised upwardly.

6.2 Public Transport: Taxis and Auto rickshaws

In terms of commutation, the residents of DMA towns, barring NOIDA where DTC buses are operating, (presently blue line buses only) have to face lot of problems. They have to pay exorbitant price for commuting in Taxi & Auto rickshaws as so far the RTO's of respective states have not made any agreement for their free inter state movement. Further, the inter city commutation by bus is more expensive than intra city (within NCT Delhi) commutation by bus, as DTC operates on highly subsidized fares. This is further substantiated by the fact that officials of both UP and Delhi RTO/Transport department are at loggerheads without coming out with concrete solution for the unrestricted movement of buses between UP cities and NCT Delhi. Majority of rail passengers of DMA cities/towns have to board trains from Delhi/New Delhi and Hazrat Nizamuddin Stations and the only mode of common transport- Auto rickshaws and Taxis are not allowed to enter into DMA cities/towns causing lot of inconvenience to the passengers. So far there is no mechanism to ensure that there can be unrestricted movement of Auto rickshaws and Taxis from Delhi to DMA cities/towns. In this regard, NCR Planning Board could have played a proactive role by coordinating with the Transport Department of the respective State Governments to ensure movements of Auto's and Taxis without any restrictions.

6.3 Differential Taxation /Stamp Duty/Property Tax

In this regard, it may be stated that the residents of NCT Delhi are in an advantageous position compared to the residents of DMA cities/towns. Both stamp duty and property taxes are on the higher side in the former. The stamp duty vary from 10-12% in DMA cities and towns while it is 6-8% in NCT Delhi with special concession to women and economically weaker sections. This is also one of the main reason which may affect the growth in real estate sector and property gets undervalued in DMA cities/towns causing immense lose to the State exchequer.

Another constraint, which comes in the way, is differential taxation on the goods. Infact goods produced in DMA cities /towns should be cheaper but in actual terms they are cheaper in NCT Delhi but expensive in DMA cities. This is one of the most important aspects that should have been thought of seriously and similar tax rates are absolutely essential. The introduction of VAT could solve the differential taxation, however Uttar Pradesh has yet to introduce the same and thereby the problem persists. Further, the property taxation in NCT Delhi has been introduced in a more scientific manner by adopting unit area method while the same is still continued to be collected in a haphazard manner in DMA cities/towns.

NCR being an inter-state region, wide variations exist in the statutory tax rates, as well as tax concessions given to manufacturers on purchase of raw materials and machinery, levy of tariff on various services like power, water and transport etc. This lead to discouragement to set up manufacturing activities in the region.

Table 6.2: NCR 2021 –SCOPE OF COMMON ECONOMIC ZONE

S.No.	Policy Intervention	Current Status
1.	Rationalization of Tax Structure	May be possible with the introduction of VAT throughout NCR.
2.	Extending Uniform Financial /Banking Services throughout NCR	This has been achieved as more and more branches of both public and private sector financial institutions have been opened in the DMA cities/towns.
3.	Integrated Rail and Road Transport Network	Achievable
4.	Removing the restrictions on Inter-State movement of taxis and auto rickshaws between NCR States	Possible if Transport Department of the concerned States resolve disputes.

5.	Providing Uniform Telecom facilities throughout the NCR	Achieved due to technological advancement in Telecommunication Sector.
6.	Uniform Power Supply Tariff	May not be possible
7.	Developing an Integrated Water Supply and Drainage System for NCR	May not be possible
8.	Integrated Education Policy	At the school level to large extent schools are affiliated to CBSE achieving the integration; however at University level establishment of NCR University could integrate the higher education. However, it may be stated that in the colleges of Delhi, students passing out of schools of DMA cities/towns may find difficult to get admission on account of variable standards/policies. Further admissions to college like Delhi College of Engineering, 75% of seats are reserved for students passing out from Delhi schools, which should be open to NCR students.
9.	Integrated approach for Pollution control	Achievable with proper coordination of the State Pollution Control Board under the overall umbrella of Central Pollution Control Board.
10.	Integrated Law and Order Machinery	It may be possible by setting up of NCR Police force.
11.	Provision of adequate financial resources in Sub-component Plans of participating States and concerned Central Ministries.	This is possible and comes within the purview of NCR Planning Board.

6.4 Project Sanctioned by NCR Planning Board for DMA Towns

Under Section 8(E) of the NCRPB Act, the Board can select and approved comprehensive schemes and provide assistance for the implementation of these schemes. Under this section, the NCRPB has been financing various projects for implementation by the State Government Agencies within the NCR with the overall objective of achieving balance development of the region. The Board since

inception has funded 40 projects for DMA towns. The townwise details are given in the following table.

Table 6.3: Project Sanctioned by NCR Planning Board for DMA Towns.

Sl. No.	Name of town	No. of Project Sanctioned	Total Estimated Cost (Rs. In Crores)	Loan Sanctioned (Rs. In Crores)	Loan Released till July, 2007 (Rs. In Crores)
1	Ghaziabad	10	172.60	101.63	47.80
2	NOIDA	1	66.29	49.72	49.72
3	Gurgaon	17	858.92	365.97	294.26
4	Faridabad	9	351.48	239.61	198.26
5	Bahadurgarh	2	168.32	51.25	43.45
6	Kundli	1	122.29	60.37	60.37
Total DMA towns		40	1739.90	868.55	693.86
Grand Total for entire NCR		171	11340.33	3901.81	2627.51
%age of DMA Towns		23.39	15.34	22.26	26.41

Source: Compiled from Agenda notes of PSMG meetings of NCR Planning Board held during 2006 & 2007.

**Table 6.4: PROJECTS SANCTIONED FOR FUNDING IN UP / HARYANA
SUB-REGION BY NCRPB (Rs. in Crore till March 31, 2007)**

I. GHAZIABAD (UP)

S.No.	Project Name	Estimated Cost (Rs in Crore)	Loan Sanctioned (Rs in Crore)	Loan Released till March 31, 07
1.	2.	3.	4.	5.
1.	Improvement of drainage network	1.24	0.93	0.75
2.	Improvement of drainage system(Nagar Nigam Area	1.60	1.20	1.20
3.	Vasundhra Residential Infrastructure Development Scheme	45.95	34.50	18.75
4.	Improvement of Road Network, GZB	11.26	8.45	8.45
5.	Improvement of water supply scheme/system in Trans-Hindon area,	2.23	1.28	1.28
6.	Improvement of water supply scheme/system in CIS Hindon area,	3.07	1.55	1.55
7.	Improvement of existing water supply system	2.00	1.24	1.24
8.	Construction of Modern Bus Station at Sahibabad,Kaushambi	16.00	12.00	9.00
9.	Improvement of Street light	2.45	1.83	1.83
10.	Augmentation of water supply of trans-Hindon area by carriage of 50 cusecs of water from Upper Ganga Canal	86.80	38.65	3.75
	Sub Total	172.60	101.63	47.80

II. NOIDA (UP)

Sl. No.	Project Name	Estimated cost	Loan Sanctioned	Loan Released till March,07
1.	2.	3.	4.	5.
1.	Noida-Greater Noida Expressway	66.29	49.72	49.72
	Sub-Total	66.29	49.72	49.72

III GURGAON (Haryana)

Sl. No.	Name of the Project	Estimated cost	Loan sanction-ed	Loan Released till March, 07
1.	2.	3.	4.	5.
1.	Development of Residential Sector -38	156.24	61.62	61.62
2.	Development of Sector-27	23.91	16.81	12.31
3.	Development of Sector-28	16.25	11.45	8.52
4	Development of Residential Sectors 4 & 7	3.79	0.75	0.25
5.	Development of Residential Sector 32 & part Sector 39	18.80	3.50	3.50
6.	Development of residential sector 40	31.20	13.28	13.28
7.	Development of residential sector 39	29.08	13.66	13.66
8.	Development of sector 15 (Incl.)18,19 & 20	5.85	4.81	2.30
9	Development of Industrial Zone Sector 34-35	366.65	86.00	86.00
10	Construction of 200 bedded hospital in Sector-10 (Phase-I)	12.08	9.06	1.50
11	Strengthening & up gradation of Sub transmission & Distribution Net work	40.16	30.12	25.0
12	Creation of power infrastructure in Gurgaon & Bahadurgarh	89.91	67.43	53.94
13	Providing Master Sewerage scheme for trunk Sewer No.4 Urban Estate	24.14	18.00	4.50
14	Construction of External link road connecting with Sector-17	2.90	1.13	1.13
15	Widening & strengthening of existing Mehrauli road from NH-8 to Gurgaon-Delhi border Gurgaon side	4.83	3.60	2.25
16	Widening & strengthening of old DelhiRd. From Dundahera border to NH-8 from Atul Kataria chowk to Mahavir Chowk and from Mahavir chowk to Management Development Institute	9.33	6.90	3.00
17	Providing Master water supply scheme of distribution main zone-3 (Phase-III)Urban Estate,	23.8	17.85	1.5
	Sub-Total	858.92	365.97	294.26

IV. FARIDABAD (Haryana)

Sl. No.	Name of the Project	Estimated cost	Loan sanctioned	Loan Released till March,07
1.	2.	3.	4.	5.
1.	Development of Residential Scheme, Sector 2	34.57	23.93	22.93
2.	Development of Residential Scheme, Sector 64	35.86	26.89	21.73
3.	Development of Residential Scheme, Sector-44-47	56.37	42.28	33.53

4.	Development of Residential Scheme, Sector 62	65.52	47.28	39.81
5.	Development of Residential Scheme, Sector 65	66.33	47.86	40.24
6.	Development of Industrial Scheme, Sector 59	34.71	9.30	9.30
7.	Development of Industrial Scheme, Sector 58	31.17	23.37	21.37
8.	Widening/re-alignment of Badkhal-Surajkund Rd. starting from Ankhir Chowk to Prahladpur F'bad	5.47	2.60	2.60
9.	Augmentation of water supply	21.48	16.10	6.75
	Sub-Total	351.44	239.61	198.26

V. BAHADURGARH (Haryana)

Sl. No.	Name of the Project	Estimated cost	Loan sanctioned	Loan Released till March,07
1.	2.	3.	4.	5.
1.	Development of Residential Scheme, Sector 9 & 9A, Bahadurgarh	124.19	26.44	26.44
2.	Development of Residential Scheme, Sector 2 at Bahadurgarh	44.13	24.81	17.01
	Sub Total	168.32	51.25	43.45

VI. KUNDLI (Haryana)

Sl. No.	Name of the Project	Estimated cost	Loan sanctioned	Loan Released till March,07
1.	2.	3.	4.	5.
1.	Development of Industrial Estate Phase IV	122.29	60.37	60.37
	Sub-Total	122.29	60.37	60.37
	GRAND TOTAL FOR DMA TOWNS	1739.90	868.55	693.86

Source: NCR Planning Board, 2007.

Since, NCR Planning Board has been instrumental in funding infrastructure in NCR, the DMA towns have been benefited by the funding. An amount of Rs. 3901.81 crores have been sanctioned till 31st March, 2007 for entire NCR. Out of which, Rs. 868.55 crores have been sanctioned to DMA towns. The total estimated cost of the project for DMA towns has been Rs. 1739.90 crores. The DMA towns received 22.26 % of the total loan sanctioned by NCRPB. The loans released to these towns are to the tune of Rs. 693.86 crores.

It can be mentioned that since sizeable funds have been made available for strengthening the infrastructure in DMA towns, the implementing agencies need to be sensitized in terms of availing the loans, which is available on soft terms. This will enable these cities to catch up with the level of infrastructure at par with NCT Delhi.

6.5 SWOT Analysis

The urban settlements if located in close proximity to a large mega city will have both advantages and disadvantages in terms of their growth and overall development. It has to be seen in broader perspective how these towns are able to encash the locational advantages but at the same time it is quite possible that they may not be able to grow to their full potential due to overwhelming predominance or primacy of the metropolitan city. Hence, it would be desirable to analyse the DMA towns *in terms of their strength, weakness, opportunity and threats*. This will help in better understanding towards the assessment of potential for development of these towns. (See Table:6.5)

6.6 Address of Chief Minister delivered at the 29th Meeting of NCR Planning Board held on 29.5.2006

The NCR Planning Board organizes its meeting every year under the Chairmanship of Hon'ble UDM. The objective of the annual meeting is to review the implementation of NCR Plan and progress of the projects being implemented out of the NCR funding. The 29th meeting was held on 29.5.2006 wherein Chief Ministers / Urban Development Ministers of the participating States gave their addresses highlighting the planning issues of NCR with respect to their States. Some of the points which they felt that the same come in the way of speedy implementation of NCR Plan are highlighted as under:

The Hon'ble Chief Minister of NCT Delhi pointed out that Delhi has become a mega metropolis having a heterogeneous demographic character and a population of over 14 million. This unchecked growth in population has contributed to increasing congestion and growing strain on the social, civic, economic and environmental fronts. It has also obstructed the efforts of integrated and balanced development of NCR. The Hon'ble CM highlighted specifically the issues which have acted against the achievement of the objectives of the NCR Plan like one of the very important regional rail based project – IRBT – has not yet been able to take off despite Government of NCT Delhi eagerness to participate. Secondly, past experiences of shifting of economic activities alien to the city character of NCR towns has not been very encouraging for Delhi nor the surrounding States. Thirdly, commitment

of Government of U.P for releasing the 300 cusecs of raw water for Sonia Vihar Water Plant.

Hon'ble Minister for Agriculture, Government of U.P in his address highlighted that there has to be integrated urban and rural development in NCR, however, the effort of regional planning has been directed towards urban centres. Hence, due to lack of employment opportunities, people from rural areas are migrating towards urban centers.

Hon'ble Minister of Urban Development, Government of Rajasthan expressed concern with regard to Bhiwadi-Palwal-Khurja broad-guage railway line. This link has not been included in the Regional Plan – 2021. Secondly, he highlighted that within the purview of NCR Plan – 2021, there is a need to prepare state-wise five yearly / annually physical and financial plan which can be in consonance with the respective states five year / annual plan so that they can assess the requirement / paucity of financial resources. This aspect has not been given attention. Thirdly, he pointed out that the development of NCR cannot be achieved without the cooperation of the participant States. There are number of developmental issues of mutual interest. This has not been pursued in true spirit. The progress of new township on National Highway-8 (Shahjanpur – Nimrana – Behrod) has been tardy.

The Hon'ble Chief Minister of Haryana in his address explained that the policies of Government of India are Delhi centric rather than being Central National Capital Region (CNCR) centric. Unless this paradigm policy shift takes place the migration towards the capital city will continue unabated which will further congest Delhi. He also pointed out that present pattern of funding by way of loans through NCR Planning Board is grossly inadequate. The development is being done at the cost of farmers interest whose most productive agriculture land is being consumed for urbanization. Further, the lowering of rates of tax has cost diversion of trade from neighbouring states of Delhi compounding the problem of congestion in Delhi. Under the Yamuna Action Plan, the Government of Haryana has completed all 11 sewerage treatment plants while the progress in Delhi is very slow.

6.7 Newspaper Clippings pertaining to DMA Towns and NCR

Some of the newspaper clippings have been included which covers the news item highlighting the issues favourably for DMA towns and NCR concept and also some of the news mentioned about those issues, which may deter achieving the objective of NCR Plan.

FARIDABAD'S NEGATIVE ASPECT OF DEVELOPMENT

Faridabad's dubious honour may be bad news for Capital

By Maneesh Pandey/TNN

New Delhi: The laidback township of Faridabad is no longer just about industries. Upcoming malls, apartment buildings and cineplexes are fast changing its skyline, thanks to the town's proximity to the National Capital and the satellite towns of Noida and Gurgaon.

But there's a flip side to this development too — Faridabad is among the 10 most polluted cities in the country and a potential health hazard for its immediate neighbours.

Experts warn that the air-pollution levels in Faridabad is "a silent killer", particularly for residents of South Delhi between Sarita Vihar and Saket.

Both the Central Pollution Control Board and the Haryana Pollution Control Board blame this on old polluting vehicles (three-wheelers and *phat-phats*) plying in the town, mushrooming industrial units with boilers and furnaces — particularly those using wood, rice husk and coal — and the two thermal power plants at Faridabad and Badarpur.

The pollution here is mainly due to the alarming particulate levels in air. "As against the prescribed scale of 60 microgram/cubic metre, the scale is over 200 microgram/cubic metre, almost a jump of about 250% from the desired level. As we don't have data on other toxins in the air, it is assumed that particulate pollution is the sole contributor, but other toxins cannot be ruled out either. All these cause severe respiratory and cardiac problems," says Anumita Roychowdhury of the Centre for Science and Environment.



UP IN SMOKE: Industrial pollution near Bata Chowk in Faridabad.

Vehicles contribute majorly to this particulate pollution. "Vehicles are responsible for 80% of air pollution in the city. While the total contribution of industries to the particulate pollution load is above 28 metric tonnes per day, the pollution load from vehicles is as high as 216 metric tonnes a day," says the latest HPCB report.

"Over the years, traffic has increased phenomenally along the 18-km stretch of Delhi-Mathura road that cuts across Faridabad city. Besides, emissions from slow-moving traffic has also increased manifold," says Roychowdhury.

She points out that a sizeable number of three-wheelers, more than 16,000, are old and polluting. And of the 656 industrial units in Faridabad, 238 are considered to be polluting. The emissions from units that use wood, rice husk and coal constitute about 17% of the total industrial units.

Pollution from local units such as brick kilns, thermocol, plastic and cement factories is already affecting the health of crops, animals and humans.

"At a village in Faridabad, the people reported that industrial waste is burnt along the road every 15 days. The smoke is suffocating and the residue found on leaves in the area. It was also noted that when livestock consumed the affected fodder, their milk started smelling," said an HPCB officer.

Taking a cue from Delhi, Faridabad should also adopt the CNG programme to beat air pollution, says noted environmentalist Bhure Lal. Such programmes are on the anvil and need to be expedited, he adds.

Due to various polluting industries, Faridabad has been experiencing high level of air pollution which may become one of the negative factor in the overall development.

FARIDABAD'S NEGATIVE ASPECT OF DEVELOPMENT

Towns overtake metros on pollution scale

Kanpur, Lucknow, Faridabad Top List

By Chandrika Mago/TNN

New Delhi: Buzzing Indian towns are slowly but surely becoming gas chambers. Leaving metros behind, towns like Raipur, Kanpur, Lucknow,



NO SMOKE WITHOUT FIRE

Indore and Faridabad are topping the air pollution charts.

They figure among the 10 most polluted towns and cities across the country. The other five are Jharia (industrial area), Jalandhar, Alwar, Satna and Kota. This report from the government has the Delhi-based Centre for Science and Environment (CSE) calling for the government to wake up to the health crisis, leapfrog to cleaner fuel and better vehicle technology and shift to public transport, pay-

ing particular attention to the threat from diesel. The time for incremental steps is over.

Some pollutants are hardly monitored. Limited data shows dangerous levels of benzene in Kolkata and Kanpur, for instance. Sporadic studies have shown a rise in asthma among children in Bangalore, chronic cough and chronic bronchitis in Mumbai, premature deaths in Chennai, respiratory disorders and allergies in Kolkata. Delhiites have undergone chromosomal changes. For many towns now becoming pollution hotspots, there is even less health data.

The government ranked towns and cities ranked on the basis of respirable suspended particulate matter measured in residential areas in 2004, taking annual average concentrations. On this count, Delhi comes 16th on a list of 52 towns and cities, Kolkata is 21st. Mumbai is 39th but Pune is at the 13th spot.

Each year, says a new book released by CSE on air pollution, India alone accounts for more than 0.1 million premature deaths.

The message, CSE says, is unambiguous. More smaller cities are being swamped by pollution, displacing metros which have tried to clean up their act at least partially.

INVESTMENT OPPURTUNITIES FOR STRENGTHENING THE NCR
INFRASTRUCTURE

Rs 2,000-crore urban overhaul plan for Faridabad

C.D. Verma
Faridabad, July 10

THE HARYANA government has put together a "city improvement plan" worth Rs 2,000-crore, funds for which will flow from the Centre's Jawaharlal Nehru Urban Renewal Mission.

A decision in this regard was taken here on Monday at a meeting between officials from the Centre, the state government and Faridabad administration. A private agency has been asked to prepare and submit the "city development plan" by August 15.

Faridabad is the only town in Haryana to be included in the Urban Renewal Mission for infrastructure development in 60 cities having a population of over 10 lakh. The Rs 2,100 crore development plan, sanctioned for Faridabad, envisages improving civic services – water, roads, sewer, storm water drains and solid waste management – for a projected population of 26 lakh by 2035.

An MoU has been signed with the consultancy firm CRISIL for preparation of a detailed report. Initially, the plan will include development schemes and infra-



Faridabad roads are a nightmare for motorists.

SANJEEV VERMA/HT

structure needs for 91 sectors and 41 revenue villages for the next five years till 2011 for a projected population of 17 lakh.

A committee headed by chief minister B.S. Hooda has been constituted to monitor the progress of the development plan. According to the tentative project report prepared by the municipal corporation, the population of Faridabad as per 2001 census was about 11 lakh, which increased to 13.37 lakh by 2005. It was likely to go up to 19 lakh by 2015, 23 lakh by 2025 and over 26 lakh by 2035.

The water requirement was 412 lakh gallons per day in 2005, which would go up to 618 lakh

gallons a day in 2015, 771 lakh gallons in 2025 and 1,050 lakh gallons in 2035.

Similarly, the need for other civic services, roads, sewer, storm water drains and solid waste management, will increase proportionately till 2035.

The projected expenditure is likely to be Rs 682 crore on water, Rs 502 crore on sewer, Rs 472 crore on roads, Rs 113 crore on drains and Rs 512 crore on the solid waste management, spread over the next 30 years.

According to the corporation commissioner, 50 per cent of the total expenditure of Rs 2,065 crore, which might go up in the next 30 years with the escalation

in costs, will be borne by the Union government under the Urban Renewal Mission, 20 per cent would be contributed by the state government, and the remaining 30 per cent by the Faridabad Corporation from its own resources, including loans from financial institutions to be paid back in easy installments.

At present, the Faridabad Corporation has an annual budget of about Rs 150 crore, which would proportionately increase with increase in population and the infrastructure in the next three decades.

Faridabad has 450 km of sewer lines, 550 km of water supply lines and 1,118 km of roads.

Faridabad is the only DMA city which is covered under Jawaharlal Nehru National Urban Renewal Mission (JNNURM). With the massive investments towards the augmentation of physical infrastructure, the city can develop to its full potential.

POSITIVE ASPECTS OF DEVELOPMENT IN NCR

सेटेलाइट शहर विकसित करें, मिलेगा सहयोग

स्थानीय व्यूग, फरीदाबाद

केंद्रीय शहरी विकास एवं गरीबी उन्मूलन राज्य मंत्री कुमारी शैलजा का कहना है कि राष्ट्रीय राजधानी क्षेत्र (एनसीआर) के विस्तार में दिल्ली के पड़ोसी राज्यों को विशेष भूमिका रहेगी। उन्होंने कहा कि हरियाणा, उत्तर प्रदेश और राजस्थान अपने बड़े शहरों को एनसीआर के सेटेलाइट शहरों के रूप में विकसित करें। इसके लिए उन्हें केंद्रीय शहरी विकास मंत्रालय का हर संभव सहयोग मिलेगा। यहां सांसद अवतार भट्टाना के कार्यालय पर पत्रकारों से बातचीत में कुमारी शैलजा ने स्पष्ट किया कि दिल्ली में आबादी के बढ़ते दबाव को देखते हुए यह जरूरी है कि एनसीआर का विस्तार किया जाए। उन्होंने कहा कि इन सेटेलाइट शहरों में जितनी सुविधाएं होंगी उतना ही एनसीआर विस्तार होगा।

केंद्रीय मंत्री ने कहा कि दिल्ली के पड़ोसी राज्यों को अवैध कालोनियों के विस्तार पर रोक लगानी होगी ताकि दिल्ली जैसी स्थिति उनके बड़े शहरों में ना हो। उन्होंने कहा कि इसके लिए इन शहरों की व्यवस्थित प्लानिंग पर राज्यों को जोर देना होगा।

जवाहर लाल नेहरू अर्बन रिन्यूवल मिशन के तहत देश में दस लाख से ऊपर की आबादी वाले शहरों को आर्थिक सहयोग देने की बात उन्होंने कहा कि इस योजना में कोई शहर केंद्र से कितना भी पैसा ले सकता है बशर्ते कि उस शहर की स्थानीय निकाय

■ आमदनी के नियमित स्रोत सुनिश्चित करने के बाद ही दिया जाएगा अर्बन रिन्यूवल मिशन के तहत पैसा
■ ग्यारहवीं योजना में स्वर्ण जयंती शहरी रोजगार योजना को बनाया जाएगा ज्यादा कारण

अपनी मौजूदा कार्यप्रणाली में व्यापक सुधार कर सके। उन्होंने स्पष्ट किया कि इस योजना के तहत आर्थिक सहयोग देने से पहले यह सुनिश्चित किया जाएगा कि संबंधित शहर में नियमित आय के स्रोत क्या हैं?

कुमारी शैलजा ने बताया कि अर्बन रिन्यूवल मिशन के तहत जो शहर नहीं आए हैं उनके लिए भी

केंद्र सरकार की ऐसी बहुत योजनाएं हैं जिनमें विकास के लिए 80 प्रतिशत तक आर्थिक सहयोग मिल सकता है।

एक सवाल के जवाब में कुमारी शैलजा ने बताया कि केंद्र सरकार ने अब वाल्मीकि आंबेडकर आवास योजना समाप्त कर दी है और गरीबों के लिए मकान बनाने की शहरी विकास मंत्रालय के तहत विभिन्न अन्य योजनाएं हैं जिनके तहत केंद्र सरकार का सहयोग मिलता है। केंद्रीय मंत्री ने माना कि केंद्र की गरीबों को दी जाने वाले ऋण योजनाओं में बैंकिंग प्रणाली में व्यापक सुधार की आवश्यकता है।

उन्होंने कहा कि इसी सुधार के तहत ग्यारहवीं योजना में स्वर्ण जयंती रोजगार योजना को अधिक कारगर बनाया जाएगा तथा राष्ट्रीयकृत बैंकों पर ऋण देने संबंधी कार्य पर निगरानी के लिए केंद्र से लेकर राज्य सरकारों तक का सीधा समन्वय रहेगा। उन्होंने कहा कि बैंकों को भी ऋण प्रदान करते समय ज्यादा संवेदनशीलता दिखानी होगी। कुमारी शैलजा ने बताया कि नई योजना में महिलाओं के स्वरोजगार समूहों को विकसित करने पर ज्यादा जोर रहेगा।

HARYANA'S CORRIDOR OF THE FUTURE

Haryana has notified 62,000 acres of land between Delhi and Western Peripheral Expressway (Kundli-Manesar-Palwal Expressway) as a Global Corridor. Here's how it will transform Haryana:

HOW WILL IT HAPPEN?

An agency was short-listed from among three finalized after an open tender. This agency will undertake an environment impact assessment study and submit its report within six months after which work on the project will begin

The finance commissioner and principal secretary P.K. Chaudhary has said a proposal to lay Ring Rail all along Western and Eastern Expressway was also under consideration



The above proposal will certainly improve the connectivity to various DMA towns in Haryana.

NOT IN CONSONANCE WITH NCR PLAN OBJECTIVES

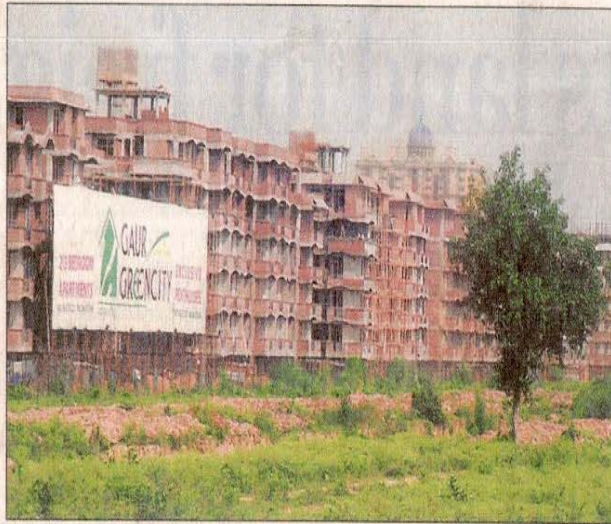
Registration rates go up in NCR

M K Mittal and KAPIL Datta
Ghaziabad, March 2

HERE'S some bad news for those planning to buy a house in Indirapuram or Vaishali. Be prepared to shell out an average of Rs 400 to 500 more per square meter for registration. The district administration has increased the circle rates with effect from April 1. Circle rates are the minimum price per square meter for calculating the stamp duty and registration. This means, a 200 square meter plot will cost the buyer Rs 80,000 to Rs 1.4 lakh extra.

But the buck doesn't stop here. "Circle rates are enhanced in the light of rising prices of land in Ghaziabad. We anticipate these rates will further be increased after evaluation of land market," said Vijay Deo, assistant commissioner (stamps).

Vaishali registered a hike from Rs. 10,000 to Rs. 16,000. In Kaushambi, the rates have been increased from Rs 16,000 to Rs.17, 000. Same goes for Vasundhra, where the rates are up from Rs 8,500 to Rs. 14,000. All rates are for per square meter area. In addition to these rates, buyers of flats that have swimming pool, gymnasium and lift will



have to pay 20 per cent extra.

Circle rates for commercial plots have also been hiked. In Indirapuram, they have gone up from Rs 14,000 to Rs 27,000. In Vaishali, they are up from Rs 20,000 to Rs 27,000.

Land prices in Ghaziabad have always seen an upward swing. In the last two years, the sector rates have already been revised four times -- In June 2004,

February 2005, May 2005 and June 2005.

This time, the rates of freehold industrial plots have also been enhanced. The rates of industrial plots between Hapur and the Meerut Road tri-section have been raised from Rs 14,000 per square metre to Rs. 20,000 per square meter.

Rates of plots between Meerut Road and Mohan Nagar have also been in-

Realty bites

Circle rates up

Circle rates are the minimum price per square metre for calculating the stamp duty and registration. This means, a 200 square meter plot will cost the buyer Rs 80,000 to Rs 1.4 lakh extra.

Industrial plots hiked

Rates for commercial plots have also been hiked. In Indirapuram, they have gone up from Rs 14,000 to Rs 27,000. In Vaishali, they are up from Rs 20,000 to Rs 27,000

creased from Rs 11,000 to 15,000 per square metre.

The hike has been quite big in areas between Mohan Nagar cross Road and U.P. border where land rates have been increased from Rs. 13,000 to 20,000. Land rates for industrial plots between Hapur Road and old bus stand cross road have also seen a jump from Rs. 11,000 to Rs. 20,000 per square meter.

The higher rates of property registration in NCR cities and towns will not be helpful in achieving the desired decentralization of economic activities from NCT Delhi.

Gurgaon policy on property transfer to rein in builders

By Payal Saxena/TNN

Gurgaon: In a major policy decision by the Haryana government, transfer of property in group housing colonies by Haryana Urban Development Authority (HUDA) and those of licensed developers will now be possible only through a registered sales deed and not through power of attorney.

This would mean that a developer would not be able to make an exit from the construction of a property till the construction is complete and he possesses a completion certificate. However, the investor will not be affected by the decision. Investors floating pre-launch flats will also not be affected. Only the buyer, who will now have to incur the 11% stamp duty, stands to lose out in the deal.

After the news was first reported in TOI on Tuesday, people swarmed to the offices of developers and HUDA, inquiring about the transfer. The chief administrator, HUDA, D S Dhillon said: "It has been decided that any kind of property will be transferred from one

buyer to another only through a registered sales deed and not solely on the basis of power of attorney."

The buyer, while buying property, will thus now incur a cost of 11% as stamp duty. There are three kinds of properties in Gurgaon — one that an individual buys directly from HUDA, group housing societies, which are auctioned by HUDA and property for which HUDA gives a license to builders to develop.

The practice of transferring of property through sales deed will be applicable to builders after they possess the completion certificate and the deed of apartment and declaration.

Currently, builders, while transferring property from one buyer to another, maintain the details of the transfer in their records. By doing so, they cancel the allotment to the previous buyer and allot the property in the name of the fresh buyer. The government, while it is trying to curb this practice, is unable to take stringent measures against it. Dhillon added: "We will try to come out with a legislation on this later."

More space for homes in Gurgaon's master plan draft

Sanjeev K Ahuja
Gurgaon, June 27

A state-level committee headed by the Haryana chief minister B.P. Hooda has approved the Draft Master Plan 2021 for 10 cities of Haryana, including of Gurgaon.

The draft plan proposes integrated development of Gurgaon and Industrial Model Township (IMT), Manesar, bigger green buffers, spacious roads and arterials, earmarked entertainment, residential, commercial, institutional and industrial and transport zones in Gurgaon, said S.S. Dhillon, the director, Town and Country Planning (DTCP).

Hooda, while chairing the state-level committee in Chandigarh on Monday, gave green nod to the Draft Master Plan 2021 for Gurgaon-Manesar, Nuh, Tauro, Nilokheri, Trawari, Jaghadari-Yamuna Nager, Ambala, Kurukshetra, Meham and Saha.

However, the committee approved Draft Master Plan 2025 for the CM's hometown Rohtak.

The principal secretary to CM, financial commissioners, DTCP, chief administrator HUDA, secretaries, commissioners and deputy commissioners were present in the state level committee meeting headed by the CM.

Dhillon told the *Hindustan Times* that the Draft Master Plan would be published in the Haryana gazette for inviting objections from the public.

After one month of clearing objections, the plan would be notified by the state government for final implementation, the DTCP added.

While commenting on the salient features of the Draft Master Plan 2021 from Gurgaon's

There is plan for a huge green buffer between Gurgaon town and Manesar, running into thousands of acres. Special focus has been laid on Leisure Valley Park concept with more greenery. The width of the roads in the new sectors has been increased several times, even more than those in Noida

perspective, the DTCP said that the plan proposed integrated development of Gurgaon town and Manesar.

"There is plan for a huge green buffer between Gurgaon town and Manesar, running into thousands of acres. Special focus has been laid on Leisure Valley Park concept with more greenery. The width of the roads in the new sectors has been increased even more than what is available in Noida. The idea is to improve the quality of life in Gurgaon," said Dhillon.

The DTCP, further, said the Draft Master Plan laid special focus on the segregation of the residential, commercial and industrial zones, but refused to divulge information on the proportionate size of each zone in acres.

"Special focus has been laid on developing entertainment parks and institutional and transport zones to fall in line with the futuristic developments. More residential zones have been added in Gurgaon to accommodate the rising demand for housing," Dhillon added.

With the notification of Master Plan for Gurgaon-Manesar Complex, it is expected that the entire complex will have planned and regulated developed.

Gurgaon development plan draft gets go-ahead

By Payal Saxena/TNN

Gurgaon: After a wait of almost five years, the draft of the integrated development plan 2021 for Gurgaon and Manesar was approved by the government on Monday. The plan is to go through some legalities, after which it will be released.

Speaking to *Times City*, chief minister of Haryana B S Hooda, said: "Plans pertaining to 10 districts, including that of Gurgaon, were approved on Monday. The draft will be released soon after going through certain modalities."

The details of the plan, however, will be revealed once the draft is released. But, giving a broad idea, Haryana Urban Development Authority's (HUDA) chief administrator D S Dhillon, said: "Initially, the plan was concentrating on Gurgaon. Later, Manesar was also added to it. The area of the plan is 32,000 hectares, out of which, 13,500 hectares would be residential. Greenery has been the focus of the plan,

therefore, 2,200 hectares will be dedicated to organised green area. This includes existing areas as well."

Dhillon added that some commercial areas like Sector-29 were designated as owned solely by the govern-

MISSION REVAMP

- The plan area includes 32,000 hectares, of which 13,500 hectares would be for residential purposes
- 2,200 hectares would be allotted as green area
- Money from extra development charge, levied on developers, to be used for giving villages urban look
- Road connectivity to Delhi to be improved

ment. In the revised plan, private players will be given 50% share to develop upcoming government-owned commercial areas.

For Gurgaon, the development plan 2021, was indeed the need of the hour. The previous plan of the city was published in 1996,

and expired in 2001. The past five years, without a revised development plan, exposed Gurgaon's fragile infrastructure. The city was plagued with problems like presence of villages on the periphery of newly-established colonies, faulty sewerage system, poor connectivity of the sector roads to the main road and rampant unauthorised commercialisation.

Pointing to the menace of villages situated on the periphery of new townships in Gurgaon, the administration said that the extra development charge levied on the developers will be increased, money from which will be used to give these villages a more urban look.

The connectivity of roads in the city will also improve, as all 60-meter-wide roads will be widened further. Road connectivity between Gurgaon and Delhi is set to hold precedence. Dwarka-Gurgaon as well as Gurgaon-Faridabad road will also be strengthened. Other routes between Gurgaon and Delhi will also be taken care of.

Rs 776-cr integrated development plan unveiled for Millennium City

By Payal Saxena/TNN

Gurgaon: The Haryana government has envisaged an ambitious three-year plan, aimed at the integrated development of Gurgaon. The entire plan would cost Rs 776 crore. This was announced by the Haryana chief minister Bhopinder Singh Hooda, while reviving the working of the Town & Country Planning and Urban Estates Department in Chandigarh on Friday.

Interestingly, the announcement comes just when the government had given the go-ahead to master plan-2021 for Gurgaon. According to Hooda, the plan would entail several developmental work like construction of roads, provision of water supply with additional channel treatment plant, proper sewerage system, storm water drainage including channelisation of creeks, building of hospitals and community centres, master streetlighting, horticulture and augmenting the fire-fighting capa-

bility of the city.

Enumerating the details of the plan, Hooda said that a sum of Rs 100 crore had been assigned to the construction of roads in the city. Out of this amount, Rs 23.78 crore had already been used for the purpose by the end of last month. Similarly, a project of Rs 324 crore to provide potable water had also been sanctioned. Rs 44.70 crore had been earmarked for sewerage system. He said that the project for augmenting the capacity of existing Gurgaon Water Scheme (GWS) channel from 100 cusecs to 175 cusecs, costing Rs 19.63 crore, had also been approved by the irrigation department. The tenders for the construction of 50 MLD sewerage treatment plant, to cost Rs 21 crore, are also underway.

The construction of storm water drains, to cost Rs 27 crore, has also been approved. Work has already started on the recharge wells in Gurgaon's phase-I. This plan is expected to cost Rs 8.50 crore.

FAST PASSAGE TO BYE-PASS DELHI

Freeway on fast track

Final KMP Expressway design on Haryana table

SANJEEV K. Ahuja
Gurgaon, June 13

A SPECIAL purpose vehicle company has wrapped up the design of the ambitious 135-km Kundli-Manesar-Palwal (KMP) expressway.

The KMP Expressway Limited — which has prepared the layout — is awaiting approval from the Haryana State Industrial Development Corporation (HSIDC), which had awarded the Rs 1,800-crore contract.

Also known as the western peripheral expressway, this will be the country's longest express highway.

Commercial director of the DS Constructions, N.D. Mehra, said the design prepared by KMP Expressway Limited provided for five flyovers, 16 overpasses and underpasses, 62 pedestrian crossing passages, 18 major and minor bridges and two toll plazas, apart from two truck and four bus bays.

There would be seven overpasses and nine underpasses at crossings of state highways and major district roads.

"We have proposed 27 more underpasses at crossings of village roads," Mehra said.

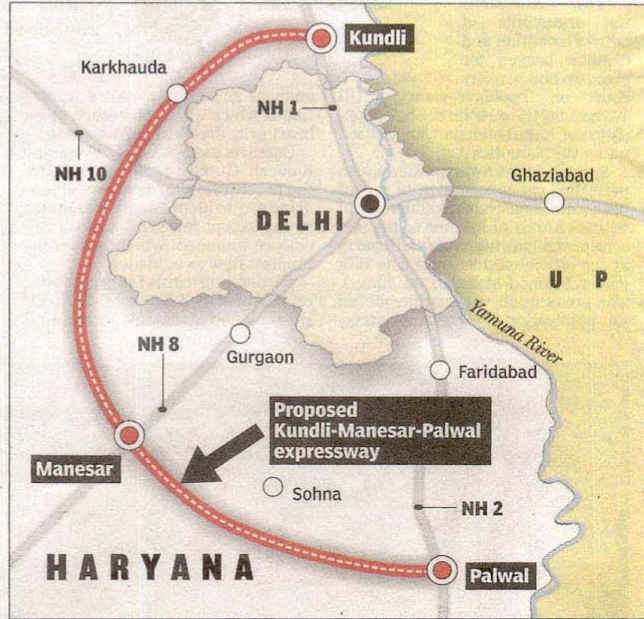
Additionally, the KMP expressway will have 62 pedestrian crossing passages, 31 cattle crossings, four railway overbridges and two toll plazas — one at NH-1 and NH-2.

The HSIDC has kicked off the process of handing over farmland it has acquired for the expressway to the KMP Expressway Limited — a special purpose vehicle company comprising DS Constructions, UK Based Apollo Enterprises and Madhucon Constructions.

About 1,000 acres of land, of the 3,000 acres, have been handed over to the company. A number of crushers and mixing plants have also been set up along the expressway site.

"On the 135-km of KMP Expressway that would cross four national highways NH-1, NH-10, NH-8 and NH-2, there would be five flyovers. The flyovers would be constructed at all places where these highways would cross the expressway," he said.

"The HSIDC is in the final stages of finalising the appointment of an



Graphic: VINEY

independent consultancy agency that will finally approve our design. The bids for the same have been invited," Mehra said.

"Though the construction time for the project is 42 months but we are sure to complete it in 30 months and it will be ready for the use by July 2008.

"This is a build-operate-transfer project and we will be holding toll collection rights for the next 23 years," said Mehra.

The KMP Expressway will not only connect four NCR towns but also four national highways and railway lines. It will take off from NH-1 near Kundli (Sonapat), crosses NH-10 west of Bahadurgarh on to NH-8 near Manesar (Gurgaon) and finally joins NH-2 near Palwal (Faridabad).

Officials said a meeting will be held to put the various process on the fast track.

Not just numbers

The 135-km KMP Expressway will be the country's longest. It will connect three key NCR towns

- 5** Flyovers at places where expressway will cross four national highways.
- 62** Pedestrian crossings for people of nearby villages to get to the other flank
- 31** Cattle crossings will help avoid animals and villagers bumping into speeding traffic
- 27** Additional underpasses have been proposed at crossings of village roads

The completion of Kudli-Manesar-Palwal expressway will certainly ease burden of traffic in NCT Delhi.

Expressway on the slow track

Delhi-Gurgaon 8/6-lane stretch may be costliest road ever built in country at Rs 1,000 crore

SANJEEV K. Ahuja
Gurgaon, June 22

THE MUCH-PUBLICISED Delhi-Gurgaon expressway has been making news for all the wrong reasons. The slow progress on the 8/6-lane stretch has been creating problems for motorists on NH-8 especially those who use the Rao Tula Ram (RTR)-Palam Junction throughway. Union minister for road transport and highways, TR Baalu, during his visit to the NHAI office in Gurgaon earlier this month said that the project was earning a bad name due to its slow progress.

The minister said that the delay was creating traffic problem for motorists using the Delhi stretch of the expressway that connected the domestic and international airports.

The National Highway Development Programme (NHDP) wants to wrap up the construction work as early as possible to avoid any further embarrassment.

The National Highway Authority of India (NHAI) recently announced the opening of two toll-free flyovers on the stretch — Rajokari (Delhi) and Rajiv Chowk (Gurgaon) — as a face saving measure. The NHAI officials have promised to complete the project by December 2006.

The deadline for the project earlier was July 2005.

NHAI officials claimed that 71 per cent of the project was completed by May this year and rest was on the fast track. But the claims that work on the expressway will be over by December 2006 looks good on paper.

The project would not be completed in totality by the end of the year as the NHAI have clarified that the 1.8 km-long RTR-Palam elevated patch would not be ready before July 2007.

Which means the vehicles moving from Gurgaon to Delhi would be left with no other option but to slow down at the Palam Junction.

Even the proposed 32-lane toll plaza at the Delhi-Gurgaon border would be made functional with 20 to 25 lanes only by December 2006.

And a substantial number of changes in the original design of the project have escalated the cost of the expressway from Rs 555 crore to around Rs 800 crore.

This is likely to cross Rs 1000 crores making it the costliest expressway ever built in the country.

Importance of project

- Part of Golden Quadrilateral connecting Delhi and Mumbai.
- Vital link between Delhi and Gurgaon.
- One of the busiest corridors carrying more than 150,000 vehicles per day with annual average increase of traffic at 7 per cent.
- Signal-free access for traffic to IGI and domestic airports.

Changes sought by

Delhi government

- Flyovers at Rao Tula Ram (RTR) and Palam Junctions were converted into elevated highway combining both flyovers with up-ramp access from Vasant Vihar and signal-free access for traffic bound for the domestic airport in the Capital.
- Defence installations on both sides of road demanded crossover facility. Thus the new design included an underpass and two steel foot overbridges.
- Up-ramp for traffic from IGI Airport to Delhi.
- Interchange at Kapersera for access to Dwarka City.

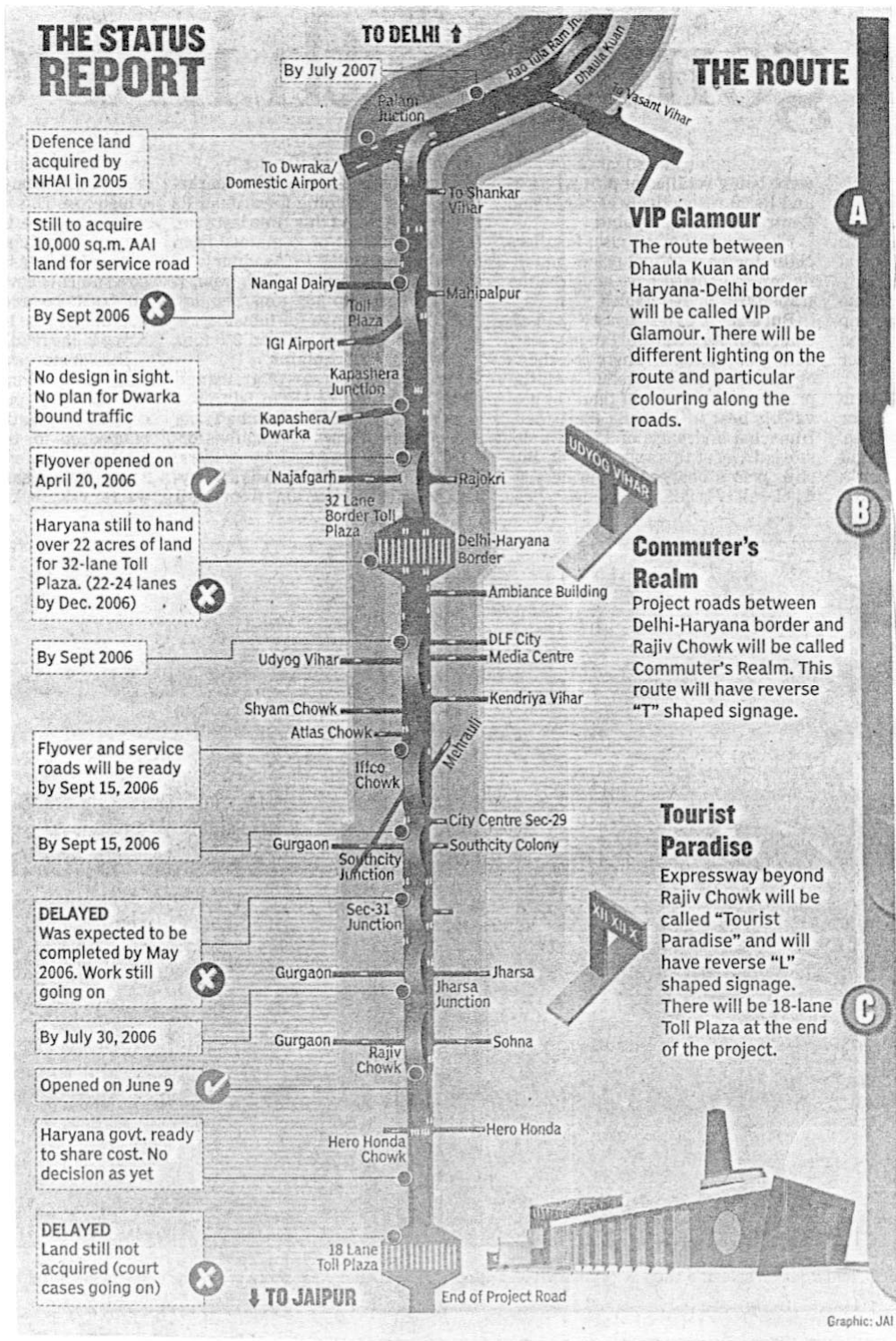
Changes sought by

Haryana government

- Increase in viaduct length of flyovers at Udyog Vihar and IFFCO CHwok junctions.
- Addition of an underpass at Sector 31 Junction and increase in width of Jharsa flyover.
- Hero Honda crossover bridge at Hero Honda Crossing.

The completion of Delhi-Gurgaon Expressway need to be expedited to reduce the commuting time.

TARDY PROGRESS OF DELHI-GURGAON EXPRESSWAY



The timely completion of Delhi-Gurgaon Expressway remains a big challenge to the implementing agencies.

DEFEATING THE OBJECTIVES OF NCR PLAN

UP puts bus row with Delhi in top gear

KAPIL Datta
Noida, June 24

BUS COMMUTERS on the Delhi-Noida and Ghaziabad stretch may be in for a bad time if the ongoing dispute between the Delhi and Uttar Pradesh transport departments on passenger tax is not sorted out soon.

The row took an ugly turn recently when, on June 16, Uttar Pradesh impounded three DTC buses and demanded Rs 60,000 per bus as penalty from the Delhi government.

According to sources, the two states differ on the issue of whether revenue should be calculated on the basis of kilometres covered or number of trips a bus makes. While Uttar Pradesh favours the first, Delhi wants it to be calculated on the basis of

number of trips a bus makes.

Uttar Pradesh also alleges the Delhi Transport Corporation plies in areas and routes for which it doesn't have permission. "We had agreed to just 30,000 km against DTC's 90,000 km coverage area. Delhi, in fact, wants to cover 2.5 lakh km. Moreover, DTC has started several new routes in Noida, Ghaziabad and Bulandshahr without seeking our approval," said UP transport minister Naresh Aggarwal.

Explaining the points of contention, Delhi transport minister Haroon Yusuf, while repeating UP wants a kilometre-based agreement and Delhi a trip-based one, said: "Delhi stands to lose from a km-based agreement. However, I have asked the transport secretary to hold talks and settle the issue," he

said.

With the earlier agreement expiring in 2000, the Delhi government suggested the meeting should finalise a new agreement outlining the guidelines for plying of buses. "We have suggested June 29-30 for the meeting to sort out differences between the two states," he said.

In 1976, the UP government had issued a notification exempting DTC from paying passenger tax. Thereafter, Noida Authority officials pursued DTC to extend its city bus fleet to Noida.

The first bus fleet began plying in the early eighties. Noida Authority allotted land for a bus depot in Sector 16. In 1984, the depot was set up which today has a

fleet of 105 buses.

"About 200 buses from other DTC depots also ply in Noida on around 25 routes," Noida depot manager R.K.Jain said when contacted by the HT.

"ARTO-Noida seized the three buses last Friday demanding Rs 60,000 per bus. We will not pay the huge penalty. We are plying busing in Noida on Noida Authority's request. In February last year, Noida authority CEO had written to UP transport commissioner to exempt the DTC fleet from passenger tax," said Jain.

"If the ARTO department kept on impounding our fleet we have no choice but to stop plying our fleet in Noida and shift our buses to Mayur Vihar," said Jain.



The three DTC buses impounded by Noida transport department.

SANJEEV VERMA/HT

The bus services have now been restored, however, commuting to NCR towns / cities of UP is not an easy affair.

HINDRANCES IN DMA TOWNS

NA proposes while Metro Rail disposes

Lakhs of rupees have been spent on bus shelters, streetlights and traffic signals, but has a thought gone into the planning of the Metro route by NA?

■ By A Correspondent

A DEKHO by the Noida Plus team revealed that all these and more are being put into place along the Metro's route and may at some time even have to be pulled down to accommodate the Metro's stations and infrastructure.

Some waste of public money this! As per sources, traffic signals are being installed by Bharat Electronics. Says Satendra, the company's engineer, "Traffic signals are being installed at 27 locations across the city. Of these six traffic signals are along the route, charted out for the Metro Rail." He adds, "Each traffic signal comes at a cost of Rs.1.50 lakh and are located at the cross roads of Sectors 3, 15, 28, 29, 36 and 39. Besides these traffic lights, high-mast lights have been put up at Naya Bans in Sector 15, in front of the commercial complex in Sector 18, cross-roads of Sector 37 and 38, which are again all along the corridor designated for the Metro Rail track and may have to be removed once

INFRASTRUCTURE



Some of the bus shelters are going to come in the way of Metro route

the work for laying the Metro line is undertaken. Not only the traffic signals and high-mast lights are a cause for concern but several of the swanky new bus shelters put up by NA along the Metro Rail map may have to be bulldozed to make way for the elevated Metro train. On being quizzed about the oversight by the project engineers of NA, agrees Sanjeev

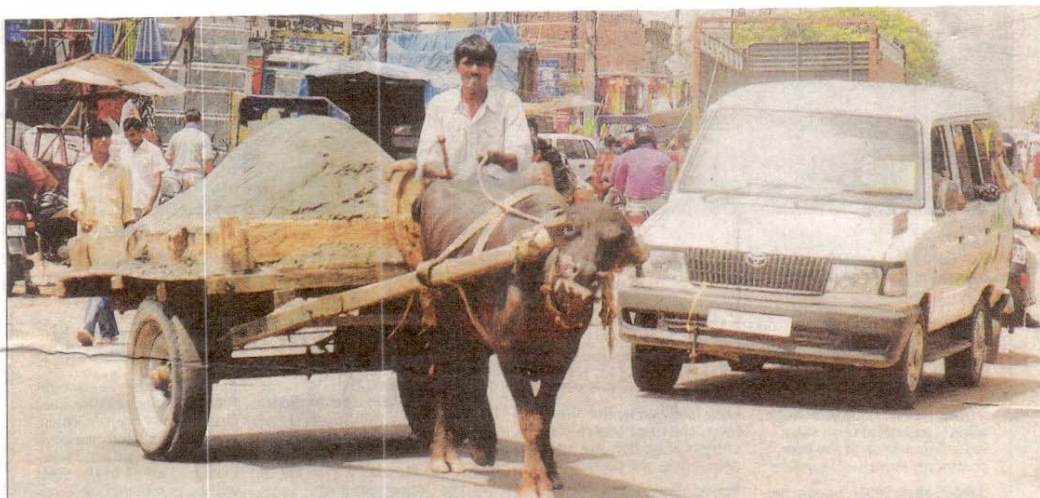
Saran, the Chief Executive Officer (CEO) of NA, "It should have definitely been looked into by my planners and engineers and I will ensure that the matter is reviewed and evaluated before any more of these structures are put into place." He adds, "All such structures will now be constructed only once the survey for the Metro Rail track is completed."

As per information received, the Metro Rail is proposed to move along the Atta bazaar and a Metro station is also planned at the market. In the wake of constructing a station at Atta, many shops will have to be pulled down to accommodate the structure. The areas of Atta market coming in the vicinity of the Metro Rail station are the Bhavani, Harvansh, Sunehri, Sanjay and Radhika markets.

GUEST EDITOR'S COMMENT: Metro would be a boon to the residents and get the traffic down but the coordination between the Noida Authority and DMRC has to be reviewed.

These kind of incidences may not augur well with the overall integrated development of NOIDA city.

HINDRANCES IN DMA TOWNS



IN KNOTS: NOIDA

Noida and Greater Noida have a good roadways system. But the public transport scenario and traffic maintenance falls much short of expectation. As these pictures show:

- ① A Qualis has to wait for a bullock cart to cross the road before it can resume on its journey. The cart-driver, however, does not seem to be in any hurry.
- ② On an average, a passenger in Noida has to wait at least 10 to 30 minutes to get a bus. The desolation of this swank bus stop is witness to the absence of a planned transport system.
- ③ This bus stop at sector 9 apparently provides more shelter to small-time traders than actual passengers.
- ④ A waste of resources according to local residents, this beautiful bus stand-like structure is, as apparent, a 'rickshaw stand'.



DISADVANTAGES IN DMA CITIES / TOWNS

Developers in dock over pre-launch ads

By Payal Saxena/TNN

Gurgaon: Over a thousand plots may have been sold near Gurgaon on NH8 in about 18 townships each, but what could put a spanner in the establishment of the residential zone is the district administration's decision to lodge an FIR against 18 developers. The reason: All these developers have been running a pre-launch campaign for their plots without being granted a licence for the same.

Officials claim that the townships may never get off the ground. According to the district town planning and enforcement department (DTPE), the developers advertised their plots near Gurgaon on March 25 and 26.

This, when neither do they possess a licence nor can hope to get a licence in the future.

Said B L Kaushik, heading DTPE: "The land where they plan to construct houses is under the controlled area. Neither did the developers apply for change of land use nor for a licence. What is worse is that they have not yet got the layout plan for the proposed area approved."

According to deputy commissioner of Gurgaon, R P Bhardwaj: "We have directed the superintendent of police



to take immediate action and no one will be spared." Added Kaushik: "Pre-launch advertising is illegal but small time developers freely fool people by advertising in big way. The FIR will be a major setback to them and will set an example for other defaulters in future."

Meanwhile, advertising for the plots is going on a big scale. Said one of the developers: "The cost of land is about Rs 12,055 per square yard. There are about 3,000 plots out of which 1,500 have been sold."

Another broker further added: "The cost of the land is 14,235 per square yard. The township will be located next to Wet and Wild Resorts on NH8. Though we have not taken a license yet, we will soon get it along with others."

NCR fares no better, 7-hour power cuts the norm in Gurgaon as well

By Payal Saxena/TNN

Gurgaon: Sharing the Capital's fate, Gurgaon too has been reeling under severe power cuts for the past one week. According to officials, the situation will only worsen in the future. Six to seven hour power cuts have become common in the city, especially in New Gurgaon.

According to officials at Dakshin Haryana Bijli Vitaran Nigam (DHBVN), power supply stands at 79 lakh units while the demand at 85 lakh units. The shortfall is thus about six lakh units. With no power, the water supply has also been hit considerably.

Officials at DHBVN claim that as the developers did not construct the number of substations they had agreed upon, New Gurgaon suffers the most due to non-availability of power. According to a senior DHBVN official: "DLF had signed an agreement to construct three substations, but have opened only one in Q-block in DLF-I with two transformers of 16 MVA each.

The developers, however, clarified: "We

get a supply of 30-40 MW for our township but require about 60 MW. We are compelled to use generators to meet the demand."

There are about eight 66 KV substations supplying power to the city, but the increasing population and construction activity has created a demand-supply imbalance. Moreover, currently, low frequency of the Northern Grid has led to acute power shortage.

While the developers and government blame each other for the situation, residents are left to bear the brunt. "The power situation is deteriorating every year. We shifted from Delhi due to these problems but Gurgaon seems to be even worse," said Mr. Itunjay Singh, resident of DLF-II. Said another resident: "While there is no power, the water supply has also been hit. Our overhead tank is not able to store enough water and the first-floor gets no water at all."

Residents of condominiums, even with 24-hour-power backup, have their set of problems. "Charges for electricity connection are around Rs 450 and for generators, about Rs 3,000-4,000," said a resident of DLF-IV.

The pre-launch ads can mislead public and is illegal which is often found in DMA cities. Similarly, long power cuts are one of the main disadvantages being faced by the residents of these cities.

Table 6.5 : SWOT ANALYSIS – DMA Cities / Towns

Name of the city / town	STRENGTH	WEAKNESS	OPPORTUNITIES	THREATS
GURGAON	<ol style="list-style-type: none"> 1. Availability of abundant skilled / trained manpower. 2. Close to International Airport. 3. Hub of IT/BPO industries thereby making the city center for employment generation. 4. Progressive and liberalized state policy. 5. Center of training in special crafts and it is training cum production state 	<ol style="list-style-type: none"> 1. No Public Transport System existing in all the sectors. 2. Sewerage system in bad shape 3. Roads are in bad conditions 4. Power Problem 5. Artificial shortage and by estate price structure putting common man hard to purchase 6. Garbage disposal problem 	<ol style="list-style-type: none"> 1. Haryana State as a more attractive state of setting of UP of Special Economic Zone (SEZ) in the country. 2. Good Industrial Relations. 3. Good Law and Order System 4. Abundant water because of maximum canals are in the state. 5. Metro Rail will come up in the Gurgaon periphery. 	<ol style="list-style-type: none"> 1. link Roads are in bad shape. 2. Power is not regular. 3. Toll free movement of Transport, Taxi, TSR from Delhi & NCR Delhi.
NOIDA	<ol style="list-style-type: none"> 1. Adequate infrastructure 2. Good connectivity with Delhi from several entry points 3. Availability of Land at reasonable rates 4. Existence of inland container depot at Surajpur facilitated inbound and outbound movement of cargo 5. Highly skilled manpower available 6. Adequate Medical facilities 7. Important entertainment and recreational centers 	<ol style="list-style-type: none"> 1. acute shortage of potable water 2. Frequent traffic jams 3. Erratic power supply 4. Law and Order problems 5. Absence of Govt. Hospitals 	<ol style="list-style-type: none"> 1. Special Economic Zone is being created 2. Pollution free environment and harmonious industrial atmosphere 3. Most preferred IT and IES destination with Global companies 4. Metro Rail project is coming up 5. Development of Software Technology Park 	<ol style="list-style-type: none"> 1. Steep rise in Real estates business may jeopardize the dreams of buying land/flats by common man 2. NRIs investment on business discourages midcore Businessman to invest in NOIDA 3. Encroachment on hinterland and problem of squatting is aggravating.

<p>GHAZIABAD</p>	<ol style="list-style-type: none"> 1. Availability of land & property at more competitive and cheap price as compare to Delhi 2. Presence of vocational, engineering, medical and management colleges and institutions in large scale. 3. Fast growing town in terms of IT professionals. 4. Presence of key industries in govt. and private sectors which are being catered by allied industries, thus creating employment opportunities 5. Better connectivity with NOIDA and greater NOIDA 	<ol style="list-style-type: none"> 1. Erratic power supply 2. Indiscriminate use of ground water depleting grand water table 3. Public transport bottleneck. 4. Large scale violation of Building Constructions in terms of Bye laws by the private builders and encroachment on public land coming up unauthorized colonies 5. Acute shortage of Medical institutions of Govt. hospitals 	<ol style="list-style-type: none"> 1. Becoming fast growing to the eastern Delhi thus creating an atmosphere of out migration from Delhi and New Delhi 2. Well linked with proposed Export Promotion Zones and traditional trade town on Road and rail network. 3. A preferred residential alternative for all income groups people 4. An important regional node of Uttar Pradesh in the NCR in terms of rail and road networks 5. It has higher potential for new real estate development 6. Opportunity of mixed use town centres 7. Metro rail project coming up in the Kosmtri closed to ISBT Anand Vihar Delhi 	<ol style="list-style-type: none"> 1. NCR's are purchasing flats in bulk for speculation purpose. 2. Acute parking problem due to highly personalized mode of transport being used. 3. Due to existence of villages there is unplanned and undesired commercial squatting taking place threatening to environment and planned community.
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BAHADURGARH	<ol style="list-style-type: none"> 1. Very close to Delhi. 2. Public Transport is easily available upto Main Bus stand 3. Cheap land rate 4. Abundant unskilled manpower 	<ol style="list-style-type: none"> 1. Erratic and poor power supply 2. Inadequate educational facility 3. No street lights 4. No potable water <p>Hospitals are far away.</p>	<ol style="list-style-type: none"> 1. Curbing migration Close to Delhi 2. Setting up of industry in the town 3. Cheapest land value as compare to other NCR Towns 4. Metro train will make life easy and smooth. 5. More and more Private builders have sprung up thus beautifying the town 	<ol style="list-style-type: none"> 1. Very poor state of Law and Order 2. Threat from slum dwellers and squatting in common 3. Noise pollution Nuisance of open defecation
FARIDABAD	<ol style="list-style-type: none"> 1. Close to Delhi 2. Blue collar workers are in abundant and catering the state industries to boost production 3. Lot of Engineering institutions. 4. Small and medium scale of industries are in big numbers 5. Rail network for transport of finished and semi finished goods are in abundant. 	<ol style="list-style-type: none"> 1. Sewerage disposal is very poor. 2. Every area is constructed on low lying area 3. Rain water disposal is very big problem. 4. Industrial wastage is also problematic 5. Transport (Plastic) in bottleneck 6. Power problem 	<ol style="list-style-type: none"> 1. Attraction of MNC and global market hub. 2. Trained manpower is available 3. Land is still available 4. Subsidies are being given by the govt. to boost industrial development. 	<ol style="list-style-type: none"> 1. Poor Law and Order 2. Labour strike & strife lock out 3. Threat of rain water gushing into houses during rainy days 4. Industrial Pollution 5. No medical facilities 6. Evasion of exercise and octroi duty 7. Very costly land

POLICY RECOMMENDATIONS

7

It has been almost two decades since NCR Plan has been under implementation. In 1980's the plan, by and large focused on the decongestion of Delhi, while the present Plan strives for the decentralization of economic activities, but in a changed economic scenario in which forces of economic liberalization and globalization are ultimately going to have large scale repercussions on the planned urban development of the DMA towns and cities. The foregoing chapters have detailed out the concept and early attempts of planned development of these towns/cities followed by description of existing scenario in terms of planned development of DMA towns, analysis of perception of residents and builders and appraisal of the NCR Plan – 2001 in terms of the proposals pertaining to these towns and cities along with efforts of NCR in terms of funding of projects and current happening in NCR through newspapers have been incorporated. Further, the cities/towns have also been viewed in terms of their strengths, weaknesses, opportunities and threats based on the existing scenario as well as potentials present in them. Thus the concluding chapter discusses policy guidelines / recommendations so as to expect effective implementation of NCR Plan, 2021.

In order to make NCR Plan implementation more effective, the participating States need to adopt a proactive approach in dealing with the development /planning issues which are mutually beneficial to them. The NCR Planning Board has established the directions for future developments; however, the respective State Governments are expected to sort out developmental problems, whether they are related to transportation, water supply, power supply or coordination amongst them so that the objectives of NCR Plan are achieved to a greater extent.

NCR Planning Board needs to play key role especially in terms of coordination among the participating State Governments. The NCR Plan proposals appear to be very sound on paper; however, when it comes to actual implementation, the State Governments often do not work together. The recent impasse on bus transport between Delhi and Uttar Pradesh has had a telling effect on lakhs of commuters who commute daily between Delhi and DMA towns. These commuters are a harassed lot and the dispute between the two state governments has put them to unfold hardship. Another example of intra-state dispute is prevailing in Greater NOIDA (although not a DMA town) where due to dispute between the Uttar Pradesh Power Corporation

Limited (UPPCL) and the Noida Power Company Limited has led to power shortage to the extent of 20 MW. The city was reeling under the long power cuts of 12-14 hrs during 2006 thereby causing lot of problems to the residents but also to the large number of industries and educational institutions, which are severely affected. Another example of inter-state dispute / disagreement is inadequate release of water by Uttar Pradesh to Sonia Vihar Plant which has led to shortage of water supply to south Delhi colonies.

Here, the role of NCR Planning Board becomes crucial wherein it should have intervened in the dispute and suggested ways for amicably settling the differences between the State Governments. The main reason for tardy implementation of NCR Plan is that NCR Planning Board is by and large more of an advisory body, which is involved in funding of projects. It becomes essential to provide adequate teeth to the Board so that it can prevail over the State Governments. In fact, NCR Planning Board should act as a tribunal and all inter or intra state disputes within the NCR should be referred to NCRPB. This will necessitate amendment to the NCRPB Act wherein NCRPB should be empowered to settle the inter or intra-state disputes within a reasonable time frame.

Section –8(b) of NCRPB Act, 1985 clearly states that one of the functions of NCRPB is to ensure preparation, enforcement of Functional Plan or Sub-Regional Plan as the case may be to be in conformity with the Regional Plan. Further, Section 29(2) of the Act also stipulates that where any participating State or Union Territory has carried out or is carrying out, any activity which is in violation of the Regional Plan, it may be given a notice in writing by the Board to stop such violations of the Regional Plan and in case of any omission or refusal on the part of the concerned State the Board shall withhold such financial assistance to them. In spite of clear-cut stipulations in the said Act, the State Governments have taken to ignoring the proposals of the Regional Plan. Since, the DMA towns have witnessed massive expansion of the spatial extent with unprecedented conversion of agricultural land to urban uses; there is no indication whether NCR Plan prevails on the large scale change of landuse in these towns.

Hence, the NCRPB is required to maintain a database, which should continuously monitor conversion of land to the urban uses. The conversion to the urban uses should be justified (or ensured) in the context that any activity proposed would ultimately benefit the concerned city and also the NCR thereby strengthening the implementation of decentralization of economic activities away from NCT Delhi.

NCR, especially the DMA Area is also witnessing development of Special Economic Zones, Hi-Tech Cities, Export Promotion Industrial Park and IT Parks. This is not in consonance with the settlement structure prescribed by the NCR Plan. With the mushrooming of this kind of development, there is every possibility that implications will be felt in the long run when these enclaves are developed without taking into consideration of regional linkages, availability of skilled manpower and efficient and fast mode of transportation. By developing these specialized centers, it could be possible that they may become island of prosperity without benefiting the rural hinterland and also will be against the spirit of balanced and harmonious development of the region.

Hence, it becomes essential that any kind of specialized development must be in conformity of NCR Plan. The identification of these centers must be as per the hierarchy of settlements as advocated by NCR Plan duly considering the future potential of the urban and rural settlements.

All the DMA cities/towns do have Master Plan, however, their preparation appears to be respective city centric without taking into consideration the spillover of Delhi. Further, it may be highlighted here that there is no representation of NCRPB, Ministry of Urban Development and Government of NCT Delhi in their Planning bodies and at the same time DDA also does not have any representative of DMA cities and towns planning agencies. Hence, there is virtually no interaction between these agencies. The immediate fallout in this regard is unregulated development of fringe areas. All the DMA cities/towns have not come together to spell out what should be the policy for the fringe areas and what kind of buffer need to be put so as to control the haphazard development.

Hence, NCR must coordinate among all the planning bodies of these cities/towns so that the Master Plan proposals are synchronized keeping in view reduction on the burden on infrastructure of NCT Delhi and have effective control on regulated development. Although the Master Plans of these cities /towns are referred to NCRPB but the same may not be in conformity with the sub-regional plans or functional plans.

It may also be highlighted that NCT Delhi has experienced large scale unauthorized construction and rampant misuse of residential premises. There are almost 5 lakh shops and almost 50 lakh persons are depending on retail trade businesses. With the directions of Supreme Court, the shops in the residential localities have been subjected to sealing. In this regard, it may be stated that no efforts were made neither at the Central Government level or State Government level to

assess the availability of commercial spaces in DMA cities/towns and even in NCT Delhi, so that the traders could have got an option to shift to these towns. NCRPB should have taken initiative in close coordination with the planning bodies of DMA cities/towns to assess the availability of commercial spaces in the DMA cities/towns. In fact, the directions of Hon'ble Supreme Court with regard to misuse of residential premises should have been taken as blessing in disguise especially for NCR as this was the right time to take steps to encourage decentralization of economic activities which otherwise has not taken place as desired right from the inception of NCR concept. In fact, this would have been welcomed by the traders of Delhi.

In this regard, NCR should take initiative along with the participating states to decentralize trade and commerce activity by preparing an inventory on availability of commercial/office spaces both with the private sector and the Development Authorities of the concerned DMA cities/towns. This will also provide much needed impetus to market forces in the real estate in these cities/towns.

There is no doubt that to make the NCR concept a success, the NCRPB had proposed not only uniformity in the tax regime across the region but also a unified power and transport authority and integration of the housing sector. But most of the proposals made in NCRPB's Regional Plan-2021 will remain only on paper until and unless there is strong political will to overcome all the inter and intra-state disputes. ***In other words NCRPB is required to sensitize all stakeholders on these issues and emphasize the importance of the NCR wherein unified services could make the region self-sustainable and pave the way for harmonious development*** otherwise poor enforcement may lead to not only slowing down the process of integration of all areas but will also hamper the development of the NCR and some areas may develop fast, while others may lag far behind negating the very concept of NCR.

While there has been some sort of integration in the telecom sector, however, a lot more needs to be done in power, water and housing sectors. ***With regard to housing the NCRPB should propose a joint venture between DDA and the Development Authorities of DMA cities/towns to provide adequate housing.*** While DDA provides housing in Delhi, in NCR the large scale housing is being mostly provided by private developers, resulting in skewed development. ***A common Housing Board for NCR will go a long way in solving the housing problem in the NCR and make housing an affordable proposition.***

In spite of non-implementation of NCR Plan proposals, there is no doubt that in respect of development of DMA cities/towns; NCR has witnessed rapid real estate development in commercial, retail and

residential segments. This kind of development, while creating opportunities for many, has placed pressure on infrastructure and resources, and brought into focus a number of issues related to city management and governance.

There should be faster sharing of information between NCR towns. A system can be evolved where common police force have total jurisdiction in NCR. This will help save time and will make law-and-order system in and around NCR much more efficient.

Similarly the extension of Metro rail appears to be the only solution in present context to provide integrated transport system. **A lot of ground work will have to be done when Metro begins its service to these cities/towns like common ticketing, revenue sharing among the State Transport Buses etc, which is only possible when NCRPB suggests various options so that there are no divergent views and stakes of the transport authorities of the participating states and the same are taken into account and suitably addressed.** At present there is no public transport available from Delhi Airport and Delhi Railway Stations to DMA towns and commuters have to pay between Rs. 700 – 1200 so as to reach their destination in these towns. Further, free movement of Taxies and Auto rickshaws in NCR and NCT Delhi vice versa appears to be a distant dream, while NCR was developed with the idea to decongest Delhi, with the forethought in establishing quick and efficient transport network through out NCR.

Therefore, a beginning has to be made so that traveling between the Delhi and DMA cities / towns become a smooth affair. In fact, this has been a biggest hindrance to the integrated development of NCR. There is a need to arrange the existing transport system so that it is easily accessible to the people. The restrictions on the movement of taxi and auto rickshaws in the DMA towns should be removed to allow free movement. Besides, airports / railway / bus terminals may have shared taxi, vans and auto rickshaws services. **The policy should focus more on developing integrated transport for NCR rather than encouraging personalized modes. Hence, there is need to eliminate entry permit so as to ensure smooth movement of vehicles within the NCR region. The free movement of vehicles in the NCR region coupled with a uniform transport policy for the region should be formulated and necessary amendments may be made in the Motor Vehicles Act.** Since, passenger tax is imposed on taxies, buses and auto rickshaws, vehicles coming from DMA towns to Delhi and and hence the taxi drivers charge exorbitantly thereby forcing DMA residents have to pay more

There is a need to adopt Mission Mode approach in implementation of projects funded by NCR on the lines of JNNURM. The

projects should be funded subject to reforms/actions undertaken by the implementing agencies, which are in line with the NCR Plan Proposals and Policies within a given timeframe. For example, one of the admissible components under the JNNURM is shifting of non-conforming uses to conforming uses. Similarly, the DMA cities/town should also offer option so that the non-conforming activities are encouraged to shift out of NCT Delhi. Further, NCR fund allocation need to be enhanced substantially as the investments requirements are going to increase in DMA cities/towns and the upper limit for funding may not be capped. ***The fund from Central Government to the infrastructure projects in NCR should be routed through NCR Planning Board. It would also be desirable that a comprehensive view of the fund available from all the sources is required to be taken so as to integrate development activities undertaken by various agencies. Without a mechanism of dedicated fund, it would not be feasible to effectively undertake various activities envisaged in Regional Plan. This can be achieved to a considerable extent through a 'Special Component Plan'. The requisite fund should be allocated by the Planning commission as a Sub-component of the five year plan in respect of Central Ministries of Shipping, Road Transport and Highways, Railways, Communication and Information Technology and Power as well as participating States have to go beyond their token approval to the Plan. They have to recognize the Regional Plan-2021 as their own Plan and accept the responsibility of implementing its policies, projects and proposals through their physical and financial effort, reflecting it in their five-year and annual plans and work programmes.***

A unified approval system in consonance with National Building Code should be introduced in these cities/towns. At present, DMA towns/cities have different sets of regulations regarding building bye-laws and other sanctions. Further, digital database in terms of Land / Property System need to be adopted and shared among the cities/towns.

The state level taxes too have been responsible for the pressure on prices of petroleum products in the DMA cities/towns. Sales tax collection from oil sector have consistently been contributing to a third or more of the total sales tax collections of the states thereby burdening the consumers as well as building an undesirable dependency at the state level too for revenues on a single sector. Moreover the rates of taxation vary widely – from a minimum of 20% to a maximum of 34% in the case of petrol, and from a minimum of 9% and a maximum of 38% in the case of diesel. Coming on top of what is considered a large incidence of excise duties, heavy sales tax levies lead to a high prices. **There is need to offset the burden of irrecoverable taxes such as octroi/entry tax on crude oil so that the prices of petroleum products are uniform throughout NCR. Hence,**

unified tax regime under the VAT umbrella is required so that the prices of all goods are uniform throughout the NCR. The efforts towards achieving a Common Economic Regional Development Zone could only be achieved once there is uniform taxation.

In conclusion, it may be stated that success or failure of the objectives of NCR Plan cannot be evaluated in quantifiable terms as yet. NCR Plan is theoretically strong. The successful implementation of plan proposals will depend on how the participating State Governments respond in a proactive manner and work in proper coordination so as to overcome all disputes. However, at the same time strong administration and political will is also required to succeed with the objectives of NCR Plan. Further, if the NCR Proposals are taken in a right spirit by the participating State Governments, then whole region can set an example to all the State Capitals and they could evolve a concept of *State Capital Regions* throughout the country. If thought in a broader perspective, the concept of State Capital Regions for all the State Capitals will actually pave the way for balanced urbanization. Further, the concept of decentralization of economic activities would get impetus throughout the country. This will help not only the State Capitals but also the vast hinterland wherein large-scale investments in infrastructure will be helpful in restricting migration towards the capital cities. Hence, the NCR concept should serve as a replicable model for the entire country.

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**TOWN AND COUNTRY PLANNING ORGANISATION
MINISTRY OF URBAN DEVELOPMENT**

Questionnaire on Residents Perception residing in NCR Towns / Cities

1. Name of the Resident
2. Address
3. Occupation Service/Own Business/Industry/Any other
4. Original Resident of the Town Yes / No
5. If No, Year of Migration (Shifting)
5. From where did you migrate (shifted)
6. Reasons for Migration Employment / Education / Better Infrastructure Facility / Marriage / Other reason

7. Infrastructure Facilities

1. Transport Mode - Own/Private/Public/Office (Commutation from Residence to office / work place)
- a) If using public transport facilities adequate / inadequate
- b) Intra city mode of transport adequate / inadequate

2. Educational facilities

Facility

Distance

School

College

Professional College

Any other

Are the educational facilities

adequate / inadequate

3. Medical facilities

Facility

Distance

	Hospital	
	Dispensary	
	Private Medical Practitioner	
	Are you satisfied with the facilities	Yes / No
4.	Housing	
or	a) Type of housing	EWS/Janta/LIG/MIG/HIG/Duplex Plotted Housing
	b) Name of the Authority from where purchased	Development Authority / Housing Board / Co-operative Group Housing Society / Private Developers / own construction
	c) Cost of House when purchased (Rs.) Cost of House Prevailing current/market (Rs.)	
5.	Whether housing loan availed If yes, source of Finance	Yes / No HBA, LIC, Bank, own savings/ other sources
6.	Power Supply Regular / Erratic Street lighting	(No. of hours available) Yes / No
7.	Position of Water supply	Adequate / Inadequate (No. of hours available) Potable / Non- potable
8.	Recreation Facilities	
	Sports Complex	Yes/No
	Play Grounds/parks	Yes/No
	Cinema Hall / Multiplex	Yes/No
	Cultural Centre	Yes/No
	Any other	Yes/No
9.	Marketing/Shopping Facilities	
	a) Is there any organised/ planned market / shopping complex	Yes/No
	b) Are the shops located within the residential locality	Yes/No
	c) Distance from House in Km.	
	d) Are you satisfied in terms of price	Yes/No

of commodities

e) Are you satisfied in terms of quality Yes/No

f) Are the prices/tariffs of Commodities/services cheaper than Delhi. Yes/No

g) Do you purchase expensive goods like vehicle, electronic items and other consumer goods locally or from Delhi. Yes/No

10. What is the level of satisfaction Outstanding/V.Good/Good/Fail/Un- in terms of housing and other satisfactory. infrastructure in DMA Towns.
11. Do you think that factor of affordability / price forced you to stay in DMA Town.
12. What suggestions you can give to improve the standard of living in DMA Town.

Questionnaire 2

**TOWN AND COUNTRY PLANNING ORGANISATION
MINISTRY OF URBAN DEVELOPMENT**

Perception of Builders/Real Estate Developers operating in NCR

1. Name of the Company with address

2. Year of Inception/Commencement

3. No. of important residential projects in NCR presently undertaken

S.No	Name of Project	Distance from NCT Delhi	No. of Dwelling Units/Flats constructed	Type of Dwelling Units HIG/MIG/LIG	Cost of the project (Approx.)
1					
2					
3					
4					
5					
6					

4. Any Non Residential Development Undertaken in NCR

S. No	Name of Non-Residential Project	Distance from NCT Delhi	Type of Non Residential Development	Area (Sq. mt)	Cost of the project (Approx.)
1					
2					
3					
4					
5					
6					

5. No. of Dwelling Units constructed in past 10 years

Year	No. of Dwelling units/flats constructed	Occupancy Rate
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1995-96 onwards		

6. What are the major reasons for undertaking construction activities in NCR

- i)
- ii)
- iii)
- iv)
- v)

7. Compared to NCT Delhi do you think that procedures related to building plan sanctions, completion certificates, water/power connections have any advantages in NCR Town

8. Are you aware of NCR Plan- 2021.

9. Do you think that NCR Plan has been successful in diverting the migration towards NCR Towns.

10. Do you think that in NCR the property buyers are genuine buyers or they purchase for mere speculation

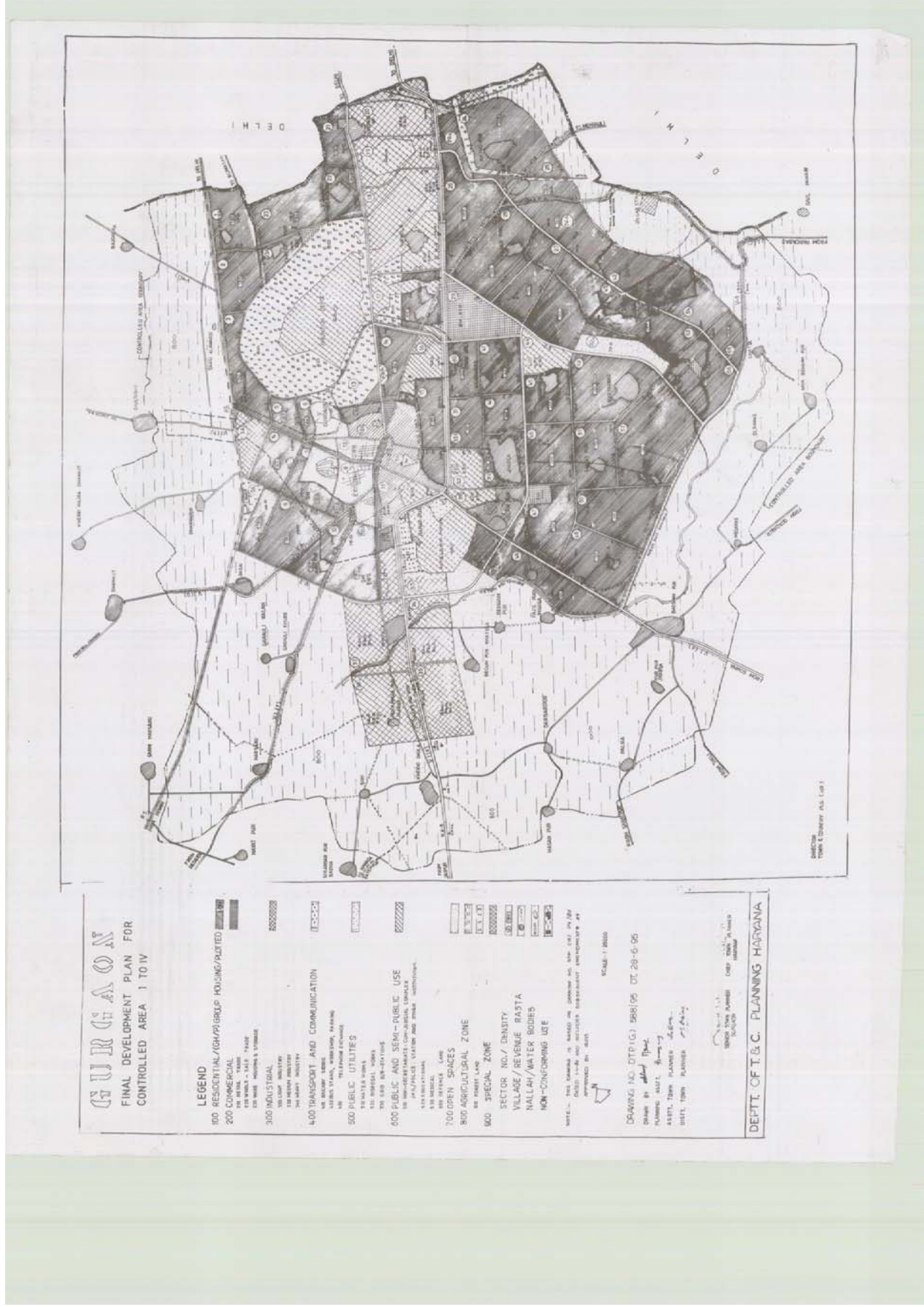
11. What have been major bottlenecks in terms of infrastructure development in NCR towns.

12. Do you think that NCR Towns have the potential to develop as Satellite towns/cities, which can absorb large number of migrants settling down in NCT Delhi.

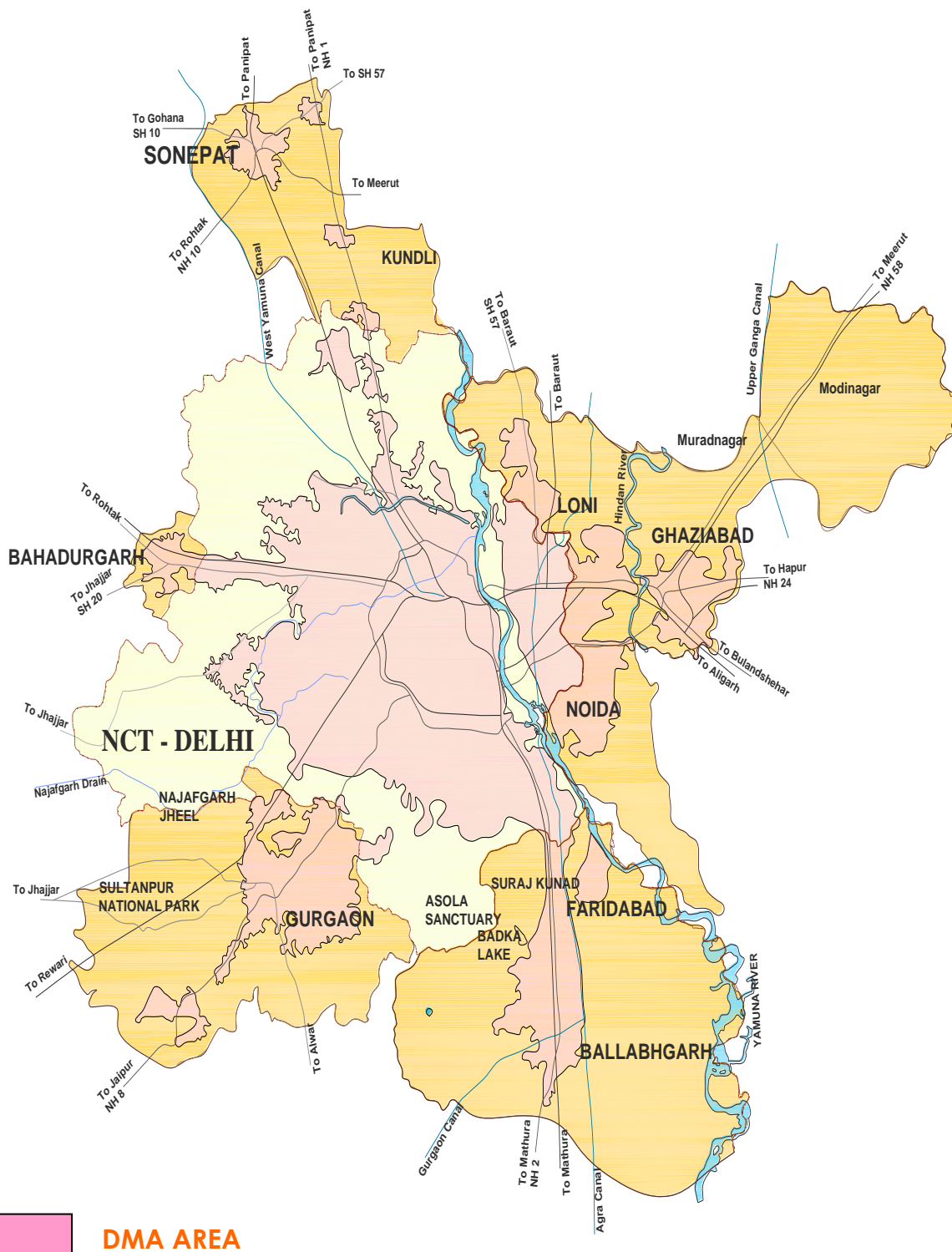
13. What incentives do you think need to be given especially to real estate developers so that the DMA Towns develop at par with NCT Delhi.

14. Suggestions for all around development of DMA Towns and NCR as a whole.

Proposed Landuse Map of Gurgaon, 2011.



Source: Office of DIP, Gurgaon.



Source: NCR PLAN-2021

MAP: LOCATION OF DMA AREA IN NATIONAL CAPITAL REGION