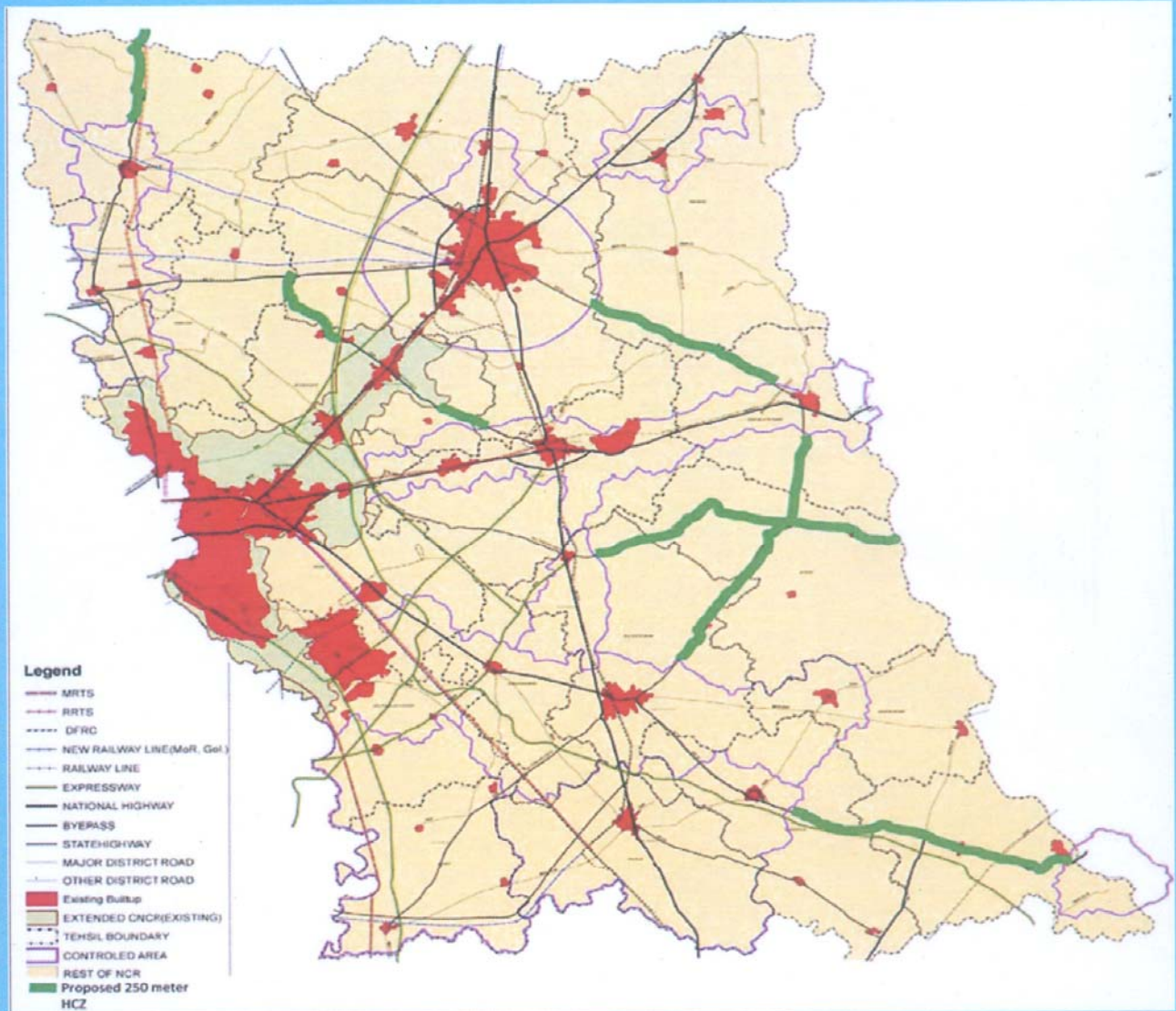


# Sub - Regional Plan

## 2021/31



NCR Planning Cell, Uttar Pradesh

## INTRODUCTION

The Interim report has been prepared on the basis of findings/ outcome of study and analysis of 19 aspects viz., Policy Zones, Demographic profile, Settlement pattern, Economic activity & fiscal policy, Transport, Power, Water, Sewerage, Solid Waste management, Drainage & Irrigation, Telecommunication, Shelter, Social infrastructure (Health, Education), Heritage & Tourism, Environment, Disaster Management, Rural Management, Regional Land Use, Implementation Strategy, Management Structure & Resource Mobilization are included in the preparation of Sub-regional Plan 2021/31 of UP part of NCR. Where ever found possible, various options of projections/ policies/ proposals have been suggested in this report for the review and the final decision by the CRC.

The report includes the proposals that were conceived and found necessary on the basis of problems and potentials identified and finalized by the CRC in the study and analysis of different aspects of Sub-Regional Plan-2021/31 within the broad policy framework of Regional Plan 2021 of NCR. As per the ToR for preparation of Sub-regional Plan 2021/31, apart from proposals mentioned above all mega projects/ schemes/ townships etc., which were conceived and planned by different departments of State government as well as Central government, are included as it is in this report.

The Draft final report will be prepared on the basis of finalizing the various options of projections/ policies/ proposed townships and other proposals suggested in the report by CRC.

## Contents

<b>CHAPTER 1. POLICY ZONE AND CONCEPT .....</b>	<b>1</b>
1.1 POLICY ZONES OF UP SUB-REGION .....	2
1.1.1 <i>Extended Central National Capital Region</i> .....	2
1.1.2 <i>Rest of NCR</i> .....	7
1.2.3 <i>Highway Corridor Zone</i> .....	10
<b>CHAPTER 2. DEMOGRAPHIC PROFILE &amp; SETTLEMENT PATTERN .....</b>	<b>15</b>
2.1 SUB-REGION WISE ANALYSIS .....	15
2.2 STRATEGIES FOR DEVELOPMENT OF SETTLEMENT SYSTEM .....	18
2.3 PROPOSED HIERARCHY OF SETTLEMENTS.....	19
2.3.1 <i>Identification of Sub-regional Centres, Service Centres, Central Villages and Basic Villages</i> .....	25
2.3.2 <i>Options of various methodologies to determine hierarchy of settlements</i> .....	27
2.4 POPULATION ASSIGNMENT .....	40
<b>CHAPTER 3. ECONOMIC ACTIVITY AND FISCAL POLICY .....</b>	<b>46</b>
3.1 ECONOMIC ACTIVITY: POLICIES AND PROPOSALS.....	46
3.1.1 <i>Regional Level Policies</i> .....	46
3.1.2 <i>Activity Specific Policies</i> .....	49
3.2 FUTURE OCCUPATIONAL STRUCTURE .....	55
3.3 FISCAL POLICY: POLICIES AND PROPOSALS .....	58
3.3.1 <i>Infrastructure</i> .....	58
3.3.2 <i>Power &amp; Energy</i> .....	59
3.3.3 <i>Fiscal Assistance-Infrastructure Projects</i> .....	59
3.3.4 <i>Stamp Duty &amp; Registration Charges on Land</i> .....	60
3.3.5 <i>Fiscal Incentives- Service Sector</i> .....	60
3.3.6 <i>Incentives for new investment in the State</i> .....	61
3.3.7 <i>Incentives to existing units</i> .....	61
3.3.8 <i>Deregulation and Simplification</i> .....	63
3.3.9 <i>Other Matters</i> .....	63
<b>CHAPTER 4. TRANSPORTSTION .....</b>	<b>65</b>
4.1 PROPOSALS .....	65
4.1.1 <i>Objectives</i> .....	65
4.1.2 <i>How?</i> .....	65
4.1.3 <i>Proposals</i> .....	65
4.1.4 <i>Proposed Policies for regional road transportation network</i> .....	71
4.2 RAILWAYS .....	76
4.2.1 <i>Proposed Rail Transport</i> .....	76
4.3 AIRWAYS.....	84
4.4 WATERWAYS .....	84
4.5 INTEGRATED MULTI MODAL TRANSPORT PLAN - COMPONENTS .....	85
4.5.1 <i>Road Safety Strategies</i> .....	85
4.6 POLICIES AND STRATEGIES .....	86
<b>CHAPTER 5. INFRASTRUCTURE FACILITIES .....</b>	<b>88</b>
5.1 POWER: POLICIES .....	88
5.1.1 <i>Power generation</i> .....	88
5.1.2 <i>Power Transmission and Distribution</i> .....	88
5.1.3 <i>Energy Saving</i> .....	89
5.1.4 <i>Other Policies</i> .....	90

5.2	WATER: DEMAND PROJECTIONS .....	92
5.2.1	<i>Domestic Water Demand</i> .....	92
5.2.2	<i>Fire fighting Demand</i> .....	94
5.2.3	<i>Unaccounted for Water</i> .....	96
5.3	WATER: POLICIES AND PROPOSALS .....	98
5.3.1	<i>Uttar Pradesh Water Policy 2007</i> .....	100
5.3.2	<i>Water Tariff</i> .....	101
5.4	SEWERAGE: WASTE WATER GENERATION PROJECTIONS .....	102
5.5	SEWERAGE: POLICIES .....	104
5.6	DRAINAGE: POLICIES .....	106
5.6.1	<i>Drainage System Planning</i> .....	106
5.6.2	<i>Maintenance of existing drains</i> .....	106
<b>CHAPTER 6. SHELTER .....</b>		<b>110</b>
6.1	POLICIES AND SCHEMES RELATED TO HOUSING DEVELOPMENT .....	110
6.2	STRATEGY/ POLICIES .....	113
6.2.1	<i>Assessment of Demand/ Need</i> .....	113
6.2.2	<i>Development and Construction of Shelters</i> .....	114
6.2.3	<i>Allocation of Shelters</i> .....	115
<b>CHAPTER 7. SOCIAL INFRASTRUCTURE .....</b>		<b>117</b>
7.1	POLICIES .....	122
<b>CHAPTER 8. HERITAGE AND TOURISM .....</b>		<b>135</b>
8.1	POLICIES AND PROPOSALS .....	135
8.1.1	<i>Policies for the Man-made Heritage Sites</i> .....	135
8.1.2	<i>Policies for the Natural Heritage Sites</i> .....	136
8.1.3	<i>General policies for the Tourism</i> .....	136
8.1.4	<i>Identified High Potential Tourism Sites</i> .....	138
8.1.5	<i>Identified Other Important Proposals for Heritage &amp; Tourism Sites</i> .....	156
8.1.6	<i>Proposed Tourism Circuit in UP Sub-region</i> .....	165
<b>CHAPTER 9. ENVIRONMENT AND DISASTER MANAGEMENT .....</b>		<b>170</b>
9.1	ENVIRONMENT: POLICIES AND PROPOSALS .....	170
9.1.1	<i>Highly Sensitive Zone</i> .....	170
9.1.2	<i>Sensitive Zone</i> .....	172
9.1.3	<i>Pollution Control</i> .....	173
9.2	DISASTER MANAGEMENT: POLICIES .....	174
9.2.1	<i>Earthquake</i> .....	174
9.2.2	<i>Flood</i> .....	174
9.2.3	<i>Wind</i> .....	175
9.2.4	<i>Fire</i> .....	175
9.2.5	<i>General Policies for all type of Hazards</i> .....	176
<b>CHAPTER 10. RURAL DEVELOPMENT .....</b>		<b>178</b>
10.1	POLICIES .....	178
<b>CHAPTER 11. SUB-REGIONAL LAND USE .....</b>		<b>179</b>
11.1	PROPOSED REGIONAL LAND USES .....	179
<b>CHAPTER 12. IMPLEMENTATION STRATEGY, MANAGEMENT STRUCTURE AND RESOURCE MOBILIZATION .....</b>		<b>191</b>
1.1	IMPLEMENTATION STRATEGY .....	191

1.2	MANAGEMENT STRUCTURE.....	192
	<i>Creation of Sub-Regional Area Development Authority for planned Development of the urban and rural areas of UP Sub-region of NCR.....</i>	<i>193</i>
1.3	RESOURCE MOBILIZATION.....	195

Index of Tables

Table 2-1 Hierarchy of Settlements .....	20
Table 2-2 Designated Metro Centres as per NCR Regional Plan 2021.....	20
Table 2-3 Proposed Regional Centres .....	25
Table 2-4 Indicators for Determining Development Potential of Settlements.....	27
Table 2-5 Proposed Sub-Regional Centres.....	29
Table 2-6 Differential Weightage Method -1 for selection of Sub-Regional Centres .....	32
Table 2-7 Proposed Sub-Regional Centres.....	33
Table 2-8 Differential Weightage Method -2 for selection of Sub-Regional Centres .....	36
Table 2-9 Proposed Sub-Regional Centres.....	37
Table 2-10 Proposed Sub-Regional Centres by Different Methods.....	39
Table 2-11 Assigned Population of NCR and Sub-regions (in lakhs) .....	40
Table 2-12 Proposed Metro Centres as per NCR Regional Plan 2021 .....	41
Table 2-13 Proposed Regional Centres as per NCR Regional Plan 2021.....	41
Table 2-14 Proposed Sub-Regional Centres as per NCR Regional Plan 2021 .....	42
Table 2-15 Proposed Sub-Regional Centres population .....	43
Table 2-16 Category for selection of Population for Settlement.....	44
Table 2-17 Proposed Sub-Regional Centres population .....	44
Table 3-1 Identified cash-crops in UP Sub-region indicating specific varieties .....	52
Table 3-2 Proposed Economic Structure of the Metro Centres .....	56
Table 4-1 Proposals for the Roads/ Links in UP Sub-region.....	65
Table 4-2 Components of Proposed Nodes in DMIC-Uttar Pradesh.....	77
Table 4-3 New Sections Proposed by DMRC in Uttar Pradesh .....	81
Table 4-4 Prioritisation and Cost of RRTS Corridor .....	81
Table 4-5 Area Reserved for Channels.....	84
Table 5-1 Domestic Water Demand Projections for Metro Centres (2011-2031).....	92
Table 5-2 Domestic Water Demand Projections for Regional Centres (2011-2031) .....	93
Table 5-3 Domestic Water Demand Projections for Sub-Regional Centres (2011-2031).....	93
Table 5-4 Fire fighting Water Demand Projections for Metro Centres (2011-2031).....	94
Table 5-5 Fire fighting Water Demand Projections for Regional Centres (2011-2031).....	95
Table 5-6 Fire fighting Water Demand Projections for Sub-Regional Centres (2011-2031).....	95
Table 5-7 Unaccounted for Water Projections for Metro Centres (2011-2031) .....	96
Table 5-8 Unaccounted for Water Projections for Regional Centres (2011-2031).....	97
Table 5-9 Unaccounted for Water Projections for Sub-Regional Centres (2011-2031) .....	97
Table 5-10 Unaccounted for Water Projections for Sub-Regional Centres (2011-2031) .....	98
Table 5-11 Waste Water Generation in Metro Centres (2011-2031).....	102
Table 5-12 Waste Water Generation in Regional Centres (2011-2031) .....	102
Table 5-13 Waste Water Generation in Sub-Regional Centres (2011-2031).....	103
Table 7-1 Projections for Educational Facilities upto 2031- Metro Centres.....	125
Table 7-2 Projections for Educational Facilities upto 2031- Regional Centres .....	125
Table 7-3 Projections for Educational Facilities upto 2031- Sub Regional Centres .....	126
Table 7-4 Projections for Educational Facilities upto 2031- Service Centres .....	127
Table 7-5 Projections for Educational Facilities upto 2031- Central Villages .....	128
Table 7-6 Projections for Health Facilities upto 2031- Metro Centres .....	129

Table 7-7 Projections for Health Facilities upto 2031- Regional Centres .....	129
Table 7-8 Projections for Health Facilities upto 2031- Sub Regional Centres .....	130
Table 7-9 Projections for Health Facilities upto 2031- Service Centres.....	131
Table 7-10 Projections for Health Facilities upto 2031- Central Villages.....	133
Table 8-1 Proposed Tourism Circuit in UP Sub-Region .....	165
Table 11-1 Density norms suggested in NCR Regional Plan 2021 .....	184
Table 11-2 List of Transport Networks where Green Buffer is to be Provided.....	186

### Index of Figures

Figure 8-1 Proposal Map of Hastinapur Tourist Hub .....	142
Figure 8-2 Proposal Map of Garhmukteshwar Tourist Hub.....	145
Figure 8-3 Proposal Map of Greater Noida Recreational Hub.....	148
Figure 8-4 Recreational-Cum-Institutinal Hub along the Hindon River at Ghaziabad .....	150
Figure 8-5 Religious cum Recreational Tourist Hub, Narora.....	152
Figure 8-6 Proposal Map for the Uttar Pradesh Tourism in UP Sub-region (conceptual plan) .....	155

Index of Maps

Map 1-1 Existing Policy Zones of UP Sub-region, NCR (Option-1) .....2

Map 1-2 Existing CNCR and Proposed Extended CNCR Policy Zones of UP Sub-region, NCR (Option-II) .....4

Map 1-3 Existing CNCR and Proposed Extended CNCR Policy Zones of UP Sub-region, NCR (Option-III) .6

Map 1-4 Existing Rest of NCR as per Regional Plan 2021 (Option-1) ..... 7

Map 1-5 Existing Rest of NCR and Proposed Extended Rest of NCR Policy Zones of UP Sub-region, NCR (Option-II).....8

Map 1-6 Existing Rest of NCR and Proposed Extended Rest of NCR Policy Zones of UP Sub-region, NCR (Option-III).....9

Map 1-7 500 meter Highway Corridor Zone for UP Sub-region, NCR.....11

Map 1-8 Proposed Highway Corridor Zone for UP Sub-region, NCR- Option I.....13

Map 1-9 Proposed Highway Corridor Zone for UP Sub-region, NCR- Option II.....14

Map 2-1 Existing Census Towns as per Census 2001 .....16

Map 2-2 Proposed Sub-regional Centres of UP Sub-region (as per option 1 {Bisection method} & 2a {Similar Weightage to all indicators}) .....30

Map 2-3 Proposed Sub-regional Centres of UP Sub-region (as per option 2b {Differential Weightage Method -1}).....34

Map 2-4 Proposed Sub-regional Centres of UP Sub-region (as per option 2c {Differential Weightage Method -2}).....38

Map 4-1 Proposed Upgradation of Roads & Bridges on Road of UP Sub-region .....73

Map 4-2 Proposed Laning of Roads of UP Sub-region .....74

Map 4-3 Notified Road Transport Proposals of UP Sub-region .....75

Map 4-4 Notified Rail Transport Proposals of UP Sub-region.....79

Map 4-5 Major Transport Proposals as per Regional Plan 2021 and Transport Functional Plan 2032 .....83

Map 7-1 Existing availability of Colleges in UP Sub-region .....118

Map 7-2 Existing availability of Hospitals in UP Sub-region .....119

Map 7-3 Existing Educational Facilities in UP Sub-region .....120

Map 7-4 Existing Health Facilities in UP Sub-region .....121

Map 8-1 Identified High Potential Tourism Sites (conceptual plan).....163

Map 8-2 Identified Other Heritage & Tourism Site.....164

Map 8-3 Proposed Tourist Circuits and Tourist Centre/ Complexes of UP Sub-Region (conceptual plan) .166

Map 8-4 Proposed Natural and Heritage Sites of UP Sub-Region (conceptual plan) .....168

Map 8-5 Proposed Pilgrimage Sites of UP Sub-Region (conceptual plan) .....169

Map 11-1 Proposed Land use of UP Sub-region 2021/31.....181

## CHAPTER 1. POLICY ZONE AND CONCEPT

Regional Plan-2021 proposes "to harness the spread of the developmental impulse and agglomeration economies generated by Delhi for harmonized, balanced and environmentally sustainable spatio-economic development of the NCR with effective cooperation of the participating States".

The NCR Regional Plan 2021 aims "to promote growth and balanced development of the National Capital Region". This can be sought to be achieved in the UP Sub-regional Plan 2021/31 through:

1. Identification and development of regional settlements capable of providing suitable economic base for future growth by absorbing the economic development impulse of NCT-Delhi.
2. Providing efficient and economical transportation well integrated with the land use patterns, in order to support the balanced regional development in such identified settlements.
3. Minimizing adverse environmental impacts resulting from the process of development proposed in the Sub-Region.
4. Developing selected urban settlements with urban infrastructural facilities such as transport, power, communication, drinking water, sewerage, drainage etc. comparable with NCT-Delhi.
5. Providing a rational land use pattern in order to protect and preserve good agricultural land and utilise the unproductive land for urban uses.
6. Promoting sustainable development in the region to improve quality of life.
7. Improving the efficiency of existing methods of resource mobilization and adopt innovative methods of resource mobilization and facilitate, attract and guide private investment in desired direction.

Keeping the above objectives in view and the policy zones proposed in the Regional Plan-2021 (Extended Central National Capital Region , Highway Corridor Zone and Rest of NCR ), the UP Sub-regional Plan 2021/31 has proposed the development of the sub-region through policy zones suggested below:

1. Extended Central National Capital Region ,
2. Highway Corridor Zone and
3. Rest of NCR

### 1.1 Policy Zones of UP Sub-region

#### 1.1.1 Extended Central National Capital Region

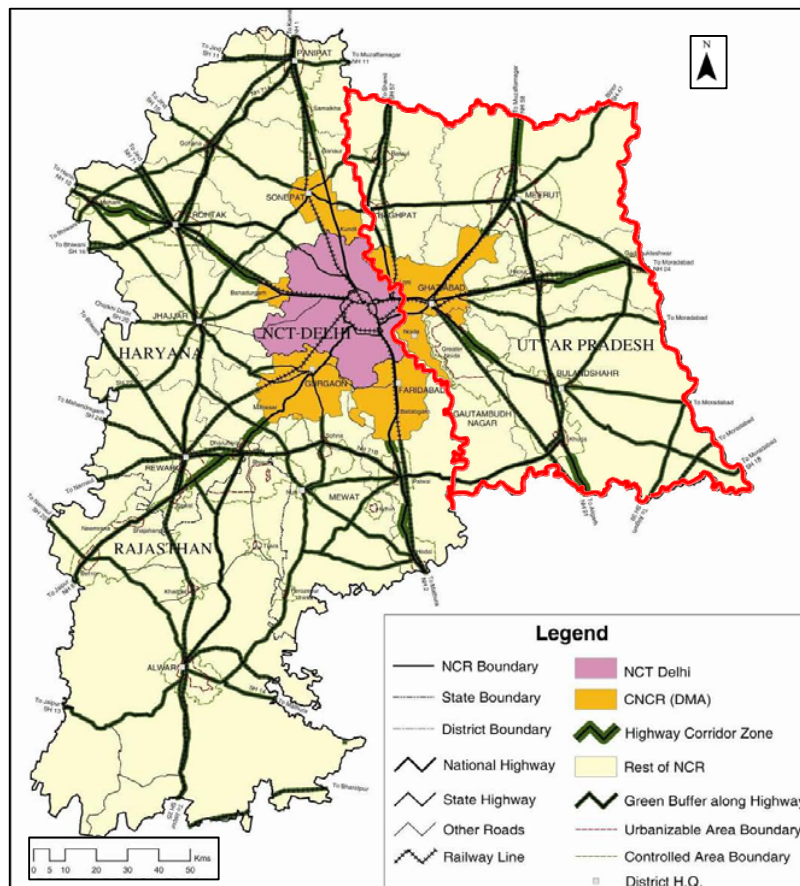
The Central NCR as identified in the NCR Regional Plan 2021 comprised of the notified controlled/development/regulated areas of contiguous towns of Ghaziabad- Loni and NOIDA in UP sub-region of NCR. In the UP Sub-regional Plan new notified controlled/development/regulated areas of new towns which are showing potential for growth similar to the CNCR areas has been added and is termed as the Extended CNCR.

The opportunities presented by Extended CNCR need to be upgraded in order to enable it to compete effectively with NCT-Delhi in terms of economic opportunities, educational facilities, health facilities, comprehensive transport system, residential opportunities, social infrastructure and quality of environment. In order to achieve a strong economic base the major economic and non-polluting activities wanting to get located in NCT-Delhi should be located in the urbanisable areas planned in this zone.

In order to achieve the envisioned development in this policy zone, emphasis should be given to infrastructure including transportation, land use (especially promotion of potential economic activities), conservation and tourism.

#### Option I

First option will be to keep the Extended CNCR as it is as it is proposed in the Regional Plan 2021 (Map 1-1).



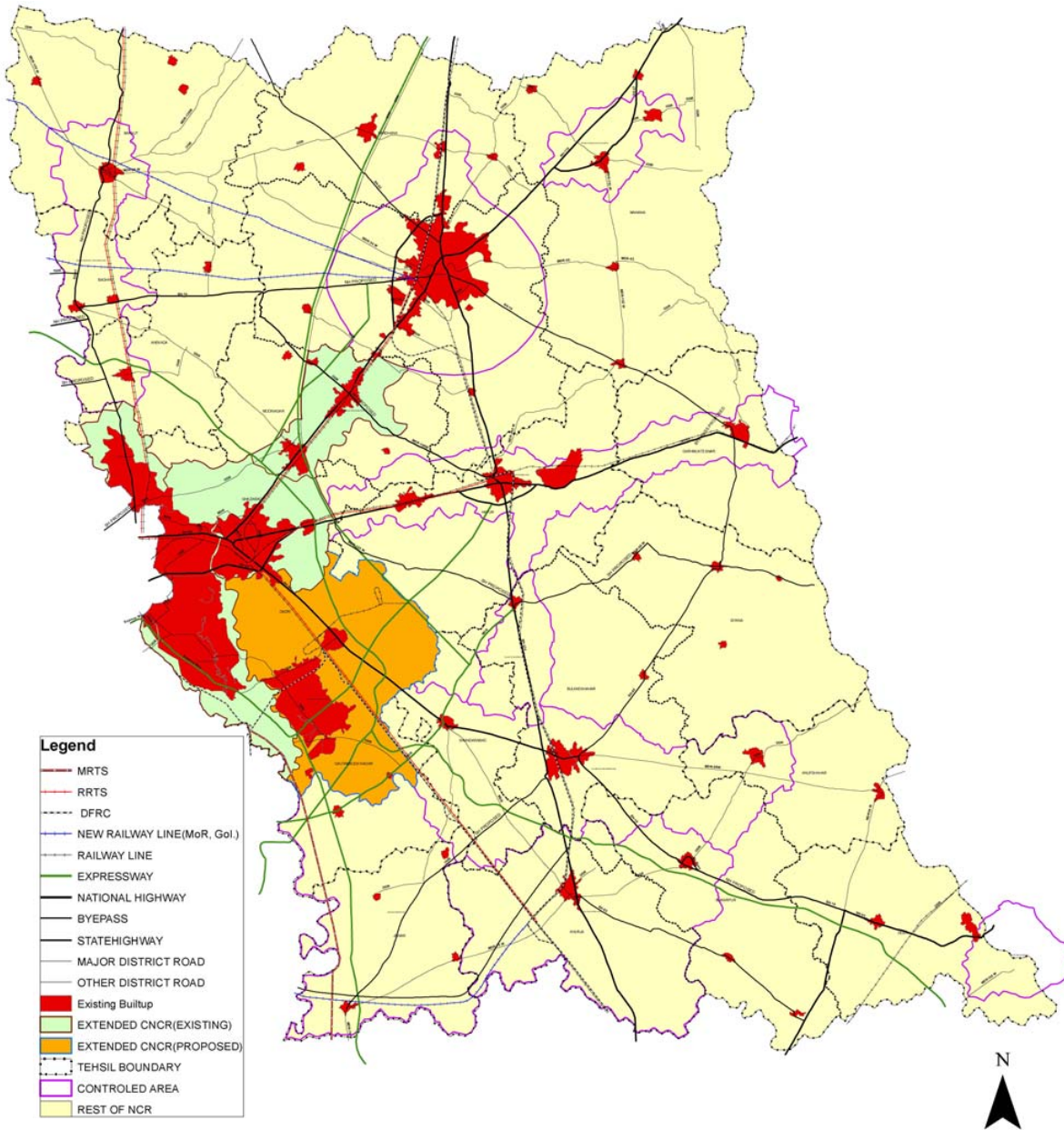
Map 1-1 Existing Policy Zones of UP Sub-region, NCR (Option-1)

**Option II**

It is based on **intense development pattern** which includes existing CNCR in UP Sub-region of NCR, Greater Noida-I and Dadri tehsil boundary (Map 1-2). This area is undergoing very rapid development because of following factors:

- Nearness to Delhi
- Nearby available areas of Noida and Ghaziabad are approaching a saturation point
- Induced development both by State as well as Central Govt. in the form of mega infrastructure projects (eg. Major transport projects, Logistic parks, SEZs and other economic activities)

Map 1-2 Existing CNCR and Proposed Extended CNCR Policy Zones of UP Sub-region, NCR (Option-II)

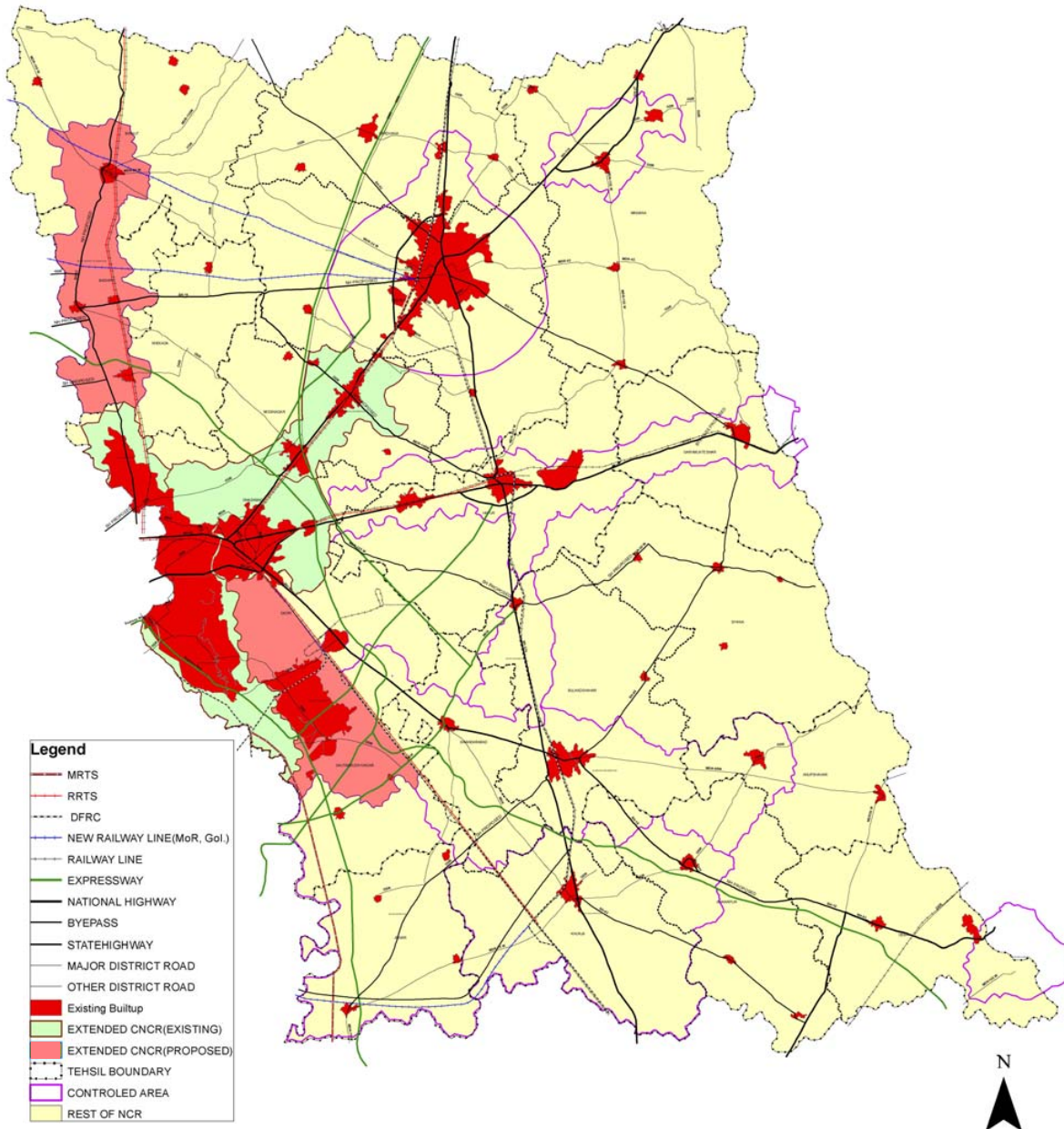


### Option III

Area undergoing **rapid development and areas having intense potential for development** is included in this option. It includes existing CNCR in UP Sub-region of NCR, Greater Noida-I, Dadri tehsil and Khekada- Baghpat – Baraut development area (Map 1-3). The reasons for rapid development in Greater Noida-1 and Dadri have been mentioned in option-II. The intense potentials of Baghpat- Baraut- Khekada development area is mentioned below:

- Nearby available areas of Noida and Ghaziabad is approaching a saturation point.
- Areas of Baghpat are almost at the door of Delhi.
- Cheapest land cost within a close vicinity to Delhi.
- Available direct links to existing as well as in- Pipeline, Transportation network projects.
- Ample possibilities to link this area directly to Delhi.

Map 1-3 Existing CNCR and Proposed Extended CNCR Policy Zones of UP Sub-region, NCR (Option-III)



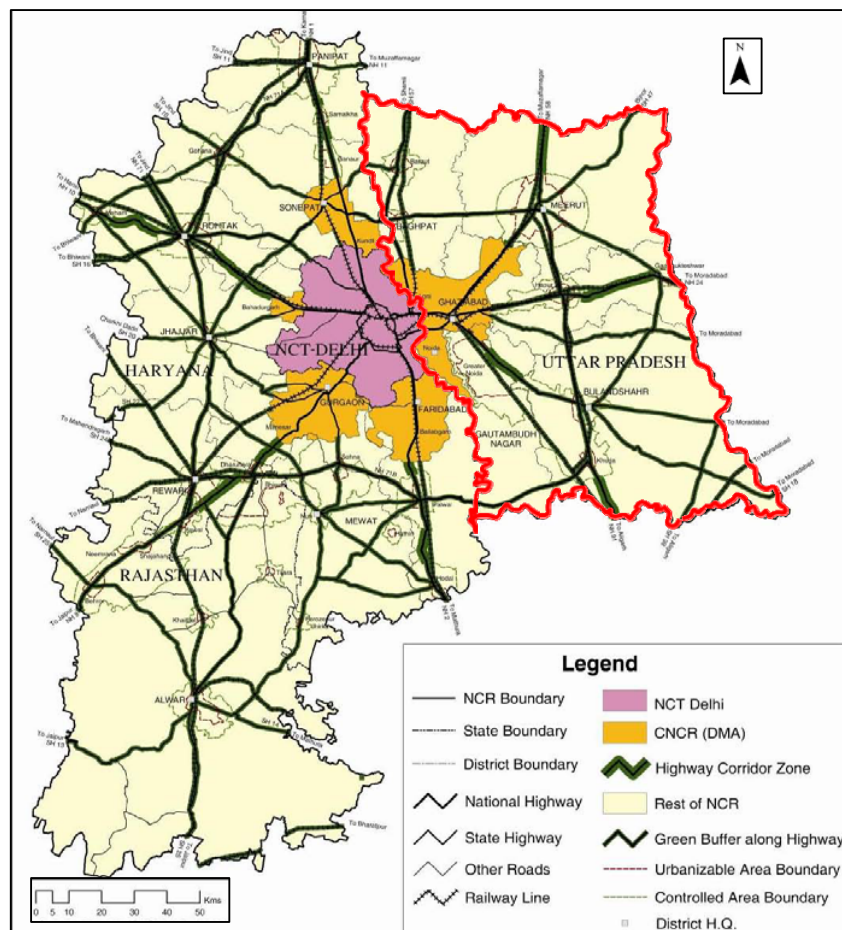
1.1.2 Rest of NCR

As per NCR Regional Plan 2021, in the Rest of NCR the basic policy of Regional Plan-2001 for accelerated development of both urban and rural areas will continue. Infrastructure has to be substantially upgraded at local and regional levels (both by State and Central Governments) especially areas identified for induced growth based on industries, heritage and pilgrimage tourism and private sector promoted development of institutions such as for engineering, management, medical education and others. The other identified hierarchy of settlements like the sub-regional centers, service centers, central villages and basic villages will also guide the development of the rest of NCR as these will cater to the institutional and service needs of other villages of the sub-region

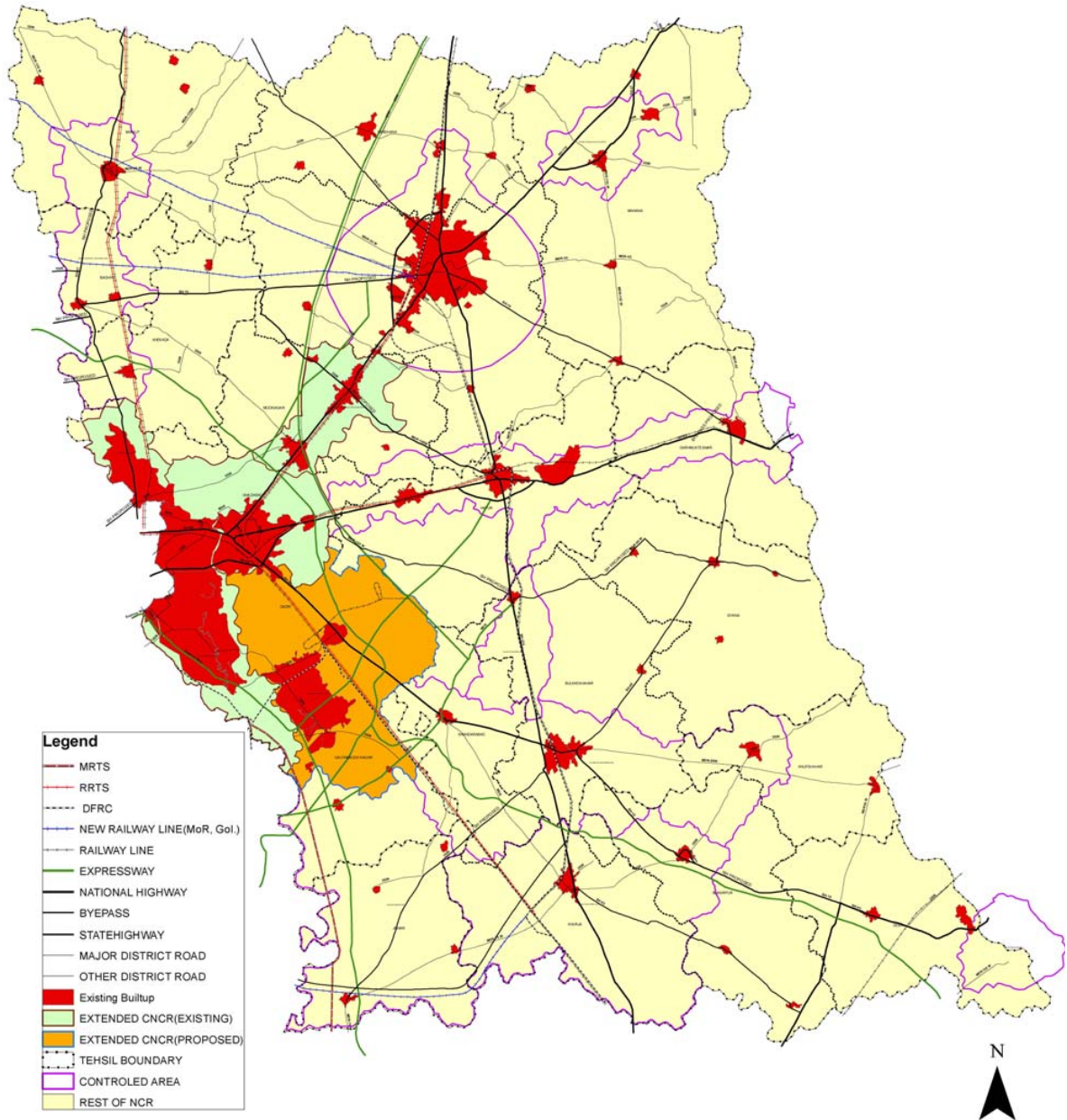
This will at a later stage make them more attractive for locating economic and allied activities and for attracting private sector investment. The land use proposals, economic restructuring etc on the basis of natural trend, current and future demand and a general policy of balanced development will be the major guiding factor in subsequent chapters of this report for this area.

The maps showing different options for Rest of NCR has shown in Map 1-4 to Map 1-6.

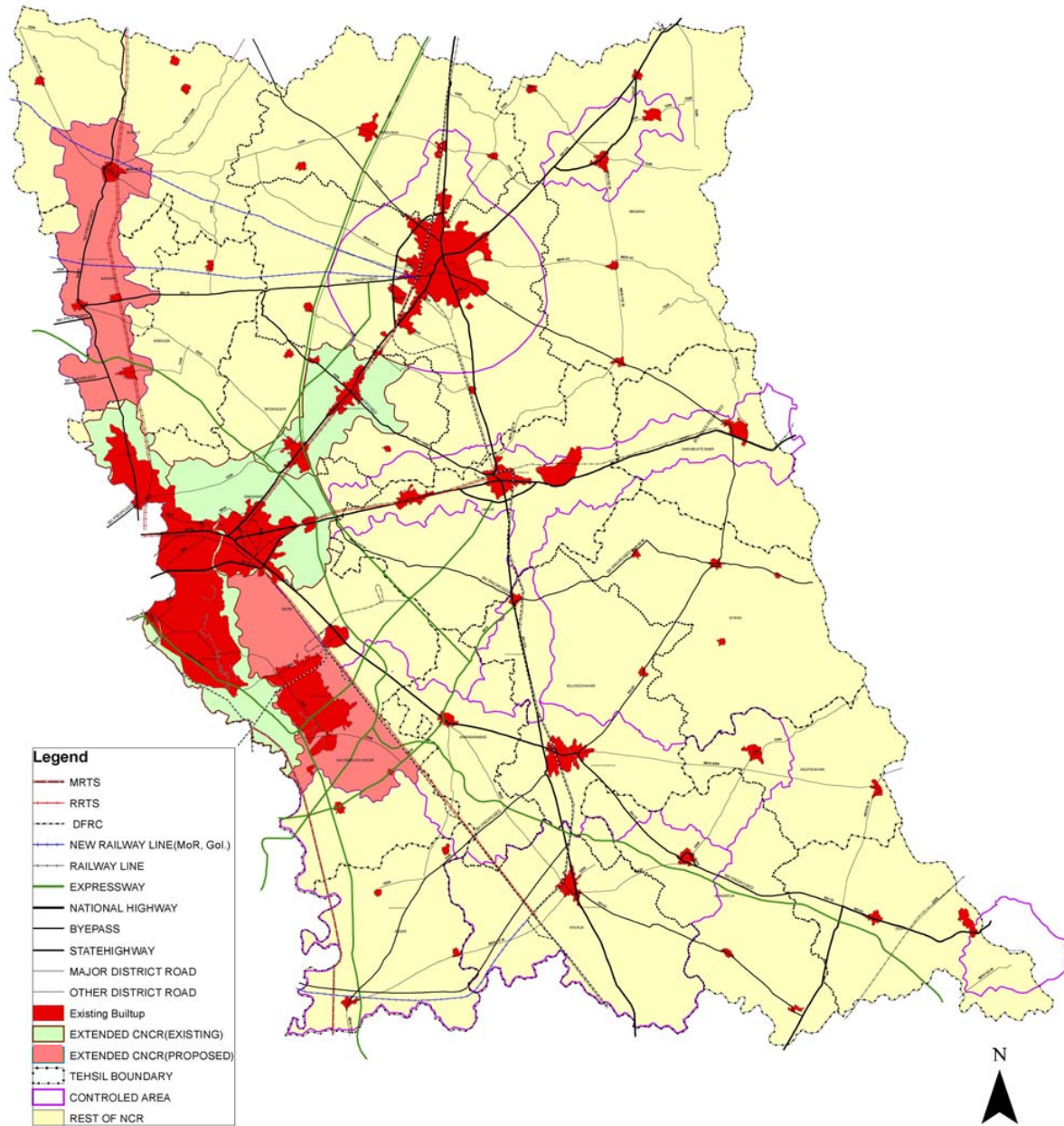
**Map 1-4 Existing Rest of NCR as per Regional Plan 2021 (Option-1)**



Map 1-5 Existing Rest of NCR and Proposed Extended Rest of NCR Policy Zones of UP Sub-region, NCR (Option-II)



Map 1-6 Existing Rest of NCR and Proposed Extended Rest of NCR Policy Zones of UP Sub-region, NCR (Option-III)



### 1.2.3 Highway Corridor Zone

#### Highway Corridor Zone (minimum 500 meter wide)

A Highway Corridor Zone as proposed in the Regional Plan 2021 is conceptualized with a minimum width of 500 metres on either side of the right-of-way (ROW) along the National Highways (NH) 24, 58, 91, 93, 119 and 334 to enable the planned and regulated development along these highways outside the existing controlled/development/regulated areas.

The Highway Corridor Zone has to be delineated and notified by the U. P. State Government but at present there is no act available having provisions for this kind of notification. Therefore keeping in view the available legal framework, the area under highway corridor zone shall be added into the development area of nearby development authority. Apart from the National Highways mentioned above Noida expressway connecting Noida with Delhi has come up, similarly another expressway connecting Greater Noida to Agra (Yamuna Expressway) is nearly at completion stage which also has to be covered under Highway Corridor Zone.

The proposed width of Highway Corridor Zone is minimum while notifying the entire revenue village should be notified under this zone instead of a part of revenue village covered by Highway Corridor Zone line. Utmost care shall be taken while planning these zones to ensure that the activities being permitted in this zone are segregated from highway traffic through proper green belts, service roads and controlled access to the highways. The proposed extension in development areas for Highway Corridor Zone is shown on Map 1-7.

**Map 1-7 500 meter Highway Corridor Zone for UP Sub-region, NCR**

**250 meter wide Highway Corridor Zone**

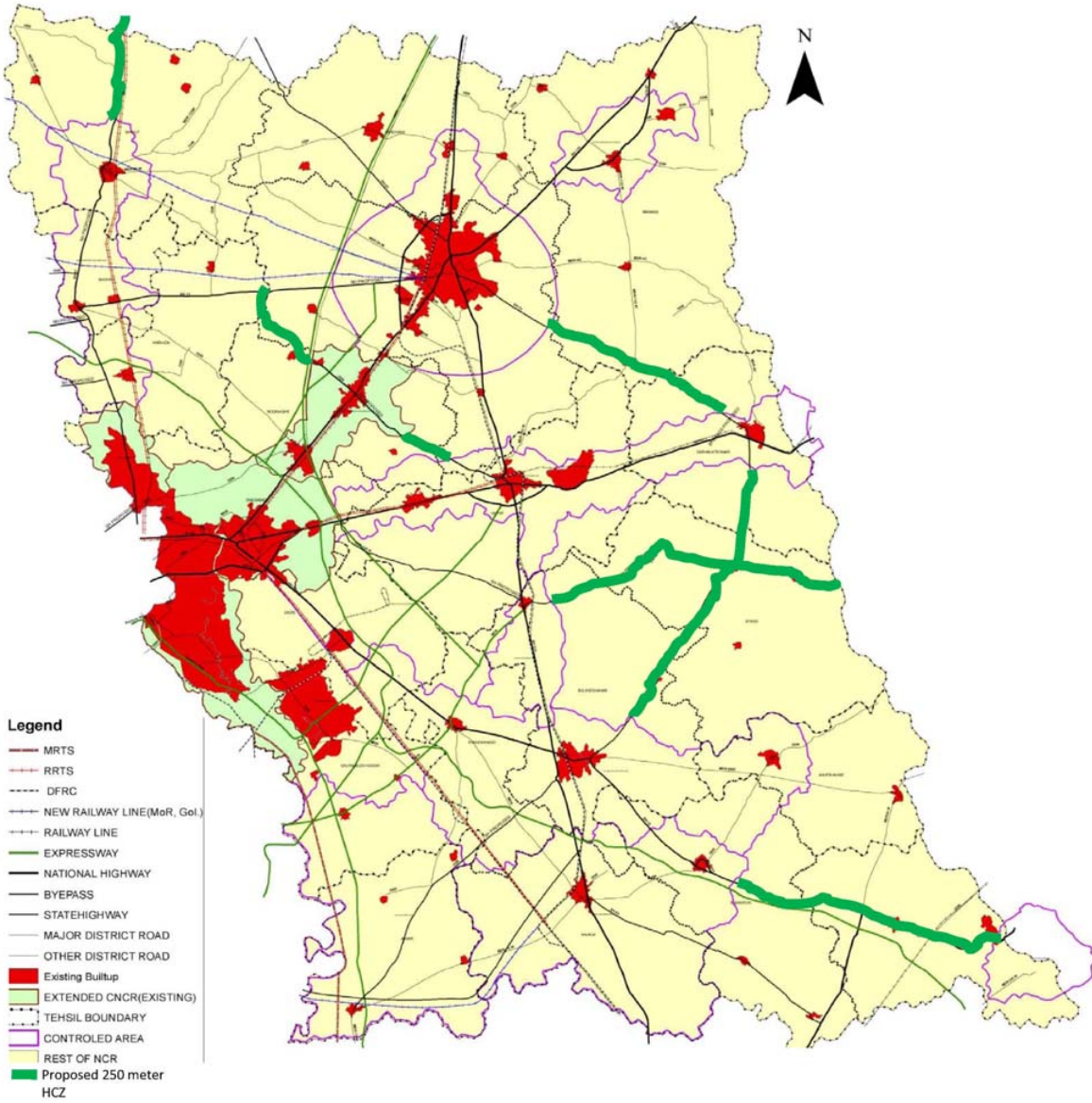
A second tier Highway Corridor Zone is suggested along the important roads proposed for upgradation from lower order to state highway and national highways. The width of these highway corridors shall be 250 meter (or 250-100 meter to be decided by CRC). The area under this highway corridor zone shall also be made part of nearby development area/ controlled area/ regulated area. Development in these areas shall follow the same principles as has been suggested for 500 meter Highway Corridor zone above. Till these areas are not included in any development area/ controlled area/ regulated area, the development activities shall be permitted on the basis of zoning regulations of nearby master plan by the competent authority.

The Highway Corridor Zones along the roads other than already earmarked in Regional Plan 2021 can have following options:

**Option-1**

A highway corridor zone of 250 metre, green buffer on either side of ROW of all State highways and some important MDRs/ ODRs outside the existing controlled/development/regulated areas are suggested as below:

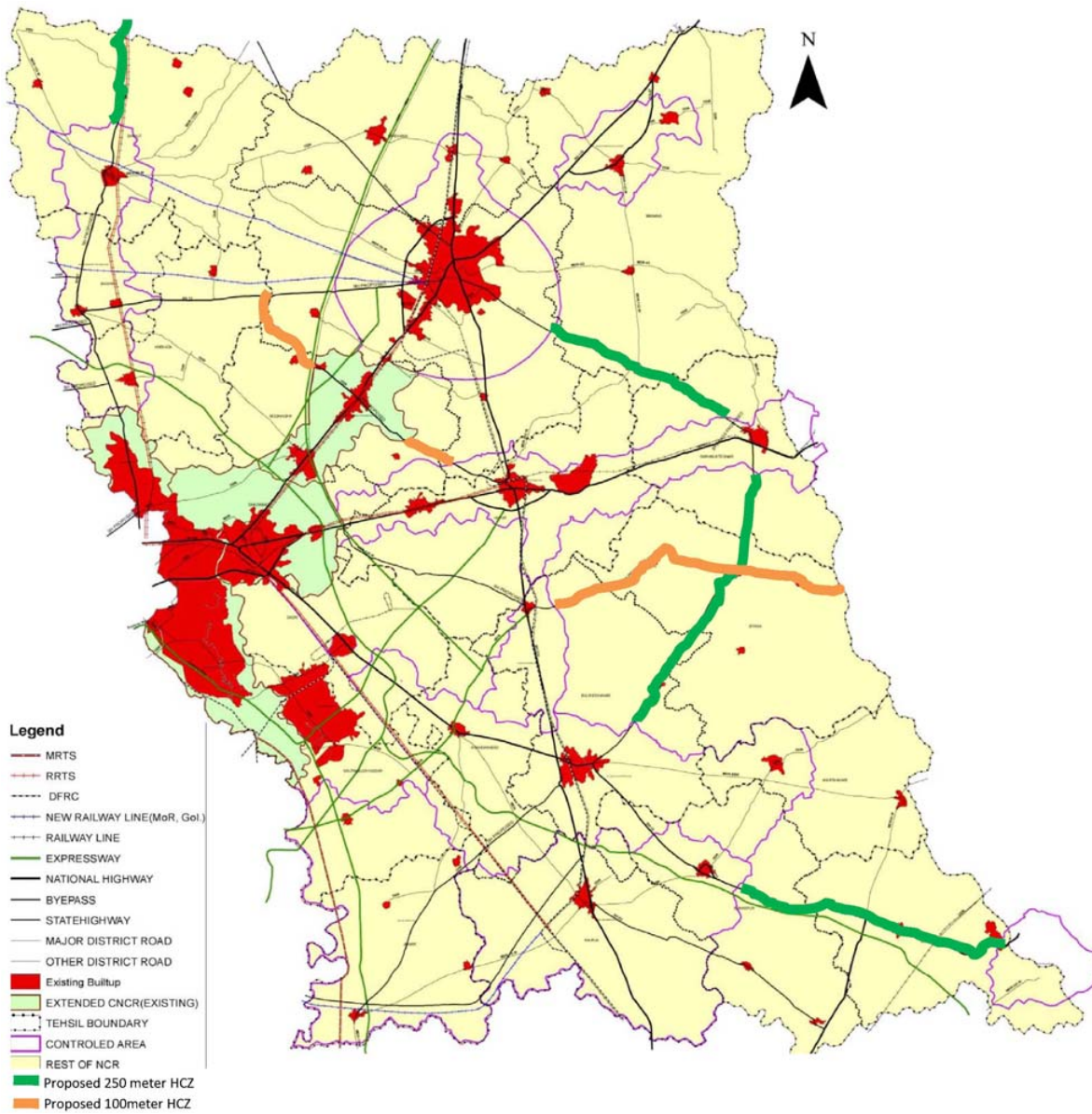
Map 1-8 Proposed Highway Corridor Zone for UP Sub-region, NCR- Option I



**Option-2**

A highway corridor zone of 250 metre, green buffer on either side of ROW of all proposed National/ State highways and 100 meter green buffer on either side of ROW for some important MDRs/ ODRs (having high potentials to be developed as alternative routes and proposed for upgradation) outside the existing controlled/development/regulated areas are suggested below:

**Map 1-9 Proposed Highway Corridor Zone for UP Sub-region, NCR- Option II**



## CHAPTER 2. DEMOGRAPHIC PROFILE & SETTLEMENT PATTERN

The population of UP sub-region was distributed over 3,234 settlements in 2001. Of the total settlements, 66 are urban accounting for a population of 46.14 lakhs (39.88%) and rest 3,168 rural settlements accommodating 69.55 lakhs (60.12%) persons. Outside NCTD, the U. P. Sub-region has highest preponderance of urban settlements vis-à-vis rural settlements.

Considering population size of urban settlements as per census classification categories, UP Sub-region has a good spread of settlements across classes I to V towns, with class IV being the nodal size. Class VI towns are almost non-existent across the region. In 2001, as much as 64% of urban population resided in 7 class I towns as compared to 52.9% in 1981. Thus the population has tendency to concentrate in cities rather than towns. Between 1981 and 2001, share of class I and II towns increased and that of class III to VI towns declined drastically.

The priority towns are those towns that were identified in the NCR Regional Plan 2001 as Regional Centres. The priority towns of UP Sub-region are Meerut, Hapur, Bulandshahr and Khurja. These priority towns were planned to achieve a total population of 49 lakhs, but achieved a population of 28.17 lakhs only. It is obvious that the development potential of the chosen town was over assessed and enough inducement was not provided through infrastructure development.

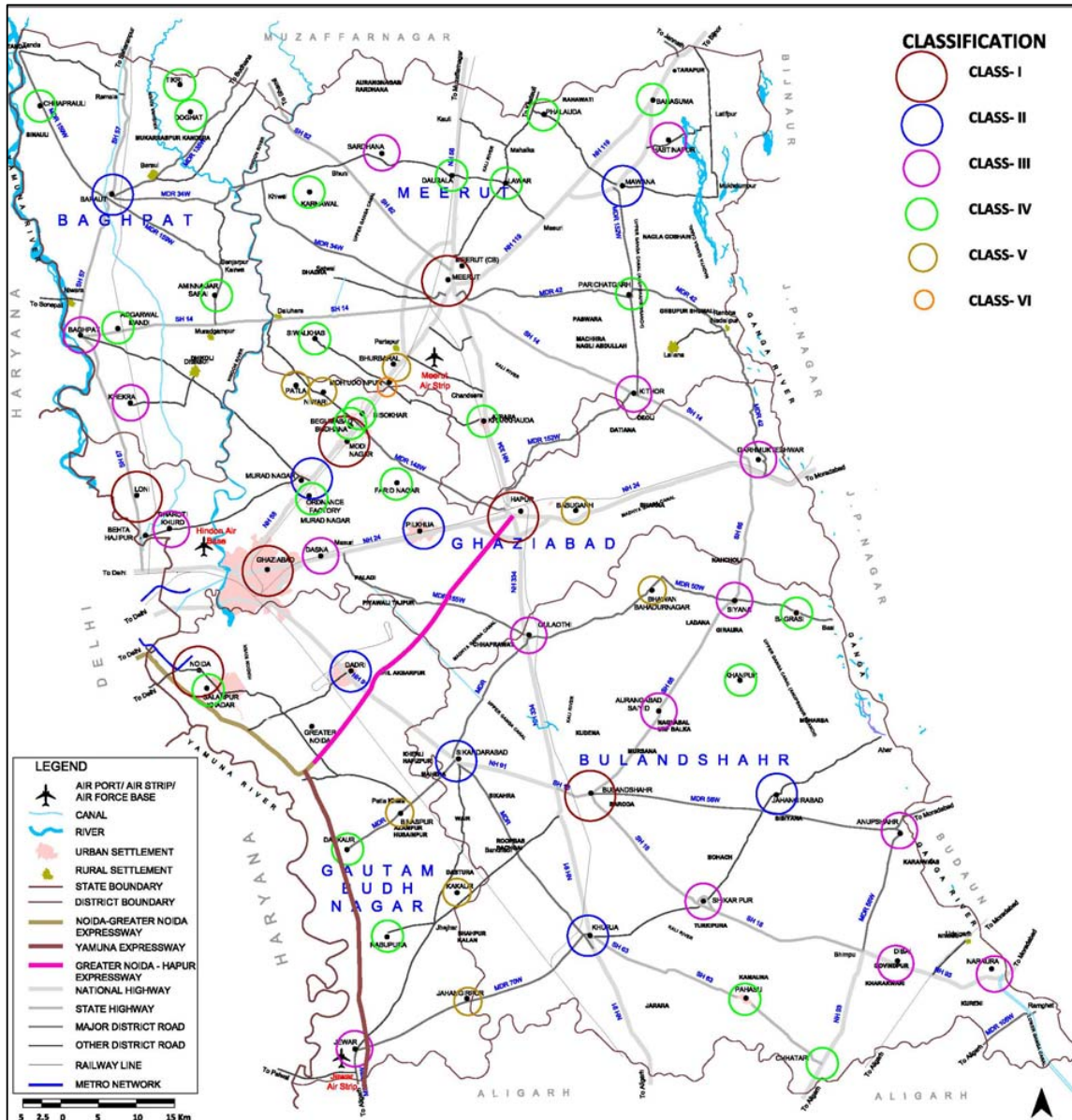
The reviews of Regional Plan 2001 as well as the result of census 2001 indicate that there has been no significant change in the earlier trends. Delhi has continued to grow in spite of curbs prescribed in the MPD. The actual population of Delhi overshot the projected or targeted population during 1981-1991 and also during 1991-2001.

### **2.1 Sub-Region Wise Analysis**

The urban centres of Uttar Pradesh displayed the following characteristics:

1. The distribution of urban centres is uneven across the sub-region. While in Gautam Budh Nagar District, there is one urban settlement for 33 villages, in Bulandshahr district, there is one urban settlement for every 77 rural settlements. This indicates predominantly rural character of Bulandshahr District.
2. Urban settlement pattern is dominated by Class I towns in the three districts of Ghaziabad, Meerut and Gautam Budh Nagar where 77.87, 73.61 and 67.88 per cent of respective urban population of the districts are contained in Class I towns.

Map 2-1 Existing Census Towns as per Census 2001



3. The settlement scenario in the district of Bulandshahr is dominated by Class II and Class III towns and in Baghpat district, the urban population is more or less evenly distributed in Class II, III and IV towns.
4. As per the 2001 census, Meerut is the only metropolitan city in the sub-region whereas Ghaziabad is on the verge of acquiring metropolitan status. Noida is the other city which is gaining prominence and all round development due to proximity to Delhi. Greater Noida though has not yet acquired urban status, is another fast upcoming township in the sub-region. The NCR Regional Plan 2021 anticipates that the township will acquire metropolitan status in 2021.
5. The remaining 4 class-I towns namely Hapur, Loni and Modinagar in Ghaziabad district and Bulandshahr in Bulandshahr district are important sub-regional urban nodes.
6. Among the Class-II towns, Khurja (Bulandshahr district), Behta Hajipur (Ghaziabad district) and Meerut CB (Meerut District) are in the verge of acquiring Class-I status.
7. Among Class-III towns, Sardhana (Meerut district) is in the verge of acquiring Class-II status.

There are 7 Class I cities (population above 1 lakh), 9 Class II towns (population from 50,000 to 1 lakh), 16 Class III (population from 20,000 to 50,000), 22 Class IV (population from 10,000 to 20,000), 8 Class V (population from 5,000 to 10,000) and 1 Class VI (population below 5,000) towns in 2001. The distribution of different settlements as per the sizes and classification mentioned above is shown on Map 2-1.

The rural areas of U P Sub-region displayed the following characteristics:

1. Out of 3,168 rural settlements, 226 (8.75%) are having population ranging from 5,000 to 9,999 and as many as 33 (1.28%) have population exceeding 10,000.
2. Small size rural settlements are scattered all over the entire sub-region where as medium sized rural settlements have developed along major roads.
3. Out of the five districts, Bulandshahr district accounts for the highest number of villages and also highest proportion of rural population.
4. 98.68 per cent of villages have drinking water facilities. Bulandshahr District is best endowed in this aspect.
5. More than 95% of the villages have electricity supply facility. Ghaziabad District is best placed in respect of this facility.
6. Health facilities are relatively under developed in the sub-region with only about 64% villages having this facility. The % of villages with health facilities is particularly low in Baghpat District. Gautam Budh Nagar District is best placed in this respect.

7. Education facility is available in 89% of villages. Ghaziabad and Baghpat districts have better provision of educational facilities as compared to other districts.
8. As many as 84% of the villages have approach by pucca road. Meerut district enjoys the best figures in this respect. Surprisingly Gautam Budh Nagar District in spite of being close to Delhi has the worst connectivity by Pucca road.
9. Only 50% of villages have post and telegraph facilities with Baghpat district being well placed in this respect and Bulandshahr district having the least figures.
10. Of all the facilities, communication appears to be the least developed facility in the sub-region with only 28% of villages having this facility. Baghpat District is best placed in this respect and G B Nagar again having the least figure.
11. Overall, availability of facilities is better in Meerut District as compared to the other districts and is the lowest in Bulandshahr district.

## 2.2 Strategies for development of settlement system

As per the NCR Regional Plan 2021, the strategy for the development of settlement system will have major thrust on harnessing the growth impulses of Delhi and integrating the urban and rural components of the region. This will be attained by means of a balanced and mutually reinforcing system of central places and bringing a series of necessary functions to the actual reach of the rural population. Following steps are proposed to achieve these objectives:

1. Development of small and medium towns in the region as they are sub-regional centres or service centres. These towns would play an important role in supporting the socio-economic development in their rural hinterland by providing access to education and health facilities, agricultural extension services and agro-industries based on local products.
2. Rural development will be encouraged by providing facilities and services in appropriate hierarchy which would stimulate production and increases income of the rural population, diversify the economy, make villages attractive to live and work and check migration to urban centers.
3. Most of the rural settlements in the sub-region lack in basic infrastructural facilities like health, education, accessibility and drainage. Hence, there is a need to set up new markets for agricultural commodities with rational distribution. There is also a need for sufficient basic services especially educational facilities in the villages of the sub-region.

4. The rural settlements located in the sub-region are widely spread, therefore, the lower order basic facilities should be provided in all basic villages. Similarly, high order facilities should be provided in service centres and central villages so that they would be able to cater to the cluster of small villages surrounding them. This strategy would fulfill the objective of development of the sub-region with an integrated approach.
5. Improvement of skills of workers engaged in non-agricultural units by conducting training programmes for rural artisans and creating more employment opportunities that may reduce the outmigration and strengthen the economic background of the settlements.
6. In order to resist haphazard growth of settlements along major roadways like National Highways and State Highways, the villages lying to the rear side of the roads should be provided with proper community facilities and basic infrastructure etc. This would help to achieve an integrated and balanced development of the whole sub-region.
7. A study on rural housing problems should be undertaken and loans and subsidies should be provided for construction and improvement of housing to middle and low income levels with special emphasis on low and economically weaker sections of the society.
8. It is necessary to impart primary education to the rural people so that they can participate in community development programmes, management of rural institutions and formal credit institutions. This will also help them to increase knowledge regarding latest techniques and methods of workmanship. Adult education that concentrates on functional literacy and practical training on subjects like health, sanitation, nutrition and agriculture shall be stressed upon.
9. It is proposed that the provisions of sanitation facilities in the rural areas may be taken up and suitable low cost technology options need to be explored.
10. Several types of community programmes and their implementation shall be taken up. It is also necessary to identify a group of villages to encourage rural based community development incorporating community reactions and suggestions.

### 2.3 Proposed hierarchy of settlements

Regional Plan 2001 had proposed a 4 -tier hierarchy of settlement system i.e. Regional Centers, Sub-Regional Centers, Service Centers and Basic Villages. Keeping in view the changing demographic scenario of the region, additional categories of settlements have been added and some changes in the nomenclature and functional classification of other settlements are proposed.

The six-tier hierarchy of settlements proposed in the Regional Plan-2021 is as given below in Table 2-1:

**Table 2-1 Hierarchy of Settlements**

S. No.	Hierarchical Level	Population Range
	1	2
1.	Metro Centre	10 lakhs and above
2.	Regional Centre	3 to 10 lakhs
3.	Sub-regional Centre	0.5 to 3 lakhs
4.	Service Centre	10,000 to 50,000
5.	Central Village	5,000 to 10,000
6.	Basic Village	Below 5,000

As per the NCR Regional Plan 2021, settlements in the Metro Centre and Regional Centre category have been proposed as follows:

#### **A. Metro Centre**

These are the settlements that will act as powerful growth nodes to attract capital functions and activities and help in population dispersal from the national capital. Because of their special functional status and size, a very high level of physical, social and economic infrastructure better than that in the Capital is required to be developed within these towns/complexes. This would include efficient intra-urban mass transportation system as well as strong transport and communication linkages with Delhi, other Metro Centres and NCR towns.

**Table 2-2 Designated Metro Centres as per NCR Regional Plan 2021**

S. No.	As per Regional Plan 2021
	1
1.	Ghaziabad-Loni
2.	NOIDA
3.	Greater NOIDA (Phase – I)
4.	Meerut

#### **Proposed suggestions for modifications/ revision of NCR Regional Plan 2021**

The above mentioned metro centres were conceived in NCR Regional Plan 2021 which was notified in the year 2005 on the basis of relevant data up to year 2005. After the notification of this Regional Plan a large number of mega projects being conceived/developed by the State/ Centre Government like Ganga Expressway, Upper Ganga Canal Expressway, Yamuna

Expressway, Dedicated Freight Rail Corridor, Jewar International Airport, Aerotropolis near Jewar international Airport, Eastern Peripheral Expressway, Orbital Rail, Mass rapid Transit System, etc which have junctions in this area, the large scale urban activities in the form of new townships/ developments are likely to come up in this region in upcoming future. Hence, the NCR Regional Plan 2021 requires be amending / modifying in light of above mentioned projects. The details of these projects both of centre and state government which are in different stages of planning and implementation and relevant provisions of NCR Regional Plan 2021 are mentioned below:

**i. MRTS proposals of the transportation functional plan of NCR-2032** being prepared by NCRPB, New Delhi has recommended different levels of public transportation systems like metro, RRTS, MRTS etc. in UP Sub-region, the three routes for MRTS which is the highest level of Public transportation system, has been conceived. Out of these three routes, two routes i.e. Ghaziabad- Hapur and Ghaziabad- Meerut are along the highest existing level of traffic volume routes, whereas the third route between Delhi and the boundary of UP NCR all along Yamuna river is passing through an area which at present has no traffic volume but it has been proposed in the Functional Plan of NCRPB keeping in view the anticipated very high level of development expected to come up in this area.

**ii. Proposed International Aviation hub at Jewar**

In the southern part of the notified area, an International Airport and Aviation Hub is proposed at Jewar which will boost development not only in NCR, but on a large part of Uttar Pradesh. This would serve as an alternative to the existing international airport in Delhi. Due to the proximity of the airport to the Delhi-Mumbai Industrial Corridor and the Delhi-Kolkata freight corridor, a multi-modal connectivity to the entire area that would help import-export activities is also envisaged.

**iii. Golden Quadrilateral National Expressways**

The proposed Golden Quadrilateral connecting the four Mega cities Delhi, Mumbai, Chennai and Kolkata and North-South & East West Corridor will cater to the major passenger and goods movement and thus are of vital importance in the economic development at National level. The Yamuna Expressway connects to this network at Agra and at Delhi via Delhi Noida Direct (DND) Flyway, thereby providing direct connectivity to the area for passenger and freight movement at national and international levels, conducive for faster economic development in the area.

**iv. Eastern Peripheral Expressway (Palwal- Ghaziabad- Loni- Kundli Expressway)**

The Eastern Peripheral Expressway which acts as the part of the third ring road of Delhi links Ghaziabad and NOIDA on the Eastern side of NCT Delhi. This proposed road passes through the northern part of the area and hence will provide direct connectivity to Delhi

and other areas of NCR thereby greatly influence the developments planned in the YEIDA area.

**v. Yamuna (Taj) Expressway**

To attract national and international tourist in Agra, the Government of Uttar Pradesh planned a 100 meter wide and a 165 km long expressway on the eastern bank of Yamuna river between Noida and Agra which would considerably reduce the travel time, was conceived in year 2001. The public private partnership based this expressway is at completion stage at present and is expected to be operational by the end of year 2011.

**vi. Ganga Expressway**

Eight lane access controlled expressway which starts from Eastern Peripheral Expressway near Sirsa village in Greater Noida passing through Gautam Budh Nagar to SH 34 near Phephana in Ballia district has been proposed by the UP government. The estimated length of the expressway is approximately 952 kms. The YEIDA area gets connected to this road at the junction point of 130.0 m. wide road of GNIDA and Eastern Peripheral Expressway thus providing link to the western UP towns and their economic activities falling along the alignment of the Ganga Expressway.

**vii. Upper Ganga Canal Expressway**

Eight lane access controlled expressway on the right bank of Upper Ganga Canal from Sanuata Bridge (Bulandshahar district) to near Purkazhi (Muzaffarnagar district) has been conceptualized by the U.P. government. The expressway connecting NCR with the developments of Western Uttar Pradesh will form an integrated road network in the area and cater for the commercial traffic which travels between the industrial, commercial and residential hubs of the area. The YEIDA area gets connected to this Expressway through the 130.0 meters wide road of Greater NOIDA.

**viii. Eastern and Western Dedicated freight corridors**

**a) Western DFC-DMIC (Delhi – Mumbai Industrial Corridor)**

With a view to optimize on the enhanced connectivity being offered for freight movement, Delhi Mumbai Industrial Corridor (DMIC) has been proposed along the alignment of Western Dedicated Freight Corridor (DFC) between Delhi and Mumbai

**b) The Eastern DFC**

The Eastern DFC is planned parallel to existing eastern rail corridor from Delhi to Kolkata. In order to provide passage to traffic avoiding the Delhi region, the Eastern DFC from Ludhiana has been diverted via Khurja and Khurja is envisaged as a major distribution and collection centre on this route.

Both the DFCs are conceived to be developed as a Model Industrial Corridors of international standards as a 'Global Manufacturing and Trading Hubs' with quality infrastructure up to 150km on both sides of the alignment of DFC. The integrated corridor development approach envisages the development of the Investment Regions and Industrial Areas. Dadri (in the GNIDA jurisdiction in the vicinity) is proposed as an Investment Region as a gateway to the DMIC corridor. It is proposed

to be connected with a feeder link to the Eastern Dedicated Freight corridor at Khurja. The YEIDA Phase-1 through the 130.0 m. wide road connectivity to Greater Noida, also gets advantage of connectivity to these important linkages from Dadri and Khurja for movement of goods.

ix. **Khurja-Palwal-Rewari section of Orbital Rail Corridor** proposed in the NCR Plan 2021.

The proposed Orbital Rail Corridor is passing along the southern end of YEIDA area. The proposed Panipat- Gohana- Rohak- Rewari- Palwal- Khurja rail corridor would serve as part of the regional orbital rail corridor. This rail corridor passes through Jewar and would serve as a regional commuter service corridor as it inter-connects the regional centres of the NCR. This provides an opportunity to connect the YEIDA area with the main Delhi – Kolkata Trunk rail line also.

x. **Aerotropolis**

The Functional Plan of Transport for NCR-2032 has envisaged great scope for development of an aerotropolis complex near the Greater Noida Airport at Jewar. A number of air transport related functional complexes could be located in this area and a new town of reasonable size could be planned and developed.

xi. **Provisions in NCR Regional Plan 2021**

**Para 4.3.5- Strategies for development of settlement system**

*“4.3.5(1) Development of a well-knit regional settlement system where Delhi and other towns in the region would be allowed to grow within their carrying capacity and development potential as may be determined by their development/planning agencies and to formulate an overall policy for all types of settlements. In order to make a significant impact and work as a catalyst for development in the National Capital Region, it is proposed to identify four or five Metro centres or regional or any other suitable township for development by attracting investment and generation of employment, creation of high-quality infrastructure, robust transport and communication linkages, high-quality residential areas, industrial and commercial complexes. The proposed new townships would be nodes along the key transport corridors, proposed expressways, orbital rail corridors and other suitable locations on virgin land.”*

**Para 5.4.2 A) (iii) Rest of NCR outside central NCR**

- *The towns selected for priority development should have a strong industrial content, and incentives should be given to all types of industries for creation of infrastructure such as power, water, sewage, drainage, CEPT etc.*
- *Modern Industrial township/estates should be developed in the area outside central NCR.*

- *Specific areas should be earmarked in the region outside the Central NCR for relocation of polluting, hazardous, heavy and large and non-conforming industries proposed for shifting out of NCT-Delhi.”*

### **The need for planned Development**

For the implementation of Yamuna Expressway project, the government of Uttar Pradesh constituted Yamuna Expressway Industrial Development Authority which includes 1187 villages of GB Nagar, Bulandshahr, Aligarh, Mahamaya Nagar (Hathras), Mathura and Agra Districts. With the Expressways under construction and other transportation systems in the process of development, the tremendous pressure would be generated for development along their routes. Transportation corridors, by virtue of providing increased accessibility to the areas abutting their alignments have always been a catalyst for generating urban growth potential in the vicinity. Foreseeing the likely haphazard unplanned growth in the area, the State Govt. has notified 171 villages in Gautam Budh Nagar and Bulandshahr districts (Total area approximately 584 sq. km.) for establishing a planned integrated industrial township. The YEIDA has prepared a Master plan for its area following within UP Sub-region of NCR. The proposed urbanizable area of this master plan has been shown on Map 11-1. The area near Dankaur at the intersection of Yamuna Expressway and Eastern Peripheral Expressway where development of Sports city including the Formula 1 racing track is in progress is presently emerging as a center for development activities. About 16 Km. from this point towards the south is located the proposed International Airport and Aviation Hub at Jewar which when taken up for development would become the second center of development activities. The entire area lying in between these two centers at Dankaur and Jewar will be under pressure for development.

The induced economic growth in this YEIDA area may arrest the in-migration to Delhi from the rural hinterland. If the YEIDA area is developed with a strong economic base supported by state-of-the-art infrastructure and ensuring a good living environment, it will also attract outmigration from congested areas of Delhi. Thus the area can play a vital role in fulfilling the objectives of the NCR Plan-2021.

As per the ToR, for preparation of Sub-regional Plan, all mega projects of State and central government, all Master plans (Draft/ Final) are to be incorporated in the Sub-regional Plan 2021/31. The proposed YEIDA township falls in the category of Metro Centres (population 10 lakhs and above). The scope of the Sub regional plan preparation is limited to identification for settlements of sub-regional level and below. However, all Metro centers and Regional centres, and other settlements of lower hierarchy which have been identified in the Sub-regional Plan 2021/31 are to be planned and developed in an integrated manner. The new

YEIDA Township is conceived/ developed after the notification of NCR Regional Plan 2021 requires to be incorporated in National Capital Regional Plan 2021. The strong potentials due to mega projects, upcoming economic thrust, requirement of checking haphazard growth/ development and addressing some important provisions of NCR Regional Plan 2021 as mentioned above, it is recommended to include YEIDA Township as metro centre in the National Regional Plan 2021.

## B. Regional Centre

These are well-established urban centre in the region, marked by highly specialized secondary and tertiary sector activities, providing job opportunities, which normally cannot be performed by other lower order centres. These centres will be developed for advanced industrial and other economic activities and will have concentration of administrative and higher order service functions, which are expected to exert an increasingly dynamic influence on attraction of investment and creation of conducive living and working environment.

**Table 2-3 Proposed Regional Centres**

S. No.	As per Regional Plan 2021
	1
1.	Hapur-Pilkhua
2.	Bulandshahr-Khurja
3.	Baghpat-Baraut

### 2.3.1 Identification of Sub-regional Centres, Service Centres, Central Villages and Basic Villages

The Sub-Regional Centres, Service Centres, Central Villages and Basic Villages have to be identified in the UP Sub-regional Plan 2021/31.

#### A. Sub-regional Centre

The Sub-regional Centre shall generally be a medium sized town or intermediate city performing a variety of roles, particularly in promoting and supporting rural development, in achieving a more balanced distribution of urban population and in providing functional linkages between the smaller towns and Regional/Metro Centres. The Sub-regional Centres are proposed to undertake the urban economic and service functions and provide for infrastructure like transport, power, water, credit banking, marketing, managerial services etc.

In consonance with size and rank, these centres, will provide higher order services to the scattered population around them. These settlements have also been identified taking into

account their potentiality as educational hubs, industrial hubs and tourist get-away points. Preference has also been given to settlements which are administrative head quarters.

### **B. Service Centre**

The Service Centre shall be a small town or a large village having linkages with immediate rural hinterlands. These centres would cater to the rural hinterland as agro-service centres in the collection and distribution of agricultural goods and services with processing, marketing, warehousing and storage facilities. Settlements with Agriculture Produce Market Committee (APMC) market facilities have been given a preference. Besides these are the settlements which have tourism potential or are Tehsil Head Quarter or Block Head Quarter. The settlements proposed as service centres in the previous Sub-regional Plan have also been taken into consideration.

### **C. Central Village**

The Central Village is the higher order village having central location and potential for development within its catchment area, with relatively better services and facilities in terms of education, health, communication, accessibility and has the capacity to serve a group of Basic Villages. This centre is proposed to provide basic social facilities for population engaged in agriculture and other primary activities. Settlements which function as block head quarters or have Agriculture Produce Market Committee (APMC) market facilities have been given a preference. Besides that the settlements having higher order social infrastructure facilities like colleges, senior secondary schools and hospitals have been given a preference. Again settlements relatively having a central location and connected with surrounding villages have been chosen so that they are easily accessible for the purpose of better health and education facilities. These villages will also have co-operative societies for distribution of agricultural implements and also for collection of agricultural goods for marketing in higher order settlements.

### **D. Basic Village**

The basic villages would be developed to cater to the day-to-day needs of a cluster of villages surrounding it and would be provided with basic facilities like link roads, water supply and electricity, paved streets and low cost common sanitary facilities as well as the minimum required social infrastructure as per planning norms. Preference is given to the settlements having minimum basic facilities while identifying basic villages.

**2.3.2 Options of various methodologies to determine hierarchy of settlements**

To identify the hierarchy of settlements for being designated as sub-regional centers, service centers, central and basic villages an extensive analysis has been done by adopting scalogram method. According to the scalogram analysis, the settlements were broadly identified based on their population size and availability of facilities. In this way, among the total number of 3,234 settlements within the UP Sub-region 4 metro centres, 3 regional centre/complexes, 20 sub-regional centres, 45 service centres, 154 central villages and 276 basic villages were identified primarily. The results obtained from the scalogram analysis have been processed in two phases.

**Option-1 (Bisection Method)**

The location of the various settlements were taken into consideration with “Bisectional Method” of dividing space based on the purely geometric logic of allocating areas to different hierarchies on maps. The bisection method is designed to identify on a map, the high level, middle level and lower level settlements, by geometrically dividing space on the basis of some knowledge of the ranking of settlements using a series of graphic progressions. It is based on the assumption that the lower level settlements are the half way houses expected to develop in the middle or higher level settlements. Or in other words, it is possible logically to expect lower level settlements around the bisection line of the major centres. In this method, the settlements of both higher and lower order are distributed evenly in the region. The result regarding the identification of Sub-regional centres by this method is shown on Map 2-2. & Table 2-5.

**Option-2 (Weightage Index Method)**

The analysis can be done following the weightage index method in three different options which was done considering certain parameters. These parameters were the indicators for determining the development potential of the settlements. The indicators and weightage on the basis of different importance are considered for evaluating the settlements as listed below in Table 2-4.

**Table 2-4 Indicators for Determining Development Potential of Settlements**

S. No.	INDICATORS	Weightage given to Indicators		
		Option-2 a	Option-2 b	Option-2 c
		Similar Weightage	Differential Weightage Method -1	Differential Weightage Method -2

	1	2	3	4
<b>a.</b>	<b>Role of the Settlement</b>			
i)	District Headquarter	1	6	5
ii)	Tehsil Headquarter	1	5	4
iii)	Block Headquarter	1	4	3
<b>b.</b>	<b>Present Economic Base</b>			
i)	Presence of Industries	1	13	8
ii)	Presence of Institutions	1	13	7
iii)	Presence of APMC Market	1	3	6
<b>c.</b>	<b>Accessibility</b>			
i)	Proximity to NCT Delhi	1	14	9
ii)	Connected by NH	1	10	14
iii)	Connected by SH	1	9	13
iv)	Connected by MDR/ODR	1	8	12
v)	Connectivity by Railways	1	7	11
vi)	Connectivity with Proposed Metro/Regional Centres	1	11	10
<b>d.</b>	<b>Tourism/Other Potentials</b>			
i)	Religious, Scenic Beauty, Heritage, Wild life etc.	1	1	1
ii)	Proposed industrial projects	1	2	2

### Option 2-a (Similar Weightage Method)

Observing the emergence of institutions and industries along the NH 119, Mawana is considered as a potential development centre. Similarly, Garhmukteswar also has a lot of potential to grow as a tourist hub due to its religious importance, presence of natural sites and its world famous local handicraft. To the south-east of the sub-region, due to the presence of NH 93 and the broad gauge railway line which connect the area to an important town like Aligarh, Dibai is found as the most potential town of the area being the tehsil headquarter as well. It is also observed that no major development centre is located in the area between Dibai and Garhmukteswar. Hence, Jahangirabad is proposed as another sub-regional centre to maintain a balance in locating the higher order settlements and it is envisioned that it can grow on the basis of induced growth potentials. Jahangirabad and Dibai will also act as a major junction points from where people can access the nearby tourist/pilgrimage sites/complexes (Refer Heritage and Tourism Chapter).

The settlements like Sardhana, Hastinapur, Anupshahr and Naraura have immense potential to develop as tourist getaway points (from crowded and congested cities in the vicinity) of the sub-region. Modinagar is growing as educational hub and Gulaothi and Shikarpur as industrial towns. Kithor is an important junction which connects higher order settlements like Meerut,

Mawana, Garhmukteswar and Hapur-Pilkhuwa urban complex. Shikarpur, Siyana, Chhaprauli and Khekada are administrative headquarters. There are 16 sub-regional centres identified in the UP Sub-region are shown on Map 2-2 & Table 2-5.

**Table 2-5 Proposed Sub-Regional Centres**

Sl. No.	Settlement Name	District	Status
	1	2	3
1	Mawana	Meerut	Urban
2	Garhmukteswar	Ghaziabad	Urban
3	Dibai	Bulandshahr	Urban
4	Jahangirabad	Bulandshahr	Urban
5	Gulaothi	Bulandshahr	Urban
6	Kithor	Meerut	Urban
7	Modinagar	Ghaziabad	Urban
8	Sardhana	Meerut	Urban
9	Shikarpur	Bulandshahr	Urban
10	Sikandarabad	Bulandshahr	Urban
11	Siyana	Bulandshahr	Urban
12	Naraura	Bulandshahr	Urban
13	Khekra	Baghpat	Urban
14	Chhaprauli	Baghpat	Urban
15	Anupshahr	Bulandshahr	Urban
16	Hastinapur	Meerut	Urban

**Map 2-2 Proposed Sub-regional Centres of UP Sub-region (as per option 1 {Bisection method} & 2a {Similar Weightage to all indicators})**

**Option 2-b (Differential Weightage Method -1)**

Weightage of Indicators or parameters have been changed in this option. Proximity to Delhi, presence of institutions and industries has given highest weightage factor followed by connectivity with proposed Metro/Regional Centres, connectivity by NH, connectivity by SH, connectivity by MDR/ ODR, connectivity by railways, District Headquarter, Tehsil Headquarter, Block Headquarter, Presence of APMC Market, proposed industrial projects, Religious, Scenic Beauty, Heritage, Wild life etc. Cut off mark for selecting settlements is 50, as per this cut off, 15 settlements have been selected. There are 15 sub-regional centres identified in the UP Sub-region are shown on Map 2-3 & Table 2-7.

**Table 2-6 Differential Weightage Method -1 for selection of Sub-Regional Centres**

Table 2-7 Proposed Sub-Regional Centres

Sl. No.	Settlement Name	District	Status
	1	2	3
1	Mawana (MB)	Meerut	Urban
2	Modinagar (MB)	Ghaziabad	Urban
3	Muradnagar (MB)	Ghaziabad	Urban
4	Gulaothi (MB)	Bulandshahr	Urban
5	Sikandrabad (MB)	Bulandshahr	Urban
6	Jahangirabad (MB)	Bulandshahr	Urban
7	Dadri (MB)	GB Nagar	Urban
8	Garhmukteshwar (MB)	Ghaziabad	Urban
9	Sardhana (MB)	Meerut	Urban
10	Shikarpur (MB)	Bulandshahr	Urban
11	Siana (MB)	Bulandshahr	Urban
12	Jewar (NP)	GB Nagar	Urban
13	Kithaur (NP)	Meerut	Urban
14	Khekada (NP)	Baghpat	Urban
15	Dibai (MB)	Bulandshahr	Urban

**Map 2-3 Proposed Sub-regional Centres of UP Sub-region (as per option 2b {Differential Weightage Method -1})**

**Option 2-c (Differential Weightage Method -2)**

Weightage of Indicators or parameters have been changed again in this option. Connectivity by NH, SH, MDR/ ODR, railways and connectivity with proposed Metro/Regional Centres has given highest weightage factor followed by proximity to Delhi, presence of industries and institutions, presence of APMC Market, District Headquarter, Tehsil Headquarter, Block Headquarter, presence of religious, Scenic Beauty, Heritage, Wild life etc, proposed industrial projects. Cut off mark for selecting settlements is 45, as per this cut off, 16 settlements have been selected. There are 15 sub-regional centres identified in the UP Sub-region (Table 2-9).

**Table 2-8 Differential Weightage Method -2 for selection of Sub-Regional Centres**

Table 2-9 Proposed Sub-Regional Centres

Sl. No.	Settlement Name	District	Status
	1	2	3
1	Mawana (MB)	Meerut	Urban
2	Modinagar (MB)	Ghaziabad	Urban
3	Muradnagar (MB)	Ghaziabad	Urban
4	Kithaur (NP)	Meerut	Urban
5	Sikandrabad (MB)	Bulandshahr	Urban
6	Jahangirabad (MB)	Bulandshahr	Urban
7	Dadri (MB)	GB Nagar	Urban
8	Garhmukteshwar (MB)	Ghaziabad	Urban
9	Sardhana (MB)	Meerut	Urban
10	Shikarpur (MB)	Bulandshahr	Urban
11	Siana (MB)	Bulandshahr	Urban
12	Jewar (NP)	GB Nagar	Urban
13	Gulaothi (MB)	Bulandshahr	Urban
14	Khekada (NP)	Baghpat	Urban
15	Debai (MB)	Bulandshahr	Urban
16	Naraura (NP)	Bulandshahr	Urban

**Map 2-4 Proposed Sub-regional Centres of UP Sub-region (as per option 2c {Differential Weightage Method -2})**

Table 2-10 Proposed Sub-Regional Centres by Different Methods

Similar Weightage Method		Differential Weightage Method-1		Differential Weightage Method-2	
Settlement Name	District	Settlement Name	District	Settlement Name	District
1	2	3	4	5	6
Mawana	Meerut	Mawana (MB)	Meerut	Mawana (MB)	Meerut
Garhmukteshwar	Ghaziabad	Garhmukteshwar (MB)	Ghaziabad	Garhmukteshwar (MB)	Ghaziabad
Modinagar	Ghaziabad	Modinagar (MB)	Ghaziabad	Modinagar (MB)	Ghaziabad
Dibai	Bulandshahr	Dibai (MB)	Bulandshahr	Debai (MB)	Bulandshahr
Jahangirabad	Bulandshahr	Jahangirabad (MB)	Bulandshahr	Jahangirabad (MB)	Bulandshahr
Gulaothi	Bulandshahr	Gulaothi (MB)	Bulandshahr	Gulaothi (MB)	Bulandshahr
Shikarpur	Bulandshahr	Shikarpur (MB)	Bulandshahr	Shikarpur (MB)	Bulandshahr
Sikandarabad	Bulandshahr	Sikandrabad (MB)	Bulandshahr	Sikandrabad (MB)	Bulandshahr
Sardhana	Meerut	Sardhana (MB)	Meerut	Sardhana (MB)	Meerut
Siyana	Bulandshahr	Siana (MB)	Bulandshahr	Siana (MB)	Bulandshahr
Kithor	Meerut	Kithaur (NP)	Meerut	Kithaur (NP)	Meerut
Khekra	Baghpat	Khekada (NP)	Baghpat	Khekada (NP)	Baghpat
		Dadri (MB)	GB Nagar	Dadri (MB)	GB Nagar
		Jewar (NP)	GB Nagar	Jewar (NP)	GB Nagar
Naraura	Bulandshahr			Naraura (NP)	Bulandshahr
		Muradnagar (MB)	Ghaziabad	Muradnagar (MB)	Ghaziabad
Hastinapur	Meerut				
Chhaprauli	Baghpat				
Anupshahr	Bulandshahr				

12 towns qualify for Sub-regional centres by all the three Options.

**Note:** On the basis of methodology finalized by CRC, the details of lower order hierarchy settlement for service centres, central village and basic villages will be computed for Draft Final Report.

## 2.4 Population Assignment

The different methods of population projection have different implications for the nature of the relationship between population size, resource use and environmental impacts. The various methods of population projection are Arithmetic, geometric, incremental increase, Exponential etc. The population projection for the urban and rural settlements has been calculated based on three techniques - Arithmetic, Geometric, and Exponential. Out of these the assigned population of the town has been selected basing on its grown rate, the growth trend, proximity to major growth node, proximity to major proposals etc.

Keeping in view the population assignment for NCT-Delhi additional expected population has been distributed proportionately amongst Haryana, Rajasthan and Uttar Pradesh Sub-regions. The assigned population for NCR is given in Table 2-11. Among the sub-regions maximum population is expected to get accommodated in the UP Sub-region after NCT Delhi. This is due to the existing growth potential as well as the proposed induced development.

**Table 2-11 Assigned Population of NCR and Sub-regions (in lakhs)**

		NCT-Delhi		Haryana		Rajasthan		Uttar Pradesh	
Year	NCR Total	Population	% to NCR	Population	% to NCR	Population	% to NCR	Population	% to NCR
1	2	3	4	5	6	7	8	9	10
2001	371.00	138.50	37.33	86.87	23.42	29.92	8.06	115.70	31.19
2021	641.38	225.00	35.08	163.50	25.49	49.38	7.70	203.50	31.73

Source: NCR Regional Plan 2021

As per the NCR Regional Plan 2021 population projection for the settlements hierarchy up to Metro and Regional Centers for the Year 2021 has been done.

### A. Metro Centre

The projected population for settlements like metro centers and regional centers for the year 2021 has been assigned in the NCR Regional Plan 2021. The assignment of population to the new identified Metro centers for the year 2031 has been done on the basis of the projected population in their respective master plans. The assigned population of the metro centers for the years 2021/31 has been given in Table 2-12. The detail of population projection has been given in Annexure 1 (a). A total population of 124 lakhs has been assigned to all the metro centers of the sub-region.

**Table 2-12 Proposed Metro Centres as per NCR Regional Plan 2021**

Sl. No.	Name of the settlement	Type of settlement	Tehsil	District	Population Projection (In Lakhs)		
					2011	2021	2031
	1	2	3	4	5	6	7
1	GHAZIABAD - LONI	Urban	Ghaziabad	Ghaziabad	19.00	30.19	46.0
2	MEERUT	Urban	Meerut	Meerut	15.00	23.00	30.0
3	NOIDA	Urban	Dadri	G B Nagar	6.00	12.00	28.0
4	Gr. NOIDA Ph -1	Urban	GB Nagar	G B Nagar	7.00	12.00	20.0
	<b>TOTAL</b>				<b>47.00</b>	<b>77.19</b>	<b>124.0</b>

Source: NCR Regional Plan 2021, Master Plans, PCA 2001

## B. Regional Centre

The projected population for settlements like Regional Centers for the year 2021 has been assigned in the NCR Regional Plan 2021. The assignment of population to some of the new identified Regional centers for the year 2031 has been done on the basis of the projected population in their respective master plans. For those settlements for which master plan have not been prepared, the highest population as per the projection methods has been adopted. The reason for adopting highest population is their potential to grow as a result economic activities and the induced development that is proposed in these settlements. The assigned population of the Regional centers for the years 2021/31 has been given in Table 2-13. The detail of population projection has been given in Annexure 1 (b).

**Table 2-13 Proposed Regional Centres as per NCR Regional Plan 2021**

Sl.No.	Name of the settlement	Type of settlement	District	Population Projection (In Lakhs)		
				2011	2021	2031
	1	2	3	4	5	6
1	BAGHPAT - BARAUT	Urban	Baghpat	1.60	3.00	4.00
2	BULANDSHAHAR - KHURJA	Urban	Bulandshahr	3.70	4.77	6.10
3	HAPUR - PILKHUA	Urban	Ghaziabad	3.00	4.50	6.60
	<b>TOTAL</b>			<b>8.30</b>	<b>12.27</b>	<b>16.70</b>

Source: NCR Regional Plan 2021, Master Plans, PCA 2001

Among the Regional centers Hapur-Pilkhua complex is projected to have maximum population, reaching 6.6 lakhs by year 2031 followed by Bulandshahar– Khurja complex. On the whole a population of about 4.05 lakhs is proposed to be accommodated in the Regional Centers.

### C. Sub-Regional Centre

The projection of population has been done through different methods. The various options developed for this purpose is mentioned below for the decision of CRC.

#### Option - I

The assignment of population to some of the sub-regional centers whose master plan has been prepared is as per their proposals. For the rest of the sub-regional centers population projection exponential method and geometric progression method have been adopted. For the year 2031 the population has been projected using different methods of population projection for all identified settlements. For these settlements, the criteria behind adopting the projected population is its potential for growth, proximity to metro and regional centres and NCT Delhi. The assigned population of the Sub-Regional centers for the years 2021/31 has been given in Table 2-14. The detail of population projection has been given in Annexure 1 (c).

**Table 2-14 Proposed Sub-Regional Centres as per NCR Regional Plan 2021**

Sl. NO	Name of the settlement	Type of settlement	Tehsil	District	Population Projection (In Lakhs)		
					2011	2021	2031
	1	2	3	4	5	6	7
1	Gulaothi	Urban	Bulandshahr	Bulandshahr	0.60	0.80	1.00
2	Khekra	Urban	Khekada	Baghpat	0.50	0.70	0.80
3	Kithor	Urban	Mawana	Meerut	0.30	0.50	0.50
4	Modinagar	Urban	Modinagar	Ghaziabad	1.50	2.50	2.10
5	Naraura	Urban	Debai	Bulandshahr	0.30	0.40	0.40
6	Sardhana	Urban	Sardhana	Meerut	0.60	0.80	1.00
7	Shikar Pur	Urban	Shikarpur	Bulandshahr	0.45	0.50	0.60
8	Sikandarabad	Urban	Sikandrabad	Bulandshahr	0.91	1.25	1.50
9	Siyana	Urban	Siana	Bulandshahr	0.50	0.60	0.70
10	Chhaprauli	Urban	Baraut	Baghpat	0.20	0.30	0.30
11	Anupshahr	Urban	Anupshahr	Bulandshahr	0.30	0.40	0.50
12	Hastinapur	Urban	Mawana	Meerut	0.30	0.40	0.50
13	Mawana	Urban	Mawana	Meerut	0.88	1.20	1.50
14	Garhmukteshwar	Urban	Garhmukteshwar	Ghaziabad	0.43	0.60	0.75
15	Dibai	Urban	Dibai	Bulandshahr	0.44	0.60	0.70

16	Jahangirabad	Urban	Anupshahr	Bulandshahr	0.65	0.85	1.10
	<b>TOTAL</b>				<b>8.86</b>	<b>12.40</b>	<b>13.95</b>

Among the Sub-Regional centers Modinagar is projected to have maximum population, reaching 2.10 lakhs by year 2031 followed by Sikandrabad and Mawana. On the whole a population of about 13.95 lakhs is proposed to be accommodated in the Sub-Regional Centers.

### Option-II

Population for every town has been projected as per the three methods i.e. Arithmetic progression, Geometric progression and Exponential. After deriving the values, average of all three has been adopted.

**Table 2-15 Proposed Sub-Regional Centres population**

S.N O	Name of the settlement	District	Arithmetic progression	Geometric progression	Exponential	Average Population
			Population Projection 2011			
			3	4	5	6
1	Gulaothi	Bulandshahr	52147	56662	53995	54268
2	Khekra	Baghpat	48011	50192	49698	49300
3	Kithor	Meerut	28526	30681	29519	29575
4	Modinagar	Ghaziabad	125995	128471	138678	131048
5	Naraura	Bulandshahr	25824	29370	25877	27024
<b>Population Projection 2021</b>						
1	Gulaothi	Bulandshahr	61390	74834	67954	68059
2	Khekra	Baghpat	55686	62457	61235	59793
3	Kithor	Meerut	33437	39863	36900	36733
4	Modinagar	Ghaziabad	138771	145779	169862	151471
5	Naraura	Bulandshahr	31241	42270	32812	35441
<b>Population Projection 2031</b>						
1	Gulaothi	Bulandshahr	70634	98834	85522	84997
2	Khekra	Baghpat	63362	77720	75451	72177
3	Kithor	Meerut	38349	51792	46127	45423
4	Modinagar	Ghaziabad	151548	165419	208060	175009

5	Naraura	Bulandshahr	36658	60836	41607	46367
---	---------	-------------	-------	-------	-------	-------

**Option-III**

Population for every town has been projected as per the three methods i.e. Arithmetic progression, Geometric progression and Exponential. After deriving the values, population has been selected as per growth potentials that a typical settlement might have. Development potential of these towns has been identified as per the indicators taken for determining the hierarchy of settlements. Four categories i.e. very high potential, high potential, moderate potential and low potential has made as per the ranking of settlements. Based on the category in which the settlement fall, population is assigned. The selected population has made in whole number. Marks adopted by settlements for Population Projection has been taken from the Table 2-6 (Differential Weightage Method- 1 for selection of Sub-regional Centres) of Option 2-b of Settlement Pattern.

**Table 2-16 Category for selection of Population for Settlement**

S.NO	Marks	Rank	Category
	1	2	3
1	70.1 – 85	1-5	Very high potential
2	60.1 – 70	6-10	High potential
3	50.1 – 60	11-15	Moderate potential
4	40 - 50	16-20	Low potential

**Table 2-17 Proposed Sub-Regional Centres population**

S.N O	Name of the settlement	District	Arithmetic progression	Geometric progression	Exponential	Potential Category	Population taken as per Potential		
			Population Projection 2011						
			1	2	3	4	5	6	7
1	Gulaothi	Bulandshahr	52147	56662	53995	Very high	60000		
2	Khekra	Baghpat	48011	50192	49698	High	50000		
3	Kithor	Meerut	28526	30681	29519	Moderate	30000		
4	Modinagar	Ghaziabad	125995	128471	138678	Very high	140000		
5	Naraura	Bulandshahr	25824	29370	25877	Low	26000		
<b>Population Projection 2021</b>									

1	Gulaothi	Bulandshahr	61390	74834	67954	Very high	75000
2	Khekra	Baghpat	55686	62457	61235	High	61000
3	Kithor	Meerut	33437	39863	36900	Moderate	37000
4	Modinagar	Ghaziabad	138771	145779	169862	Very high	170000
5	Naraura	Bulandshahr	31241	42270	32812	Low	33000
<b>Population Projection 2031</b>							
1	Gulaothi	Bulandshahr	70634	98834	85522	Very high	100000
2	Khekra	Baghpat	63362	77720	75451	High	75000
3	Kithor	Meerut	38349	51792	46127	Moderate	46000
4	Modinagar	Ghaziabad	151548	165419	208060	Very high	210000
5	Naraura	Bulandshahr	36658	60836	41607	Low	42000

**Note:** On the basis of methodology finalized by CRC, the details of lower order hierarchy settlement for service centres, central village and basic villages will be computed for Draft Final Report.

## **CHAPTER 3. ECONOMIC ACTIVITY AND FISCAL POLICY**

The economic profile of the UP Sub-region is greatly influenced by the physical and economic growth of NCT Delhi. In the rest of NCR, the employment in government and semi-government services is mainly centralized in the towns viz., Meerut, Baghpat, Bulandshahr, Ghaziabad and Greater Noida in U.P. Sub-region. The level of these services is much lower being limited to district administration or at best to some divisional functions, which have no comparison with the national/international functions being performed by the Capital. However, gradually the level of services has improved quite a lot in the CNCR towns like Ghaziabad, Noida and Greater Noida in recent days.

Industrial development in the Sub-region could be easily characterised in terms of large and medium units, small scale industries and development in tiny unorganised units. Electric machinery, metal products and parts, chemicals and food products constitute the major sectors in the U.P. Sub-region. commercial activities are fairly developed in bigger towns like Meerut, Ghaziabad, Hapur, Khurja and Bulandshahr in which is limited to local needs within the district or a slightly larger area of the sub-region. Leaving aside the industrial and trade and commerce activities, it can be said that the main economy of the sub-region depends on agriculture. The districts like Bulandshahr and Baghpat are still mainly prospering on the basis of agricultural activities.

### **3.1 Economic Activity: Policies and Proposals**

#### **3.1.1 Regional Level Policies**

1. For the development of economic activities in the UP Sub-region, a balance of economic activity may have to be achieved by adopting appropriate policy measures in the three identified policy zones taking into account the availability of resources, constraints arising out of the environmental factors, land and physical infrastructure like power, water etc. The policy of development of economic activities in the region should take into account the impact of various proposals made in the Regional Plan-2021, Sub-regional Plans and the Functional Plans.
2. There should be definite attempt to change the basic character of the sub-regional economy from the agricultural and pre-industrial to more diversified one, in order to raise the earning capacity of the people. By 2021, nearly 70% of the population would be living

in urban areas. This would entail the creation of more jobs in non-agricultural occupations, mainly in industry, which has a strong multiplier effect. For this purpose there should not only be an injection of additional activities in existing and new centres outside NCT-Delhi but also development of agro-based industries in rural areas in order to support urbanization on the one hand and to stabilize the rural economy on the other.

3. In the region, land is generally good for agriculture and hence selection of sites for the development of industrial/urban activities should be done judiciously in strict compliance to development plans of the area and local environment laws.
4. Utilization of less and least valuable land for urban expansion/ new urban centres/ development purpose should be encouraged.
5. There is a need for streamlining not only the fiscal and other incentives given by the UP State Government but also tax and tariff structure in the region. It should also be possible to rationalise the taxes in the various towns for mutual benefits and in the overall interest of the sub-region. This will also enable free flow of goods and encourage economic development.
6. NCR should be considered as a single economic zone with dispersal of economic activities over self contained regional towns, restructuring of the regional transport network, integrated development of the infrastructure etc. All fiscal/physical barriers in NCR should be removed to make it One Economic Zone-One Common Market-One Opportunity Zone with a uniform tax and tariff structure.
7. The concept of a single 'Common Economic Zone' should also cover those issues where the disparities in the availability of physical infrastructure within UP Sub-region are prominent and are not conducive in pursuing the objective of achieving balanced and harmonised development in NCR. The objectives of the concept are listed below:
  - Rationalisation of Tax Structure
  - Extending Uniform Financial/Banking services throughout NCR
  - Integrated Rail and Road Transport Network
  - Removing the restrictions on Inter-State movement of taxis and auto-rickshaws between the NCR States
  - Providing Uniform Telecom Facilities throughout the NCR
  - Uniform Power Supply
  - Developing an Integrated Water Supply and Drainage System for NCR

- Integrated Education Policy
  - Integrated Health Policy
  - Integrated approach for Pollution Control
  - Integrated Law and Order Machinery
  - Provision of adequate financial Resources in Sub-component Plans of participating States and concerned Central Ministries
8. Modern Industrial Estates/Townships with all the necessary infrastructures for industry should be developed in NCR outside Central NCR. Simple streamlined procedure should be adopted for the expeditious allotment of land to entrepreneurs in these Estates/Townships so that there is no delay in commissioning of the projects. Simultaneous efforts to provide necessary housing and other social infrastructure should also be made for the industrial workers in the very beginning so that they are not forced to take shelter in unauthorised colonies which may later grow into slums.
  9. Single window system of registration, financing and industrial regulatory measures should be set up.
  10. In order to encourage the industries to be located in NCR, liberal incentives in terms of creating infrastructure should be given to the new units as provided in the industrial policy framework of the States.
  11. There is a need to develop agro-based industries in the rural areas in order to support urbanisation in NCR as a whole on the one hand and to stabilise the rural economy on the other. In the long run this will prevent exodus of people from rural areas to Delhi. Studies have shown that the lower order settlements in the sub-region have enough localised traditional skills like potteries, handloom weaving, leather work, bone handicraft, furniture making from sarkanda wood, carpet weaving etc., which if properly nurtured can play the role of a vibrant component of the rural economy and provide gainful employment to potential migrants to Delhi and Central NCR.
  12. In view of the demand for diversification and expansion of industrial activities in NCR, there is an immediate need of strengthening and upgrading the training facilities in the sub-region. Introduction of new courses, especially in hi-tech areas, regulatory controls, supervision and maintenance of uniform standards and curricula, particularly in privately run institutions are some of the areas which need consideration.

13. Special economic zones for different economic activity should be developed by the state government providing long term financial benefits in terms of tax holidays, long term loan interest rebates, free or at nominal rate technical knowhow etc. these special zones should be well spread in entire NCR especially in eastern half of UP Sub-region for balanced development of entire area.

### 3.1.2 Activity Specific Policies

#### A. Industry

##### a) Central NCR/Extended CNCR

1. Owing to the location of Central NCR towns adjacent to Delhi, no hazardous, polluting industry should be allowed in Central NCR.
2. Hi-tech industries should be allowed to flourish in Central NCR.
3. The industries existing before 1986 should be made to conform to Environment Protection Act, 1986.
4. There are certain wholesale trades and storages in Delhi which involve bulk handling of commodities such as PVC goods, chemical, timber, food grains, iron and steel and building material and are hazardous in nature by virtue of their location in congested localities. Facilities for the functioning of these wholesale trades (as well as others) and related activities should be developed in Central NCR.
5. Relocation or expansion of government offices/PSUs which need to perform such ministerial, protocol or liaison functions which make it incumbent upon them to be located in Delhi, alone should be allowed to be located in the Central NCR towns. The opening of new government offices/PSUs or expanding the existing ones should be encouraged in the rest of NCR/CMAs outside NCR.
6. In order to encourage industries to be located in NCR, liberal incentives for creation of infrastructure facilities be given to new units as provided in the industrial policy framework of the States.

**b) Rest of NCR**

1. The towns selected for priority development should have a strong industrial content, and incentives should be given to all types of industries for creation of infrastructure such as power, water, sewage, drainage, CEPT etc.
2. Potential industries that can be recommended are:
  - i. Industries that offer jobs that match the skills of local population should be encouraged
  - ii. Agro-based fruit and food processing, live-stock based units like dairy and meat products, cattle feed etc
  - iii. Cottage and rural industries
  - iv. Handicrafts industries
  - v. Indigenous industries should be promoted like Artisans working with Gold, Pharma Industry, musical instruments.
  - vi. High tech, high value industries should be promoted in major urban centres.
3. Modern industrial townships/estates should be developed in the area outside Central NCR.
4. Specific areas should be earmarked in the region outside the Central NCR for relocation of polluting, hazardous, heavy and large and non-conforming industries proposed for shifting out of NCT-Delhi.
5. Incentives for provision of infrastructure facilities should be made available in the various regional towns in order to encourage and accelerate the growth of trade centres on a wider scale within NCR.
6. The Central government offices which are considered for being shifted from NCT-Delhi and the Central NCR towns should be located in other towns of NCR and incentives in the form of CCA, HRA etc., as given to employees working in Delhi, should be given to employees who may be affected by this shifting for a limited period. Other incentives like providing government accommodation, allowances for study of their children etc., should also be given.

**B. Trade and Commerce**

1. Based on various factors affecting location of wholesale trade such as volume of commodity flow, direction of flow, trade linkages, mode of transport, preferences of traders etc., locations have been suggested for five major commodity groups.

The suggested locations are listed below:

- Food grains - Hapur
  - Fruit and Vegetables - Hapur (for potato and onion)
  - Textiles and Readymade Garments - Meerut
  - Iron and Steel - Ghaziabad
  - Hardware and Building materials For hardware – Ghaziabad
  - Vegetables – Sikandrabad
  - Vegetables – Bulandshahr
  - Fruits and Vegetables – Baghpat
  - Jaggery and Sugar - Baghpat
2. Alternative wholesale markets for the above commodities could be developed by the concerned agencies of the State Governments as 'joint venture' projects and also declaring these commodities under the 'Specified Commodities Act' as explained under the head 'Institutional Machinery' at various Regional Freight Complexes.
3. There is a sizeable presence of informal sector activities and enterprises in various towns in the UP Sub-Region, which produce comparatively inexpensive wage goods and services while providing abundant opportunities for self-employment to a large section of population. This unorganized sector has come to be recognized as an important segment of urban human activity which is making positive contributions to the growth and economic development of these towns and, through them, to the entire region.
4. Some of these activities are being carried out since long and are also well recognised from the point of view of specialisation and export potentials. It is, therefore, necessary to address the informal sector in all its ramifications and evolve appropriate strategies to cater to the basic needs of its constituents population by way of shelter, workplace, social amenities and financial support so as to facilitate their growth and, at the same time, mobilize their skills and entrepreneurship for the benefit of the society at large. The informal sector activities present in the sub-region are listed below:
- **Meerut** : Handloom, sports goods and scissors and blades industry
  - **Khurja** : Pottery and ceramics
  - **Hapur**: Textile Industry
  - **Pilkhuwa**: Weaving, Dying, Block Printing
  - **Garhmukteswar-Brijghat**: Mudha (Handcrafted Furnitures) of Sarkanda Wood and Mat Making

- **Khekra:** Bone Handicrafts and imitation jewellery made of bone pearls
  - **Loni:** Handicrafts and bone necklaces
  - **Bahadurgarh:** Handloom Cloth
  - **Alipur:** Leather Washer, Belt for the neck of animal
5. The traditional type of retail shopping in the form of 'Weekly Market' is quite popular in the towns of UP Sub-region. The functioning of these markets need to be improved by providing parking and other open spaces. There is also a need to provide organized informal sector places, to be located strategically near work centres, commercial areas, near schools, colleges, hospitals, transport nodes etc.
  6. The role played by the street vendors in the economy as also in the society needs to be given due credit. The policy should be to provide and promote a supportive environment for earning livelihoods, as well as ensure absence of congestion and maintenance of hygiene in public places and streets.
  7. Under the strategy for accelerated development of NCR, the informal sector would be poised to claim a large share of the induced population growth and income generation. An attempt, therefore, is to be made to absorb the informal sector, as far as possible, particularly within the fabric of planned urban development and economic growth of the integrated townships which are at the core of the envisaged development strategy for NCR.

### C. Agriculture

1. Administrative action for reforms in the APMC Act for direct marketing, contract farming and markets in private/co-operative sectors should be accelerated.
2. The major thrust areas which should be taken care of in the sub-region are as follows:
  - **Diversification of Agriculture:** Towards more remunerative cash crops like vegetables, spices, medicinal & aromatic plants. Certain areas with specialization with some varieties of cash crops are identified within the sub-region which should be promoted for value added agricultural produce (Table3-1).

**Table 3-1 Identified cash-crops in UP Sub-region indicating specific varieties**

Fruits		
1	Mango	Meerut, Bulandshahar, Baghpat
2	Guava	Bulandshahar, Baghpat, Meerut
3	Sugarcane	Meerut, Bulandshahar, Baghpat

4	Watermelon/Muskmelon	Baghpat
5	Papaya	Meerut, Bulandshahar, Baghpat
6	Amla	Meerut
<b>Flowers</b>		
1	Gladiolus	Ghaziabad, Meerut
2	Tuberose	Ghaziabad, Meerut
3	Marigold	Ghaziabad
4	Mushroom	Baghpat, Meerut
<b>Cereals</b>		
1	Basmati Rice	Ghaziabad, Meerut, Bulandshahar

Apart from the above cash crops, other related activities like bee keeping and pisciculture should also be entertained wherever possible.

**a. Sustainable Agriculture:**

- i. Doubling of Agricultural credit in three years.
- ii. Better natural resource management.
- iii. Strengthening of farm management.
- iv. Developing infrastructure for production of quality planting material in Horticulture.

**b. Dissemination of Technology:**

- v. Participatory approaches for dissemination of technology.
- vi. Involving women in agriculture extension training programmes.

**c. Post Harvest Management**

- vii. Creating infrastructure for increasing shelf-life of perishable products through cool chains, zero energy cool chambers, cold storages etc.
- viii. Improving grading & packaging facilities.

**d. Providing Better Market opportunities**

- ix. Arranging regular buyers & sellers meet.
- x. Strengthening of marketing information network.
- xi. Promotion of contract farming.
- xii. Promotion of agricultural export zone-Basmati rice & potato.
- xiii. Amending Mandi Act, appropriately, to encourage private entrepreneurs for marketing of agriculture produce.

**e. Research and Development**

- xiv. Priority areas advertised and research funded in competitive mode.
- xv. Development of organic protocols for rice, wheat, sugarcane and vegetables.
- xvi. Development of farming system modules.

**D. Tourism**

1. Integrated development of tourism circuits within the UP Sub-region should be done by carefully selecting tourist sites/destinations based on its tourism potential. The aim would be to provide all infrastructure facilities required by the tourists within such destinations and circuits. Master Planning of these destinations and circuits will be undertaken so as to develop them in an integrated holistic manner.
2. Immediate steps should be taken for the overall improvement of the existing sites of tourist interest and their promotion and advertisement.
3. Lesser known tourist spots should be promoted to add more alternatives and to ease the pressure on core destinations.
4. Highlighting quality and affordability through effective publicity both within and outside the country should be carried out which can give boost to the economy of the sub-region. Marketing meets should be conducted at potential tourist centres. Frequent meetings should be arranged with Hoteliers, Tour Operators, representatives of Airlines, Railway authorities and other stakeholders for new promotional avenues.
5. The major focus should be on high spending domestic tourists. Certain getaway points should be identified for the tourists from NCT Delhi which can provide them very good weekend destinations.
6. Apart from the existing potential tourism types, new leisure uses like rural recreation, rural tourism, medical tourism, adventure tourism and eco-tourism can be promoted which includes new tourist attractions and sites for transit camping and caravanning facilities.

**E. Institutional Mechanism**

In general, it was felt that a mechanism consisting of a mix of the following may help to achieve the required objectives:

1. Guidelines, which establish 'give and take' relationship between the 'exporting authority' (i.e., Delhi Administration) and the receiving authority (i.e., UP State Government). This

will include package of incentives and concessions offered by these authorities and who is to do what. This can be in the form of resolution of the Board in lieu of statutory provisions as done in United Kingdom in the form of the Town Development Act, 1952.

2. To ensure optimal linkages with NCT-Delhi in the development of the core economic activities such as industrial estates, wholesale markets, commercial complexes etc., joint venture projects could be set up on partnership basis between the development agencies of NCT-Delhi and Uttar Pradesh State Government.
3. Evolving a common "Specified Commodities Marketing Act" to enable the dispersal of wholesale distributive trades to the NCR towns.
4. With the fast growth of population and commercial activities, the congestion and consequent traffic and other problems particularly in old Delhi along the outer and inner Ring Roads and the main arteries leading to Delhi, the necessity of relocating wholesale markets is increasingly felt, specially of those that involve bulk handling of commodities such as PVC goods, chemicals, timber, food grains, iron and steel, building material and hazardous in nature, to CNCR and other important towns of UP Sub-region.
5. Since NCR is an inter-state region, there is no provision of law available to enable the Government of NCT of Delhi (GNCTD) to take appropriate steps for relocating such markets in NCR towns. It is, therefore, necessary to enact a law to regulate the location of market areas and wholesale markets in respect of commodities specified from time to time under such law and to establish market committees to manage and control different markets established for different commodities in different areas.
6. The Specified Commodities Market Act would be on the lines of Agricultural Produce Marketing Act, enacted to shift wholesale markets for some of the agricultural produce. This Act will be operative in entire NCR.
7. Aggressive marketing by the various development agencies of the State Governments (in the light of benefits accruing out of 'give and take' relationship).

### 3.2 Future Occupational Structure

By analyzing the present trends of development, it is felt that the higher order settlements with proximity to NCT Delhi should be provided with sufficient employment opportunities not only in industrial sector but also trade and commerce, construction, transport sectors also. This will help restricting the prospective migrants from the sub-region to NCT Delhi. Some major settlements

outside CNCR have also been identified as growth nodes to prosper on the basis of induced development which will help in achieving a balanced development of the whole sub-region. These settlements will grow in tourism sector, cottage as well as small and medium scale industries and trade and commerce activities and will provide employment to nearby lower order settlements. The central and basic villages will provide essential important facilities for development of agro-based industries such as land, electricity, water in addition to services. The proposed economic activities for the settlements identified under different hierarchies up to Sub-regional centres are listed in the following tables.

**Table 3-2 Proposed Economic Structure of the Metro Centres**

SI No.	Settlement Name	District	Status	Proposed Economic Activities 2021/31
<b>Metro Centres</b>				
1	<b>GHAZIABAD</b>	Ghaziabad	Urban	Industry, Trade and Commerce, Services
2	<b>LONI</b>	Ghaziabad	Urban	Industry, Services
3	<b>MEERUT</b>	Meerut	Urban	Industry, Trade and Commerce, Tourism, Services
4	<b>NOIDA</b>	G B Nagar	Urban	Industry, Trade and Commerce, Services
5	<b>Gr. NOIDA Phase I</b>	G B Nagar	Urban	Industry, Trade and Commerce, Tourism, Services
<b>Regional Centres</b>				
1	<b>BAGHPAT</b>	Baghpat	Urban	Industry (Agro based), Trade and Commerce, Services
2	<b>BARAUT</b>	Baghpat	Urban	Industry (Agro based), Trade and Commerce, Services
3	<b>BULANSHAHAR</b>	Bulandshahr	Urban	Industry (Small scale), Trade and Commerce (Agro based & Other), Tourism, Services
4	<b>HAPUR</b>	Ghaziabad	Urban	Trade and Commerce , Industry (Small & Medium scale)
5	<b>KHURJA</b>	Bulandshahr	Urban	Industry (Cottage, Small & Medium scale), Trade and Commerce, Tourism
6	<b>PILKHUA</b>	Ghaziabad	Urban	Industry (Small & Medium scale)
<b>Sub-Regional Centres</b>				
1	<b>GULAOTHI</b>	Bulandshahr	Urban	Industry, Sevices, Trade (Agro based & Other)
2	<b>KITHOR</b>	Meerut	Urban	Industry, Trade and Commerce

3	<b>MODINAGAR</b>	Ghaziabad	Urban	Industry, Trade and Commerce
4	<b>SARDHANA</b>	Meerut	Urban	Tourism, Trade and Commerce
5	<b>SHIKAR PUR</b>	Bulandshahr	Urban	Industry (Small), Trade and Commerce (Agro Based)
6	<b>SIKANDARABAD</b>	Bulandshahr	Urban	Industry, Trade and Commerce (Agro based & Other)
7	<b>SIYANA</b>	Bulandshahr	Urban	Trade and Commerce (Agro based), Services
8	<b>NARAURA</b>	Bulandshahr	Urban	Industry, Tourism
9	<b>KHEKRA</b>	Baghpat	Urban	Industry (Cottage), Trade and Commerce
10	<b>CHHAPRAULI</b>	Baghpat	Urban	Trade and Commerce, Services
11	<b>ANUPSHAHR</b>	Bulandshahr	Urban	Tourism, Trade and Commerce (Agro Based)
12	<b>HASTINAPUR</b>	Meerut	Urban	Tourism, Trade and Commerce
13	<b>MAWANA</b>	Meerut	Urban	Industry (Agro based & Cottage), Trade and Commerce
14	<b>GARHMUKTESWAR</b>	Ghaziabad	Urban	Tourism & Allied Activities
15	<b>DIBAI</b>	Bulandshahr	Urban	Industry (Small & Medium scale, Tourism), Services, Trade and Commerce (Agro based)
16	<b>JAHANGIRABAD</b>	Bulandshahr	Urban	Trade and Commerce (Agro based & Other) , Industry (Small, Tourism), Services

**Note:** The proposals regarding the economic structure of Service centres will be done after the finalization of settlements of Service centres.

### 3.3 Fiscal Policy: Policies and Proposals

In order to have a balanced development in the sub-region, the whole of NCR has to be considered as a unified economic zone.

In order to create comprehensive reforms and restructuring of the economy by creating new opportunities and opening new avenues for investment in the state, Industrial and Service Sector Investment Policy of 2004 (Source: Udyog Bandhu) has been prepared . The broad fiscal policies that will influence the development of UP Sub-region are as follows:

1. Infrastructure
2. Power & Energy
3. Fiscal Assistance-Infrastructure Projects
4. Stamp Duty & Registration Charges on Land
5. Fiscal Incentives- Service Sector
6. Incentives for new investment in the State
7. Incentives to existing units-
8. Deregulation and Simplification
9. Other Matters

#### 3.3.1 Infrastructure

1. Creation of Industrial Infrastructure Development Fund (IIDF) with a Budgetary Provision of Rs 50 crore. Rs 50 crore budgetary provisions will be made in the next four years also. Fund will finance and subsidize initiatives in infrastructure creation.
2. Establishment of Industrial Infrastructure Development Authority (IIDA) to manage IIDF.
3. Creation of world class infrastructure through private partnership. Facilities like transshipment centres, integrated transport and trade centres, exhibition halls, trade centres, container depots, way-side facilities, display centres etc.
4. Maintenance of Industrial Estates by a Co-operative Society of the entrepreneurs. The Society will receive 60% of taxes collected by the local authority and may be granted necessary financial assistance as and when necessary

### 3.3.2 Power & Energy

1. Uninterrupted power supplies for 24 hours to Industrial Areas. IT/ BT/Food Processing/ Agro-based industries involving investment of more than 10 crores and other industries involving investment of more than 50 crores will be supplied electricity through dedicated feeders
2. Feeders having 75 per cent or more industrial load will be deemed as industrial feeders and will be exempted from power cuts
3. Dedicated feeders built at the cost of industries shall not be tapped for any other purpose, except where such industry consents to tapping of such feeders for another industrial unit under mutual agreement
4. Captive and Co-generation of power is to be promoted
5. Natural gas to be promoted as an alternative source of energy

### 3.3.3 Fiscal Assistance-Infrastructure Projects

Financial Assistance shall be provided for investment in infrastructure projects like:

1. Industrial Estates for IT/BT units are eligible for 50 per cent of investment or Rs. 250 lac, whichever is less
2. Other industrial estates are eligible for 20 per cent of investment or Rs. 250 lac, whichever is less
3. Call centre hubs having covered area of not less than 10,000 sqm are eligible for 50 per cent of investment or Rs. 50 lac, whichever is less
4. Convention halls, multimedia centres, exhibition grounds and business/trade centres having recreational facilities and having –
  - i. covered area of not less than 5,000 sqm but less than 10,000 sqm are eligible for 50 per cent of investment or Rs. 50 lac, whichever is less
  - ii. Covered area of not less than 10,000 sqm are eligible for 50 per cent of investment or Rs. 100 lac, whichever is less;
5. Common facilities in industrial clusters, which are recommended by industrial associations, are eligible for 50 per cent of investment or Rs. 200 lac per cluster, whichever is less;

6. Laboratories for quality control and Research and Development for products of small scale industries are eligible for 50 per cent of investment or Rs. 100 lac, whichever is less;
7. Case to case approval by Cabinet on the recommendations of high powered committee under the chairmanship of Chief Secretary;

### 3.3.4 Stamp Duty & Registration Charges on Land

1. 100 per cent exemption from payment of stamp duty on –
  - i. Infrastructure projects
  - ii. IT/BT, and food processing units and call centres;
  - iii. service sector projects as enumerated below-
    - Multi-facility hospitals with specified facilities and having at least 100 beds;
    - Super-specialty hospitals with specified facilities;
    - Hospitals at block headquarters with specified facilities and having at least 50 beds;
    - Hospitals in rural areas other than a block head-quarter with specified facilities and having at least 30 beds;
    - IT/Technical education institutes at block headquarters teaching syllabus approved by the State Government for this purpose and having at least 75 students/apprentices;
    - Medical and dental colleges, other educational institutions, multiplexed cinema halls, shopping malls and entertainment centers investment in building and machinery in which is not less than Rs. 10 crore;
2. Facility of registration of all industrial projects at concessional rate of Rs. 2 per thousand, subject to a maximum of Rs. 5,000.

### 3.3.5 Fiscal Incentives- Service Sector

1. Service sector projects listed above will also be eligible for-
  - i. Exemption from acquisition charges if land for the project is acquired by the Government;
  - ii. Exemption from entry tax on plant and machinery used for the establishment of project;

- iii. Exemption from electricity duty for 10 years from the date of establishment;
- iv. exemption from development charges and malba charges levied by the development authority/local authority;
- v. exemption from house-tax, water and sewage tax and all other taxes/charges levied by the development authority/local authority for five years from the date of establishment;

### 3.3.6 Incentives for new investment in the State

1. 5 per cent interest subsidy to new small scale units for five years subject to a maximum of Rs. 2.5 lac per annum;
2. Concessional rates of 2 per cent of CST instead of 4 per cent;
3. Power bill subsidy equivalent to trade-tax paid on raw materials;
4. Exemption from entry tax on plant and machinery used in establishment of new units;
5. First new units in every district with an investment of at least 10 crores in case of IT/BT/food processing units and 25 crore in case of other units to be reckoned as pioneer units. Pioneer units will get interest free loan under Industrial Investment
6. Promotion Scheme (IIPS) for 15 years instead of 10 years
7. New industrial units employing more than 50 percent or 500 women and 25 percent or more SC/ST employees will be entitled to addition 20 percent of interest free loan under IIPS;
8. All new industrial units will be exempted from payment of electricity duty for 10 years. Pioneer units will be exempted for 15 years;
9. Projects having investment of more than Rs. 500 crore will be considered on a case to case basis for providing incentives;

### 3.3.7 Incentives to existing units

1. Stamp duties on business transactions to be rationalized to Rs. 2 per thousand for
  - i. Agreement relating to deposit of title deeds for pawn or pledge, from existing Rs. 5 per thousand

- ii. Bank guarantee, subject to a maximum of Rs. 10,000, from existing Rs. 5 per thousand subject to a maximum of Rs. 10,000
  - iii. conveyance of movable property belonging to the industry, from existing Rs. 20 per thousand
  - iv. Mortgage deed in which possession is not transferred, from existing Rs. 70/- per thousand
  - v. Collateral security, from existing Rs. 10 per thousand
2. Rates of interest on arrears of declared trade tax and assessed trade tax to be reduced to 14 per cent and 12 per cent respectively from existing 24 per cent and 18 per cent respectively;
  3. Reimbursement of 50 per cent expenditure incurred on registration of patents and other intellectual property rights, subject to a maximum of Rs. 5.0 lac;
  4. Interest rates of state financial institutions to be brought at par with bank/market rates
  5. Reimbursement to small scale units of expenditure incurred on-
    - i. Obtaining quality certification, 50 per cent of expenditure subject to a maximum of Rs. 2.0 lac;

Market and technical studies and study of production skills, 90 per cent of expenditure subject to a maximum of Rs. 50,000;

6. Incentives to existing small scale units under U. P. Small Industries Technical Up-gradation Scheme-
  - i. 50 per cent subsidy, subject to a maximum of Rs. 2.5 lac for purchase/import of technical know-how from government recognized institutions;
  - ii. 50 per cent capital subsidy, subject to a maximum of Rs. 2.00 lac for purchase of additional machinery for increasing production;
  - iii. 5 per cent interest subsidy for five years, subject to a maximum of Rs. 50,000 per annum, on loans from banks/financial institutions for purchase of machinery mentioned in para 16.6.2 above;
7. Purchase of diesel for captive power plants permitted against form 3-B;
8. Identification of trade fares and exhibitions will be made at the beginning of the year itself and participating industrialists shall be chosen through a transparent process at

least 6 months before the event. State Government will bear 50 per cent of transportation and space rental expenditure;

### 3.3.8 Deregulation and Simplification

1. An Act to be passed for effective implementation of Single Window Clearance System
2. System of self-certification and third-party certification will be introduced
3. Only one combined inspection of industries in a year
4. Small scale units having less than 25 employees exempted from labour laws
5. Entrepreneurs and traders having turnover upto Rs. 3 lac exempted from trade-tax registration
6. Automatic approval of industrial building maps on submission except for a restricted list of highly-polluting industries
7. Compulsion of giving employment to land-holder in lieu of acquired land removed
8. In case of recovery of dues-
  - xvii. Stamp duty to be charged on actual auction amount;
  - xviii. Recovery charges on actual amount recovered/amount of OTS only;
9. Breaking local truck cartels;
10. U.P. Shops and Establishments Act, 1962 will be amended considering the needs of Call Centres, Multiplexes, Shopping Complexes and other services facilities which keep open for 24 hours;

### 3.3.9 Other Matters

1. Appointment of Chief Industrial Development Officer in selected industrial districts;
2. Task force under the chairmanship of Industrial Development Commissioner for inquiry into complaints of harassment by officials;
3. Fast track grievance redressal system on security issues. An IG Police to be deputed on whole time basis in the office of DG Police to look into the security needs of the entrepreneurs;

4. Entrepreneurs / Trader Security Forum to be created at District level under the Chairpersonship of the District Magistrate;
5. Meeting of Udyog Bandhu at Hon'ble Chief Minister's level once in every three months;
6. Creation of Human Resource Development Fund for providing assistance to participating companies for training and development of employees. Participating companies to contribute 1/2 to 1 per cent of their wage bill according to number of employees. State Government will contribute twice such amount. Participating companies will be entitled to draw three times their contribution.
7. U.P. Small Industrial Units Rehabilitation board to be created. An Act to be passed for effective implementation of Rehabilitation Board
8. Creation of Rehabilitation Fund of Rs. 50 lac for funding 50 per cent of consultancy charges for making rehabilitation packages;

## CHAPTER 4. TRANSPORTATION

### 4.1 Proposals

A comprehensive analysis was carried out to understand the existing as well as possible flow of traffic movement, economic activities within UP Sub-region as well as outside NCR, the effects of ongoing as well as proposed mega projects (that may affect traffic characteristic) in the study part. The study was also carried out for existing legal framework related to traffic and transportation and the various modality of Integrated Transport Functional Plan for NCR.

#### 4.1.1 Objectives

- 1 To develop convenient intercity transportation network.
- 2 To provide free and convenient flow of traffic movement within NCR UP.
- 3 To reduce traffic pressure in major urban centres of NCR UP.
- 4 To provide proper connectivity among cities and between cities with rural centres.
- 5 To avoid new roads as far as possible to save rich agricultural land of this area.
- 6 To reduce travel time in NCR UP.

#### 4.1.2 How?

- 1 Upgradation of the status of roads.
- 2 Upgradation and widening of roads.
- 3 Development of By-passes and bridges.
- 4 Provisions of access control and service roads.
- 5 Development of elevated roads (both land filled and single pillar road)
- 6 Development of alternative links.

#### 4.1.3 Proposals

**Table 4-1 Proposals for the Roads/ Links in UP Sub-region**

S.No	Name of Road/ Link	Approximate Distance in kms	Action	Description
1	<b>Old Yamunotri Road:</b> Behtha Hazipur- Loni- Baghpat- Baraut- Shamli	47	<ul style="list-style-type: none"> <li>• Upgrade from SH and MDR to NH</li> <li>• 4/6 laning</li> <li>• 60 -60 m wide green buffer along both sides of ROW of proposed</li> </ul>	<ul style="list-style-type: none"> <li>• The current surface condition of road is very poor.</li> <li>• The road provides an alternative link between Uttrak hand and Delhi.</li> <li>• The development of this road as suggested will help in reducing traffic problem at Meerut, Modinagar and</li> </ul>

S.No	Name of Road/ Link	Approximate Distance in kms	Action	Description
			status of road.	Ghaziabad.
2	Masoori (Dasna)-Gulaothi- Siana-Bugrasi	52	<ul style="list-style-type: none"> <li>MDR to SH</li> <li>4 laning</li> <li>New bridge at Ganga</li> <li>30 -30 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	<ul style="list-style-type: none"> <li>Existing NH-24 connecting eastern parts of the country/ Uttar Pradesh etc with Delhi experiences traffic hazards averagely once or twice in a week. The widening of this road has been reached to its maximum extent.</li> <li>The development of this road as suggested will provide a alternative link for NH 24 by-passing Garhmukteshwar, Hapur and Pilkhua towns.</li> <li>The concept of balanced development and growth can be achieved with the development of this road which will open highly undeveloped area of UP Sub-region along Ganga River for development of economic activity.</li> </ul>
3	Gulaothi-Sikandrabad-Dankaur-Ballabgarh	36	<ul style="list-style-type: none"> <li>MDR to Expressway</li> <li>6/8 laning</li> <li>Elevated road to cross Sikandrabad</li> <li>100 -100 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	<ul style="list-style-type: none"> <li>This road will be bisecting some mega infrastructure project like Ganga Expressway, Upper Ganga Canal Expressway, Taj Expressway etc therefore it can act as a connecting link for these mega projects. This road will help in tapping the overflow of economic activities from Faridabad and its adjoining areas in Haryana which has reached to its optimum level.</li> </ul>
4	Daluhera- Patala-Niwari- Modinagar-Hapur	40	<ul style="list-style-type: none"> <li>ODR and MDR to SH/ NH</li> <li>6 laning</li> <li>By-pass (Hapur as per current Master Plan)</li> <li>Single pillar elevated road</li> </ul>	<ul style="list-style-type: none"> <li>A large volume of traffic between Northern states and UP and Eastern states passing through UP NCR creates lot many problems at Ghaziabad and Meerut. The development in and around Ghaziabad does not allow any by-pass</li> </ul>

S.No	Name of Road/ Link	Approximate Distance in kms	Action	Description
			(at Modinagar) <ul style="list-style-type: none"> <li>30 -30 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	connecting NH-1, SH-57, NH-58 and NH-24. Similarly an alternative route for this traffic is restricting at Meerut while using SH 14 in the absence of a proper by-pass in Meerut. <ul style="list-style-type: none"> <li>The development of this link will reduce the distances as well as it will be causing tremendous reduction in the volume of traffic passing through Ghaziabad and Meerut. It will be convenient for Regional traffic as well as the residents of the cities where inter mixing of Local and regional traffic causes hazards.</li> <li>Unencroached road is available at present for proposed widening.</li> </ul>
5	Baraut- Sardhana- Daurala- Lawar- Masuri	46	<ul style="list-style-type: none"> <li>2 laning</li> <li>20 -20 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	<ul style="list-style-type: none"> <li>The scattered sugar factories in extreme northern belt of UP Sub-region, important tourist places like Hastinapur, Sardhana etc and scattered medium scale industries are unable to flourish because of poor inter connectivity in this belt.</li> <li>The widening of this existing MDR and ODR will provide not only better connectivity between these economic activity but also better linkages with other parts through NH 119, NH 58, SH 57 etc.</li> <li>The widening of this road will ease out traffic on NH 119 and NH 58.</li> </ul>
6	Garhmukteshwar- Siana- Bulandshahr- Kakaur- Jewar	93	<ul style="list-style-type: none"> <li>ODR to SH (Jewar- Bulandshahr stretch)</li> </ul>	<ul style="list-style-type: none"> <li>This link acts as a outer ring within UP Sub-region of NCR. It is important to develop this road for overall balanced</li> </ul>

S.No	Name of Road/ Link	Approximate Distance in kms	Action	Description
			<ul style="list-style-type: none"> <li>• 4 laning</li> <li>• Single pillar elevated road in Bulandshahr</li> <li>• 30 -30 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	<p>development in the Sub-region.</p> <ul style="list-style-type: none"> <li>• The Southern part of Uttrakhand and North-west districts of Uttar Pradesh (Bijnaur, Moradabad etc) will be having a shortest as well as direct link with major economic hubs of western India, bypassing highly developed and congested areas of Ghaziabad, Noida, Faridabad, Gurgaon etc.</li> <li>• This road provides excellent linkages between urban centres and lower hierarchy towns/ rural settlements of UP Sub-region.</li> </ul>
7	Garhmukteshwar-Kithaur- Meerut	45	<ul style="list-style-type: none"> <li>• 4 laning Bypass at Meerut connecting Baghpat road, NH 58, NH 334 and Garh road.</li> <li>• 30 -30 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	
8	Baghpat- Sonipat	20	<ul style="list-style-type: none"> <li>• ODR to SH (A part)</li> <li>• 4/ 6 laning</li> <li>• 30 -30 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	<ul style="list-style-type: none"> <li>• The existing ODR link is used as a major bypass at regional level to avoid Delhi-Ghaziabad area for the national movement of goods.</li> </ul>
9	Naraura- Dibai- Bhimpur- Shikarpur- Bulandshahr	63	<ul style="list-style-type: none"> <li>• SH to NH (Bhimpur – Bulandshahr)</li> <li>• 6 laning</li> <li>• 60 -60 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	<ul style="list-style-type: none"> <li>• The development of this road is necessary for economic development of farthest area of UP Sub-region by providing better road linkages between Noida/ Greater Noida/ Ghaziabad/ Delhi with this area. This can also act as alternative link between central and eastern part of UP with Delhi and North India thereby reducing pressure on NH 91 and NH 24.</li> </ul>
10	Baghpat- Meerut	50	<ul style="list-style-type: none"> <li>• SH to NH</li> </ul>	<ul style="list-style-type: none"> <li>• This road caters to the</li> </ul>

S.No	Name of Road/ Link	Approximate Distance in kms	Action	Description
			<ul style="list-style-type: none"> <li>6 laning</li> <li>60 -60 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	national flow of goods. The upgradation of this road with bypass at Meerut will help not only the smooth flow of traffic but also will help in decongesting Ghaziabad and Trans Yamuna area of east Delhi.
<b>New Roads</b>				
1	Greater Noida-Dadri- Hapur (Bypass Road)	47	<ul style="list-style-type: none"> <li>Expressway</li> <li>6/8 lane</li> <li>Access control</li> <li>100 -100 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	<ul style="list-style-type: none"> <li>High potentials at Hapur-Pilkhuwa belt can be developed by providing this link. This road will encourage the expansion of existing entrepreneurs of Noida, Greater Noida and also will attract the establishment of new economic activities due to relatively lower land cost in this belt.</li> </ul>
2	Khekada- Delhi (NH-1)		<ul style="list-style-type: none"> <li>SH</li> <li>6 laning</li> <li>Bridge over Yamuna</li> <li>30 -30 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	<ul style="list-style-type: none"> <li>The cheapest land as compared to entire Sub-region is available along Loni-Baghpat Highway. Despite at the door of Delhi is highly undeveloped because of no direct linkages with Delhi or with major transport network. The proposed roads / bridges will open this area for economic development. The level of economic development in this area can be at par with Noida, Greater Noida area in much lesser time.</li> </ul>
3	Loni- Delhi (NH-1)		<ul style="list-style-type: none"> <li>SH</li> <li>6 laning</li> <li>Bridge over Yamuna</li> <li>30 -30 m wide green buffer along both sides of ROW of proposed</li> </ul>	<ul style="list-style-type: none"> <li>The cheapest land as compared to entire Sub-region is available along Loni-Baghpat Highway. Despite at the door of Delhi is highly undeveloped because of no direct linkages with Delhi or with major transport network. The proposed roads / bridges</li> </ul>

S.No	Name of Road/ Link	Approximate Distance in kms	Action	Description
			status of road.	will open this area for economic development. The level of economic development in this area can be at par with Noida, Greater Noida area in much lesser time.
4	Baghpat- Delhi (NH-1)		<ul style="list-style-type: none"> <li>• SH</li> <li>• 6 laning</li> <li>• Bridge over Yamuna</li> <li>• 30 -30 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	<ul style="list-style-type: none"> <li>• The cheapest land as compared to entire Sub-region is available along Loni-Baghpat Highway. Despite at the door of Delhi is highly undeveloped because of no direct linkages with Delhi or with major transport network. The proposed roads / bridges will open this area for economic development. The level of economic development in this area can be at par with Noida, Greater Noida area in much lesser time.</li> </ul>
5	Khurja- Palwal (NH-2)		<ul style="list-style-type: none"> <li>• Expressway</li> <li>• 6/8 laning</li> <li>• Bridge over Yamuna</li> <li>• 100 -100 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	<ul style="list-style-type: none"> <li>• The trend of development activity is rapidly increasing along the existing as well as proposed transport networks of the west of Yamuna river in Haryana. Creating a link with this part will open up the tremendous scope for economic development of this relatively lesser developed area of UP Sub-region.</li> </ul>
6	Meerut- Ghaziabad	46	<ul style="list-style-type: none"> <li>• Expressway</li> <li>• 6/8 laning</li> <li>• 100 -100 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	<ul style="list-style-type: none"> <li>• One of the highest movements of traffic is observed on NH-58 which connects Meerut (the biggest industrial and business hub of western UP with National capital Delhi). This road is also the only link between Uttrakhand and New Delhi. The widening of this road can not absorb even the existing volume of traffic. Therefore</li> </ul>

S.No	Name of Road/ Link	Approximate Distance in kms	Action	Description
				development of this new expressway is very essential.
<b>By-passes</b>				
1	Pipeline road {Murad nagar- Behta Hazipur- Delhi (Sonia Vihar)}	20	<ul style="list-style-type: none"> <li>• 2-4 laning</li> <li>• Single pillar flyover at Behta Hazipur and Muradnagar</li> <li>• Access control as far as possible.</li> </ul>	<ul style="list-style-type: none"> <li>• A high volume of traffic using NH 58 for Delhi passes through Ghaziabad. The inter mixing of Regional traffic of NH 58 with local traffic in Ghaziabad is hazardous for both traffics.</li> <li>• The proposed road is a only possible by-pass for Ghaziabad.</li> </ul>
2	Hapur By-pass (NH 24 to NH 334)		<ul style="list-style-type: none"> <li>• 6 laning</li> <li>• Access control</li> <li>• 100 -100 m wide green buffer along both sides of ROW of proposed status of road.</li> </ul>	<ul style="list-style-type: none"> <li>• The proposed road intersecting NH 58 and NH 334 will help the smoothening of Regional traffic, convenient inter linkages between different NHs and different parts of Meerut.</li> </ul>

Note: The propose lane of road will be referred as per true IRC Norms  
The proposals mentioned above are shown on Map 4-1 and Map 4-2.

#### Rural Linkages

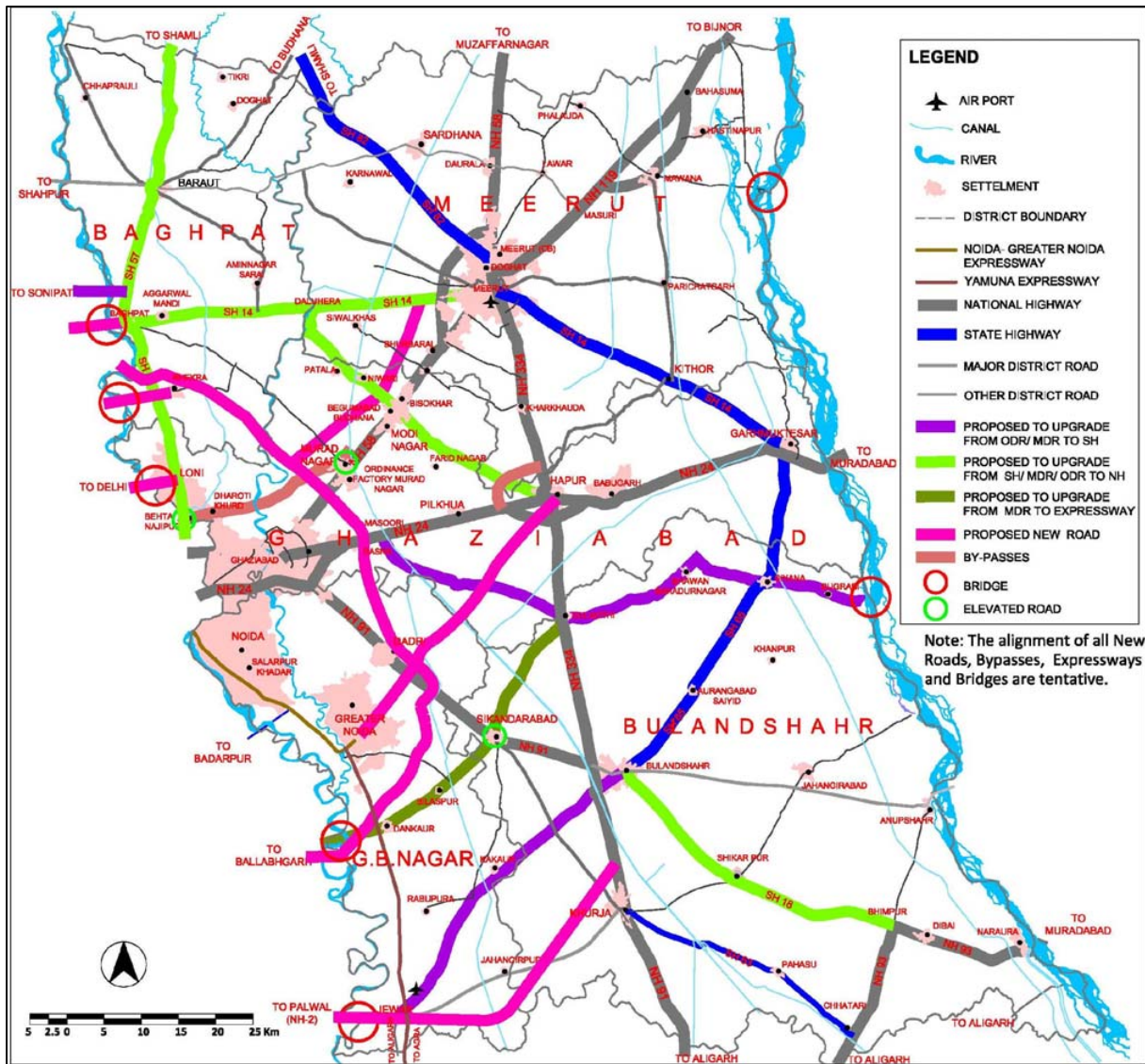
The upgradation of lower hierarchy roads connecting small and medium urban centres, service centres, central villages etc will be envisaged after the finalization of settlement pattern.

#### 4.1.4 Proposed Policies for regional road transportation network

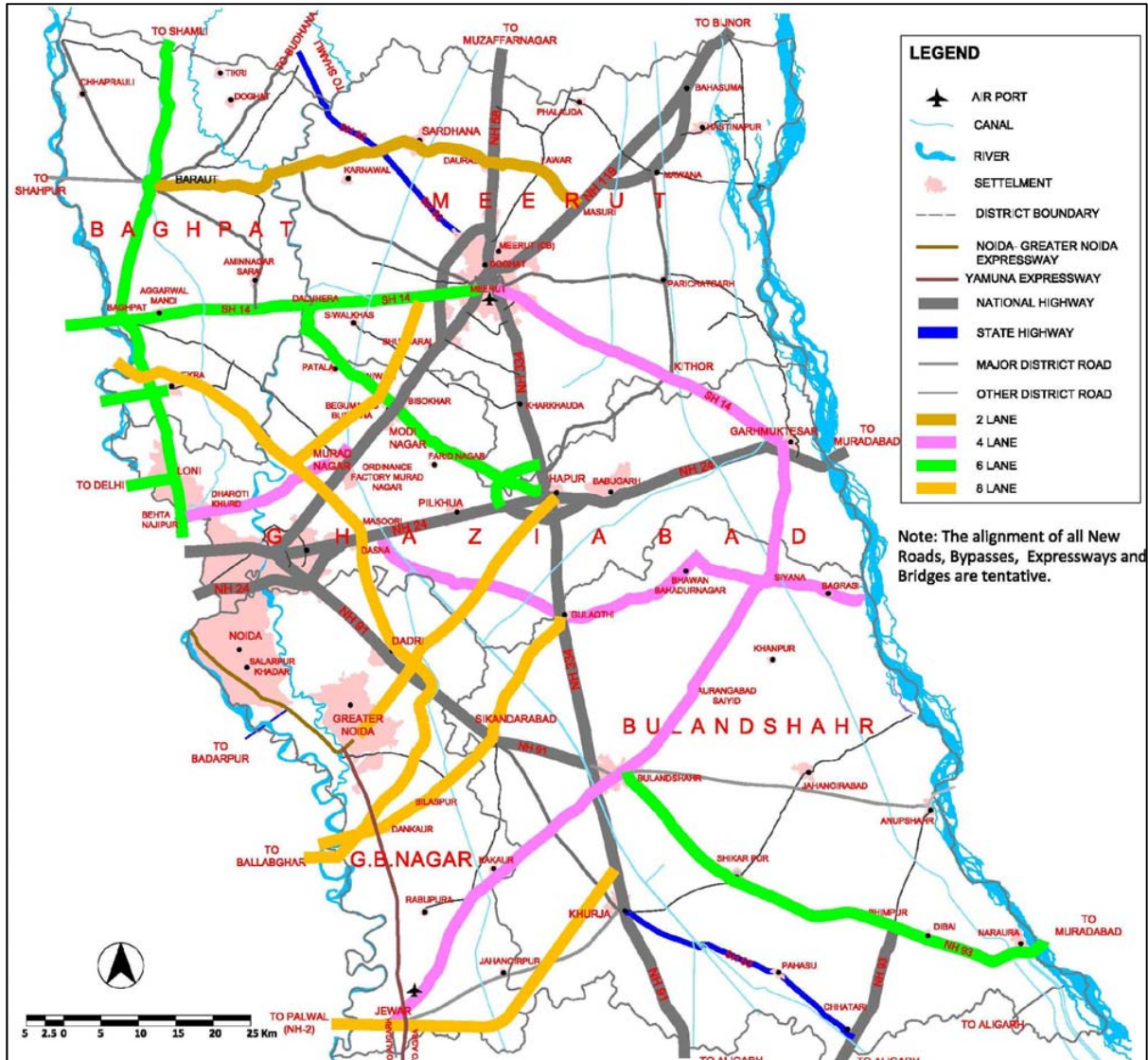
- 1 All new culverts/ bridges on different hierarchy of roads shall be atleast one lane wider than maximum conceived/ projected width of every road.
- 2 As far as possible the access control roads should not be elevated routes especially in regional context.

- 3 A satellite based traffic volume and speed observation centres should be developed. (Current online traffic volume status for public using regional roads so as to help them decide alternative route. Online traffic volume status for public utility vehicles used in different emergencies like fire brigade, police, ambulance)
- 4 Common data bank for all type of vehicles, sharable on national basis.
- 5 Provide large scale transport facility centres at the important urban centres which include eating joints, medical facilities, repair and maintenance centre etc and small scale facility centre/ booths at every urban centre or at specific distance.
- 6 All National Highways and Expressways should have minimum 1 hour intermittent patrolling by police and 2 hour interval patrolling on all NHs, MDRs/ link roads. All such patrolling vehicles should have a GPS tracking device with regular recording of vehicle movement at District Head quarter.

Map 4-1 Proposed Upgradation of Roads & Bridges on Road of UP Sub-region



Map 4-2 Proposed Lining of Roads of UP Sub-region





## 4.2 Railways

It is evident from the analysis that Delhi requires lot of expansions keeping in view the passenger and goods travel demand, Railway network radiating from Delhi has great impact on rail network of NCR UP. The scope of expansion of rail network to cater to the current and future demand can be summarized into two following heads:

### i. Addition of parallel lines

- Ghaziabad-Aligarh route is presently having 130% line utilization which is presently a double line which can be extended upto 4 lines.
- Ghaziabad-Meerut is having 50% of line utilization at present with double line which can be extended upto three lines.
- Loni-Baghat-Shamli route is single track at present which is highly underutilized despite having very high scope for catering large volume of goods movement. This track can be extended upto two lines.
- Ghaziabad-Hapur-Muradabad route at present it is double track with 60% Of line utilization due to infrastructure constraints, this route cannot be expanded.

### ii. Increasing line capacity

- Ghaziabad-Aligarh route is electrified and a high speed line but advance signalling system is old and many railway crossings are without ROBs which reduces the overall speed.
- Ghaziabad- Hapur- Moradabad route, Ghaziabad- Meerut route and Loni- Baghat route are non electrified routes, advance signalling system; slow speed lines, underutilized line capacity and many ROBs etc are all factors which require immediate attention by Railway Ministry.

### 4.2.1 Proposed Rail Transport

Some of the major railway transport proposals are as given below (Map 4-4 & Map 4-5):

#### A. Notified Major Railway Transport Proposals of Ministry of Railways:

##### 1) Dedicated Freight Corridor Project

**Need:** The Indian Railways' quadrilateral linking the four metropolitan cities of Delhi, Mumbai, Chennai and Howrah, commonly known as the Golden Quadrilateral; and its two diagonals (Delhi-Chennai and Mumbai-Howrah), adding up to a total route length of 10,122 km carries more than 55% of revenue earning freight traffic of IR. The existing trunk routes of Howrah-Delhi on the Eastern Corridor and Mumbai-Delhi on the Western Corridor are highly saturated, line capacity utilization varying between 115% & 150%. The surging power needs requiring heavy coal movement, booming infrastructure

construction and growing international trade has led to the conception of the Dedicated Freight Corridors along the Eastern and Western Routes.

#### i. Dedicated Rail Freight Corridor (Eastern)

The Eastern Dedicated Rail Freight Corridor connect Sonnagar on the East Central Railway to Khurja on the North central Railway through double line electrified traction, Khurja to Dadri in U.P. Sub-region double line electrified corridor (46 km) and single line electrified line from Khurja to Ludhiana.

Electrification of branch line from Khurja city to Meerut via Hapur and Saharanpur will ease the goods movement problem in Delhi and NCR. A new link of Meerut and Panipat will also offload some traffic destined to and from Panipat and beyond.

There is also proposal to connect the Western DFRC with the Eastern DFRC at Dadri.

#### ii. Dedicated Rail Freight Corridor (Western)

The Western DFC (1483 kms) is proposed from Jawaharlal Nehru Port (JNPT) in Mumbai to Dadri in U.P. Sub-region and would cater largely to the container transport requirements. The Western DFC will be funded substantially by the Japan International Cooperation Agency (JICA).

### 2) DMIC (Delhi - Mumbai Industrial Corridor)

Of the 7 investment regions within the DMIC, 1 lie within the UP Sub region and of the 13 industrial areas, 1 lies within UP Sub Region. Dadri- Noida- Ghaziabad is identified as an Investment Region in close proximity to Meerut-Muzaffarnagar Industrial Area. (Table 4-2)

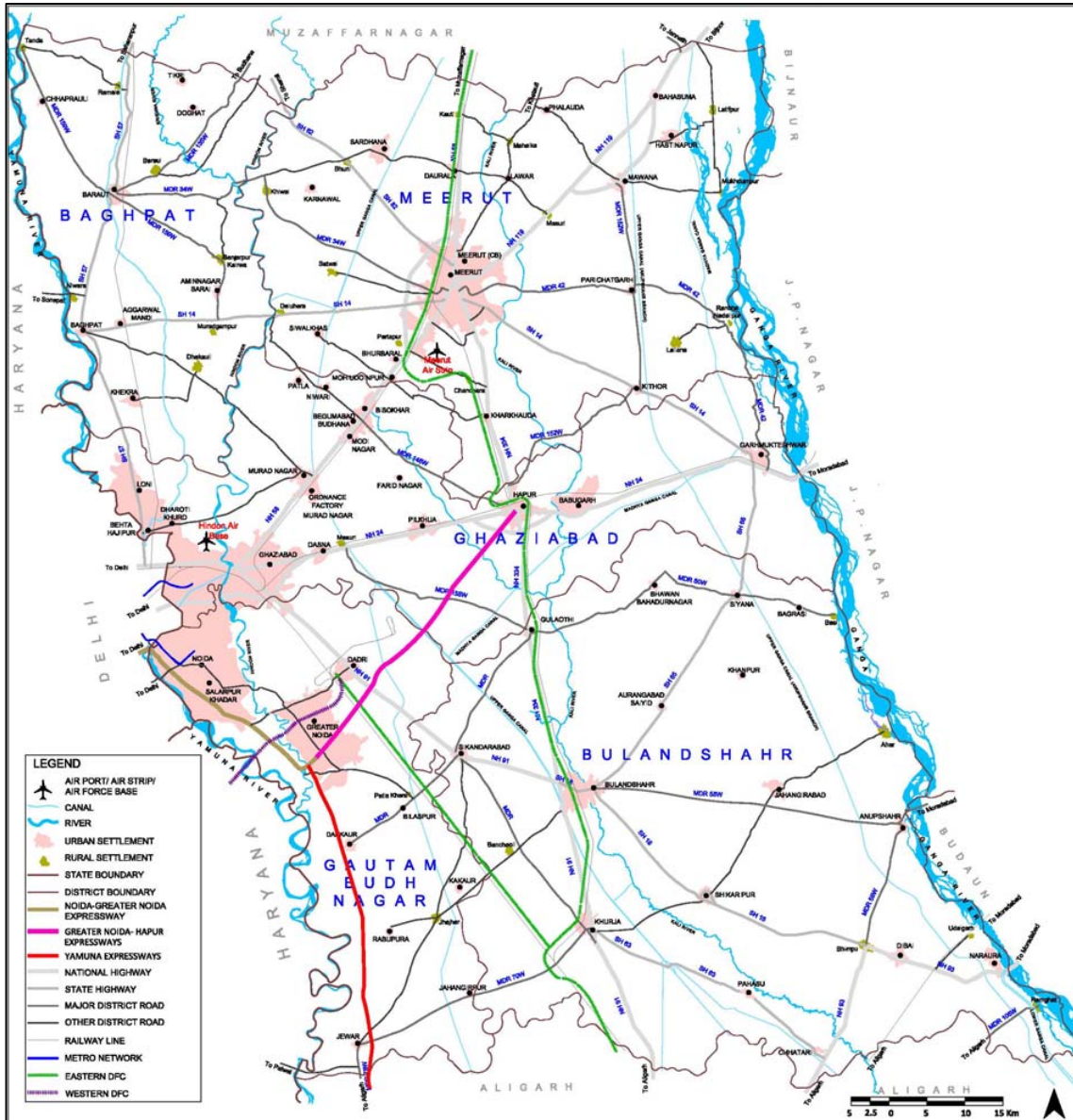
An investment region would be a specifically delineated industrial region with a minimum area of around 200 sqkm (20,000 ha) while the maximum limit is based on the specific site's potential, while an industrial area would be develop with a minimum area of around 100 sq.km (10,000 ha) for the establishment of manufacturing facilities for domestic and export led production along with the associated services and infrastructure.

**Table 4-2 Components of Proposed Nodes in DMIC-Uttar Pradesh**

Component	Dadri-Noida-Ghaziabad (Investment Region, Min. -200 Sqkm)	Meerut- Muzaffarnagar (Industrial Area, Min. 100 Sqm)
1	2	3
<b>Node No</b>	1	2
<b>New Export-oriented Unit/ SEZs</b>	-	-
<b>Augmenting Existing Industrial Estates</b>	Ghaziabad	Meerut, Muzaffarnagar
<b>Agro/ food Processing Zone</b>	-	-
<b>Knowledge City</b>	-	-
<b>Logistic Park/ ICD/ port Cont. terminal/ CFS</b>	Integrated Logistics Hub	Truck Terminal with warehousing Facilities
<b>Integrated Township</b>	-	-

<b>Power Plants</b>	Dadri	-
<b>IT/ ITES/ Biotech Hub</b>	-	-
<b>Feeder Rail</b>	Connectivity to eastern (Ludhiana- Delhi- Kolkata) and western ( Delhi - Mumbai) Freight Corridors	Connectivity to DFC, Meerut, Lucknow/ Saharanpur
Feeder Roads	Linking with NHDP (NH-24, NH-58), Taj expressway, Eastern peripheral Expressway and Hinterlands and augmentation of SH (Ghaziabad- Aligarh- Agra)	Connectivity to NH-58, Augmentation of state highways, construction of new expressway between Delhi, Meerut and Muzaffarnagar
<p>Note:</p> <ol style="list-style-type: none"> <li>1- This investment region will be served by proposed Greater Noida airport.</li> <li>2- General manufacturing Investment region to be spread over 400 sqkm is being planned at Dadri- Noida- Greatr Noida- Ghaziabad.</li> </ol>		

Map 4-4 Notified Rail Transport Proposals of UP Sub-region



**B. Major Railway Transport proposals as Per Transport Functional Plan 2032:****1) Orbital rail (Panipat - Rohtak - Rewari – Palwal - Khurja - Hapur – Meerut- Panipat)**

Orbital rail connecting radial rail corridor of IR at CNCR towns and directional terminals to bypass the regional traffic around Delhi. The alignment orbital rail was proposed along the West and East Peripheral Expressways. This corridor was envisaged to enable bypassing of a number of trains, presently passing through Delhi. However extensive urban development along the peripheral expressways, particularly along the western expressway, has been proposed. Hence this orbital corridor would not be able to efficiently service bypass movements. Moreover DFC will drastically change the face of freight operation on IR on existing routes. Hence as an alternative, Panipat-Gohana-Rohtak-Rewari-Palwal-Khurja rail corridor is considered to serve as part of the regional Orbital Rail Corridor (ORC). The existing rail link between Khurja and Meerut along with the proposed rail link between Meerut and Panipat will complete the orbital system. This revised Orbital Rail Corridor (ORC) would also serve as a regional commuter service corridor as it inter-connects regional centres. It is recommended that Rewari – Palwal – Khurja project be taken up to complete the outer orbital.

It is proposed that the new lines on these corridors be single lines with electrification and colour light signalling. With Khurja – Hapur – Meerut and Shakurbasti – Rohtak sections getting electrified, Rohtak – Panipat branch may also be sanctioned for electrification. Present traffic density may not appear to justify it. However to obviate the problems related to multi-tractions and change of tractions in the region, it is suggested that all legs of ORC be electrified. They are also proposed to be fit to run MEMU/ EMU Progressively.

**2) Other New Rail Lines (Inner ORC)**

In addition to ORC, 2 other rail lines, within UP Sub region, are proposed to strengthen the connectivity of the rail system. They are: (Map 4-5)

**i) Sonipat- Meerut (66 Kms)**

It is also proposed to connect Sonipat with Meerut. This would complete the inner orbital corridor, around CNCRs.

**ii) Gurgaon - Faridabad - Dadri (53 Kms)**

The Jhajjar - Gurgaon rail line is proposed to be extended upto Faridabad, connecting the two major urban nodes and linking it with Delhi–Bhopal-Chennai rail line route from Faridabad. It is proposed to be further extended to Dadri to link with Ghaziabad – Aligarh line and the proposed DFC terminal at Dadri. The above two rail lines would also cater to the intense commuter movement in this part of CNCR.

**3) Regional Rail Transport System**

The primary regional rail network will connect the regional towns with each other and with Delhi, through dedicated lines to meet the demand on specific corridors. Apart from the road and MRTS network, significant and substantial demands for low cost fast train services within NCR need to be met by augmentation of existing rail network. In this

direction, all the radials need to be electrified and provided with automatic and modern signalling. All the radials need to have independent double line electrified corridor for running of commuter trains by way of operation of EMUs. As seamless operation of Metro and Indian Railways trains does not appear to be feasible now, a smooth and fast transfer of passengers on the two networks is essential. Integrated ticketing need be experimented to save lot of time and effort. This can be done along with adequate junction arrangements and planning travelling facilities appropriately.

#### i. Delhi Metro Rail Transport System

DMRC, as part of its Master Plan, has proposed extension of Delhi Metro to CNCR towns like NOIDA and Ghaziabad (Map 4-5, Table 4-3).

**Table 4-3 New Sections Proposed by DMRC in Uttar Pradesh**

S. No.	Operational	To be Extended	Length
	1	2	3
1	Shahdara- Dilshad Garden	Ext. to Ghaziabad Bus terminal (Phase III)	9.4 kms
2	Indrapratha- Anand Vihar	Ext. to Vaishali (Phase III)	3 kms
3		Mayur Vihar Phase I- Gazipur- Noida Sector 62 (Phase IV)	7 kms

Source: Functional Plan on Transport for National capital Region 2032

#### ii. Extension of MRTS

It has been planned to extend the MRTS alignment to regional towns of NCR. In the first instance, the following extensions are under implementation.

- Delhi-Ghaziabad
- Delhi-Noida-Greater Noida

#### iii. Extension of Regional Mass Rapid Transit System

- Noida – Greater Noida – Jewar (65.0 km)
- Ghaziabad-Meerut ( 42.0 km)
- Ghaziabad-Hapur ( 35.0 km)

### 4) Regional Rapid Transit System (RRTS)

NCRPB has finalised 8 RRTS corridors in NCR out of which four corridors are suggested for UP Sub Region of NCR as shown in Table 4-4 below, on the basis of need and importance. Out of suggested 8 routes Delhi-Ghaziabad- Meerut route has been given first priority for implementation. Accordingly the tentative alignment has been prepared as shown in Map 4-5.

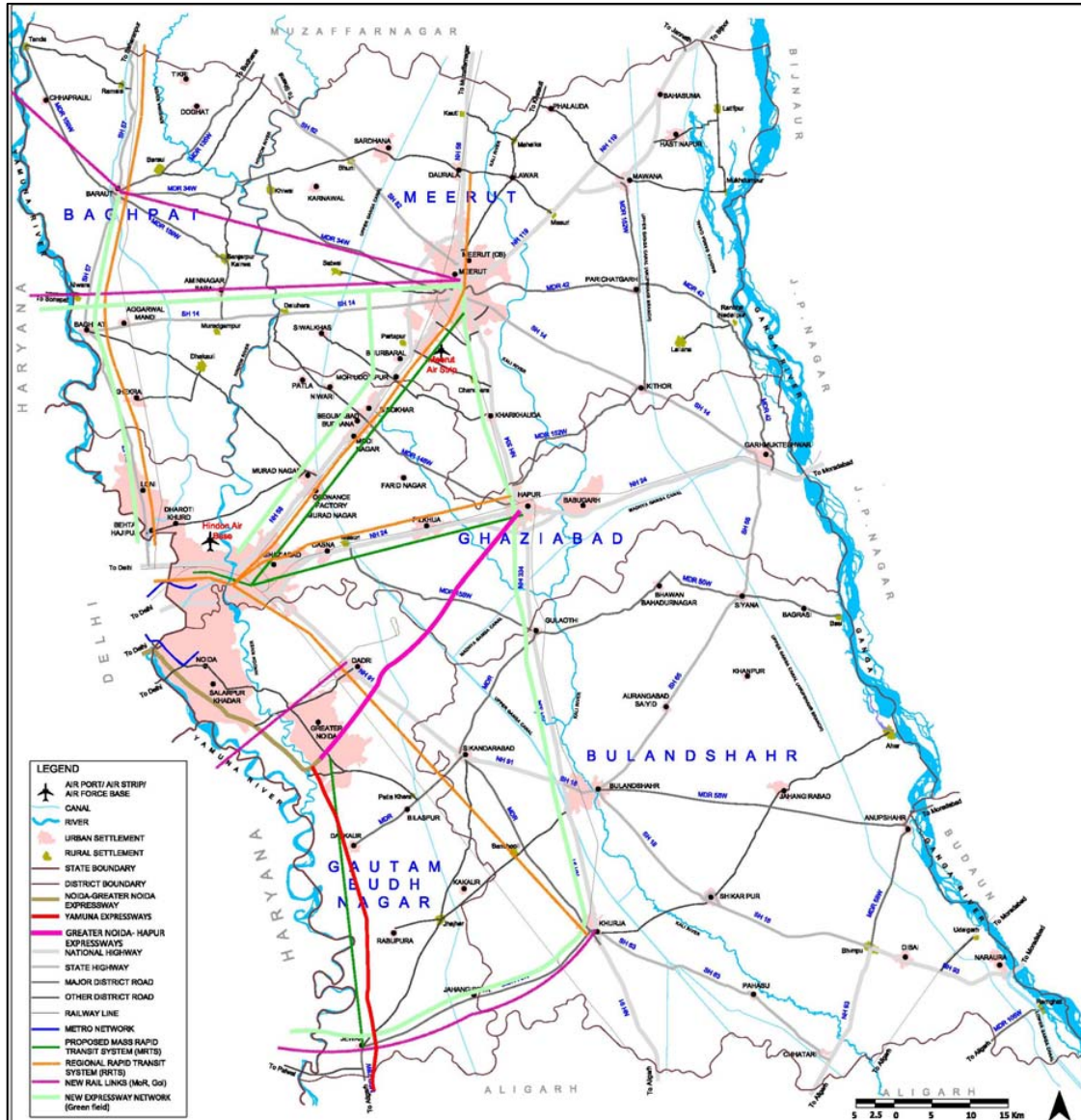
**Table 4-4 Prioritisation and Cost of RRTS Corridor**

Order of Priority	Corridor	Length including Delhi Urban area (Km)	Appro. Cost of dedicated RRT infrastructure in NCR including Delhi Urban area without Rolling stock (in millions)
	1	2	3
1	Delhi-Ghaziabad-Meerut	67.0	Rs 13400

2	Delhi-Gurgaon-Rewari-Alwar	158.0	Rs 31600
3	Delhi-Faridabad-Ballabgarh-Palwal	60.0	Rs 12000
4	<b>Ghaziabad-Khurja</b>	<b>83.0</b>	<b>Rs 16600</b>
5	Delhi-Sonipat-Panipat	89.0	Rs 17800
6	Delhi-Bahadurgarh-Rohtak	70.0	Rs 14000
7	<b>Delhi-Ghaziabad-Hapur</b>	<b>57.0</b>	<b>Rs 11400</b>
8	<b>Delhi-Shahadra-Baraut</b>	<b>56.0</b>	<b>Rs 11200</b>
	<b>Total</b>	<b>640.0</b>	<b>Rs 128000</b>

Source: Functional Plan on Transport for National capital Region 2032

Map 4-5 Major Transport Proposals as per Regional Plan 2021 and Transport Functional Plan 2032



### 4.3 Airways

#### A. Taj International Airport (TIA), Jewar

A new international airport is proposed at Jewar, which will serve the whole sub region and other parts of NCR. It will be the second international Airport in the region. The airport will be connected in the region by Taj expressway (Map 4-5).

#### B. Meerut Airport

The existing Dr Bhimrao Ambedkar Air Strip at Gagol Road in Meerut is proposed to expanded into an international airport. The airport expansion is seen as a move to decongest air traffic from Indira Gandhi International Airport and cater to the burgeoning number of flyers from UP, NCR, Uttarakhand and Moradabad. This development is expected to positively impact real estate projects on NH 58, Raj Nagar Extension, Hi-tech Cities and Hapur. The project has been conceptualized and will be in PPP mode on design, build, and finance, operate and transfer (DBFOT) basis. UP government has sanctioned expansion and widening of current airstrip, at a cost of Rs 65 crore, to make it suitable for night landing (Map 4-5).

### 4.4 Waterways

#### A. Upper Ganga Canal

“The Upper Ganga Canal Expressway Project” contains some proposals related to navigation facility in the sub region. According to their proposal, Land area of 8 hectares near Dasna, 8 ha near Bhola and 8 ha near Salawa, totalling 24 hectares are exclusively earmarked for navigation channel and reserved area (Table 4-5).

**Table 4-5 Area Reserved for Channels**

S. No.	Village/Tehsil, District name	Area Reserved for channels (ha)	UGC Chainage	Left/ Right bank of canal
	1	2	3	4
1	Dasna, Ghaziabad	8 ha	169.9	Left
2	Bhola, Meerut	8 ha	135.6	Left
3	Salwa, Meerut	8 ha	108.4	Right & left
<b>Total Area</b>		<b>24 ha</b>		

Source: The Upper Ganga Canal (UGC) Expressway Project, UPEIDA

#### B. Yamuna River

Ferry system will be used to transport goods in inter and intra states which will reduce the operational cost of fuel and environmental pollution as compared to roads, rail or air. Transit points will be proposed at the places which have proper accessibility through any kind of road

facility. For Yamuna, transit points may be proposed at Jewar, Noida, Loni Tronica City and Baghpat.

## 4.5 Integrated Multi Modal Transport Plan - Components

As envisaged by the Functional plan, Transport, NCR, it is proposed that the UP Sub region will promote IMMTP. This integration will physical, operational, financial and institutional. It would help in improving accessibility of and connectivity to major Regional Centres in NCR and within the Sub region. This shall include:

- Bus System
- Rail System (Commuter)
- Mass Rapid Transit System
- Airport

### 4.5.1 Road Safety Strategies

The Road Safety Strategies for Accident Prevention, Reduction and Mitigation are proposed to be adopted:

- a. Adoption of standard designs for Roads & Highways such as basic forms of intersections and their choice, road alignment and vertical profile, visibility at intersections, radii of curves, minimum design features, minimum turning radii, widths of carriageway at junctions, etc.
- b. Design of Expressways, Arterial Roads, Sub-arterial Roads & Collector Roads will specially be based on premise that accidents are bound to take place even if all possible safety measures are taken, i.e. all categories of Roads & Highways should be of forgiving nature and are provided with gentle road-side slopes, safety barriers, guard rails, guard posts, delineators, object / obstruction markers, besides adequate traffic signs with markings, etc.
- c. Adoption of standard designs for appropriate types of grade-separated interchanges for catering to all traffic movements safely
- d. Adoption of sound construction and maintenance practices.
- e. Provision of adequate and effective traffic control and safety devices during construction and maintenance activities as it has been observed that the accident rate is generally 1.5 times during these activities as against normal traffic flow conditions
- f. Adoption of traffic calming measures such as speed breakers, rumble strips etc. on Urban Stretches of Highways.
- g. Provision of road side amenities for pedestrians, cyclists and other special road users such as rickshaws, vans, buses, trucks, etc.

- h. In addition, all possible engineering, educational, enforcement, environment management and emergency measures (5 Es) for ensuring highway safety, including training as appropriate should be adopted.
- i. Adoption of Intelligent Transport Systems (ITS) for design of vehicles, road & road environment and traffic guidance.

#### 4.6 Policies and Strategies

- i. To decongest roads, rail and rail terminals by diverting the traffic through By-passes or alternative routes and increasing their quantity and quality.
- ii. To connect Metro/Regional Centres with the Capital by an efficient and effective transport network for facilitating faster movement of traffic among such centres and NCT-Delhi.
- iii. To link the Sub-regional Centres with effective and efficient transport network for facilitating the faster movement of traffic among such centers and higher order settlements.
- iv. Each and every part of Sub-region should be connected to some kind of transport network and mode.
- v. Lateral connectivity should be improved in Sub-region.
- vi. Any kind of activity which is not permissible on the roads or road side should not be allowed which creates chaos and congestion on roads.
- vii. To directly link other urban nodes having maximum attracting and generating characteristics.
- viii. Indian Railways should also concentrate on Regional/ local commuter traffic.
- ix. Service capacity of the lines should be increased as per the requirement of the lines.
  - x. To create the Unified Metropolitan Transport Authority for NCR.
- xi. To decongest the traffic caused by daily commuters using personal vehicles in single occupancy should be encouraged to pool common vehicles for common destinations. The local authorities in coordination with each other should carry out a comprehensive survey to gather the information regarding movement of such commuters from a common place to a common destination. Such gathered information should be made available to the people so that they can communicate and make arrangement for pooling of personal vehicles.
- xii. The large establishments should be encouraged by providing some sort of incentives if they opt for use of public transportation system for their employees.
- xiii. Intelligent sensors guiding signaling at important junctions should be installed which keeps on changing the timings of green and red signal based on the volume of traffic at any time.
- xiv. The congested areas where land is not available for bypasses, where existing road network has no space for expansion or space for development of elevated road, the best

option can be underground bypasses/ subways. The technology for this type of construction is easily available in our country, the local authority/ state government/ central government should make comprehensive mobility plans for these kind of roads. The budgetary provisions along with the private investment should be worked out in detail for such projects.

## **CHAPTER 5. INFRASTRUCTURE FACILITIES**

### **5.1 Power: Policies**

#### **5.1.1 Power generation**

1. The state government by its own resources or with the help of public private partnership constructs power generation plants of new technologies to meet out the current shortfalls and projected demand of the area. It is also advisable to built smaller capacity power generation plants within the area which may require lesser space and investment. The power generation plants entirely by private sector should be facilitated by the state government.
2. Power generation plants through wind mills and solar power should be encouraged and developed by the government.
3. The state government should prepare comprehensive plan for power generation, transmission and distribution for the requirement of this area.
4. The interest rate for the loan amount required for the construction and development of power generation plant should be kept at minimum possible level.
5. Vigorous effort should be made to complete ongoing projects to augment the power generation plants in the sub-region as well as other areas that may supply power to UP Sub-region.
6. EIA should be done before giving permission for the setting up of any power plant in the sub-region. Site for the disposal of waste from the power plant should be pre identified.

#### **5.1.2 Power Transmission and Distribution**

1. Vigorous effort should be made to complete ongoing projects to augment the power supply through sub stations, distribution and transmission lines in the sub-region.
2. Efforts should be made to strengthened existing transmission and distribution system. More and more use of sub stations based on GIS techniques should be encouraged by the state government especially within CNCR area and nearby areas having high density as well as high land values, because substation based on this technology require much lesser space.

3. The effort should be made to convert high power transmission lines into underground lines using road sides or central verge of existing road network of UP Sub-region. This will help in saving prime lands which are kept reserved as power transmission lines buffer zone on one side and avoiding/ saving land acquisition cost which can compensate to some extent the additional cost that may be anchored for underground high tension lines.
4. Governance should be improved in respect of billing and revenue collection. Private operators (under PPP mould) should be appointed for electricity distribution and billing with fixing the targets of revenue collection. The targets shall also include rewards and punishment provisions. This will lead to reduction in AT&C losses, viability gap funding for privatization would be reduced.
5. A special cell should be created having powers to check distribution of electricity in relation to revenue collection. This cell should identify the areas of power thefts which should be made available for public viewing also through internet or any other suitable means.
6. For improvisation of power infrastructure in the sub-region, new methodologies should be adopted for metering, billing, revenue collection and material management system, and collection of data regarding line losses, theft, electricity supply to rural and urban areas, breakdowns of transformers etc.
7. Introduce automatic meter reading of all distribution transformers to track how much loss occurred in each area served by a transformer and to introduce accountability.
8. Carry out GIS mapping of the distribution system to facilitate power audit and improve customer service.
9. Modern techniques for load management must be adopted to flatten the load curve and to reduce the demand to a manageable level.

### 5.1.3 Energy Saving

1. Efforts should be to accelerate the promotion and adoption of non-conventional energy sources such as solar and wind energy and 'gobar gas' (in rural areas). A system of incentives/ awards should be instituted to promote such practices.
2. A guideline should be developed by local authorities regarding use of solar passive architecture in the buildings.

3. The use of solar energy should be encouraged by means of incentives and subsidies to every sector of society. The solar water heating equipment, solar lighting system, solar cooking etc should be made available with subsidy. Mass awareness program should be organized in regular basis by the state government highlighting the benefits of solar energy.
4. Local bodies should be encouraged through incentives and subsidies to convert as much as possible street lights into solar lights.
5. A phased program along with the budgetary provisions should be made by the state government for installation of solar energy equipment required in different offices.
6. Massive research should be carried out to reduce the cost of solar cell panel so that it would be convenient for everyone to purchase it.
7. The provisions for some incentives should be prepared for the development of high star rated electrical equipments which save a substantial amount of electricity. Such incentives can be as a relaxation in local taxes, making technical knowhow of this technology to the industrialist at lesser cost etc.
8. Green buildings should be encouraged through incentives which can save a huge amount of electricity consumption.

#### 5.1.4 Other Policies

9. Power supply should be provided in a balanced manner in all urban and rural areas of the sub-region as per their requirements.
10. Power supply augmentation is particularly required in small and medium towns. This will encourage entrepreneurial capacities in such towns, increase job prospects and lead to a more balanced settlement pattern.
11. All the departments and agencies which are directly or indirectly responsible for the power supply and the maintenance work in the sub-region should work in a coordinated way. The proposed NCR authority shall play an active role for this purpose.
12. For the power generation, transmission and distribution, financial resources and managerial skills can be improved through public-private partnership approach. Regular training and orientation programs should be organized by the state department giving exposure to power related officials regarding latest techniques and technologies as

success stories across the world in power generation, transmission, distribution and revenue collection.

13. Time to time review of the existing policies is required to keep them updated as per latest technologies.
14. A strong power network should be placed in the eastern part of UP NCR to encourage the establishment of large industries, new townships, tourism etc.

## 5.2 Water: Demand Projections

The demand projections have been made as per the NCRPB Functional Plan report “Water Supply and its Management for NCR”.

### 5.2.1 Domestic Water Demand

As per the NCRPB report “Water Resources and its Management, 2010” there are three norms vide which the domestic water demand projections can be made.

#### a. By NCRPB Norms

The demand can be calculated based on the norms as laid down in the Regional Plan 2021.

- Towns having population  $\geq$  1 lakh @ 200 lpcd
- Towns having population  $<$  1 lakh @ 135 lpcd
- Rural is 70 lpcd (catering to human & cattle population)

#### b. By CPHEEO Norms

The demand has been calculated based on the norms as laid down in CPHEEO Manual.

- Towns having population  $\geq$  1 lakh @ 150 lpcd
- Towns having population  $<$  1 lakh @ 135 lpcd
- Rural is 70 lpcd (catering to human & cattle population)

#### c. By Ideal Condition

The demand has been calculated based on the minimum water requirement as laid down in water conservation ideally.

- Towns having population  $\geq$  1 lakh @ 110 lpcd
- Towns having population  $<$  1 lakh @ 108 lpcd
- Rural is 56 lpcd (catering to human & cattle population)

### Accepted Projected Domestic Water Demand in NCR by NCRPB Norms

In the Workshop held on 5th Feb. 2010 wherein the participants (from the departments of water supply, industry and irrigation from Govt. of Haryana, Govt. of Rajasthan, NCT-Delhi, Govt. of U.P., Delhi Jal Board, Ministry of Water Resources, CPHEEO, CGWB, CWC, Planning Commission, NCR Planning Board, WAPCOS LTD. etc.) recommended adopting Norms formulated by NCRPB.

The domestic water demand has been calculated Hierarchy wise. The water demand calculations for metro centres have been calculated in Table 5-1.

**Table 5-1 Domestic Water Demand Projections for Metro Centres (2011-2031)**

Name of the	Tehsil	District	Population Projection (In	Total Domestic Water
-------------	--------	----------	---------------------------	----------------------

Sl. No	settlement			Lakhs)			Demand (Mld)		
				2011	2021	2031	2011	2021	2031
1	Ghaziabad - Loni	Ghaziabad	Ghaziabad	19.00	30.19	46.0	380.00	603.80	920.00
2	Meerut	Meerut	Meerut	15.00	23.00	30.0	300.00	460.00	600.00
3	Noida	Dadri	G B Nagar	6.00	12.00	28.0	120.00	240.00	560.00
4	Gr. Noida Ph -1	GB Nagar	G B Nagar	7.00	12.00	20.0	140.00	240.00	400.00
	<b>Total</b>			<b>47.00</b>	<b>77.19</b>	<b>124.0</b>	<b>940.00</b>	<b>1543.80</b>	<b>2480.00</b>

A total water demand of 1543.8 Mld has been projected for the year 2021 and 2480 Mld has been projected for the year 2031.

The water demand calculations for Regional centres have been calculated in Table 5-2.

**Table 5-2 Domestic Water Demand Projections for Regional Centres (2011-2031)**

Sl. No.	Name of the settlement	Tehsil	District	Population Projection (In Lakhs)			Total Domestic Water Demand (Mld)		
				2011	2021	2031	2011	2021	2031
1	Baghpat - Baraut	Baghpat-Baraut	Baghpat	1.60	3.00	4.00	32.00	60.00	80.00
2	Bulandshahar - Khurja	Bulandshahr-Khurja	Bulandshahr	3.70	4.77	6.10	74.00	95.40	122.00
3	Hapur - Pilkhua	Hapur	Ghaziabad	3.00	4.50	6.60	60.00	90.00	132.00
	<b>Total</b>			<b>8.30</b>	<b>12.27</b>	<b>16.70</b>	<b>166.00</b>	<b>245.40</b>	<b>334.00</b>

A total water demand of 245.40 Mld has been projected for the year 2021 and 334.00 Mld has been projected for the year 2031.

The water demand calculations for Sub-Regional centres have been calculated in Table 5-3.

**Table 5-3 Domestic Water Demand Projections for Sub-Regional Centres (2011-2031)**

S. No	Name of the settlement	Tehsil	District	Population Projection (In Lakhs)			Total Domestic Water Demand (Mld)		
				2011	2021	2031	2011	2021	2031
1	Mawana	Mawana	Meerut	0.88	1.20	1.50	11.88	24.00	30.00

2	Garhmuktesar	Garhmukteshwar	Ghaziabad	0.43	0.60	0.75	5.81	8.10	10.13
3	Dibai	Debai	Bulandshahr	0.44	0.60	0.70	5.94	8.10	9.45
4	Jahangirabad	Anupshahr	Bulandshahr	0.65	0.85	1.10	8.78	11.48	22.00
5	Gulaothi	Bulandshahr	Bulandshahr	0.6	0.8	1	8.10	10.80	20.00
6	Khekra	Khekada	Baghpat	0.5	0.7	0.8	6.75	9.45	10.80
7	Kithor	Mawana	Meerut	0.3	0.5	0.5	4.05	6.75	6.75
8	Modinagar	Modinagar	Ghaziabad	1.5	2.5	2.1	30.00	50.00	42.00
9	Naraura	Debai	Bulandshahr	0.3	0.4	0.4	4.05	5.40	5.40
10	Sardhana	Sardhana	Meerut	0.6	0.8	1	8.10	10.80	20.00
11	Shikar Pur	Shikarpur	Bulandshahr	0.45	0.5	0.6	6.08	6.75	8.10
12	Sikandarabad	Sikandrabad	Bulandshahr	0.91	1.25	1.5	12.29	25.00	30.00
13	Siyana	Siana	Bulandshahr	0.5	0.6	0.7	6.75	8.10	9.45
14	Chhaprauli	Baraut	Baghpat	0.2	0.3	0.3	2.70	4.05	4.05
15	Anupshahr	Anupshahr	Bulandshahr	0.3	0.4	0.5	4.05	5.40	6.75
16	Hastinapur	Mawana	Meerut	0.3	0.4	0.5	4.05	5.40	6.75
	<b>Total</b>			<b>8.86</b>	<b>12.40</b>	<b>13.95</b>	<b>129.38</b>	<b>199.58</b>	<b>241.63</b>

A total water demand of 199.58 Mld has been projected for the year 2021 and 241.63 Mld has been projected for the year 2031.

**Note:** Projections for the other lower hierarchy settlements will be done in draft report on the same basis as per the final discussion with the CRC.

### 5.2.2 Fire fighting Demand

Fire fighting demand has been taken for towns having population above 50,000 as per CPHEEO norms.

The Fire fighting water demand has been calculated Hierarchy wise. The water demand calculations for metro centres have been calculated in Table 5-4.

**Table 5-4 Fire fighting Water Demand Projections for Metro Centres (2011-2031)**

Sl. No.	Name of the settlement	Tehsil	District	Population Projection (In Lakhs)			Total Firefighting Water Demand (Mld)		
				2011	2021	2031	2011	2021	2031
1	GHAZIABAD	Ghaziabad	Ghaziabad	19.00	30.19	46.00	4.36	5.49	6.78

	- LONI								
2	MEERUT	Meerut	Meerut	15.00	23.00	30.00	3.87	4.80	5.48
3	NOIDA	Dadri	G B Nagar	6.00	12.00	28.00	2.45	3.46	5.29
4	Gr. NOIDA Ph -1	GB Nagar	G B Nagar	7.00	12.00	17.00	2.65	3.46	4.12
	<b>TOTAL</b>			<b>47.00</b>	<b>77.19</b>	<b>121.00</b>	<b>13.33</b>	<b>17.21</b>	<b>21.67</b>

A total water demand of 17.21 Mld has been projected for the year 2021 and 21.67 Mld has been projected for the year 2031.

The water demand calculations for Regional centres have been calculated in Table 5-5.

**Table 5-5 Fire fighting Water Demand Projections for Regional Centres (2011-2031)**

Sl. No	Name of the settlement	Tehsil	District	Population Projection (In Lakhs)			Total Firefighting Water Demand (Mld)		
				2011	2021	2031	2011	2021	2031
1	Baghpat - Baraut	Baghpat-Baraut	Baghpat	1.60	3.00	4.00	1.26	1.73	2.00
2	Bulandshahr - Khurja	Bulandshahr-Khurja	Bulandshahr	3.70	4.77	6.10	1.92	2.18	2.47
3	Hapur - Pilkhua	Hapur	Ghaziabad	3.00	4.50	6.60	1.73	2.12	2.57
	<b>Total</b>			<b>8.30</b>	<b>12.27</b>	<b>16.70</b>	<b>4.91</b>	<b>6.03</b>	<b>7.04</b>

A total water demand of 6.03 Mld has been projected for the year 2021 and 7.04 Mld has been projected for the year 2031.

The water demand calculations for Sub-Regional centres have been calculated in Table 5-6.

**Table 5-6 Fire fighting Water Demand Projections for Sub-Regional Centres (2011-2031)**

Sl No	Name of the settlement	Tehsil	District	Population Projection (In Lakhs)			Total Firefighting Water Demand (Mld)		
				2011	2021	2031	2011	2021	2031
1	Mawana	Mawana	Meerut	0.88	1.20	1.50	0.94	1.10	1.22
2	Garhmuktesar	Garhmukteswar	Ghaziabad	0.43	0.60	0.75	0.00	0.77	0.87
3	Dibai	Debai	Bulandshahr	0.44	0.60	0.70	0.00	0.77	0.84
4	Jahangirabad	Anupshahr	Bulandshahr	0.65	0.85	1.10	0.81	0.92	1.05
5	Gulaothi	Bulandshahr	Bulandshahr	0.6	0.8	1.0	0.77	0.89	1.00
6	Khekra	Khekada	Baghpat	0.5	0.7	0.8	0.00	0.84	0.89
7	Kithor	Mawana	Meerut	0.3	0.5	0.5	0.00	0.00	0.00
8	Modinagar	Modinagar	Ghaziabad	1.5	2.5	2.1	1.22	1.58	1.45

9	Naraura	Debai	Bulandshahr	0.3	0.4	0.4	0.00	0.00	0.00
10	Sardhana	Sardhana	Meerut	0.6	0.8	1.0	0.77	0.89	1.00
11	Shikar Pur	Shikarpur	Bulandshahr	0.45	0.5	0.6	0.00	0.00	0.77
12	Sikandarabad	Sikandrabad	Bulandshahr	0.91	1.25	1.5	0.95	1.12	1.22
13	Siyana	Siana	Bulandshahr	0.5	0.6	0.7	0.00	0.77	0.84
14	Chhaprauli	Baraut	Baghpat	0.2	0.3	0.3	0.00	0.00	0.00
15	Anupshahr	Anupshahr	Bulandshahr	0.3	0.4	0.5	0.00	0.00	0.00
16	Hastinapur	Mawana	Meerut	0.3	0.4	0.5	0.00	0.00	0.00
	<b>Total</b>			<b>8.86</b>	<b>12.40</b>	<b>13.95</b>	<b>5.46</b>	<b>9.65</b>	<b>11.15</b>

A total water demand of 9.65 Mld has been projected for the year 2021 and 11.15 Mld has been projected for the year 2031.

**Note:** Projections for the other lower hierarchy settlements will be done in draft report on the same basis as per the final discussion with the CRC.

### 5.2.3 Unaccounted for Water

Unaccounted for Water (UFW) has been limited to 15% as per norms laid in CPHEEO Norms and adopted in the Regional Plan 2021 also.

The UFW has been calculated Hierarchy wise. The UFW calculations for metro centres have been calculated in Table 5-7.

**Table 5-7 Unaccounted for Water Projections for Metro Centres (2011-2031)**

Sl. No.	Name of the settlement	Tehsil	District	Total Domestic Water Demand (Mld)			Unaccounted for Water (Mld) (15% of Demand)		
				2011	2021	2031	2011	2021	2031
1	GHAZIABAD - LONI	Ghaziabad	Ghaziabad	380.00	603.80	920.00	57.00	90.57	138.00
2	MEERUT	Meerut	Meerut	300.00	460.00	600.00	45.00	69.00	90.00
3	NOIDA	Dadri	G B Nagar	120.00	240.00	560.00	18.00	36.00	84.00
4	Gr. NOIDA Ph -1	GB Nagar	G B Nagar	140.00	240.00	340.00	21.00	36.00	51.00
	<b>TOTAL</b>			<b>940.00</b>	<b>1543.80</b>	<b>2420.00</b>	<b>141.00</b>	<b>231.57</b>	<b>363.00</b>

A total water demand of 231.57 Mld has been projected for the year 2021 and 363.00 Mld has been projected for the year 2031.

The water demand calculations for Regional centres have been calculated in Table 5-8.

Table 5-8 Unaccounted for Water Projections for Regional Centres (2011-2031)

Sl. No.	Name of the settlement	Tehsil	District	Total Domestic Water Demand (Mld)			Unaccounted for Water (Mld) (15% of Demand)		
				2011	2021	2031	2011	2021	2031
1	Baghpat - Baraut	Baghpat-Baraut	Baghpat	32.00	60.00	80.00	4.80	9.00	12.00
2	Bulandshahar - Khurja	Bulandshahr-Khurja	Bulandshahr	74.00	95.40	122.00	11.10	14.31	18.30
3	Hapur - Pilkhua	Hapur	Ghaziabad	60.00	90.00	132.00	9.00	13.50	19.80
	<b>Total</b>			<b>166.00</b>	<b>245.40</b>	<b>334.00</b>	<b>24.90</b>	<b>36.81</b>	<b>50.10</b>

A total water demand of 36.81 Mld has been projected for the year 2021 and 50.10 Mld has been projected for the year 2031.

The water demand calculations for Sub-Regional centres have been calculated in Table 5-9.

Table 5-9 Unaccounted for Water Projections for Sub-Regional Centres (2011-2031)

Sl. No.	Name of the settlement	Tehsil	District	Total Domestic Water Demand (Mld)			Unaccounted for Water (Mld) (15% of Demand)		
				2011	2021	2031	2011	2021	2031
1	Mawana	Mawana	Meerut	11.88	24.00	30.00	1.78	3.60	4.50
2	Garhmuktesar	Garhmuktesar	Ghaziabad	5.81	8.10	10.13	0.87	1.22	1.52
3	Dibai	Debai	Bulandshahr	5.94	8.10	9.45	0.89	1.22	1.42
4	Jahangirabad	Anupshahr	Bulandshahr	8.78	11.48	22.00	1.32	1.72	3.30
5	Gulaothi	Bulandshahr	Bulandshahr	8.10	10.80	20.00	1.22	1.62	3.00
6	Khekra	Khekada	Baghpat	6.75	9.45	10.80	1.01	1.42	1.62
7	Kithor	Mawana	Meerut	4.05	6.75	6.75	0.61	1.01	1.01
8	Modinagar	Modinagar	Ghaziabad	30.00	50.00	42.00	4.50	7.50	6.30
9	Naraura	Debai	Bulandshahr	4.05	5.40	5.40	0.61	0.81	0.81
10	Sardhana	Sardhana	Meerut	8.10	10.80	20.00	1.22	1.62	3.00
11	Shikar Pur	Shikarpur	Bulandshahr	6.08	6.75	8.10	0.91	1.01	1.22
12	Sikandarabad	Sikandrabad	Bulandshahr	12.29	25.00	30.00	1.84	3.75	4.50
13	Siyana	Siana	Bulandshahr	6.75	8.10	9.45	1.01	1.22	1.42
14	Chhaprauli	Baraut	Baghpat	2.70	4.05	4.05	0.41	0.61	0.61
15	Anupshahr	Anupshahr	Bulandshahr	4.05	5.40	6.75	0.61	0.81	1.01
16	Hastinapur	Mawana	Meerut	4.05	5.40	6.75	0.61	0.81	1.01
	<b>TOTAL</b>			<b>129.38</b>	<b>199.58</b>	<b>241.63</b>	<b>19.41</b>	<b>29.94</b>	<b>36.24</b>

A total water demand of 22.19 Mld has been projected for the year 2021 and 25.51 Mld has been projected for the year 2031.

**Note:** Projections for the other lower hierarchy settlements will be done in draft report on the same basis as per the final discussion with the CRC.

### Total Water Demand

The total water demand hierarchy wise has been calculated after adding the domestic water demand, fire fighting water demand and the UFW for each decade (Table 5-10).

**Table 5-10 Unaccounted for Water Projections for Sub-Regional Centres (2011-2031)**

Sl. No.	Hierarchy of the settlement	Demand for 2011 (in Mld)			Demand for 2021 (in Mld)			Demand for 2031 (in Mld)			Total Demand (in Mld)		
		Domestic	Fire fighting	UFW	Domestic	Fire fighting	UFW	Domestic	Fire fighting	UFW	2011	2021	2031
1	Metro Centre	940.0	13.3	141.0	1543.8	17.2	231.6	2480.0	21.7	363.0	1094.3	1792.6	2864.7
2	Regional Centre	214.0	6.7	32.1	310.4	9.6	46.6	415.0	11.0	62.3	252.8	366.5	488.3
3	Sub-Regional Centre	96.9	3.7	14.5	147.9	6.1	22.2	170.1	7.2	25.5	115.2	176.2	202.7

A water demand of 2864.67 Mld is expected to arise by the year 2031 for Metro Centres.

**Note:** Projections for the other lower hierarchy settlements will be done in draft report on the same basis as per the final discussion with the CRC.

### 5.3 Water: Policies and Proposals

Water is a key development ingredient that impacts a variety of factors that sustain and enhance life. As a critical natural resource, the issues connected with managing it are inherently diverse and complex. They involve questions of allocation and distribution, equity, conservation, pricing, regulation, education, participation, and sustainable use. With the region's rapid population growth, rising industrialization, increasing environmental degradation and pollution, and the specter of a dwindling resource. Hence there is a need for integrated water resource management in a comprehensive and holistic manner. It is imperative to have certain policies and proposals which will help in harmonized and balanced development of the region. Policies

will be proposed on the foot prints of the policies that have already been outlined in the Regional Plan 2021.

- i. The state government should develop new projects for tapping fresh water from surface and underground sources.
- ii. Long term solutions like construction of upstream reservoirs and small check dams at favorable location to store excess monsoon water should be planned. This water can then be used during the period of scarcity. A detail study to understand the natural surface flow should be carried out to construct small check dams.
- iii. All effort should be made to conserve the water and to reduce the waste of water. Double pipeline system should be made mandatory in all new colonies especially for domestic purpose.
- iv. A comprehensive action plan should be prepared for each town to reduce the limit of unaccounted water which should be limited to 15%.
- v. The establishments that require more water should be assessed separately with proper justification.
- vi. For proper recharge, the land surrounding the water bodies should be protected from being encroached by other land uses that may reduce the percolation of rain water into aquifers as well as that can reduce the catchment area of a natural reservoir.
- vii. Rainwater harvesting should be promoted vigorously to harvest roof-top rain water in urban areas, the state government should constantly advertised the benefits and consequences of rain water harvesting.
- viii. Industries which consume large sum of water should not be permitted in over exploited areas.
- ix. All the upcoming developments should use the concept of 3R's (Recycle, Reuse and Reduce) in consumption of water. Liberal tax rebates should be provided by the government to the establishments using recycled water and treating waste water.
- x. Public awareness campaigns should be organized through media etc for promoting the 3R concept.
- xi. Public-private partnership approach needs to be adopted for development and operation and maintenance of the water supply schemes.

- xii. Drinking water supply should strictly conform to quality norms as per BIS standards and CPHEEO Manual. The regular sample checking should be carried out from different spots in entire water supply system by an independent agency regarding the quality of water. The finding of these sample checking should be made available through internet.
- xiii. Before approving new township development plans, new area development plans, new layout plan etc it should be ensured that sufficient water supply is available and land is allocated for the water treatment and distribution system.
- xiv. Provisions should be made in the five year plans for augmenting the funds to be made available to the State Government for the development of infrastructure in the Sub-regions of NCR. Special Component Plan should be made by the Planning Commission for the NCR and Sub-Component Plans should be prepared for each sub-region.
- xv. Mass awareness program should constantly run by the Government to make farmers aware of sprinkler/ drip irrigation techniques to save water.
- xvi. Strict provision should be made to check the misuse of potable water made available to a locality through water supply system as well as extraction of potable water from personal deep bore tube wells.
- xvii. Bulk meter should be provided at source, treatment plant, transmission mains, distribution system etc. All connections should be metered.
- xviii. Many natural ponds and water bodies has been encroached and also the catchment area is reduced due to many factors. The state government should prepare a comprehensive action plan to revive the natural ponds, lakes and to improve their catchment area to the maximum extent possible.
- xix. The strict provision should be made for industries to follow zero discharge methods for their effluents.

### 5.3.1 Uttar Pradesh Water Policy 2007

The "State Water Policy" while recognizing the water resource as a state subject under the constitution and addressing to its specific requirements, needs to be inconsonance with the general guide lines and parameters laid down in the "National Water Policy".

The objectives of the Uttar Pradesh water policy shall be to ensure the preservation, optimize the utilization, maintaining the quality of water resources. Promote equity of utilization among users,

research and training facilities in this sector. Ensure the ecological and balanced development, flood management and drainage as an integral part of the water resource development projects.

### **Regional Planning Approach for Potable Water**

In UP Sub-region, a large area along the Ganga River, the underground water is highly unutilized. The study reveals that surface run off is unable to recharge the aquifers is primarily because water is not being extracted from these aquifers. As a result, the rain water which is not percolating down is causing flood as one of the reason. The state government should prepare a comprehensive plan to use these aquifers to meet out not only the requirement of UP Sub-region but can also supply potable water to its surrounding areas having water scarcity.

#### **5.3.2 Water Tariff**

The water tariff structure especially in urban areas should be realistic and increased telescopically depending upon the monthly consumption.

## 5.4 Sewerage: Waste Water Generation Projections

The waste water generation status is calculated on the basis of domestic water supply demand for the projected population. The waste water generated is assumed to be 80% of the water supplied. The waste water generated is calculated hierarchy wise as given below.

The projected waste water generation in the metro centers is calculated in Table 5-11.

**Table 5-11 Waste Water Generation in Metro Centres (2011-2031)**

Sl. No.	Name of the settlement	District	Total Domestic Water Demand (Mld)			Total Domestic Waste Water Generated (Mld)		
			2011	2021	2031	2011	2021	2031
1	Ghaziabad - Loni	Ghaziabad	380.00	603.80	920.00	304.00	483.04	736.00
2	Meerut	Meerut	300.00	460.00	600.00	240.00	368.00	480.00
3	Noida	G B Nagar	120.00	240.00	560.00	96.00	192.00	448.00
4	Gr. Noida Ph -1	G B Nagar	140.00	240.00	340.00	112.00	192.00	272.00
	<b>Total</b>		<b>940.00</b>	<b>1543.80</b>	<b>2420.00</b>	<b>752.00</b>	<b>1235.04</b>	<b>1936.00</b>

Projected waste water generated in the year 2021 is 1235.04 Mld followed by 1936.00 Mld in the year 2031.

The projected waste water generation in the Regional centers is calculated in Table 5-12.

**Table 5-12 Waste Water Generation in Regional Centres (2011-2031)**

Sl. No.	Name of the settlement	District	Total Domestic Water Demand (Mld)			Total Domestic Waste Water Generated (Mld)		
			2011	2021	2031	2011	2021	2031
1	Baghpat - Baraut	Baghpat	32.00	60.00	80.00	25.60	48.00	64.00
2	Bulandshahar - Khurja	Bulandshahr	74.00	95.40	122.00	59.20	76.32	97.60
3	Hapur - Pilkhua	Ghaziabad	60.00	90.00	132.00	48.00	72.00	105.60
	<b>Total</b>		<b>166.00</b>	<b>245.40</b>	<b>334.00</b>	<b>132.80</b>	<b>196.32</b>	<b>267.20</b>

Projected waste water generated in the year 2021 is 196.32 Mld followed by 267.20 Mld in the year 2031.

The projected waste water generation in the Sub-Regional centers is calculated in Table 5-13.

Table 5-13 Waste Water Generation in Sub-Regional Centres (2011-2031)

Sl. No.	Name of the settlement	District	Total Domestic Water Demand (Mld)			Total Domestic Water Demand (Mld)		
			2011	2021	2031	2011	2021	2031
1	Mawana	Meerut	11.88	24.00	30.00	9.50	19.20	24.00
2	Garhmuktesar	Ghaziabad	5.81	8.10	10.13	4.65	6.48	8.10
3	Dibai	Bulandshahr	5.94	8.10	9.45	4.75	6.48	7.56
4	Jahangirabad	Bulandshahr	8.78	11.48	22.00	7.02	9.18	17.60
5	Gulaothi	Bulandshahr	8.10	10.80	20.00	6.48	8.64	16.00
6	Khekra	Baghpat	6.75	9.45	10.80	5.40	7.56	8.64
7	Kithor	Meerut	4.05	6.75	6.75	3.24	5.40	5.40
8	Modinagar	Ghaziabad	30.00	50.00	42.00	24.00	40.00	33.60
9	Naraura	Bulandshahr	4.05	5.40	5.40	3.24	4.32	4.32
10	Sardhana	Meerut	8.10	10.80	20.00	6.48	8.64	16.00
11	Shikar Pur	Bulandshahr	6.08	6.75	8.10	4.86	5.40	6.48
12	Sikandarabad	Bulandshahr	12.29	25.00	30.00	9.83	20.00	24.00
13	Siyana	Bulandshahr	6.75	8.10	9.45	5.40	6.48	7.56
14	Chhaprauli	Baghpat	2.70	4.05	4.05	2.16	3.24	3.24
15	Anupshahr	Bulandshahr	4.05	5.40	6.75	3.24	4.32	5.40
16	Hastinapur	Meerut	4.05	5.40	6.75	3.24	4.32	5.40
	<b>Total</b>		<b>129.38</b>	<b>199.58</b>	<b>241.63</b>	<b>103.50</b>	<b>159.66</b>	<b>193.30</b>

Projected waste water generated in the year 2021 is 159.66 Mld followed by 193.30 Mld in the year 2031.

**Note:** Projections of waste water generation for the other lower hierarchy settlements will be done in draft report on the same basis as per the final discussion with the CRC.

## 5.5 Sewerage: Policies

1. Sewerage system master plan should be prepared for each town. The master plan shall contain the physical distribution and network of sewers and treatment plants and also a policy to construct underground sewers and treatment plants in a phased manner to improve environmental condition in urban areas.
2. Till proper sewerage systems are installed in towns, intercepting sewers need to be constructed to lead sewage in open pucca drains to treatment plants to discontinue the practice of raw sewage flowing into rivers and other water bodies.
3. A comprehensive planning can be made to add rain water into sewerage system to reduce the density of sewage for better and fast flow. As far as possible the practice of disposing sewerage into the drain should be avoided.
4. The treated effluent should be recycled so that it can be used for irrigation, gardening, and industries and for other non drinking purposes.
5. The open drains which carry sewerage flowing through densely inhabited areas should be covered in such a way that the cleaning of such drains could be carried out easily.
6. The STPs proposed in all the master plans of the sub-region should be constructed at the earliest and be made operational as soon as possible. The State government should provide sufficient finance on priority basis as a matching share for the construction of these STPs. Additional STPs as per requirement in all towns should be proposed.
7. The location of STPs should be finalized after a comprehensive study for environmental impact assessment. This assessment should be made not only for the STP itself but also for its feeder sewerage network.
8. The existing sewerage systems should be upgraded to make them capable of handling the present and the future requirements.
9. Policy to encourage rural sanitation such as pour flush latrines, nirmal gram schemes and campaigns for cleanliness and hygiene should be promoted.
10. Provision should be made in the five year plans to augment the fund availability to the State Governments for the operation and maintenance of the existing and the proposed sewers in the sub-region.
11. Modern techniques and equipments for cleaning and maintenance of the sewers should be used.

12. Industrial effluent and domestic sewage waste should not get mixed. Liquid waste minimization should be encouraged. Provision should be made for zero industrial discharge as far as possible. An independent agency should be designated by the government which should regularly monitor the quality as well as quantity of industrial effluent for all industries. The industries generating hazardous effluent should be listed as priority industries where monitoring should be done on lesser intervals.
13. The overall construction, operation and maintenance work in towns should be handled by the single authority (preferably local bodies) to avoid the conflicts etc.
14. Adequate amount of land should be allocated for sewage treatment plants in all town development plans.
15. Regular training/ seminars etc should be organized to keep the members and the staff of the concerned bodies/ authorities updated regarding the new trends and technologies.
16. Mass awareness campaigns should be organized regarding recycle, reuse and reduction of liquid waste. The larger establishments especially hotels, commercial complexes, institutions etc should develop their own small sewerage treatment plant, such provisions should be made in the building byelaws.
17. Public-Private Partnership should be encouraged for construction, operation and maintenance work. The local authority or the state government shall work out some incentives to develop this kind of model.
18. The sewage connection charges should be rationalized. It should be related to plot size and water consumed.
19. State should prepare plans with the help of specialized agencies, experts and NGOs for up gradation of existing sewers and laying of new sewers in a sustainable manner. Low cost alternatives such as oxidation ponds, root zone technology and decentralized systems should be encouraged.
20. The existing sewers should be regularly monitored and maintained by the local body or by some designated agency for this purpose. The local body should make necessary provision in their annual budget.

## 5.6 Drainage: Policies

To improve the overall drainage system within NCR UP Sub-region, both at regional level as well as settlement level, following policies/ actions are suggested:

### 5.6.1 Drainage System Planning

- i. The State government shall prepare a comprehensive drainage plan for entire UP Sub-region, this planning shall taken into cognizance following factors:
  - The existing capacity of all available regional drainage network.
  - Maximum possible expansion of existing drainage network.
  - Drainage Master plan for each urban settlement with existing as well as estimating maximum outflow quantity. Such Plan shall also clearly indicate existing as well as proposed disposal point/ discharge points.
  - The Regional level Plan shall take into account existing as well as proposed outflow as per drainage master plans of settlements, existing and estimated inflow from the regional level catchment areas etc.
  - The proposals if any is made to construct a new drain on the basis of all above mentioned requirements, it shall take into account the final discharge point in a river with conceived slop and depth of drain so as to avoid back flow of water from rivers specially during rainy season.
  - The regional level drainage plan shall be prepared with an objective to smoothly allowing the surface run off, outflow from domestic/ industrial/ other uses disposal etc on one hand and to make provisions to check flooding and back flow from rivers on the other hand.
  - The norms for regional as well as settlement level drain are mentioned in annexure plan.

### 5.6.2 Maintenance of existing drains

#### A. Urban area

- Periodical de-silting and cleaning of drain before monsoon season should be done and local body should made necessary provision for such activity in their annual budget.

- Dumping of solid waste shall not be allowed within 100 m distance of any city level drain.
- Independent sewerage system should be developed so that mixing of sewage with storm water can be avoided. However, a careful planning can suggest the disposal of drainage into a sewerage system that may help the faster cleaning of sewerage network.
- Before discharging water into the drains, the effluent should meet the BIS and CPHEEO norms and standards. The local body shall take samples on monthly basis to check the effluents.
- Existing drains should be maintained regularly by the local bodies. The provisions regarding funds shall be made in the annual budget of local bodies for such purpose.
- Catchment and watershed areas of the drain should be made pollution and obstacle free since waste from such area flows along with the storm water and lead to pollution & chocking of drain.
- As per the norms and standards, internal and peripheral drainage system for urban areas should be designed for maximum rainfall of five years frequency whereas main drains for the frequency of ten years.
- The coefficient of runoff may be calculated for areas with composite land use pattern on the basis of anticipated and existing land use pattern for the areas. In absence of adequate details of the areas, the runoff coefficient not less than 0.6 may be adopted for planning of new drains.
- Heavy fines should be imposed on the industries/ institutions etc who are discharging/ discarding their waste into the drains without treating them.
- Natural drains in the urban areas should be declared as an ecologically sensitive area. Areas along the drainage system should be made free from encroachment, leaving sufficient green buffer for them to swell during the monsoon to avoid danger in low lying areas.

#### **B. Country side**

- Runoff from agricultural field mainly contributes to the regional drains. The inefficiency of these drains to carry excess rainwater causes soil erosion and damage to crops. Such runoff is also a waste and it causes silting as well as flooding in rivers during heavy rainy season. The Construction of check dams, ponds etc. at suitable locations can be promoted to check the surface run off thereby not only helping ground water recharge, less silting in

rivers, reduction of floods in river, increase supply of water for different purposes in rural areas. The State government should prepare a comprehensive plan along with the budgetary provisions.

- Natural drains in the rural areas should be declared as an ecologically sensitive area. Areas along the drainage system should be made free from encroachment, leaving 10-30 metre green buffer.
- For the rural areas, drainage system should be designed for three days rainfall of five years frequency. For computing the runoff, an appropriate area dispersal factor should be adopted.
- Construction of embankments should be undertaken where drains overflow banks due to excess storm water. The secondary measure should be taken to channelize the drain at such places.
- Provision should be made in the plan for draining the surplus irrigation water during monsoon period from the point where the irrigation canal escapes in the drains or nearby ponds.
- Heavy fines should be imposed on the industries/ institutions etc who are discharging/ discarding their waste into the drains without treating them. The state government should make provisions regarding regular sample checking of drains for this purpose.

### C. Urban and Rural Drains

- In most of the UP Sub-region's town/ cities, cleaning of drains has been done manually due to unavailability of trained manpower and proper machinery. This method need to be changed by latest, effective and efficient technologies.
- The land around the drains are of relatively low rates which can be converted into public uses mainly of commercial and recreational interest so as to generate revenue which in turn help the local bodies to maintain the drains and also develop into a leisure spot for the people (the leisure valley in some cities like in Chandigarh develop all along the major drain passing through the entire stretch of the city is one of the best example).
- Pre training should be given to the staff who will get involved in maintenance of drains. Regular training for the staff should be organized to make them up to date with the latest and modern technologies.

- Mass awareness campaign program need to be conducted to make people understand about the ill effects of dirty and filthy drains.
- Different stakeholders should be involved in the maintenance and upkeep of drains. Local people should be encouraged to get involve in all the activities associated with drains. They can be requested to surveillance the drains and report any incident which will affect the health of drains and need Government scrutiny and action. People should get some reward or award for this so that they will get motivated. This system will help Government in a better way than any other means due to the day to day involvement of people with the local area and also it's the easiest and cheapest way.
- Drains in urban areas are usually get closed by the people for a longer stretches which results into the blockage and choking of drains. It is necessary to make provisions in the building byelaws that a removable cover should be provided at regular interval for the cleaning of drains. No pucca construction including covering of drain by CC slabs shall be permitted over designated drains. The violation of these provisions shall be taken seriously and heavy fine should be imposed on the culprit as well as authenticated authority shall demolish the cover and the cost to be recovered from such people.
- For all drains, the exercise to remove plants/ weeds which restrict the smooth flow of water shall be carried out on a regular interval.
- The inner side plaster of city drains shall also be regularly repaired.
- Bridges should be constructed over the drains by the responsible agencies after taking into account the L-section and discharge capacity of the drain instead of laying RCC pipes which leads to blockage of drains due to accumulation of waste into them.

## **CHAPTER 6. SHELTER**

### **6.1 Policies and Schemes related to Housing Development**

#### **A. National Housing and Habitat Policy, 2007**

The National Urban Housing and Habitat Policy recognize shelter as a basic human need and are focused on the mismatch between demand and supply of housing units. 99% of the housing shortage of 24.7 million at the end of the 10th Plan pertains to the Economically Weaker Sections (EWS) and Low-income Groups (LIG) sectors. Given the fact that 26.7% of the total poor in the country live in urban areas, the issue of affordability assumes critical significance. In terms of numbers, 26.7% of the total poor imply 80.7 million persons or about one-fourth of the country's total urban population.

Policy is to ensure sustainable development of all urban human settlements, duly serviced by basic civic amenities for ensuring better quality of life for all urban citizens. The Action Plan at the State/UT level in this regard must be prepared with the active involvement of all stakeholders. The National Urban Housing and Habitat Policy, 2007 also lays special emphasis on provision of social housing for the EWS/LIG categories so that they are fully integrated into the mainstream of ecologically well-balanced urban development.

#### **B. State Housing Policy**

The State Housing Policy lays special emphasis on promoting private investment in the housing sector. However, owing to lack of adequate land, the activities of the private sector have been piece-meal whereas, this sector has inherent competition, professionalism, dynamism, efficiency and capacity to mobilize financial resources, which hitherto has largely been untapped. With the current policy of economic liberalization and stress on privatization, the government is now resuming the role of a catalyst and "facilitator" in housing sector rather than discharging the traditional role of being a "provider". Therefore, efforts shall be made during the 11th plan to pursue the reform agenda and design policies that spur private sector investment while encouraging competition by guarding against monopolistic practices.

#### **C. Role of State Government**

The Uttar Pradesh State government with the identification of various schemes and policies for state like IDSMT Schemes, Solar Programmes etc. as well as local levels has defined the respective roles to be fulfilled by the concerned departments:

Liberalize the legal and regulatory regime to give a boost to housing and supporting infrastructure. Promote private sector and cooperatives in undertaking housing construction. Define the role of public and private agencies particularly in the infrastructure sector, Undertake appropriate reforms for easy access to land, Prepare long term programmes to tackle problems in housing and basic services, Facilitate training of construction workers by converging other development programmes through Building centers and other agencies. Promote decentralized production and availability of building material, empowering the local bodies to discharge their responsibilities in regulatory and development functions.

#### **D. Valmiki Ambedkar Awas Yojana (VAMBAY)**

The objective is primarily to provide shelter or upgrade the existing shelter for people living Below Poverty Line in Urban Slums, with a view to achieve the goal of “Shelter for All”. Equally important is the objective to provide not just shelter for the urban poor but also a healthy and enabling urban environment, to help them to come out of their poverty level.

The target group under the VAMBAY will be slum dwellers in Urban areas who are below the poverty line including members of the EWS who do not possess adequate shelter. It is a Centrally Sponsored Scheme shared on a 50:50 basis with States which envisages an annual subsidy of Rs. 1000/- crores from the Ministry of Urban Development and Poverty Alleviation to be matched by an equal amount of long term loan from HUDCO to be availed against usual State Government Guarantee. The State Government has been given the option to obtain resources from any other source (ie. other than HUDCO) eg: budgetary support, own resources of Local Bodies, loan from other agencies etc.

#### **E. National Slum Development Programme (NSDP)**

The basic objective of the NSDP is to provide basic amenities to slum dwellers in the field of physical & social amenities, community infrastructure etc. The scheme shall be implemented at the grass root level by the neighborhood committees and community development societies.

#### **F. Indira Awaas Yojana (IYA)**

The objective of IYA is primarily to help construction of dwelling units by members of Scheduled Castes/ Schedule Tribes, freed bonded labourers and also non- SC/ST rural poor below the poverty line by providing them with grant-in-aid. The target group for houses under IYA is people below poverty line living in rural areas belonging to Scheduled Castes/ Scheduled Tribes, freed bonded labourers and non- SC/ST Categories. A maximum of 40% of the total IAY allocation during a financial year can be utilised for construction of dwelling units for non-SC/ST BPL categories

#### **G. Samagra Awaas Yojana (SAY)**

The basic objective of the Samagra Awaas Yojana is to improve the quality of life of people and overall habitat in the rural areas. The Scheme specifically aims to provide convergence to activities till now separately undertaken such as construction of houses, sanitation facilities and drinking water schemes and ensures their effective implementation by suitable and sustainable induction of technology, IEC and innovative ideas.

The scheme in due course is proposed to be implemented all over the country. However, in the first phase, the scheme is proposed to be implemented in one Block each of 25 districts in 24 States and one Union Territory. These blocks and districts will be selected in consultation with the State Governments out of the 58 Districts earmarked for institutionalizing community participation in rural water supply and sanitation.

#### **H. Pradhan Mantri Gramodaya Yojana (PMGY)**

PMGY in the field of provision of rural shelter, which is focused to extend benefits to the rural poor. The target group for houses under the scheme will be the people who are living Below the Poverty Line in the rural areas, belonging to Scheduled Caste/Scheduled Tribes, freed bonded labourers and non SC/ST categories. Not more than 40% of the total allocation during a financial year can be utilized for construction of dwelling unit for non SC/ST BPL families, while funds to the tune of 3% will be earmarked for benefit of BPL disabled persons.

#### **I. UP Awas Evam Vikas Board**

UPAVP has planned and executed various projects for the development of housing, health and education. UPAVP has attained capability of executing large residential colonies and townships. The UPAVP is an autonomous body and is capable to manage its activities with its own resources. Extra resources are generated with the help of loans from various financial institutions like

Housing and Urban Development Corporation, Unit Trust of India, Life Insurance Corporation, banks and HDFC etc.

## J. Private High-Tech Townships

The State Housing Policy has laid special emphasis on promoting private investment in the housing sector. However, owing to lack of adequate land, the activities of the private sector have been piece-meal whereas, this sector has inherent competition, professionalism, dynamism, efficiency and capacity to mobilise financial resources, which hitherto has largely been untapped. With the current policy of economic liberalisation and stress on privatisation, the government has to resume the role of a catalyst and "facilitator" in housing sector rather discharging the traditional role of being a "provider". Therefore, there is urgent need to make vigorous efforts to create an enabling environment for the same.

To achieve the above stated objective, government needs to aggressively promote the development of hi-tech townships with facilities comparable to international standards in cities like Lucknow, Kanpur, Ghaziabad, Agra, Bareilly, Moradabad, Saharanpur and other cities having high growth potential. Therefore, it is imperative that such projects are promoted aggressively, as these are basic pre-requisites for encouraging general tourism, medical tourism and I.T. Hubs, where high quality living conditions are available. It is proposed that for promoting development of such townships in the private sector, involving a minimum investment of Rs.750 crores (during the five year time frame) and a land area of about 1500 acres for each project.

## 6.2 Strategy/ Policies

The strategy and policies regarding shelter in UP Sub-region is mentioned below:

### 6.2.1 Assessment of Demand/ Need

1. The housing deficit/demand is intrinsically linked to various local factors such as potential of the area, economy, affordability etc. the State Government/local agencies need to work out the housing requirements and prepare phased programmes taking into account these factors so as to meet the demand.
2. Housing / shelter need should not be only based on the census statistics. a careful analysis has to be carried out between a demand of an area and the need of the area.
3. The demand of shelter in different areas is primarily based on commercial factors and as an investment opportunity. The state government shall prepare comprehensive policy

that should help the need of a given area and to a level upto which commercial/ investment based demand may be permitted.

4. The assessment of demand/ need shall also consider the realistic approach toward costing. A house/ shelter designed/ developed for any income group shall be affordable by that income group.
5. the census reveals thousands of uninhabitat building units, the state government should enforce a comprehensive policy to use, acquire, reallocation of such uninhabited buildings.

### 6.2.2 Development and Construction of Shelters

1. The development and construction of shelter should strictly adhered to the land use proposals of Master Plans. The areas which do not have Maste Plans, the primary factor guiding development of shelter should be non-agriculture or less intensive agriculture landuse as far as possible.
2. Low cost building material should be developed by the state government or private sectors should be encouraged through different appropriate means to develop such low cost building materials. Use of fly ash bricks in lieu of traditional bricks should be encouraged by the state government.
3. The Government by itself or by NGOs/ Private sectors should develop building centres in all urban centres and in all villages upto service centres. These building centres should perform following functions:
  - These centres should be well equipped and act as guidance for low cost building materials and low cost construction techniques for different types of shelter.
  - The centre should manufacture low cost building materials for its surrounding area requirement.
  - The centre should provide a regular training program for its surrounding population regarding low cost construction techniques and manufacturing. This will help to generate employment.
4. The state government should develop eco friendly shelters and also make provisions of some reward/ incentive for private sector developing such eco-friendly shelters.
5. The use of solar architecture passive techniques for shelters should be encouraged. State government shall develop a comprehensive list/ details of solar passive architecture techniques which should be made available to the people free of cost or at a very nominal cost.

6. Every shelter should strictly follow the provisions regarding disaster management (earthquake, fire). An independent agency should be formed by the state government which should verify the construction for disaster management provisions. Such agency should randomly select different types of shelter as sample the final analysis report of these samples should be made available for public view also.
7. The state government should develop model shelter designs of different sizes including a one room house of a village upto a very large villa of a metro centre. these model design should have all necessary provisions of disaster management, rain water harvesting, inclusion of solar architecture passive techniques etc. such model designs of LIG and EWS houses should be made available free of cost.
8. State government should prepare a policy to meet out the need as well as acceptable demand of shelters. Shelter for LIG/ EWS both for urban and rural areas can be constructed by the concerned authority/ department or by private sector, but the overall cost of construction of these EWS/ LIG houses should be kept upto affordable limit of that income group. A mandatory provision of time schedule for construction of LIG/ EWS houses at par with other income group houses of same area should be made in the model under which private sector is involved.

### 6.2.3 Allocation of Shelters

1. The strict provisions should be made regarding the allotment/ allocation of house to an individual of specific income group for the house for which he is entitled. A regular sample checking of the allottees shall be done by the authority to verify the income of the allottee from all sources.
2. To protect the rich agriculture land, the housing as an investment should be discouraged. Housing as an investment other than present and future personal need should be discouraged. A regular sample investigation should be made by the authority not only for the houses allotted by the government authority/ agencies but also for private sector allottees.
3. Innovative concepts like 'work-cum-shelter', 'incremental housing' etc. should be adopted to cater to the specific needs of individual household thereby effecting savings as well as opportunity costs.
4. The night shelters should be made with the following provisions:
  - Night shelter should be constructed by the state authorities at appropriate locations keeping in view the work area relationship,
  - Basic utilities and facilities should always be available in these night shelters.

- A complete record of the habitants of such night shelters should be maintained with periodic investigation regarding the where about of inhabitants.
  - Night shelter should be regularly maintained by the authority or through outsourcing.
5. Slums: State government should identify the slums with a clear distinction from densely populated unauthorized colonies. An action plan shall be prepared by the state government for all such slums. No new slum should be allowed to develop within the controlled area.

## CHAPTER 7. SOCIAL INFRASTRUCTURE

1. Higher level educational facilities like colleges and technical institutions are available only in Metro Centers and Regional centers; lower order settlements are dependable on them for college level and higher studies as shown on Map 7-1.
2. Lower hierarchies of settlements have basic medical facilities, but higher order health facilities like Hospitals are sparse causing patients to travel long distances to avail facilities as shown on Map 7-2.
3. The existing availability of Primary, Middle, Secondary and Senior Secondary schools in UP Sub-region of NCR as per census 2001 is shown on Map 7-3.
4. The existing availability of Health Centres, Maternity Centres, Dispensaries and Hospitals in UP Sub-region of NCR as per census 2001 is shown on Map 7-4.

**Map 7-1 Existing availability of Colleges in UP Sub-region**

**Map 7-2 Existing availability of Hospitals in UP Sub-region**

**Map 7-3 Existing Educational Facilities in UP Sub-region**

**Map 7-4 Existing Health Facilities in UP Sub-region**

## 7.1 Policies

1. There is a need to remove the disparities in distribution of social infrastructure facilities in the sub-region. All the urban settlements at every hierarchic level should meet the education and health facilities as per the norms specified in UDPFI norms and all rural settlements of different hierarchic level should meet the education and health facilities as per Planning Commission norms as mentioned in Manual for Integrated District Planning. In addition all service centres at each hierarchic level should be provided with a package of facilities so that they can play the regional role expected of them.

The requirement of education facilities ( Primary schools, senior secondary schools and Colleges) for the year 2021 and 2031 including the existing shortfalls for all Metro centres, Regional centres, Sub-regional centrals, Service centres, central villages has been worked out on the basis of UDPFI norms as shown from table 7-1 to table 7-5. Similarly the requirement of Health facilities (Hospitals, Dispensaries, Maternity and Child welfare, Health care centre and Family welfare, Medical Practitioner, Nursing Home and T.B. Clinic) has been worked out on the basis of UDPFI norms as shown from table 7-6 to table 7-10.

The projected population for which the Education and Health facility requirements have been worked out has been taken from the option-1 method of population projection mentioned Demographic chapter of this document.

2. Further, to relieve Delhi from the migration pressure, this could be the approach to induce growth in relatively less developed parts of the sub-region. Settlements identified as growth nodes in this plan should be encouraged through infrastructure development as suggested in the plan.
3. The social infrastructure facilities should be within easy reach of people in all parts of the sub-region. Low cost/ locally accessible health care facilities should be strengthened for existing available facilities. It is envisaged that one or two specialized centres should be identified and developed into the centre of excellence for the indigenous systems in all identified regional and central towns.
4. Greater Noida, Noida, Ghaziabad and Meerut belt is emerging as national hub for educational institutes both by Government as well as Private sectors. Sustainability of these institutions is very important from educational point of view as well as economy of the area. A comprehensive policy which helps these institutions to sustain is a need of

this time. To encourage the setting up of private institutions, State Government should encourage private investors by providing them incentives (rebate in development charges, free technical know how for the development of rain water harvesting model, disaster management) and making land available to them. However the fess structure of such institutions should be finalized with the consent of state education department. Further, such institutions should have a transparent mechanism regarding fee collected, teacher, student strength etc.

5. National/ State level affiliating universities are primarily concentrated in Greater Noida, Noida, Ghaziabad, Meerut belt. Either this concentration of Universities should be spread throughout Sub-region or and new National/ State level Universities should be encouraged for rest of the area of Sub-region.
6. A strategy should be adopted to prioritize social infrastructure development based on comprehensive analysis of existing social infrastructure, demographic profiles, and social trends.
7. Mass awareness campaigns regarding available health facilities, hygiene and general health precautions should be organized by the Government or by selecting NGOs with assistance of Government through media and by including it in school curriculum. Similarly mass awareness program should be conducted as mentioned above regarding available education facilities of different level, merits of education. This will help in improving education and health standards of the people in the sub-region.
8. Facilitating academic and industrial links to ensure the future provision of skilled graduates in a variety of employment sectors within the region. The training centre to provide skilled knowledge for locally available products should be developed by the Government or on PPP mode for eg. Potteries, mudhe, cane furniture, agriculture products, milk products, fruit products, sports goods, leather products, ornaments, scissor etc.
9. Foreign sector should be encouraged to open education institutions in India to get world-class education in their home-country and save invaluable foreign exchange. Further, Local institutions will compete with world standards restructure and in this environment of competition education will become more easily accessible and economical.
10. Public Private Partnerships (PPPs) should be encouraged to manage the existing educational institutes of all level and also to develop new institutions. The education department should develop various modals of PPPs by taking examples of success stories

across the country. The provision should also be laid out for the sustainability of such developed educational infrastructure.

11. Every District should have a blue print of all projects (social, physical and economical) with a yearly dovetailing of all projects so that each scheme or project can have an optimum benefit.
12. A centralized mechanism to monitor the developed education and health facilities in Sub-region along with its all kind of stakeholders should be developed and available for public. Each block head quarter should have a centre to collect, process and transmit such information. This system will help in improving the decaying of present education and health system.
13. Make substantial investments by Government or and with the help of PPP should be made in the development of telemedicine for severe health requirements. This facility should be available in all hierarchy of settlement upto central villages. It helps eliminate distance barriers and can improve access to medical services that would often not be consistently available in distant rural communities.
14. Keeping in view the large agricultural area of the UP Sub-region, agricultural universities should be established at appropriate locations. These universities should have special provision to cater to the needs of local surrounding population and agricultural activities.

**Table 7-1 Projections for Educational Facilities upto 2031- Metro Centres**

**Table 7-2 Projections for Educational Facilities upto 2031- Regional Centres**

**Table 7-3 Projections for Educational Facilities upto 2031- Sub Regional Centres**

**Table 7-4 Projections for Educational Facilities upto 2031- Service Centres**

**Table 7-5 Projections for Educational Facilities upto 2031- Central Villages**

**Table 7-6 Projections for Health Facilities upto 2031- Metro Centres**

**Table 7-7 Projections for Health Facilities upto 2031- Regional Centres**

**Table 7-8 Projections for Health Facilities upto 2031- Sub Regional Centres**

**Table 7-9 Projections for Health Facilities upto 2031- Service Centres**



**Table 7-10 Projections for Health Facilities upto 2031- Central Villages**



## **CHAPTER 8. HERITAGE AND TOURISM**

The UP Sub-region is enriched with large number of heritage and tourism sites. Due to the existence of Delhi near the Sub-region, this area has very high potentials but the state has not tapped its resources in this sector. Due to the increasing demand of the highly diversified tourism industry can be developed as one of the core activity in this area. The areas and settlements in Sub-region are facing a serious threat of urban degeneration. Unsympathetic and alien developments destroying the harmony in heritage zones due to lack of proper development guidelines is experienced in this field. Based on the demand as well as potentials of this area, the tourism industry should be developed with the following objectives:

- i. Preservation and development of existing heritage sites
- ii. Development of important religious places for Pilgrimage tourism.
- iii. To create employment generation for local people.
- iv. To generate revenue through tourism.
- v. Preservation and development of tourism sites
- vi. To develop alternative tourist sites as a major option for tourist of/ from Delhi.
- vii. To develop state and national level importance tourism places.
- viii. To build a healthy, friendly environment through tourism.
- ix. To provide safe and secure tourist centres.
- x. To develop recreational sites for daily/ weekly tourism for local people.

### **8.1 Policies and Proposals**

To achieve the objectives mentioned above the following policies and proposals of Heritage and Tourism should be followed by the State and Central Government. The policies for different nature and character of tourism are suggested below:

#### **8.1.1 Policies for the Man-made Heritage Sites**

1. All existing important Monuments be listed and specified on the Master/ Zonal/ District plans. Separate conservation and preservation plans should be prepared for all listed Heritage monuments/ sites.
2. 100 meter area around protected monuments be declared as 'Restricted Development Zone' and activities permissible and the permissibility of activities shall be as per land use zoning of Sub-regional Plan. The width of protected areas shall be decided on case to case basis while preparing the conservation and preservation plans.

3. Some incentives in the form of grant, tax holiday, free technical assistance, laying of necessary infrastructure etc should be given by the state government to encourage privately owned potential heritage monuments.

### **8.1.2 Policies for the Natural Heritage Sites**

1. The state government shall prepare a list of all type of natural heritage sites (rivers, all important natural lakes, large ponds, bird sanctuary, wild life sanctuary, forest).
2. The enlisted natural heritage sites should be demarcated on the map and be declared as natural heritage sites.
3. All existing important Natural Heritage Sites be listed and specified on the Master/ Zonal/ District plans.
4. Separate conservation and preservation plans should be prepared for all listed Natural Heritage sites. The enlisted sites should be well protected from the land encroachment, pollution of soil, air and water.
5. Deforestation and practice of monoculture should be stopped near these sites.
6. Agricultural practices including social forestry, energy plantation and agro-forestry should be encouraged.
7. The sensitive areas all along such sites shall be as per the details mentioned in the chapter of environment. The permissibility of the activities in these restricted zones shall be as per the zoning regulations mentioned in land use chapter.

### **8.1.3 General policies for the Tourism**

1. The development of infrastructure at all the Heritage and Tourism sites should be in an integrated manner.
2. An action plan shall be prepared for each Heritage and Tourism sites for the development/ conservation and preservation in an integrated manner for all stakeholders.
3. Proper Site Planning should be done of listed sites which should include landscaping, development of parks, fencing, demarcation of boundary, proper lighting, adequate security, public utilities, necessary services etc.

4. Accessibility should be improved leading to the listed sites by proper road treatment, public conveniences, signage etc especially from the National Highways/ State Highways and other entry points.
5. The state government shall prepare a comprehensive tourism plan for UP NCR. The provision should be made for involvement of private sector in every attribute of tourism.
6. State government should ensure 24 hour uninterrupted power supply round the clock security in all the enlisted sites. PPP model can be developed for a single activity of tourism as well as a comprehensive PPP model can be developed as one single project including every activity related to tourism. This involves preservation, conservation of existing sites, development of new sites, hospitality, marketing, transportation of all kind, connectivity of all kind, entertainment, security, and related public utilities.
7. Promotion of village tourism as one of the important tourism product should be added in the comprehensive tourism plan. The preservation of culture and heritage of different communities and projecting them as knowledge (study purpose), entertainment etc can help not only the overall development of tourism but also an alternative source of revenue for local people.
8. The government should organize fairs and festivals at different places which should include area specific folk dances, local music, food, handicraft etc that will generate revenue for the local people also. Students from the tourism and hotel institutes should be invited to study and to actively take part in such fairs and festivals. This will help the students to learn the local specific rural characters and traditions which they can use and promote in their professional life.
9. Many sites present within the Sub-region are in poor physical condition but still used by the local people for their Heritage/spiritual/ religious significance. The state government should provide necessary finance/ guidance/ facilities etc for the betterment of these sites at local level.
10. The state government should make provisions for one day trip and weekend trips for different centres of tourist attraction.
11. Tourism circuits covering tourism, leisure, cultural and heritage sites should be created with one to three days trip and should be given priority in development of transportation and other infrastructure.
12. To give a break from day to day busy urban life some of the villages should be identified near listed Heritage and Tourism sites as a spill over for relaxation close to nature and

rural life. The state government should allow accommodation facilities by the local village people in their houses. Training should be given to the interested local people regarding hospitality to the tourists and how to get incoming tourist should involve in local specific activity of villages. This will generate additional revenue for such rural households. The state government should advertise on regular basis regarding such tourism activity at state level or at surrounding larger towns.

13. The connectivity linkages to tourist centres should be well planned from landscaping point of view with proper and sufficient lighting facility. Such linkages should be provided with all kinds of necessary amenities all along the link. Such amenities should provide sufficient space for short and long duration parking and large space for resting purpose.
14. All tourist routes shall be well protected from security point of view with regular and short duration patrolling by police.
15. Each town should have a tourist centre having facilities not only regarding travel related bookings but also should provide detailed tourism information.
16. A database for heritage and tourism sites, visiting tourists of different kind/ purpose, travelling mode (both public and private) should be developed and updated on regular basis.
17. Regular publicity of the heritage and tourist sites should be done through all kind of media including regular distribution of low cost pamphlets.
18. All tourist sites shall be well connected with all kind of communication system.

#### **8.1.4 Identified High Potential Tourism Sites**

On the basis of study and analysis of existing tourist sites as well as potential sites having some locational / physiographical advantages has been identified as shown on Map 8-1. These identified sites have potentials of self sustainability. The identified sites are listed below:

##### **A. Hastinapur Tourist Hub**

###### **a. Development of Entry Gate at the Junction of Mawana and Hastinapur Road**

In order to recreate the grandeur of the Mahabharat era and to create an experience for the visitors, it is proposed that the journey of Hastinapur- Tourist Hub will start with a majestic gate with carvings and relief work of Mahabharat events and characters to create a 'flash back' impact on the tourists while entering the city.

**b. Development of Mahabharata theme park**

Though Hastinapur boasts of its association with the Mahabharat, today the tangible remains of this historic are not very attractive to the visitors due to their scale and present condition, thus there is need to create an interpretation and feel for this historic period. It is proposed to develop a theme park to highlight this aspect where visitors can experience the history in an entertaining format.

The proposed activities in the park are given below:

- Temple complex
- Photo Gallery/Museum
- Light and Sound Show
- Amphitheatre
- Library
- Dioramas, Sculptures

**c. Development of Amusement park/Adventure Sports**

An amusement park is proposed as an adjunct to the Mahabharata Theme Park, where the visitors can relax, eat and drink and the children could take joy rides etc. Adventure sports like diving, aero sports, aqua sports, adventure excursion, horse/camel ride, yoga and meditation, row boat/ motor boating and jungle safaris etc.

**d. Cycling along the Ganga Canal at Hastinapur**

Cycling along the Ganga Canal amidst the luxurious surrounding of nature is proposed because it will be a pleasure for a person who loves adventure and sports. Moreover, bicycle does not emit any form of pollution as other means of transportation. Hence, it is good for the ecosystem too, as it does not harm the environment.

**e. Forest walk/Mini Jungle Safari**

Hastinapur has a large reserved forest which can be developed for Eco-Tourism. It is proposed to develop jungle walks and trails through the forest. Subject to getting permissions from the Forest Department, watch towers could be set up and 'Treetop Canopy Walkway' could be developed. Visitors could walk amongst the treetops and get a birds-eye view of the forest situated along the canal amidst a nature reserve. Provision of night stay can be made in jungle lodges and log huts in the villages which are located in the reserved forest allowing time for personal exploration of the wildlife, flora and fauna of the area.

The proposed activities in the Hastinapur Sanctuary are given below:

- Walk through the treetops on the canopy walkway.
- Bird watching excursions.

- Experience nighttime excursions on foot and by canoe to look for nocturnal birds, insects and mammals, spot caiman, enjoy the sounds of the forest at night.
- Visit nearby Indian villages to learn of their native cultures and maybe a little bartering for trade items.
- Examine exotic plants and flowers and learn about the ecosystem in which they live.
- Fishing.
- Creation of Botanical Garden.
- Boat rides.

#### **f. Educational Adventure Tour**

Such tours are proposed to be organized for students of schools and colleges, where there could be learning of history and our heritage, as also visit to the Hastinapur Sanctuary to learn about ecology and fauna and flora.

#### **g. Camping For School**

Long camps conducted during vacations will give students an opportunity to learn firsthand about outdoor life. They also get a chance to use the skills they learn during the regular course at school. Typical camp activities include:

- Day and Night Treks
- Setting up Camp -Selecting a Camp Site, Tents etc.
- Night Navigation
- Cycle treks
- Games and Quizzes
- Campfire Activities
- Cooking

#### **h. Establishment of Tourist Information Bureau / Tourist Information centre**

A Tourist Information Centre would help in developing tourist information and guide system.

#### **i. Yoga and Art of Living Centre**

These kind of centres are proposed in order to give the tourists a chance to achieve good health and the calmness of mind and soul.

#### **j. Sound & Light Programme**

Sound & Light shows will be set up at Hastinapur to attract more tourists. Besides the sound and light show state of the art laser show is also proposed in the theme park.

**k. Visit to native place of Bhai Dharam Singh at Saifpur, Hastinapur**

Located in close vicinity of Hastinapur this place is a popular place among the Sikhs. This place is proposed to be integrated within the Hastinapur Hub as an excursion point.

**l. Boating and Water Cruise/House boats development at Hastinapur**

Most of the tourist destinations are located on the banks of River Ganga, since there is no direct connectivity through road to all these places like Garh Ghat, Brijghat, Anoopshahr, Rajghat etc., an alternative route through water ways is proposed. A cruise trip originating from Hastinapur to Brijghat along the Ganga River for tourism purpose would not only reduce the travel time but also induce the experience of excitement. Boat/ferry stations would be planned and linked to feeder services as per the detailed survey.

**m. Adventure Sports**

Adventure sports are proposed to be designed, constructed and fabricated on the natural settings or manmade sites e.g. bungee jumping, forest walks, artificial climbing walls and full rope activities etc. Adventure sports activities will generate excitement and draw lots of tourists.

**n. Infrastructure Development Proposal**

- Construction of Resorts/Jungle Lodge/Hotels and tents at Hastinapur Village and Jambudweep.
- Proposed 2-3 Star Hotels at the road junction of Mawana and Hastinapur.
- Development of parking at Mawana and Hastinapur road junction.
- Provision of Lighting, Thematic Signage, Markets, Souvenir and eating joints at north of Hastinapur road.
- Temporary accommodation/ tents for tourists.

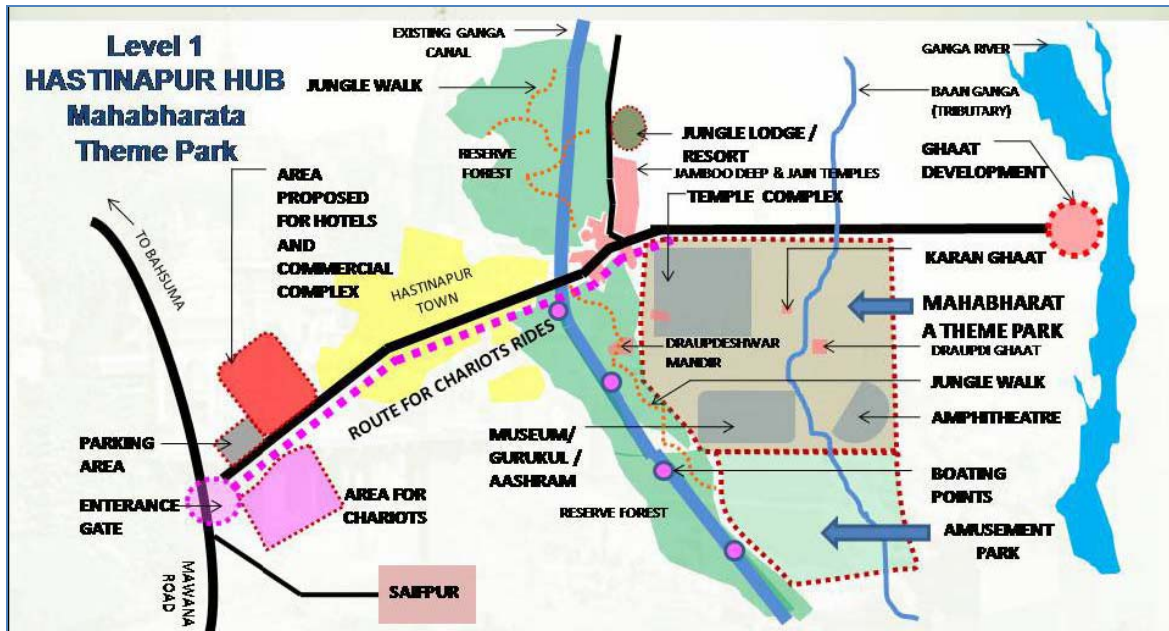


Figure 8-1 Proposal Map of Hastinapur Tourist Hub

## B. Garhmukteswar Tourist Hub

With the historical background of Garh Mukteshwar as a religious pilgrimage centre, it is proposed to develop it as a religious tourism hub which can act as a counter magnet to Haridwar. The proposal is mainly focused on pilgrimage and the area designated as 'Ganga Dhaam Complex'.



### a. Ganga Dhaam Complex

This complex will be developed as an additional attraction for the city to supplement the existing activities of holy bath, last rites and immersion of ashes.

The ingredients of the complex would be:

- Live model of river Ganga with its story
- Ganga interpretation center (theater) – Story of Ganga
- Ganga Library
- Meditation cum yoga Centre
- Health Spa with star facilities and naturopathy/ayurvedic rejuvenation facilities
- Holy bath at northern side of National Highway-24
- Ethnic Village

In order to bring Ganga water in to the complex both for the live model as also for the hydrotherapy requirements of the spa, the feasibility of a barrage to divert a part of the water

through the Ganga Dham Complex which would flow back to the main river about 5 Kms downstream would be examined.

#### **b. Heritage/Religious walk at Garh Village**

There are a number of heritage sites such as 'Pracheen Ganga Mandir' which will be restored and improved and provided with proper signages. Guided tours with well trained guides heritage/religious walks would be organized to act as an attraction and additional activity for tourists visiting Garh. The Garh village can be developed on the lines of "Chokhi Dhani" and should be equipped with infrastructure like budget hotels, heritage havelis and restaurants etc.



#### **c. Yoga and Art of Living Centre**

These kind of centres are proposed in order to give the tourists a chance to achieve good health and the calmness of mind and soul. Yoga weeks can be organised here under Dr. Igender from time to time.

#### **d. Sound & Light Programme**

Sound & Light shows will be set up at Garhmukteshwar to attract more tourists. Besides the Sound and light show, water screen multimedia presentation is also proposed at Ganga Dham. 3D laser show in cinemadome on Ganga is also proposed.

#### **e. Ganga Mahotsav**

Ganga Mahotsav is a proposal for mega celebrations of holy river Ganga. It is a tribute to the holy river which will be organized twice a year for a period of 10-15 days at Garhmukteshwar.

The main purpose of the Ganga Mahotsav would be spreading awareness of the holy Ganges and environmental sensitivity by drawing maximum number of tourists, pilgrims and mass gatherings. The other activities which will be associated will be fairs and festivals, temple complex, literature, exhibition and light and sound shows etc. The management of ganga mahotsav will be done by the proposed mela authority. It would be a association of professionals, volunteers, NGO groups etc. which would provide quality services & infrastructure during the mahotsav. Ganga Mahotsav will also give exposure to the local skills, trade and handicrafts through exhibition spaces and mela.

**f. Development of the Ghats**

The ghats are proposed to be further extended and modernized. The separate dressing areas for ladies need to be expanded. A separate ladies Ghat may be considered for ladies who would prefer a separate cordoned off area. Facilities for Aarti congregations may also be provided.

**g. Up-gradation and Improvement of Mela facilities**

It is proposed to develop a permanent Mela Zone over about 20 acre on the outskirts of the temple area but distinctively separated. To summarize, the improvement in infrastructure of mela would include:

- Improving basic facilities for conduct of annual mela including hygienic toilets in sufficient numbers. Similarly facilities for drinking water and shelter need to be provided.
- Provide facilities for display and keeping of animals including mules e.g.; special shade areas for animals; facilities for collective waste disposal; water pools for drinking by animals etc.
- In order to provide good quality accommodation for higher strata of pilgrims, setting up of Swiss tents should be considered. Currently tents are sufficient only to accommodate officials on duty.
- Additional facilities : Administration office, medical facilities (including veterinary)
- Special veterinary camp to be conducted during mela season and if required for “off-season” periods (to serve as a value added facility service)
- Certain portions of the area can be earmarked for weekend picnic getaway/ local melas in addition the annual mela festivities
- River cruise on steamer may be organized during the mela.
- Place to park bullock carts and other animal drawn carriages.
- Development of parking area nearby Brijghat.

**h. Boating and Water Cruise/House boats development at Hastinapur**

An alternative route through water ways is proposed connecting the major tourist destinations located on the banks of River Ganga. A cruise/houseboats trips originating from Garhmukteshwar to Narora via Anoopshahr along the Ganga River for tourism purpose would not only reduce the travel time but also induce the experience of excitement. Boat/ferry stations would be planned and linked to feeder services as per the detailed survey.

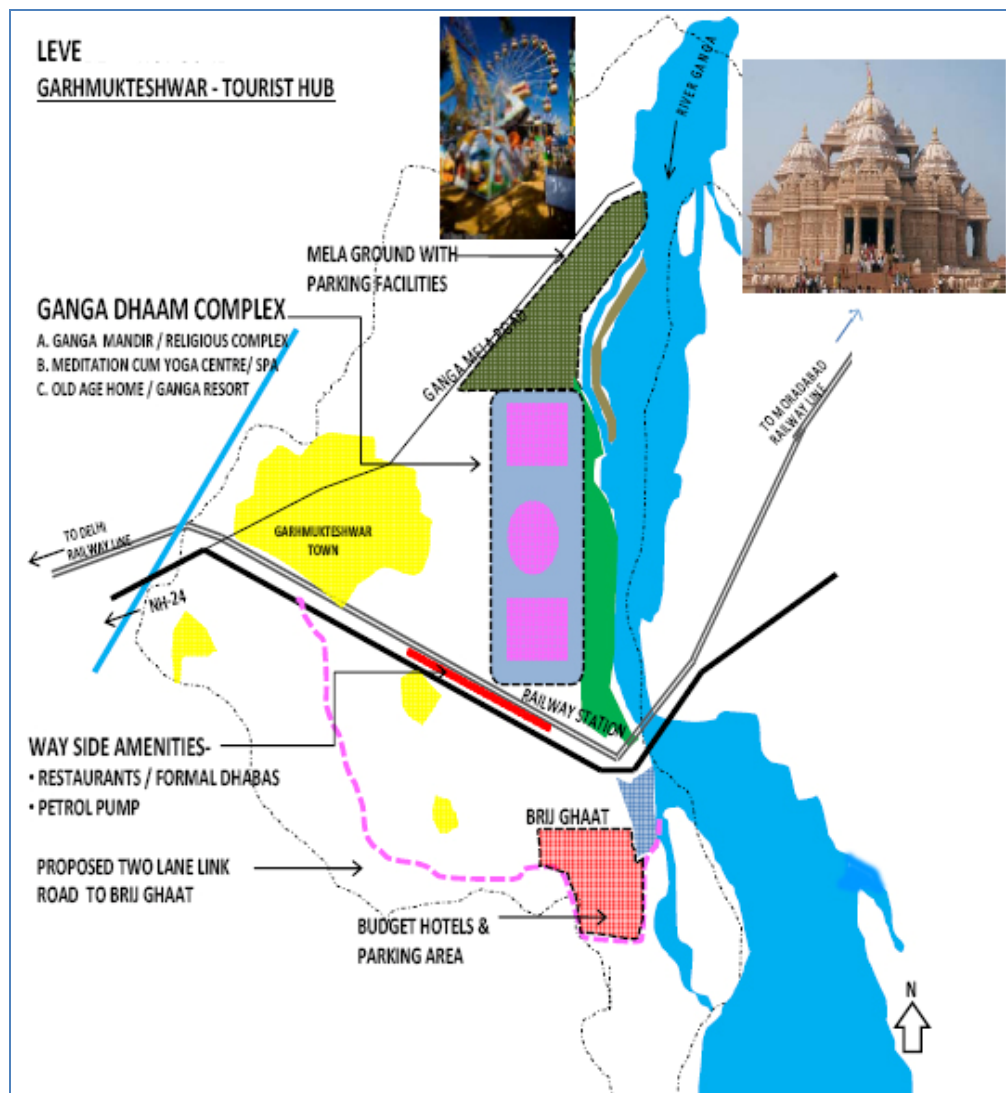


Figure 8-2 Proposal Map of Garhmukteshwar Tourist Hub

#### i. Infrastructure Development Proposal

- Development of 3-Star hotels and Ganga Resort/tents at the northern side of railway line.
- Construction of Budget hotels at south of Brijghat.
- Creation of new markets/food joints/souvenir.
- Alternative route/Byepass from Allahbakshpur to Brijghat for decongest the National Highway-24.
- Boating/Ferry services to connect east and west ghaats of Ganges.
- Conversion into 4 lane road of the Hapur-Brij Ghat road.

- Bus stand, taxi stands, post office, banks, hospital, electric sub-station, tube wells, dharmashalas (rest houses) and mandirs are intended to be developed in the town.
- Separate 5 acre area earmarked for children's park /picnic area.

### C. Development of Greater Noida as a Recreational Hub

The proximity to Greater Noida to Delhi and the upcoming world class planned development has led Gautam Budh Nagar District to attract several capital investment projects. The township of Noida, Greater Noida and proposed Ganga Expressway Development Authority already have sites earmarked for the recreational/tourist activities in their Master Plan. Places of interest in this area include Okhla Bird sanctuary, Ambedkar Park (Noida) and Dronacharya Village. The type of activities proposed in the master plans are as follows:

- Golf Course
- Race Course
- F-1 Racing Track spread over 875 acres
- Upcoming ICC standard Cricket Stadium with 1 lac seating capacity by JAYPEE Groups.
- Upcoming Commercial Business District spread over 182 acres by JAYPEE Groups.
- Introducing Country homes in sizes ranging from 200-4000 sqm. and residential lake district spread over 200 acres.
- Integrated Sports Complex
- Expo Mart developed by Export Promotion Council
- 5-Stars Hotels
- Amusement Park
- Luxury Hotel Resorts
- International Airport at Jewar

#### a. Night Safari in Mursheedpur Reserve Forest, Greater Noida

Night Safari at Noida is an effort to create awareness about the biodiversity. Visitors can see the animals at night in the open backwoods. However, these animals would be confined within specified areas. The safari would be adequately illuminated for night conditions. The project is proposed to build over the 150 acres of land near Mursheedpur Reserve Forest on the Taj Express Highway.

#### b. Bird Sanctuary

Intending to promote tourism in the state, the forest department has plans to create a bird sanctuary in Greater Noida. The sanctuary named 'Greater Noida Bird Habitat' would be built on the lowland, natural water body called 'Surajpur Jheel' and is said to be one the largest bird sanctuaries of the country. The forest department, which has already started implementing the project, will treat and develop 330 hectares bird habitat on the lake area measuring 108

hectares. This includes plantation and beautification work in and around the lake area, which comes under the reserve forest area. The habitat would be developed for migratory and local birds, which would provide protection and a safe habitat.

**c. Convention Centre**

It is proposed to construct a massive Convention Centre with NRI / private sector support with 1500 capacity in Greater Noida. This Convention Centre will have World class facilities for conducting National and International Conferences. This project will be taken up as a joint-venture in an area of around 500 acres and will contain a Five Star Hotel with 1000 rooms, Mini Conference Halls, shopping arcade, Disney land, ethnic village, handicraft emporium, children park, textile museum, swimming pool, bar, theatre, all modern communication links, wide car parking area, huge exhibition mansion, art gallery, etc.

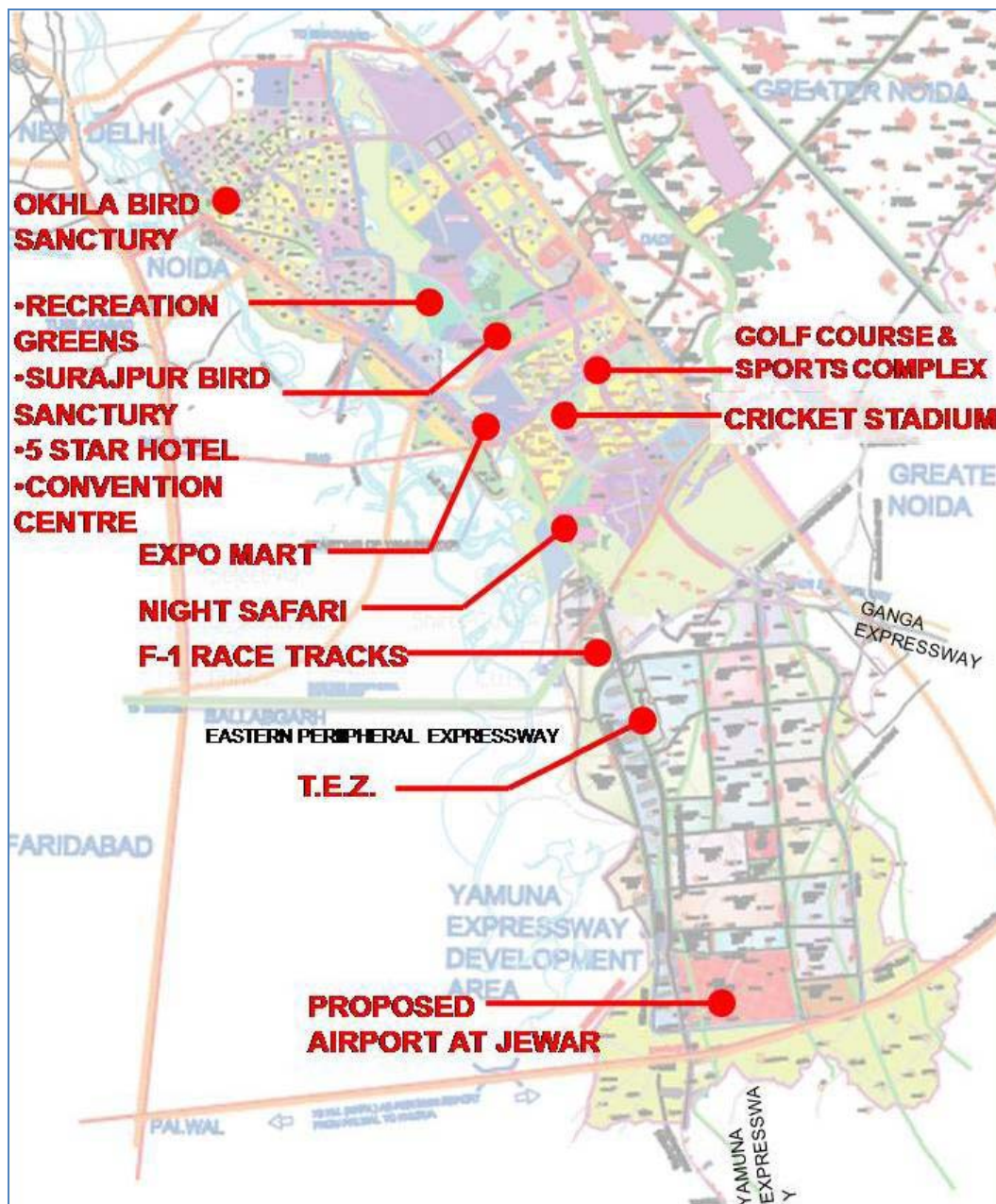


Figure 8-3 Proposal Map of Greater Noida Recreational Hub

**d. Other Proposals for consideration of the Authority**

- Ethnic Village on lines of Chokhi Dhani.

- Establishing existing Expo center as craft hub of the region with special emphasis on Khurja Pottery.
- 100 acres site to be earmarked as the special recreation/entertainment zone (TEZ).



Formula 1 Racing Tracks



Golf Course



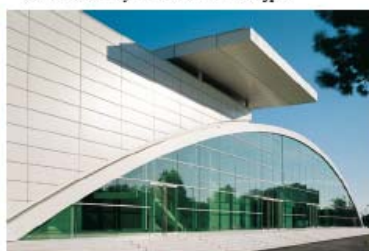
Cricket Stadium



Bird Sanctuary at Okhla &amp; Surajpur



Proposed Airport at Jewar



Proposed Convention centre at Knowledge Park

#### D. Recreational-Cum-Instititunal Hub along the Hindon River at Ghaziabad

The site identified for the recreational-cum-instititunal hub lies next to the bridge of NH – 24 and Hindon River. Connectivity, availability of land , proximity to natural water body (Hindon River) are main advantages for creating Ghaziabad as tourist hub which will also caters to the local and regional population.

The proposed recreational hub will include the following activities:

- a. Water Sports
- b. Amusement park
- c. Boating

- d. Garden of five sense/Chinese Garden
- e. Artificial Waterfalls and Fountains
- f. River front landscaping
- g. Water front Holiday Homes
- h. Jogging Track
- i. Botanical Garden
- j. Rural Tourism based on CHOKI DHANI concept.
- k. Proposed 2-3 Star hotels/tents for tourist.
- l. Water screen show.

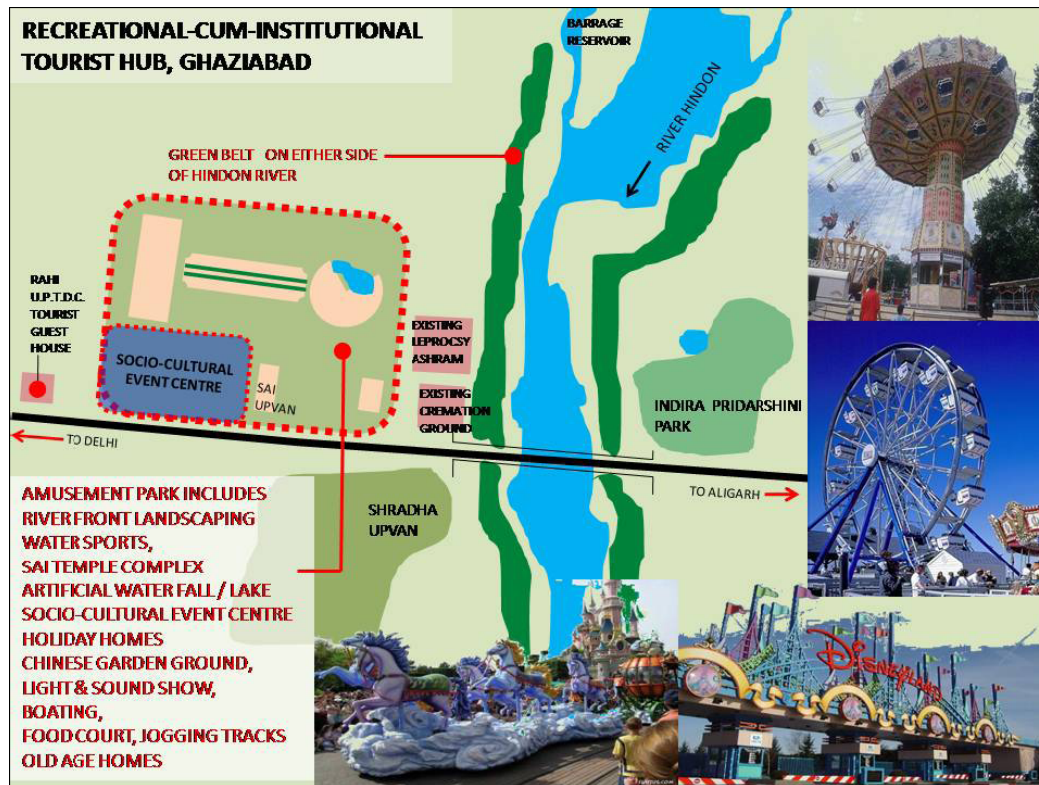


Figure 8-4 Recreational-Cum-Instititunal Hub along the Hindon River at Ghaziabad

**E. Narora Designated as Religious-Cum-Recreational Hub**

In the series of bathing ghats and pilgrims centre along the Ganga River downstream, Narora is the last destination point in the NCR-UP sub region. The whole belt along the Ganges from Anoopshahr to Narora is full of rich cultural and religious tourism. The Proposed Tourist Hub at Narora is situated next to Ganga Barrage. The adjoining land near Ganga Barrage/Canal belongs to Irrigation and Forest Deptt. Uttar Pradesh Tourism department needs to take land approvals from the concerned agencies.

The proposed developments in Narora are as follows:

- Ghat Development at Naraura, Anoopshehar, Rajghaat, Karanbas and Ahar.
- Creation of new markets/food joints at Ahar, Naraura, Rajghaat, Sardhana.
- Provision of temporary accommodation, civic amenities and medical facilities at Ahar, Garh, Rajghaat during mela and festivals.
- Connectivity from Narora to Garh Mukteshwar along the Ganga River.
- Civic Amenities at tourist destinations
- The object of this scheme is to develop and improve basic amenities such as drinking water supply, sewerage and sanitation systems, in particular "Pay and Use toilets", provision of cloak room facilities, hygienic eateries etc. at the Tourist Centres.

The proposed activities in the Religious-cum-Recreational Hub are mentioned below:

- Temple Complex
- Yoga and Art of living Centre
- Garden of Five Sense/Botanical Garden
- New Traditional Market
- Food Court and Cafeteria along the river
- Ghat Development
- Floating Restaurant
- Mela Ground

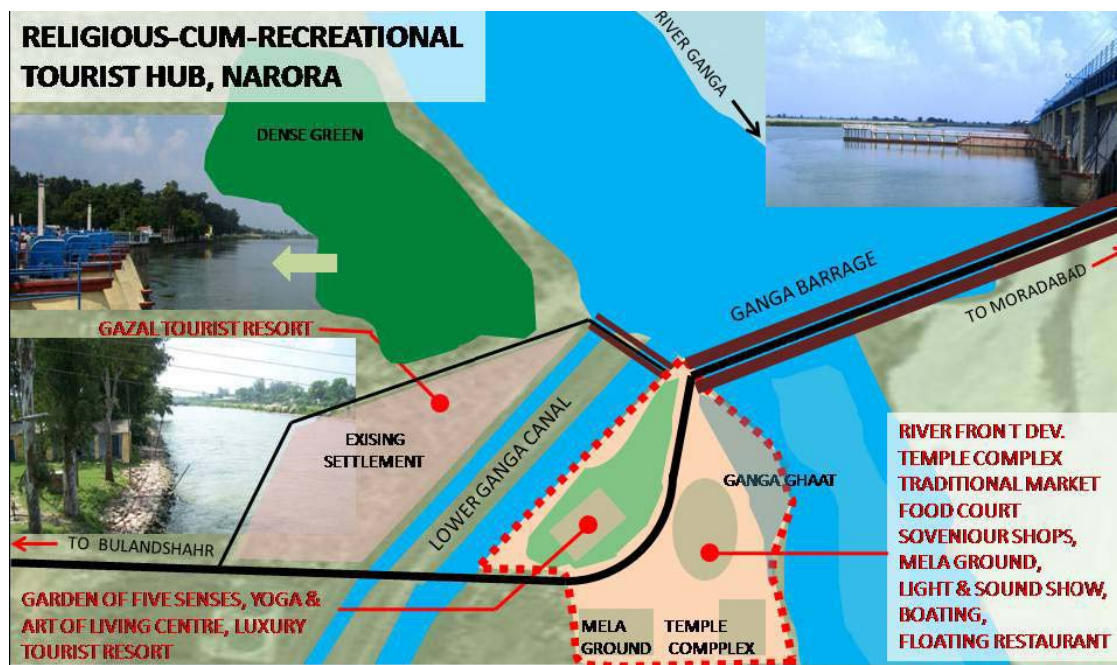


Figure 8-5 Religious cum Recreational Tourist Hub, Narora

## F. Product Development and Identification of Schemes

### a. Proposals for Development of wayside amenities

The tourism master plan proposes a network of wayside amenities to be proposed in the sub-region. The facilities to be provided in the wayside amenities are classified into three categories.

- i. To be proposed at every important urban centre and equipped with tourist information centre, fuel stations, souvenir shops, internet, PCO, restaurant, 2-3 star hotels, mobile medical and security. (**Garhmukteshwar, Bulandshahr, Khurja, NOIDA, Greater NOIDA, Modinagar, Meerut, Mawana, Sardhana**)
- ii. Proposed at every 50 km stretch includes eating food joints, PCO, motor vehicle mechanics, ATM, souvenir shops, mobile ambulance and security systems. (Baraut, Dasna, Ghaziabad, Dadri, Sikandrabad, Jewar, Siyana, Anoopshahr)
- iii. Up gradation of existing dhaba's with proper seating, light and meals facility, internet, PCO etc. (Based on availability of the Dhaba's)
- iv. Wayside amenities imply facilities provided to tourists, some of these facilities are listed as under:

- Toilets
- Cafeteria
- Telephone booths
- Motels
- Petrol pumps
- Guesthouses for resting and others.
- Gym with green area
- Happy club includes Indoor Games (i.e. Carrom, Table Tennis, Badminton etc.)
- First aid
- Grocery
- Souvenir Shops

Developments of wayside amenities are proposed on the following stretches.

1. Delhi-Meerut-Haridwar ( Partapur Site)
2. Delhi-Garh-Lucknow ( Hapur and Brijghat Site)
3. Delhi-Bulandshahr-Narora ( Bulandshahr and Narora Site)
4. Along Yamuna Expressway at Jewar
5. Delhi-Bulandshahr-Khurja (Near proposed Pottery Centre at Khurja)
6. Delhi-Sardhana Highway
7. Delhi-Dadri-Bulandshahr ( Proposed at Dadri)

#### **b. Identification of sites for Heritage Hotels**

There already 2 existing Heritage Hotels at Unchagaon and Kuchesar. There are many other sites with potential to be developed as heritage hotels however incentives from the Govt. will be required for the owners.

- Pili Kothi at Dasna, Ghaziabad District
- Zali Kothi on Delhi-Meerut Road, Meerut city
- Mustafa Palace at Meerut city
- Begum Palace at Sadar Bazaar, Meerut Cantt.

#### **c. Upgradation/Development of existing Hotels/Guest houses**

The following existing hotels are also part of proposed tourist hub and will be upgraded through PPP model.

- Hindon Motel, Ghaziabad
- Rahi Tourist Guest House, Garhmukteshwar
- Wayside amenities at Khurja, Bulandshehar
- Gazal Tourist Resort at Narora, Bulandshehar

#### **d. Promotion of Farm/Rural Tourism in the Region**

Since most of the region is agrarian based, especially sugarcane and flower farming, there is a potential to develop farm tourism. Schemes for incentive can be considered for farmers who can develop this within their farm land by providing temporary accommodation etc.

The identified areas for promotion of farm tourism are:

- Lakshagra/Barnava for Farm Tourism
- Mawana/Daraula for Sugarcane
- Khurja for Pottery
- Muzaffar Saini Village near Meerut on Mawana Road , Garhgaj Minar
- Garh Bangur near Garhmukteshwar famous for Mudhas
- Unchagaon village
- Kuchesar Village

Rural Tourism at Muzaffarpur Saini, (Garhgaz minar), Garh Bangar, Bisrakh & Dankaur in Greater Noida, Kuchesar and Unchagaon, Khurja, Bahsuma are proposed. The tourists may meet and mingle with the village community, halt overnight and observe the life-style of the rural folk before resuming their journey to their further destinations. As this will generate rural employment and advance development of these areas, bring out the rich and unadulterated culture, tradition, fine arts, martial arts, games, worship forms, handicrafts, herbal cures etc. which are preserved, protected and maintained only in the villages, it is aimed to bring out these inbuilt talents and expose some of the salient features of rich tradition to the outside world.

#### **e. Tourism Police**

The Safety and Security of tourists is extremely important and is a critical factor for the promotion of tourism. Therefore, the Government has proposed to introduce Tourism Police facilities in all important tourists centres like Hastinpur, Ganga Ghats, Sardhana, Greater Noida and Baghpat as also at places like airports, railway stations, monuments etc., in a phased manner.

#### **f. Eco-Tourism**

Natural environment is the primary attraction in Ecotourism. Two reserve forests (the Hastinapur Sanctuary and the Mursheedpur Forest) are located in UP Sub-region of NCR. In order to explore eco-friendly tourism potential in the Ganga Ghat, Narora, Hastinapur Sanctuary and Mursheedpur Forest will be introduced and Eco-friendly adventure tourism activities are proposed to be encouraged.

#### **g. Promotion and Development of Fairs and Festivals**

- Infrastructure development in Pradarshni Ground of Bulandshahr, Sardhana, Karnabas, Rajghaat, Nauchandi Mela etc.
- Provision of designated fair grounds at Pura Mahadev, Ahar.
- Creation of Mela Authority for mela infrastructure and management improvement.

The UP sub-region is rich in religious and spiritual shrines. The presence of holy Ganga River and enchants the entire region and attracts thousands of pilgrimage around the year. Many festivals and fairs are held at regional and local level i.e. Ganga Snaan, Nauchandi ka mela, Shivratri, Purnima and Amavasya etc.

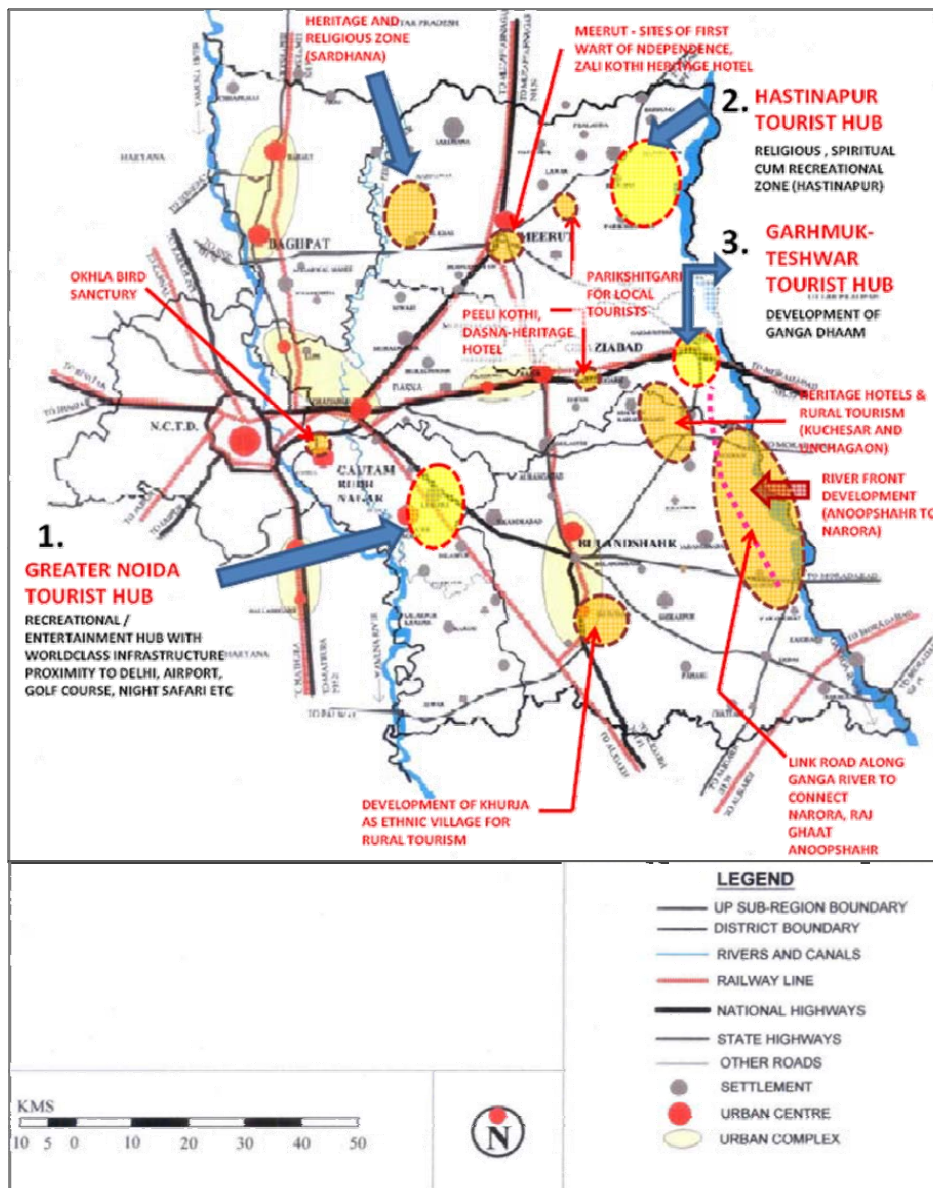


Figure 8-6 Proposal Map for the Uttar Pradesh Tourism in UP Sub-region (conceptual plan)

**h. Tourism Signages**

- **Regional Level:** These signages will be placed at tourist information centres, major road nodes, district headquarters, railway stations, inter-state bus terminal, proposed airport etc.

- **Tourist Hub Level:** It will demonstrate the spatial location of tourist hub with respect to other hubs and urban centre. It will marked all the information related to the sites and activities proposed in the hub along with site map and tourist calendar.
- **Site level:** It will indicate the significance and background of the site along with the site map and photos.

### 8.1.5 Identified Other Important Proposals for Heritage & Tourism Sites

The potential of increasing the number and scale of existing sites remains untapped. Important sites under ASI and State protected monuments and places of Tourist interest of UP Sub-region is shown on Map 8-2. Proposals for some of the sites in different districts of UP Sub-region as per their specific requirement and need are as follows:

#### A. Sites in Meerut District

- a. **Shahpeer Dargah, Meerut-** It's an ASI protected site, having strong architectural character but needs conservation, preservation, maintenance and measures to make it free from encroachment.
- b. **Vilveshwarnath Mahadev Temple, Meerut-** It is declared as ancient monument by UP Government under Ancient Monument & Preservation Act 7 of 1957 as it is believed as the oldest God Shiva temple in district but needs proper signage and parking facility.
- c. **Pracheen Balaji Mandir, Meerut-** Due to its location in the main market area, it requires free movement and parking space.
- d. **Augharhnath Mandir, Meerut-** Temple is fully flourished with modern architecture and latest facilities and draws a large number of devotees during festivals, Shivratri, Poornima & Amavas. Parking should be provided near the temple complex or at the suitable identified site.
- e. **Suraj Kund, Meerut-** Originally, the tank was fed by the water of Abu Nala. Now it is fed by Ganga Canal. There are several temples around the Suraj Kund, built during the period of Shah Jahan. During auspicious occasions the temple is visited by hundreds of devotees.
- f. **Chandi Devi Temple (Nauchandi ka mela), Meerut-** This temple is very near to the Suraj Kund. Every year, one week after the festival of Holi, a colourful and mesmeric fair called the Nauchandi Mela is held on the Nauchandi Ground in Meerut having a mixture of religious flavour, commercial activity, artistic creativity and rustic merriment. The security of the visitors, civic amenities and mela ground needs to be developed for convenience of the tourists.

- g. **Jama Masjid, Meerut**- The mosque holds high historical and religious value.
- h. **Gandhari Talab, Parikshitgarh**- It is a temple complex near a large water body. A lot of people come to Gandhari Talab for religious and recreational purpose. The site was developed under Mahabharat Circuit Plan in 2007 but the entry to the site and signage should be proper for the visitor convenience.
- i. **Gopeshwar Temple, Parikshitgarh**- There is one secret tunnel which connects to Ghandhar, Hastinapur and Sharang Rishi Ashram. The temple is located on the outskirts of Parikshitgarh and is newly constructed under MahaBharat Scheme of UP Govt. The natural vicinity of orchards makes the environment very pleasant. Solid waste management system near temple should be developed.
- j. **Sharang Rishi Aashram, Parikshitgarh**- People from different places come here to get blessings and treatment for their diseases etc. Due to its historic and spiritual values the place should be developed as meditation/ yoga / ayurved centre.
- k. **Draupdeswar Mahadev Temple**- Draupadeswar Mahadev Temple is identified and developed by Hastinapur circuit tourism, Uttar Pradesh tourism department. The place has relevance from Mahabharata time.
- l. **Jambo Deep & Jain Temples, Hastinapur**- Jambo Deep is a centre for holy pilgrimage. It is situated on the Gangetic plains of Hastinapur. The Jain Temple Complex upholds the spiritual moral of an individual to the topmost level. Various kinds of facilities have been provided in the complex like library, dining halls, meditation centers, discussion forums, literature etc. Apart from spiritual tour, Jambo Deep also serves as a very good recreational point for the family purpose, outings etc. It is comfortably accessible, safe and a peaceful place to visit.
- m. **Haji Kabristaan, Meerut**- It is the oldest graveyard of Meerut. During the festival of Id and Shab-e-raat, lots of religious pilgrims come here to congregate and pay homage to the departed souls of their dear ones. The graveyard has numerous structures of fascinating tombs in abandoned state. The area needs to be conserved, protected, landscaped and equipped with civic and parking facilities for the visitors.
- n. **Begum Palace, Sardhana**- Begum Palace is a State protected monument. The palace includes a famous church and a fort which. The palace is presently used for education purpose and Church for Religious purpose. The accessibility to the site should be improved, tourist facilities, physical infrastructure, public transport, market and signage should be provided for the overall development of the shrine.

- o. **British cemetery at Golf Course, Meerut**- The cemetery is a historic graveyard of the British period. Due to its location in the cantonment area, the access is restricted here which should be open for visitors after taking care of security and safety. Signage should be provided at the approach roads to guide the visitors.
- p. **Ghantaghar, Meerut**- Ghantaghar is the most outstanding structure built, by the Britishers, in 1914. It was built in place of Kamboh Darwaza (one of the fort gates of Meerut) and stands as landmark in the centre of the market.
- q. **Bahsuma**- According to the tradition, Bahsuma was a muhalla of Hastinapur and served as the treasury of the Kauravas and Pandavas. The house of the king and a fort built by him still stand in the village which need to be preserved and maintained.
- r. **Archaeological sites, Hastinapur**- During the exploration by the Northern Circle of the ASI, many sites were discovered which should be properly advertised and preserved.

#### B. Sites in Bulandshahr District

- a. **Balai Kot or Upper Court, Bulandshahr**- Historically Upper Court used to be in a fort of a local ruler. It is situated in the vicinity of Kali river. The fort should be maintained and preserved, proper solid waste management and sanitation plan should be made to improve the condition of the city and the surrounding of the site.
- b. **Moti Bagh, Bulandshahr** - It is a palace but currently houses a police station, a primary school, private residences and a small garden. It should be made free from encroachment, preserved and conserved as heritage, museum and recreational space.
- c. **Ahmadgarh Fort (Ruins), Ahmad Nagar near Shikarpur** - The fort stands in ruins and is in very poor structural condition. Maintenance should be done, signage, accessibility and tourist facilities should be provided. It should be made free from encroachment.
- d. **Raj Ghat**- The Ganga snan, Poornima and Amavas attract large section of rural population from the region. Local festivals and melas are organized. Ghats, public facility, proper eating places, sanitation, accommodation facility and parking grounds should be provided.
- e. **Anoopshahr**- Several religious bathings and festivals are organised in Anoopshahr all the year round. Anoopshahr has historic value and infrastructure support like banking, civic amenities, dhramshalas, ghaats for holy Ganges, Dedicated Ghaats for women.
- f. **Ahar**- It is a religious place and lies on the banks of Ganges. The place lies in the interiors of rural settlement but attracts lakhs of people during poornima and amavas nights every

month. Apart from it, Ganga snan is the major festival which brings in people at an unmanageable proportion. The infrastructure facilities should be developed.

- g. **Jahangirabad**- Jahangirabad is also called as Chota-Vrindawan. There is a famous temple of Binner devi. Devotees from adjoining areas come to offer prayers to Devi. The temple is locally very important and the access road shall be improved with proper signage.
- h. **Unchagaon Fort, Unchagaon**- Unchagaon Fort provides heritage experience and also promotes rural tourism. It lies along the Ganga canal and this particular stretch is famous for Dolphins. Sometimes crocodiles can also be seen. A walk through the village gives one a chance to view the village life along with a chance to see pottery and jaggery making. Accessibility and infrastructure facilities should be improved.
- i. **Mud Fort & Rao Raj Vilas Heritage Hotel, Kuchesar**- The fort has bravely withstood the onslaught of the Marathas, Sikhs, Rohillas, and Rajputs, as well as the French and East India Company. Power supply, security and access road with proper signage should be improved for the growth of these heritage hotels.
- j. **Khurja**- Khurja is a small town in Bulandshahr district and is world famous for its pottery / ceramic work. Though a small town of U.P. State, Khurja supplies a large portion of the pottery to national and international market. Physical and social infrastructure facilities should be provided in the city for the betterment of the whole city and the local people.

### C. Sites in Baghpat District

- a. **Laakshagrah, Barnawa**- It is identified with the Varanavata of the Mahabharata and the old mound to the south of the village, which is about hundred feet high and extends over an area of 30 acres, is believed to be the ruins of the Laksha Garaha (home of lac) which the Kauravas burnt down in their attempt to kill the Pandavas. Effort should be made to restore the remaining structures and necessary facilities should be made for the tourists.
- b. **Sinauli**- The first Harappan burial site has been found near village Sinauli on the banks of Yamuna in Baghpat District. Many evidence of the late Harappan period, believed to be of around 2000 BC. UP Tourism department is in talks with ASI to link Sinauli with the Mahabharat circuit that it is proposing to launch. ASI is proposing to acquire the site land and plans to set up a museum here. Meanwhile, as excavations continue, this will be an attractive destination not only for the history students, but also for tourists, who can revive history through the skeletons of Sinauli.

- c. **Dera Sachha Sauda Ashram, Barnawa-** It is located to the south of Barnava. Devotees from all parts and of all religion visit this ashram. Devotees from Punjab, Haryana, and Delhi visit the ashram. Dera Sachha Sauda is a spiritual centre and has many activities related to spiritualism, meditation, yoga etc.
- d. **Pura Mahadev, Pura Village-** Fairs are held here on the fourteenth day of Sravana and Phalgun which are attended by approximately 1 lakh -1.5 lakh people respectively. The fairground should be developed and infrastructure facilities needs to be upgraded to promote the local fair, festivals, employment opportunities and rural tourism in the area.
- e. **Parshuram ka Khera-** Parshuram ka Khera is about 3km away from pura village. According to the legend the site used to be the ashram of sage Parshuram. During the Shiv Ratri pilgrims from far off places come here to pay homage. Access road, signage and infrastructure facilities should be made available.
- f. **Valmiki Ashram, Baleni-** The place is associated with the sage Valmiki, people from far places visit the ashram and the temple within it. Several bricks bearing religious imprints have been found around the ashram. Every year many festivals are organised on the banks of the river, within the compound of the ashram. Tourist facilities should be developed.
- g. **Sports Tourism, Baghpat-** Nearly 25 KM from Baghpat, the Johri village is famous for its International Shooters. Again, in Tikri village there is an ashram known as Gurukul Prabhat Ashram where the Combination of Sanskrit and Archery makes this a rare seat of learning. Proper advertisement and facilities should be provided to promote the sports.
- h. **Jain Temples-** The district has a strong presence of Jainism. Bada Gaon is an important pilgrimage center for Jains. The three major Jain temples in Baghpat District are:
  - Chandraprabhu Digamber Jain Atishya Kshetra, Barnawa
  - Chhaprauli Jain Temple, Baraut
  - Badagaon Jain Temple, Khekra

#### D. Sites at Ghaziabad

- a. **Sites of 1857 first war of Independence, Dhaulana-** The village was sacked by the Sikhs in 1780 and again became the scene of action during the freedom struggle of 1857 in which the local Rajputs took a leading part, 14 of them being said to have been hanged. In 1957 the villagers raised a memorial in honour of these martyrs. The memorial site should be integrated with the dedicated circuit for First War of Independence.

- b. **Garh Village-** There are few temples like Nakki kuan scattered within the village which form the part of spiritual walk when pilgrims come for the holi bath during Ganga Snan, Poornima and Amaavas.

Ganga Temple is situated on a mound near Old Garh Village. Most of the pilgrims come to this temple while coming to take holy Bath in Garh Ganga. Garh Village has a potential to be developed as to spiritual walk by integrating important buildings / temples etc.

- c. **Mukteshwar Mahadev Temple, Garhmukteshwar** - Garhmukteshwar is said to have derived its name from this temple. Opposite the Mukteshwar temple is a sandy stretch of land called Meerabai ki Reti.
- d. **Ancient fort, Garhmukteswar-** There was believed to have been an ancient fort here in Garhmukteshwar built by the Pandavas and later repaired by Mir Bhawan, a Maratha General during the Anglo-Maratha war. Today hardly even the forts ruins remain which should be conserved.
- e. **Garh Ganga Ghaats, Garhmukteshwar-** These are natural Ghaats and people come here to stay in a temporary accommodation during the festive season. This place is famous for its bathing fair that takes place on the Full Moon Day of the month of Kartik. Garh mukteshwar has of late been increasing in its significance as a site for cremation and post cremation rites especially immersion of ashes. Necessary civic amenities, accommodation, health facility etc should be developed here.

There are many scenic spots like Puth and Tigri around Garhmukteswar, which can be developed as picnic destinations of a boat ride from Garh and Brijghat.

- f. **Brij Ghat-** These Ghats are being developed on the lines of Haridwar. There are lots of dharmashalas, temples and market available near Brij Ghat. A comprehensive river front development project should be formulated to reduce the problems during the periods of mass congregations.

#### E. Sites at Gautam Budh Nagar

- a. **Okhla Bird Sanctuary-** Okhla Bird Sanctuary lies on the Delhi-UP border along the Yamuna River. The entire zone is ecologically protected and provides an excellent site for mini tours and recreational trips in the natural environment. Bird watching in the midst of busy atmosphere of Delhi, is a real relaxation in Okhla bird sanctuary. Encroachment, Illegal Fishing, Cattle grazing, Poaching and Hunting, Heavy Traffic on the Sanctuary (bund) road should be stopped. Proper Management and Development Plan should be prepared.

- b. **Dankaur-** According to myth, Eklavya casted a stone into guru Dronacharya and started practising art of archery on his own. That stone is still present in ancient Dronacharya temple in the town. Near Dankaur in the village Bilaspur the British established a base and from here they collected taxes from over 1900 villages. The remains of the British fortress and the cavalry association graveyard still exist.

**Map 8-1 Identified High Potential Tourism Sites (conceptual plan)**

**Map 8-2 Identified Other Heritage & Tourism Site**

### 8.1.6 Proposed Tourism Circuit in UP Sub-region

Different Tourism circuits are proposed in the Sub-region based on their connectivity and distance. Six circuits are identified which are shown in Map 8-3.

Detail of the circuits is shown in Table 8-1. Junction points will be the places where the tourist and accommodation facilities should be available. While proposing any settlement as a junction point it should be considered that the congregation of people over there should not hamper the existing environment of the nearby manmade and natural heritage and tourism sites. Marked green places shown in the figure shows the proposed areas for the water front development along the Ganga, Yamuna and Hindon River.

**Table 8-1 Proposed Tourism Circuit in UP Sub-Region**

Circuit Number	Places Included	Junction Point	Location in U.P. Sub-Region
1	Ghaziabad, Meerut, Sardhana, Barnawa, Baghpat, Baraut	Meerut/ Baghpat-Baraut	North-West
2	Sardhana, Meerut, Hastinapur	Meerut/ Hastinapur	North-East
3	Meerut, Hastinapur, Parichatgarh, Garhmukteshwar	Meerut, Hastinapur, Garhmukteshwar	North-East
4	Hapur, Garhmukteshwar, Unchagaon, Ahar, Bulandshahr	Garhmukteshwar, Hapur	South-East
5	Bulandshahr, Unchagaon, Ahar, Anupshahr, Narora, Khurja	Bulandshahr, Jahangirabad, Dibai	South-East
6	Ghaziabad, Bulandshahr, Khurja, Greater Noida	Bulandshahr, Noida-Greater Noida	South-West

Tourist Destinations and Circuits would be identified in consultation with the State Governments and should be taken up for development. This should include activities ranging from preparation of a master plan to implementation of the master plan. Projects to be taken up under this scheme should follow an integrated, projectised, area development approach. Comprehensive DPRs should be prepared for each project after consultations with all the stakeholders. Efficient infrastructure should be developed at the heritage and tourism sites on the Public-private partnership. Integrated development of the circuit will involve the concerned departments like PWD, Public Health, Power etc.

**Map 8-3 Proposed Tourist Circuits and Tourist Centre/ Complexes of UP Sub-Region  
(conceptual plan)**

Analyzing the tourism potential of the entire sub-region, it is found that some of the areas in Baghpat and Meerut have the potential to be developed for the purpose of heritage tourism where as tourist destinations located on the banks of River Ganga can be developed for the purpose of religious tourism. While Greater Noida and Ghaziabad have potential to be developed as recreation/ entertainment hubs in the modern context, Hastinapur Wildlife Sanctuary and Mursheedpur Reserved Forest in Greater Noida can be developed for eco-tourism. The areas like Khurja, Garhmukteswar, Barnawa etc can be developed for Cultural/Rural tourism.

**i. Proposed Natural and Heritage Sites**

The sites having Natural potential (especially along the rivers of NCR and some other important places like Gulistanpur Bird sanctuary and Mursheedpur Reserve Forest) and Heitage sites are shown on Map 8-4.

- Efforts should be given to achieve a balance between optimum enjoyment and appreciation of the environment by the visitors without degradation of the environment by tourism.
- Plans need to be made for cleaning of ghats, rivers and lakes & river front development in the demarcated areas.
- Ecological analysis, including any special surveys required such as of the wildlife, flora, and ecological systems, with identification of special environmental areas to be preserved, such as wildlife habitats, etc.
- Zoos, safari parks, botanical gardens, aquariums, butterfly parks and nature museums, should be developed on demarcated sites according to their potential as important complementary features to nature tourism.

**ii. Proposed Pilgrimage Sites**

The existing sites related to different religions having potentials to be developed as Pilgrimage as well as Tourism sites are shown on Map 8-5.

- Necessary accommodation facilities and related services should be created on these sites for both normal and festive days.
- The State Govt. should constitute a committee for ensuring orderly and planned development of pilgrimage centres and fair grounds.

**Map 8-4 Proposed Natural and Heritage Sites of UP Sub-Region (conceptual plan)**

**Map 8-5 Proposed Pilgrimage Sites of UP Sub-Region (conceptual plan)**

## CHAPTER 9. ENVIRONMENT AND DISASTER MANAGEMENT

### 9.1 Environment: Policies and Proposals

On the basis of Environmental Sensitive Analysis, various zones have been carved out as **Highly Sensitive Zone, Sensitive Zone**. The permissibility of activities in these zones has been detailed out in Land use chapter.

#### 9.1.1 Highly Sensitive Zone

**A. Sanctuary** - The Hastinapur wildlife sanctuary has one third part of total sanctuary area of Uttar Pradesh. Though it is notified as wildlife sanctuary to protect ecology, biodiversity of Ganga basin and conserve environment; many anthropogenic activities are going on inside the sanctuary. Decreasing number of wildlife such as deer, dolphin, crocodile, leopard etc because of hunting and worldwide climatic changes affecting natural habitat. Such activities should be stopped and strict adaptation of **Wildlife Protection Act** should be followed on ground.

Area should be declared as no development. There should be restricted entry in the Sanctuary through proper check post so as to avoid poaching. To avoid further degradation to the environment, industrial area should be relocated outside the sanctuary.

- The demarcation of sanctuary area should be well defined by laying of fencing in a phased manner. The state government should share 50% of its cost.
- 500 meter wide area all around the Hastinapur sanctuary should be declared as no development zone. The no development zone here includes kutchha construction, infrastructure development on and below the ground of any kind etc. 100 meter wide area around all other notified sanctuaries within urbanizable areas shall be declared as Restricted Development Zone.
- 1 km wide belt around no development zone belt of Hastinapur Sanctuary shall be declared as restricted development zone. The development or construction activity of any kind should be regularized and monitored through a special cell having officers from forest department and nearby development authority.
- The State department should prepare a comprehensive plan to protect the sanctuary from frequent floods in this area. The central government should share 30-50% of the total cost of scheme that may be suggested in this comprehensive plan.
- A cell should be created well equipped with the latest technologies like frequent infra red satellite imageries procurement, collection and testing of required information regarding plants as well as wild life of this area.

**B. All Forest**

Forest means all reserved, protected and other forest (Both natural and manmade) excluding man made orchids.

- The forest department should prepare a plan on sajra level showing existing forest areas and forest areas as per revenue records.
- The State should prepare a program in a phase manner to restore forest as per revenue records and monitor general health of forest.
- The identified forest areas as per revenue records, where construction of any kind has covered forest area shall be compensated by equal area of any other land use convert into the forest area. Such areas shall be procured by the person occupied or responsible for converting forest area in any other use.
- An independent cell should be established by the centre having participation of State revenue officials which should regularly monitor these forests through some sample level checking.
- 100 meter wide belt around notified forest shall be declared as restricted development zone. In all regulated and controlled areas, any activity during construction and after construction by its use shall not affect the flora and fauna of the forest. The provision should be made in the building bye laws regarding NOC from Environment department in this regard for all construction in this zone. In the area outside the limit of regulated / controlled areas, the development or construction activity of any kind should be regularized and monitored through a special cell having officers from forest department and nearby development authority.

**C. Water Bodies**

This includes all natural ponds, lakes, natural drains and canals.

- An action plan shall be prepared by the state government for the restoration and preservation of all water bodies in UP, NCR.
- Comprehensive plan should be prepared to integrate rain water harvesting plan of the state with restoration of natural ponds and lakes through surface runoff of rain water in first phase and development of check dams to create new ponds.
- No construction activity, dumping of any kind shall be permissible within 5 m wide belt on both side within urbanizable areas and 50 meter wide belt on both sides outside urbanizable areas (No Development Zone) along natural drains.
- 50 meter wide belt all around natural lakes and ponds shall be declared as No Development Zone.
- 30 meter wide belt on both sides shall be declared as green buffer on both sides all along the canals.

- 1-2 km wide belt along river Ganga from Naraura to Brijghat has been earmarked as natural conservation restricted zone (as detailed out on the map) which is a khaddar area of river Ganga including barren and marshy land also.
- 500 meter wide belt along river Yamuna, 200 meter wide belt on both sides along Hindon and 100 meter wide belt on both sides along all other rivers shall be declared as natural conservation restricted zone outside the controlled areas.

### 9.1.2 Sensitive Zone

#### A. Restricted area along River

- 1 km wide belt all along the natural conservation restricted zone along notified Ramsar site of river Ganga shall be declared as a restricted development zone. Only tourism related activity shall be permissible in these areas with the prior NOC from expert environmentalist. No vehicles of any kind shall be permissible in this belt. The necessary construction activity required for tourism purpose shall be kutchra in nature.

#### B. Development area along River

- The state government shall prepare an action plan for channelizing rivers to control flooding, to reclaim permanent flood areas and to save rich agricultural areas from frequent floods.
- The action plan shall identify the reclaimed areas. The cost of these reclaimed areas or development benefits from these reclaimed areas can compensate the cost of river channelization. This entire exercise can be developed as PPP model also.
- The primary activity permissible in this area shall be related to tourism. Other activities like industries, real estate development etc shall be allowed in this belt only in the area falling within controlled areas.
- 1 km wide belt along river Yamuna, 500 meter wide belt on both sides along Hindon, and 200 meter wide belt on both sides along other rivers shall be declared as restricted development zone outside the urbanizable area. All construction activities in this belt shall be strictly as per the BIS norms/ NBC or as may be specified by the government regarding construction technique, building material and structural design to withstand flood possibilities, high humid / moisture conditions and soil conditions.
- Zila Panchayat should be strengthened enough to successfully implement the riverfront zone provisions outside the controlled areas or a riverfront development authority should be formed.

### 9.1.3 Pollution Control

- The data collection centers to collect necessary information, sample and analysis regarding Air, Noise, Water shall be established at least one in each town of NCR and at all centres of high density areas of all major towns of NCR.
- Regular campaign / awareness programmes shall be carried out by state and central government as a joint venture regarding benefits and harms of different pollution. Dissemination of information regarding byelaws, rules and regulations suggested measures for all kind of activities through these centres.
- The data collected by these centres shall be available to any government, semi government department free of cost and with a nominal charge for any other users.
- The state government shall prepare an action plan to make Hindon River free of pollution. The stringent provisions up to the level of criminal offence shall be included in the bye laws regarding the disposal of industrial effluents, disposal from city drains etc for all the rivers as a part of action plan.
- A comprehensive plan shall be prepared by the state government for phased plantation in all declared and notified roadside green belts, green belts and buffer zones of all master plans etc. the plantation in these areas shall be carefully designed that can cater to the need of different areas. E.g. thick and high density plantation for green areas around industrial areas, plants in ascending or descending height orders along highways, plants with high trunk level and no fruit/ flower shading in and around parking areas etc.
- All state government and central government policies, rules and regulations regarding different aspects of environment (disposal of industrial effluents, smoke emitting industries, hazardous waste producing industries, vehicular pollution, city sewage/drainage disposal, solid waste disposal etc.) shall be monitored by an independent agency appointed by state/ central government. The agency shall randomly select the cases and submit its report to state and central government.
- The state government shall identify areas not used for agriculture. These areas shall be developed/ convert into agriculture land in lieu of agriculture area being consumed by the expansion of cities.
- Large scale projects like medium/heavy industries, air ports/air strips, amusement/ entertainment, new township etc shall be allocated on these identified lands.

## 9.2 Disaster Management: Policies

### 9.2.1 Earthquake

1. Earthquake resistant construction as per BIS norms is mandatory for all development areas in Uttar Pradesh. It should be mandatory for other constructions also outside the development areas.
2. Independent agencies should be designated by the state government to check the safety of construction as per the approved building plan. The findings of this agency for each case should be made available for public through some convenient mode. The sampling should be done on regular basis throughout the year and should be well spread.
3. Capacity building in cyclone and earthquake resistant features for houses and all other structures in disaster prone districts, training in retrofitting, and latest technology for earthquake resistant construction should be carried out by the state and central government on regular interval. Budgetary provision should be made for this purpose both for the state as well as central government.
4. Constant mass awareness programs through training, demonstration, distribution of complexes, print and electronic media should be carried out by the state and central government. The training program should include the masons and labours which should be made aware of some basic features of earthquake resistant construction. The awareness program should also be designed for the masses in layman's language to make people understand some basic techniques of earthquake resistant construction where a qualified structure engineer is not involved.
5. Technical assistance should be provided to individuals at very nominal cost by the state government/ local authority for retrofitting. The state/ central government should provide some incentive for the individuals modifying their buildings under retrofitting.
6. Each town should have a map showing structurally weak buildings and detail of their approaches by local bodies.

### 9.2.2 Flood

1. Land use zoning map should be prepared by identifying the areas prone to flood in a return period of intervals like 5, 10, 15 and so on years. Contour map should be prepared on a scale of 1:15000 at a contour interval of 0.3 to 0.5 meter and on that flood prone areas should be marked.

2. A comprehensive national level plan should be prepared to avoid floods, especially due to manmade disaster like damage to dams and embankments, sudden release of water from reservoirs, lack of study regarding the nature of geographical changes in river flows etc.
3. Non construction zone should be clearly specified in the plans prepared; this will help in reduction of exposure to the flood. It should be regularly patrolled so as to prevent encroachment on these areas.
4. Embankments should be strengthened.
5. An efficient flood forecasting and warning system should be developed by the government to enable the people to move to safer places and helps in protecting valuables thereby reducing the overall damage.
6. Mass awareness programs on regular interval should be organized by the government for different sectors of settlement explaining the preparedness as well as precautions at the time of flood.

### 9.2.3 Wind

1. All the structures should be well anchored so as to resist them from being taken away by the strong winds.
2. The state government should organize training programs to construct temporary houses/ structures which should withstand any kind of wind.

### 9.2.4 Fire

1. While preparing development Control Rules/ Byelaws for mitigation of fire hazard, the existing National Building Code and other related Indian Standards safety regulations should be incorporated in all kind of buildings.
2. Risk evaluation of the towns and cities should be done regarding the areas vulnerable to fires and database in terms of available equipments and personnel should be compiled and periodically updated. Similarly such vulnerable areas in the country side should also be evaluated periodically.
3. Fire safety measures need to be worked out as per the vulnerability of the areas which can be classified as High vulnerability, Moderate vulnerability and low vulnerability from fire hazard's point of view.

4. Fire departments/ authorities should be well equipped with the latest technology and machinery required to fight against any kind of fire. This should include building fire, chemical fire, jungle, shrubs etc.
5. Mass awareness program should be organized by the government to make people aware of fire prevention, mitigation etc. procedures and possibilities.

### 9.2.5 General Policies for all type of Hazards

1. Vulnerability assessment shall be prepared for each district identifying the potential hazards. While making such assessments, the risk involved and capacity to respond should be taken into account.
2. District level disaster management authority should be set up for each district within the purview of national disaster management authority. All such district level authorities should have a provision of real time online sharing of data regarding different aspects of disasters on one hand and availability of equipments and skilled man power on other hand.
3. The state government should make provisions to empower disaster management authority to procure/ acquire any equipment (planned, machinery, vehicle) required during a disaster.
4. The disaster management authority should organize a mock drill exercise for different kind of disasters atleast one a year. Such exercises should be performed at every level including offices, institutions (school, colleges etc).
5. Post disaster preparedness includes multi agency function. There will be one Lead or Primary Agency which will be responsible for managing and coordinating the response while other agencies will support and provide assistance in managing the incident.
6. The Disaster management authority should be provided with sufficient funds by the central government to procure the latest technologies to predict, to prevent and for mitigation purposes.
7. Community involvement and awareness generation, particularly that of the vulnerable segments of population and women has been emphasized as necessary for sustainable disaster risk reduction. This is a critical component of the policy since communities are the first responders to disasters and, therefore, unless they are empowered and made capable of managing disasters, any amount of external support cannot lead to optimal results.
8. The disaster management should be a compulsorily included in the school curriculum.

9. The effort should be made by the state/ central government to involve corporate sector, non-governmental organizations and the media in the national efforts for disaster prevention and vulnerability reduction.

## **CHAPTER 10. RURAL DEVELOPMENT**

78% of the UP Sub-region's population resides in rural areas. These areas play significant role in the growth of Sub-region due to their vast potential and untapped creative and intellectual energy. People in rural areas should have the same quality of life as is enjoyed by the people living in urban areas. The major lacunas or issues therefore identified in this chapter and the policies to overcome these issues have been listed.

### **10.1 Policies**

1. Basic infrastructure should be provided in all the rural settlements. Existing one should be upgraded and maintained.
2. Connectivity to main transportation networks have to be developed and modernized.
3. Damages to the environment of rural areas (soil and water pollution, uncontrolled waste disposal etc.) should be eliminated.
4. Make all the rural settlements equally benefitted by the different schemes for their upliftment.
5. Emphasis should be given on the local and traditional knowledge and expertise.
6. Effort should be made to support the capacity of local institutions and government to identify the opportunities and constraints for poverty reduction and regional development provided by rural-urban linkages.
7. It is necessary to develop a dialogue between national and local government to ensure a better integration between national macro-economic and sectoral policies and local initiatives.
8. It is necessary to strengthen the financial condition of the concerned authorities for enhancing and upscaling the condition of rural settlements.
9. Financial assistance should be given to the rural families residing below the poverty line through various credits and subsidies.
10. Encourage private sector to involve in rural development by providing them credits, subsidies, incentives etc. projects should not be made a profit making business for the private sector. Therefore, counter-balancing forces/mechanism should be developed.
11. Introduce PPP frame work for providing the livelihood opportunities and urban amenities in the rural settlements.
12. Awareness should be created among the people regarding the health issues, available schemes, financial assistance etc for their benefits.

## **CHAPTER 11. SUB-REGIONAL LAND USE**

Land supplies space for economic and other operations and are required for all the activities whether they are related to primary, secondary or tertiary sector. In order to apprehend the regional land use policy ingredients, it is very much important to understand the correlation between the issues related to land utilization of an area. The UP Sub-region of NCR is comprising primarily of agricultural area, only 22131 ha area that is 2.04% is waste land which is very less as compared to other participating states of Rajasthan, Haryana and NCT Delhi, these waste lands are spread in small patches in the entire region of UP NCR. Hence, it cannot be used for the urban expansion which should be contiguous and also these waste lands cannot be used for new townships, SEZs, EPZs, other mega infrastructure projects etc. This left with no option but to expand on available agricultural areas for urbanization purpose. The use of barren land for other smaller individual level activities has been encouraged in this plan through the provisions of zoning regulations.

### **11.1 Proposed Regional Land uses**

As per the land use analysis of the UP Sub-region and the conceptualized development aspect, the following land uses are proposed:

- a) Urbanizable Areas including existing built up/ urban areas**
- b) Agriculture land within controlled/ development area**
- c) Agriculture land outside controlled/ development area**
- d) Waste land**
- e) No development zone**
- f) Natural conservation restricted zone**
  - i. River side
  - ii. Notified sanctuary side
- g) Restricted development zone**
  - i. Around Forest
  - ii. Along Rivers
  - iii. Along/ around notified sanctuaries
  - iv. Around Protected Monuments
- h) Road side green buffer**
- i) Forest**
- j) Notified Sanctuaries**
- k) Water bodies (Rivers, Drains, Pond and Lakes)**
- l) H.T. Line buffer zone.**
- m) Defense Areas**

The provisions made in Land use plan of Sub-regional Plan 2021/31 made within the controlled areas will not be applicable where Master Plans have already been notified. However, in the new Master Plans and any Master Plans revised after the notification of Sub-regional Plan 2021/31 shall have to incorporate all the provisions of Sub-regional Land uses to the extent physically possible.

The proposed Regional land-use plan 2021/31 of UP Sub-region of NCR is shown on map 11-1.

**Map 11-1 Proposed Land use of UP Sub-region 2021/31**

**Note:**

- a. The map indicates broad regional level land uses for UP Sub-region 2021/2031 which would be supplemented by master/development plans for metro centres, regional centres, sub regional centres, service centres etc within the controlled areas.
- b. The controlled/ development area boundary, existing built-up areas and the proposed urbanisable areas as shown on the map for different urban centres are approximate and the urbanisable limits and other boundaries/ details would be governed by proposals of the statutory master plans/ development plans in-force.
- c. Details of lower hierarchy of settlements located within the controlled areas will be identified in the master plans/ development plans and their land uses will be as shown in the master plans/ development plans in-force.
- d. The details regarding the physical spread of lower hierarchy of settlements outside the controlled areas has not been worked out in this plan. However, the total requirement of urbanisable area for these settlements has been worked-out on the basis of prescribed density norms and shown in report in table 11-1.
- e. Agriculture areas within controlled area as shown on the map are approximate and would be governed by the proposals of the statutory master plans/ development plans in-force.
- f. The green buffers will be 100 meters on either side of the ROW of MRTS/ EXPRESSWAYS/ BY-PASS, 60 meters on either side of the ROW of the NATIONAL HIGHWAYS, 30 meters on either side of the ROW of STATE HIGHWAY, 20 meters on either side of the ROW of MDR/ ODR, 30 meters on either side of the ROW of RAILWAY LINES and 5 meter on either side of the ROW of LOOP/ LINK/ PRIVATE RAILWAY LINES.
- g. The boundaries of conservation zones i.e. forests, bird & wild life sanctuaries and rivers are tentative and shall be in accordance with the master plans/ development plans/ notifications of the ministry of environment and forest (MoEF) or the concerned department thereof.
- h. Alignment of all EXPRESSWAYS, BY-PASSES, MRTS, RRTS, DFRC and ORBITAL RAIL CORRIDOR etc shown on the map are tentative.
- i. Width of roads and green buffers within controlled areas will be as per the statutory master plan/ development plans.
- j. The width of restricted development zone for all around forest will be 100 meter; natural conservation restricted zone of river Ganga will be 1000 - 2000 meter (as detailed out on the map), 500 meter along river Yamuna, 200 meter on both sides of river Hindon and 100 meter on both sides of all other rivers outside the controlled area.

- k. 1000 meter wide belt along river Ganga and Yamuna, 500 meter wide belt on both sides of river Hindon and 200 meter on both sides of all other rivers will be declared as Restricted Development Zone outside the urbanizable area.
- l. 500 meter wide belt around Hastinapur Sanctuary will be declared as No Development Zone and 1000 meter wide belt around this No Development Zone will be declared Restricted Development Zone.
- m. 100 meter wide belt around all other Notified Sanctuaries and all Forests will be declared as Restricted Development Zone.
- n. 100 meter wide belt around protected monuments will be declared as Restricted Development Zone.
- o. 5 meter wide belt within urbanizable area and 50 meter wide belt outside urbanizable area around/ along all natural drains will be kept as no development zone. 50 meter wide belt around all natural lakes and ponds will be declared as No Development Zone.
- p. The width of green buffer, restricted development zone, no development zone and natural conservation restricted zone shown on the map are notional. The actual width will be as per details given in the report.
- q. The width of natural conservation zone along Ganga is based on Ramsar Conventions to protect the Dolphins in Ganga covering area from Naraura to Brijghat stretch, which also include the waste land, forest etc. along Ganga.
- r. The width of natural conservation restricted zone along Yamuna is 500 meters, along Hindon is 200 meters on both sides and along all others rivers is 100 meters on both side.
- s. 30 meter wide belt along all canals will be declared as Green Buffer.
- t. 30 meter wide belt (15 -15 meters on both sides) below all HT lines will be reserved as No Development Zone.
- u. The U.P. Govt. (industrial development section-3) vide its order no. 1990/77-3-11-32 (m)/11 dated 14 October, 2011 recommended the incorporation of draft master plan-2031 of Yamuna express way industrial development authority in the Sub-region Plan 2021/31, accordingly the urbanizable area of Draft Master Plan -2031 of YEIDA is included in this Plan subject to the approval of govt. of U.P. and clearance from NCR Planning Board, New Delhi.
- v. In the compliance of CEO Greater Noida authority (letter no.-planning/m/59/2011/9999 dated 25-10-2011) the urbanisable area of Greater Noida and Greater Noida extended area (phase-2) is shown tentatively on the map, subject to the approval of UP government and clearance from NCR planning board New Delhi.
- w. Alignment of all high tension lines shown in the map are tentative and final alignment will be as per the actual ground position.

The details of regional land uses are given below:

**a) Urbanizable Areas including existing built up/ urban areas**

The existing and proposed urbanizable areas will be guided by master/ development plans of all development/ controlled/ regulated areas. For calculation of proposed urbanizable area on the basis of projected/ assigned population will be guided by following density norms suggested in NCR Regional Plan 2021:

**Table 11-1 Density norms suggested in NCR Regional Plan 2021**

S. No.	Urban Centres	Persons per hectare
1	2	3
a)	Below 50,000 population	60 to 80
b)	50,000 to 1 lakh population	80 to 100
c)	1 lakh to 5 lakhs population	110 to 125
d)	5 lakhs to 10 lakhs population	125 to 150
e)	10 lakhs to 50 lakhs population	150 to 200
f)	More than 50 lakh population	200 to 250

- i. The respective authorities/ agencies shall determine the urbanizable area while preparing and revising their master/ development plans on the basis of density norms suggested in NCR Regional Plan 2021.

However during the study and analysis of various aspects, it was found necessary to modify these norms especially for towns having population of 1 lakh and above which can generate or attract substantial economic base on the basis of different characteristics and proposed/ induced economic base of various settlements. The towns of these category which are being proposed to develop as industrial towns where area requirement for industrial use will be very high in percentage as compared to the percentage area of residential land use. The overall town density should be lesser than the normal density pattern mentioned above in the NCR Regional Plan. The NCR Regional Plan-2021 should be modified/ revised accordingly.

- ii. Settlements having population less than 50,000 which are classified as service centres in the hierarchy of settlements are presumed to be all urban centres. The existing built up areas and proposed urbanizable areas in all approved/ approval awaited master plans are shown in the proposed land use plan 2021/ 2031. The areas where master/ development plans are under process or to be prepared, the utmost care should be taken in guiding the direction of spread of the settlement, keeping in view that as far as possible preservation of agriculture land, preservation of naturally environment sensitive areas. The proposed/ future development should be in a compact manner so as to optimum utilization of urban infrastructure facilities and discourage the tendency of lopsided development.

No activities will be permitted other than those defined in the zoning regulations of the approved Master Plans of respective development/ regulated areas.

**b) Agricultural Area within Controlled/Development area:**

These are agricultural areas identified in the notified controlled areas under various acts within UP Sub-region.

No activities will be permitted other than those defined in the zoning regulations of the approved Master Plans of respective development/ regulated areas.

**c) Agricultural Area outside Controlled/Development area:**

These are the agricultural areas lying outside the notified controlled areas. At the regional level, agriculture zone be designated for primary sector production and as open areas comprising of farmlands, orchards and pastures etc. These areas of the sub-region have to be regulated and guided by Village and Block plans to be drawn under the district planning process.

Following policies have been proposed for this use:

- Existing agriculture land should be conserved for agricultural purpose only as far as possible.
- Efforts should be made to increase the production through intensive cultivation by providing irrigation facilities and other necessary infrastructure.
- Measures should be initiated for protection of prime agricultural land and ensure its needless conversion into non-agricultural/urban use.
- Utilizations of less and least valuable land for urban expansion/new urban centres/development purposes.

**d) Waste Land**

“Wastelands” comprise of gullied land, saline land, barren, rocky/ stony, sandy, ravenous and water logged areas. Wherever it is possible, the waste lands shall be converted into agricultural or forest lands. Similarly to encourage the conversion of agriculture land into urbanisable land, many indirect incentives in the form of permissibility of various activities has been suggested in the zoning regulations. The state government should prepare a comprehensive plan for the utilization purpose of waste lands. Since these waste lands are of irregular shapes and smaller in size, the State Government may permit to add surrounding agricultural area to form a regular

shape require for activities that has been permitted in the zoning regulation of this plan.

**e) Road side Green Buffers**

Road side green buffers are proposed along the following major transport corridors of the sub-region (Table 11-2).

**Table 11-2 List of Transport Networks where Green Buffer is to be Provided**

Sl. No.	Transport Network	Distance from the either side of ROW (in Meters)
	1	2
1	Expressways/ Bypass	100
2	National Highway	60
3	State Highway	30
4	MDR/ ODR	20
5	Railway line	30
6	Link Railway lines, Loop lines, Connecting lines with factories/ godowns/ warehouses	5

Green buffers along the expressways/ bypasses, national highways, state highways and railway lines of different nature are to be strictly maintained.

Outside the notified development/ regulated areas, these green buffers shall be preserved all along the transportation lines as per the table 11-2 given above. Within the notified development/ regulated areas, these green buffers will be preserved all along the transport lines upto the outer limits of existing built up areas from the boundary of controlled area as far as possible. The new master plans shall be prepared accordingly and the existing master plans should be modified accordingly.

The width of the green buffers along the transport networks of various hierarchies is minimum width on either side of the 'right of way' (ROW), which may be increased if required in the respective Master/Development Plans by the State governments.

No activities other than those permitted in the Zoning Regulations of the Sub-regional Plan-2031 shall be permitted in the green buffer zone outside the controlled areas.

The basic purpose of this green buffers outside the controlled areas and within controlled areas up to the extent it is possible while preparing/ revising master plans is to cater to the future expansion of the Highways. This expansion/ widening of highways will be depending upon the traffic volume as and when required, keeping in view the purpose of these green buffers. The plantation of large trees along the road side green buffers which require the permission of cutting from forest department

should be avoided as far as possible. The small plants having commercial/ aesthetic values like flower plantation, herbs etc should be planted in this belt. However, the 10 meter wide stretch all across the outer side of green buffers (farthest from road side) shall be planted with large trees.

The green buffers delineated in Sub-regional plan-2021/31 along such roads which has been proposed for up-gradation shall come into force from the day of notification of this Sub-regional plan 2031.

**f) No development zone**

A 5 m wide belt on both sides all along natural drains within urbanizable area and 50 m wide belt on both sides all along natural drains outside urbanizable area, similarly 50 m wide belt all around natural ponds and lakes will be kept as no development zone. A 500 meter wide belt all around Hastinapur Wild life Sanctuary will be kept as No Development Zone. No construction activity of any kind including Kutcha construction and dumping of any type will not be permissible in this belt. The concerned authorities should regularly watch this zone for any breach in the embankments, any unauthorized disposal in these drains and growth of weeds and any other kind of plantation which may affect the flow of natural drains.

**g) Natural conservation restricted zone**

The khadar areas of Ganga, Yamuna, Hindon and Kali Rivers as well as areas along/ around notified Sanctuaries are identified under this zone. A 500 meter wide belt along Yamuna, 200 meter wide belt on both sides of Hindon river and 100 meter wide belt on both side of other river is declared as Natural Conservation Restricted Zone outside controlled areas. However, for river Ganga, the Ramsar convention regarding the protection of Dolphins, a belt of average width of 1-2 km from Naraura to Garh has been year marked in this zone all along the Ganga river taking into consideration the low-lying areas, waste lands, floodable areas, etc., along Ganga. No construction activity other than activities which are necessary to maintain and monitor these areas shall be permitted in this zone. The tourism and related study/ research activities may be permitted in this zone with extreme precautions regarding the impact of these activities over this zone. The other detail has already been mentioned in Environment chapter of this report. The width of this belt is flexible, which can be reduced or eliminate if the river side is channelized and declared permanent flood free by the competent authority and clearance from the environmental department.

**h) Restricted development zone**

A belt of different width has been earmarked as restricted development zone along/ around all forest, Natural conservation restricted zones of rivers and notified sanctuaries, around protected monuments as per the table given below:

S.No.	Land use/ Zone	Designated width
1	Around all forest	100 meter
2	Along Natural conservation restricted zone of river Ganga and Yamuna	1 km (outside urbanizable area)
3	Along Natural conservation restricted zone of river Hindon	500 meter on both sides (outside urbanizable area)
4	Along Natural conservation restricted zone of all other rivers	200 meter on both sides (outside urbanizable area)
5	Around all notified protected monuments	100 meter outside controlled areas

In all regulated and controlled areas, any activity during construction and after construction by its use shall not affect the flora and fauna of these areas. The provision should be made in the building bye laws regarding NOC from Environment department in this regard for all construction in this zone. In the area outside the limit of regulated / controlled areas, the development or construction activity of any kind should be regularized and monitored through a special cell having officers from forest department and nearby development authority or by NCR authority.

#### i) Forest

All forest shown on the land use map of Sub-regional Plan 2031 shall be preserved as per the norms of forest department. The locations of forests shown on this map are tentative which are to be verified from the revenue records which includes both natural as well as manmade forest.

#### j) Notified Sanctuaries

All notified sanctuaries as and when notified including Hastinapur Wildlife Sanctuary, Okhla Bird Sanctuary, Mursheedpur Reserve Forest, Gulistanpur Reserve Forest are included in this zone. No construction of any kind shall be permitted in this zone. However, the abadis existing within these zones if any shall be preserved in such a way that may not impose any negative environmental impact on this zone.

#### k) Waterbodies

All water bodies should strictly be preserved. All kind of construction activities within the close vicinity of these water bodies shall carefully be observed so as to keep the catchment areas of these water bodies clear for natural flow of water.

#### I) H.T. Line Buffer Zone

The area below all High Tension Lines will be restricted for any kind of construction (both for permanent and temporary constructions). A belt of 30 meter width (15-15 meter wide on both sides) below all H.T. lines will be reserved as H.T. Line buffer zone, where no construction of any kind is permissible.

The analysis of various aspects in UP Sub-region to identify the future level of settlement which is based on the present status of various aspects, potentials, various models of identifying the hierarchy of settlement, does not identify the current level of township as being conceived by the Yamuna Expressway Industrial Development Authority. However, keeping in view the mega projects being conceived/developed by the State/Centre Government like Ganga Expressway, Upper Ganga Canal Expressway, Yamuna Expressway, Dedicated Freight Rail Corridor, Jewar International Airport, Aerotropolis near Jewar international Airport, Eastern Peripheral Expressway, Orbital Rail, Mass rapid Transit System, etc which have junctions in this area, the large scale urban activities in the form of new townships/developments are likely to come up in this region in upcoming future.

Therefore, U.P. Govt. (industrial development section-3) vide its order no. 1990/77-3-11-32 (m)/11 dated 14 October, 2011 has given its consent for incorporating the draft master plan-2031 of Yamuna express way industrial development authority in sub-regional plan 2021/31 and Regional Plan of NCR. In compliance of the above mentioned Government order the urbanizable area of draft master plan-2031 of Yamuna express way industrial development authority is incorporated in the proposed regional land Use Map of U.P. Sub-region, subject to the approval of govt. of U.P. and clearance from NCR Planning Board, New Delhi

The detail of YEIDA township which is expected to cover a very large area has to be incorporated in the Sub-regional plan through the NCR Regional Plan.

#### ZONING REGULATIONS:

The permissibility of various activities in different proposed land uses is given in zoning matrix attached at **Annexure- 2**.

In the development area Master Plan Zoning will be applicable where as beyond development area the zoning of Sub Regional Plan will be applicable.

Activities permitted in the Agricultural land outside the controlled/development area as per the zoning regulations with the condition that only 80% of the permissible ground coverage and FAR will be allowed in this area.

Most of the activities have been permitted in the waste lands with a view to protect the rich agriculture lands. The permissibility of activities has been suggested as an easy alternate for most activities. In such permissibility, the State Government may provide relaxations in the form of more ground coverage and more FARs along with some financial incentives as an attraction to develop these areas.

In the rural built-up area of Agriculture Zone outside the controlled area, Single residential unit will be permissible within the 500 meter buffer around existing Abadi Area.

The permissibility clauses of Zoning regulations of the Sub Regional plan-2021/31 shall be incorporated in the New master Plans prepared or Master Plans revised after the notification of this Sub-Regional Plan-2021/31.

## **CHAPTER 12. IMPLEMENTATION STRATEGY, MANAGEMENT STRUCTURE AND RESOURCE MOBILIZATION**

### **1.1 Implementation Strategy**

1. Practice of piecemeal and ad hoc decisions for development should be stopped; proper phasing and development of programmes should be prepared.
2. Proper coordination and management should be there between the multiple agencies involved in different works related to the sub-region. Agencies should focus on harmonious development of whole Sub-region not concentrating on the few pockets.
3. As far as possible, agricultural land should be preserved. In case due to some unavoidable conditions for projects especially like infrastructural development which requires agriculture land in such cases, the effort should be made to convert non-agriculture land somewhere else but within UP Sub-region area. The non- agriculture land should be converted to agriculture land in lieu of agriculture land used for purpose other than agriculture.
4. Master plans and Zonal plans should be prepared for all the towns of the sub region within the broad frame work of Sub-regional plan 2021/31. The Master plans which are already prepared should be reviewed in light of Sub-regional plan 2021/31 and necessary modification should be made if found necessary.
5. Strategies, guidelines, detail projects/ schemes should be prepared for the various sectors as part of the U. P. Sub-regional Plan to meet the aims and objectives of the Regional Plan 2021 for NCR.
6. Moreover, it should be necessary to strengthen economic activities and infrastructure facilities in these towns and their accessibility with service areas on the one hand and higher order settlements on the other should be improved.
7. Due to the limitation of resources and institutions, it should be necessary to determine the priorities and then action plans should be formulated.
8. Projects, after implementation, should be monitored to assess their overall impact.
9. Private sector should be encouraged to participate in the development programmes and for this to happen, an environment of mutual trust and understanding should be created between private and public agencies.

## 1.2 Management structure

The important Acts to regulate and control the development activities in U.P. Sub region are listed below:

- RBO Act, 1958
- Urban Planning & Development Act, 1973
- Special Area Development Act, 1986
- Industrial Development Act
- U.P. Housing & Urban Development Act, 1973
- U.P. Rural Housing Board Act
- U.P. Road Side Land Controlled Act
- Zila Panchayat Act
- Nagar Palika Act
- Nagar Panchayat Act
- NCR Planning Board Act 1985
- Railway Act
- Ancient Monuments and Archaeological Sites and Remains Act, 1958
- Antiquities and Art Treasure Act, 1972

Following Development Authorities and departments controls the overall development and construction activities in their respective development/ jurisdiction areas.

### A. State Departments/ Authorities

#### 1. Development Authorities

- Meerut Development Authority (Meerut, Daurala and Modipuram)
- Ghaziabad Development Authority (Ghaziabad, Loni, Muradnagar and Modinagar)
- Hapur- Pilkhua Development Authority (Hapur, Pilkhua and Garh-Mukteshwar)
- Bulandshahr- Khurja Development Authority (Bulandshahr, Khurja, Jhangirabad and Sikandrabad)
- New Okhla Industrial Development Authority
- Greater Noida Industrial Development Authority
- Yamuna Expressway Industrial Development Authority

#### 2. Regulated Areas

- Mawana Regulated Area
- Baraut Regulated Area
- Narrora Regulated Area

#### 3. Departments

- UPSIDC
- Agriculture Department
- Agriculture Marketing and Export
- Dairy Development Department

- Energy Department
- Education Department
- Health Department
- Fire Department
- Police Department
- Revenue Department
- PWD
- Irrigation Department
- Minor Irrigation Department
- UPTCL
- UPPCL
- Uttar Pradesh Pollution Control Board
- Department of Environment
- Department of Forest
- Department of Infrastructure and Industrial Development
- Urban Development Department
- Department of Land Development & Water Resources
- Ground Water Department

**B. Central Departments/ Authorities:-**

- Railways Department
- Forest Department
- P&T Department
- CPCB
- CGWB
- Disaster Management Authority
- ASI
- Environment

**Other recommendations**

Organization structure of the committee responsible for the implementation of plan should be strengthened from technical, financial and administrative point of view.

**Creation of Sub-Regional Area Development Authority for planned Development of the urban and rural areas of UP Sub-region of NCR**

There is no affective mechanism to control the haphazard and unplanned construction/development for areas falling beyond the boundaries of development authorities and regulation areas. Even NCR Planning Board Act, 1985 does not provide an effective mechanism for implementing the regional plan/ sub regional plan over space. Regional Plan-2001, included number of proposals for implementation but due to the lack of an effective and sufficient mechanism in the respective states, the desired objectives of balanced and harmonized development could not be achieved.

There is a huge multiplicity of projects/ schemes which are to be planned, execute and monitor by different department/ agencies which create lot many problems at every stage. The necessary information in the form of availability of required data regarding projects cost, implementation status, financial status etc are not available at one place. Different agencies working under State/ Central government finds it very difficult to correct such data basically required for planning purpose and monitoring at various level. Often there are clashes of interest between various departments/ agencies. The projects/ schemes should be compliment to each other. No matter they are being executed by which department. The schemes/ projects of different departments can be phased and execute in such a way that support each other. In this way, the optimum utilization of the money spends by various departments/ agencies on different schemes / projects can be achieved, thereby giving maximum benefit to the masses.

Regional Plan-2021 has an enlisted various kinds of proposals and suggestions related to different sectors for implementation over space just to ensure the speedy and balanced development of the region. This plan also assigned the responsibility of implementing the different sector proposals to different state departments.

To cater to the complex need of the area a Sub Regional Area Development Authority should be created for overall development of the Sub-region. In this context it is also proposed that the concerned State Government may develop a new act in this regard or may like to make some amendments in their concerned acts/rules for creating such an authority. Keeping in view the problems of the implementation of the Regional Plan-2001 it is essential to have an effective Sub Regional Area Development Authority for the entire Sub-Region. NCR Cells can be converted in to Sub-Regional Area Authority for the purpose of planning and development controls. The commissioner NCR planning cell can act as a chairman of all authorities of UP Sub-region.

### Constitution of the Authority

The Sub-regional area development authority shall consist of following management structure:

1	Commissioner, NCR Planning Cell	Chairman
2	VC, Ghaziabad Development Authority	Member
3	VC, Meerut Development Authority	Member
4	VC, Hapur- Pilkhua Development Authority	Member
5	VC, Bulandshahr- Khurja Development Authority	Member
6	VC, New Okhla Industrial Development Authority	Member
7	VC, Greater Noida Industrial Development Authority	Member
8	VC, Yamuna Expressway Industrial Development Authority	Member
9	HOD, UPSIDC	Member
10	HOD, Agriculture Department	Member
11	HOD, Agriculture Marketing and Export	Member
12	HOD, Dairy Development Department	Member
13	HOD, Energy Department	Member
14	HOD, Education Department	Member
15	HOD, Health Department	Member

16	HOD, Fire Department	Member
17	HOD, Police Department	Member
18	HOD, Revenue Department	Member
19	HOD, PWD	Member
20	HOD, Irrigation Department	Member
21	HOD, Minor Irrigation Department	Member
22	HOD, UPTCL	Member
23	HOD, UPPCL	Member
24	HOD, Uttar Pradesh Pollution Control Board	Member
25	HOD, Department of Environment	Member
26	HOD, Department of Forest	Member
27	HOD, Department of Infrastructure and Industrial Development	Member
28	HOD, Urban Development Department	Member
29	HOD, Department of Land Development & Water Resources	Member
30	HOD, Ground Water Department	Member
31	Member secretary/ CRP of NCRPB, New Delhi	Member
32	Chief Coordinator Planner, NCR cell UP	Member secretary

Functions of the Authority are listed below:-

- i. To coordinate between different authorities/ agencies, departments.
- ii. To assist relevant departments for dovetailing of their projects.
- iii. To notify the areas proposed as specific land uses in Sub-regional plan outside any controlled/ development area.
- iv. To plan, execute, map sanctioning etc activities for notified areas by this authority.
- v. To regularly collect data of all kind.
- vi. To develop human resources for specialized field.
- vii. To arrange and manage the financial resources for different schemes/ projects of UP Sub-region.
- viii. To monitor the implementation of infrastructure projects.

Budgetary provisions for the authority

All development authorities, housing board etc shall contribute financial assistance to the authority required for its day o day functioning. The amount of this contribution shall be decided by the chairman of the authority.

### 1.3 Resource mobilization

1. The institutional framework both at the state and local level and resource mobilization at local level should be strengthened.
2. Public Private Partnership should be encouraged for development programmes. The state government should develop different kinds of PPP models for projects should made them available to the concerned departments.
3. As far as possible, the projects should be made commercially viable through innovative methods for resource generation. If this is not possible then one

- component of the project should be clubbed with other project components which are generating more revenues to make the project viable through composite profit.
4. Local governments should be strengthened so that they become self sufficient and also explore the avenues through which private initiatives can find a greater role in urban development programmes.
  5. The stable and transparent system of functioning under different policies and system at the government level, for government aided NGOs and agencies/ NGOs working under the name of the government should be evolved.
  6. Special component plan mechanism should be established as part of five-year plan to undertake the various activities of the Sub-Regional Plan.
  7. Innovative methods for generating fund should be explored so that the development programmes should be implemented on the specified time.
  8. Departments/ agencies responsible for tax collection and departments/ agencies involved in generation of revenue should ensure the effective and transparent functioning. The system should be developed with the provisions of incentives and penalties for the officials of such departments on one hand and tax/ revenue payee on other hand.
  9. Restructuring and reforms in institutional, fiscal and economic systems is necessary to achieve the efficacy and effectiveness in management of long term program of investments based on private finance by utilizing the public funds.
  10. The provisions should be made both by state and central government to attract more and more FDIs.
  11. To implement some of the policies under which high value lands are put under some restricted zone or green belts where due to the financial constraints, the authorities are unable to acquire the land, always remains under possibilities of illegal/ unauthorized construction. The road side green buffer along expressways/ bypasses, national highways, state highways etc are difficult to maintain/ preserve. Therefore, to compensate the high economic value to the land owners of this green buffer zones, a policy of TDR has been proposed and annexed as **Annexure- 3**.
  12. The State Government should develop some policies, may be on similar grounds as suggested above for the road side green buffer zone for other green buffers, parks & Play ground, master Plan roads, etc. so that the encroachment of activities on other land-uses can be avoided.

**Annexure: 2 Zoning Regulation Matrix**

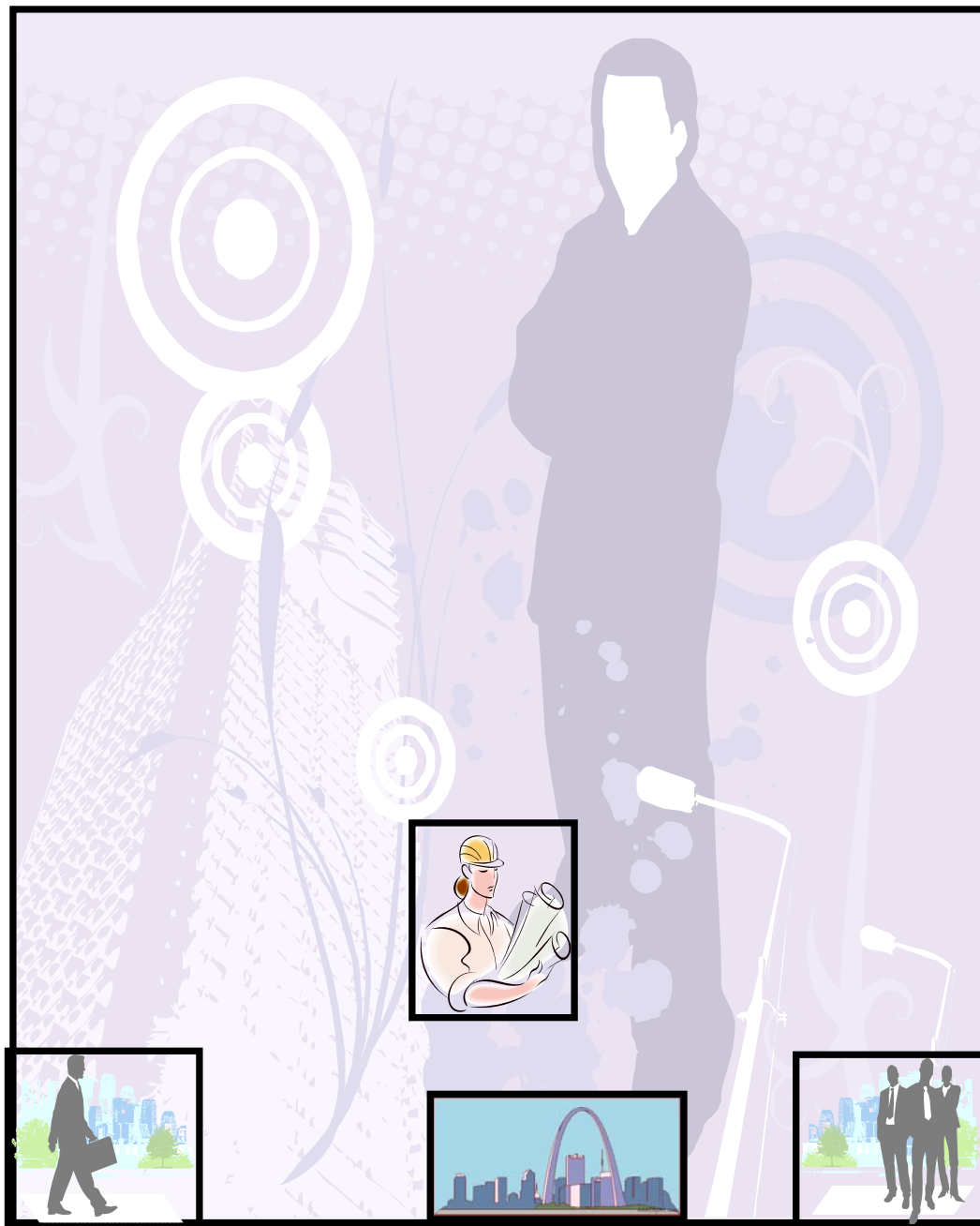
Permissibility of Different Activities in Various Land-Uses

(Activities)/Use	Major Land-Uses																
	UAEUB	ALCD	ALOC	WL	NDZ	NCRZR	NCRZS	RDZAF	RSGB	FOR/NS	HTBZ						
<p>★ UAEB : Urbanizable Areas including existing built up/ urban %</p> <p>★ ALCD : Agriculture land within controlled/ development</p> <p>★ ALOC : Agriculture land outside controlled/ development</p> <p>★ NDZ : No Development Zone</p> <p>★ NCRZ : Natural conservation restricted zone on River side</p> <p>★ NCRZ : Natural conservation restricted zone on Notified sanctuary side/Forests/Protected Monuments</p> <p>★ RDZA : Restricted development zone Around Forest, Notified Sancturies, Rivers, Protected</p> <p>★ RSGB : Road side green buffer</p> <p>HTBZ : HT Line Buffer Zone</p> <p>WL : Waste land</p> <p>FOR : Forest/Notified Sancturies</p>																	
<table border="1" style="width: 100%; text-align: center;"> <tr> <td colspan="2">Index</td> </tr> <tr> <td>Permissible</td> <td style="background-color: #90EE90;"></td> </tr> <tr> <td>Non-Permissible</td> <td style="background-color: #FFB6C1;"></td> </tr> </table>												Index		Permissible		Non-Permissible	
Index																	
Permissible																	
Non-Permissible																	
<b>1- Residential</b>																	
1-1 Single Residence																	
1-2 Group Housing																	
1-3 Related Staff/Chokidar/Sentinal Residence																	
<b>2- Commercial</b>																	
2-1 Retail Shops	As per Zoning Regulation of approved Master Plan																
2-2 Show Room	As per Zoning Regulation of approved Master Plan																
2-3 Weekly Market (Related to Daily Domestic Use)	As per Zoning Regulation of approved Master Plan																
2-4 Wholesale Market/Business	As per Zoning Regulation of approved Master Plan																
2-5 Auction Market	As per Zoning Regulation of approved Master Plan																
2-6 Bakery/Confectionery/Flour Mills)	As per Zoning Regulation of approved Master Plan																
2-7 Coal and Wooden Stack	As per Zoning Regulation of approved Master Plan																
2-8 Outlet for Agriculture Product	As per Zoning Regulation of approved Master Plan																
2-9 Cold Storage	As per Zoning Regulation of approved Master Plan																
2-10 Resorts	As per Zoning Regulation of approved Master Plan																
2-11 Hotels	As per Zoning Regulation of approved Master Plan																
2-12 Motel, Way-side Boarding House	As per Zoning Regulation of approved Master Plan																
2-13 Restaurant and Canteen	As per Zoning Regulation of approved Master Plan																
2-14 Cinema and Multiplex	As per Zoning Regulation of approved Master Plan																
2-15 Temporary Cinema, Circus and Fair Venue	As per Zoning Regulation of approved Master Plan																
<b>3- Industrial</b>																	
3-1 Service/Cottage Industry	As per Zoning Regulation of approved Master Plan																
3-2 Communication Technology/ Software Technology/Bio Technology Park	As per Zoning Regulation of approved Master Plan																
3-3 Small Industry	As per Zoning Regulation of approved Master Plan																
3-4 Large Industry, Sugar Mill, Rice Mill, Flour Mill	As per Zoning Regulation of approved Master Plan																
3-5 Critical/ Dangerous/ Polluting Industries	As per Zoning Regulation of approved Master Plan																
3-6 Minning, Brick/Lime Kiln	As per Zoning Regulation of approved Master Plan																
3-7 Oil Depot/ LPG Refilling Plants	As per Zoning Regulation of approved Master Plan																
3-8 Pasteurizing Plants/ Milk Collection Centers	As per Zoning Regulation of approved Master Plan																
3-9 Electricity Production Plants/Centers	As per Zoning Regulation of approved Master Plan																
<b>4- OFFICE</b>																	
4-1 Government, Semi-Government, Local Body Office etc.	As per Zoning Regulation of approved Master Plan																
4-2 Private Office, Agent Office etc.	As per Zoning Regulation of approved Master Plan																
4-3 Bank	As per Zoning Regulation of approved Master Plan																
4-4 Commercial/ Business Office	As per Zoning Regulation of approved Master Plan																
4-5 Labour Welfare Center	As per Zoning Regulation of approved Master Plan																
4-6 P.A.C./ Police Line	As per Zoning Regulation of approved Master Plan																
4-7 Weather Research Center/ Waireless Centers/ Mircowave	As per Zoning Regulation of approved Master Plan																
<b>5- Public and Semi Public Facilities</b>																	
5-1 Guest House, Inspection House																	
5-2 Hospice, Dormitory, Boarding House																	
5-3 Hostel																	
5-4 Orphanage, Reformatory																	
5-5 Jail																	
5-6 Handicapped Children House																	

(Activities)/Use	Major Land-Uses										
	UAEBU	ALCD	ALOCD	WL	NDZ	NCRZR	NCRZS	RDZAF	RSGB	FOR/NS	HTBZ
1	2	3	4	5	6	7	8	9	10	11	12
5-7 Child and Day care Centres											
5-8 Old Age House											
5-9 Primary Education centers											
5-10 Middle, Intermediate											
5-11 University/ Colleges											
5-12 Polytechnique, Engeneering, Medical/Dental College cum Hospital	As per Master Plan	As per Master Plan									
5-13 Manneement Institute/ Special Education Institute	As per Master Plan	As per Master Plan									
5-14 Post Office/ Tele Office											
5-15 Police Station, Fire Station											
5-16 Library											
5-17 Helath Centers, Dispencary, Family Welfare Centers											
5-18 Hospital											
5-19 Nursing Home											
5-20 Clinical laboratory											
5-21 Health Club/ Gymnasium											
5-22 Electrical Cermatory, Funeral, Graveyard											
5-23 Music/ Dance and Dance training center											
5-24 Sewing, Weaving, Painting Training etc.											
5-25 Auditorium, Theater											
5-26 Yog, Meditation, Spritual and Religious Preaching/Satsang Buildings	As per Zoning	As per Zoning									
5-27 Religious Building	As per Zoning	As per Zoning									
5-28 Community Centers, Cultural Centers											
5-29 BaratGhar/Banquet Hall											
5-30 Confrence Hall/ Meeting Hall											
5-31 Museum											
5-32 Art Gallery, Exhibition Centers											
5-33 Telephone, Radio and Television Office/Centers											
5-34 Research and Development Centers, Research Centers											
5-35 Social Welfare Centers											
(Activities)/Use	Major Land-Uses										
1	2	3	4	5	6	7	8	9	10	11	12
<b>6- Public Utilities</b>											
6-1 Swewrage Treatment Plants, Waste Dumping Ground etc.											
6-2 Tube-Well, Over-head Reservoir, Electricity Center/Sub-station											
6-3 Water works											
6-4 Microwave Centers											
6-5 Compost Plants											
6-6 Slaughter House											
6-7 Cellular/ Mobile Tower											
<b>7- Traffic and Transportation</b>											
7-1 Parking Place											
7-2 Taxi, Tempo, Riksha etc Stands											
7-3 Transport City, Bus Depot											
7-4 Bus Stand											
7-5 Bus Terminal											
7-6 Motor Garage/ Service Garage and Workshops											
7-7 Motor Driving Traning Centers											
7-8 Loading-Unloading Services											
7-9 Railway Godown, Railway Yard/ Siding/ Terminal											
7-10 Weighting Machine											
7-11 Airport											
<b>8- Park, Playground/ Open Area</b>											
8-1 Park, Play Ground											
8-2 Multipurpose Open Area											
8-3 Golf/ Rase-Course											
8-4 Stadium/Game Training Centers											
8-5 Picnic Area, Camp Area											
8-6 Traffic Park											
8-7 Entertainment Park											
8-8 Club, Swimming Pool											
8-9 Zoo,Water Vivarium, Wild Animal/Bird Sanctuary											
8-10 Flying Club/ Helipad											
8-11 Shooting Range											

(Activities)/Use	Major Land-Uses										
	UAEBU	ALCD	ALOCD	WL	NDZ	NCRZR	NCRZS	RDZAF	RSGB	FOR/NS	HTBZ
1	2	3	4	5	6	7	8	9	10	11	12
<b>9- Agriculture</b>											
9-1 Gardening, Nursery, Garden, Botanical Garden	As per Zoning Regulation of approved Master Plan	As per Zoning Regulation of approved Master Plan									
9-2 Farm House											
9-3 Grassland, Dairy Farm											
9-4 Dhobhi Ghat											
9-5 Swine/Fish/KutKut/Bee Farming, Animal Husbandry/Breeding Centers											
9-6 Agriculture Instruments Repairing/Serviceing Workshop											
<b>10- Floating Uses</b>											
10-1 Public Facilities and Services	As per Zoning Regulation of approved Master Plan	As per Zoning Regulation of approved Master Plan									
10-2 Wholesale Businesses											
10-3 Traffic and Transportation											
10-4 Service/ Cottage Industries											
10-5 Special Industries (Critical/ Dangerous/ Polluting)											
10-6 Religious Area ie Temple, Mosque, Church, Gurudwara											
10-7 Waste Collection Centers											
10-8 Dumping Grounds											

### Annexure 3: Proposed Policy for Road side Green Buffer Zone for UP Sub-Region of NCR



## Transferable Development Rights (TDR)

### 1. Hkifedk %

यातायात के अत्यधिक बढ़ते हुये दबाव के कारण लगभग सभी राजमार्ग, राष्ट्रीय राजमार्ग, राज्यमार्ग, अन्य जिला मार्ग, इत्यादि अवरूद्ध हो रहे हैं। यातायात के कारण न केवल वाहनों को क्षति पहुँचती है बल्कि स्थानीय नागरिकों को भी अनेकों समस्याओं का सामना करना पड़ता है। इसका मुख्य कारण है, वाहनों की संख्या में अत्यधिक बढ़ोत्तरी तथा मुख्य मार्गों के दोनों ओर व्यवसायिक क्रियाओं का विकास, जो Linear Development के रूप में कई किलोमीटर तक होते जा रहे हैं। इस समस्या के समाधान के रूप में मुख्य मार्गों के दोनों ओर ग्रीन बैल्ट्स का प्राविधान महायोजनाओं में किया जा रहा है। राष्ट्रीय राजधानी क्षेत्र के अन्तर्गत क्षेत्रीय योजना-2021 में विभिन्न प्रकार के मार्गों के दोनों ओर 30मी0, 60मी0 एवं 100 मी0 की ग्रीन बैल्ट का प्राविधान प्रस्तावित किया गया है।

भूमि की बढ़ती हुई कीमतों के परिप्रेक्ष्य में ग्रीन बैल्ट में पड़ने वाली भूमि सामान्यता व्यवसायिक दृष्टिकोण से अत्यधिक मंहगी होती है। इसे प्राधिकरण अथवा अन्य भासकीय एजेन्सी/विभाग द्वारा अधिग्रहण किया जाना वित्तीय भार के दृष्टिकोण से लगभग असम्भव है। ऐसी स्थिति में मात्र महायोजना में ग्रीन बैल्ट चिन्हित कर दिये जाने से इस क्षेत्र के स्वरूप को ग्रीन बैल्ट के रूप में बनाये रखना सम्भव नहीं हो पा रहा है। ऐसे ग्रीन बैल्ट क्षेत्र में लगातार अतिक्रमण होता रहता है क्योंकि नगर में अधिकांशतः ग्रीन बैल्ट से प्रभावित इस भूमि का कोई लाभ भू-स्वामी को नहीं मिलता है।

उक्त समस्या के समाधान हेतु स्थानान्तरणीय/विक्रय योग्य विकास अधिकार से सम्बन्धित नियमावली प्रस्तावित की गयी है।

### 2. LFkkukUvj.kh; @fodz; ;kk; fodkl vf/kdkj ¼TDR½ dh i fjHkk'kk:

किसी भी भूखण्ड को प्रचलित महायोजना के प्रस्तावों के अनुरूप विक्रय करने अथवा विकसित किये जाने का अधिकार प्रत्येक भू-स्वामी को होता है। भूखण्ड को विकसित करने के स्थान पर विकसित की जाने वाली भौतिक क्रिया को अन्यत्र स्थानांतरित अथवा अन्य भूखण्ड हेतु विक्रय किये जाने के अधिकार को स्थानान्तरणीय/विक्रय योग्य विकास अधिकार कहा जायेगा।

### 3- LFkkukUvj.kh; @fodz; ;kk; fodkl vf/kdkj ¼TDR½ dh vuqll; rk %



TDC का प्रयोग केवल ऐसे भवन हेतु किया जा सकेगा, जिसके भवन का मानचित्र नियमानुसार प्राधिकरण द्वारा स्वीकृत किया जा चुका हो।

## 6- TDC ग्रहण करने के लिए

TDR के अन्तर्गत जारी किये जाने वाले TDC में अंकित किये जाने हेतु कुल देय एफ. ए.आर. के आधार पर तल क्षेत्र की गणना की जायेगी। आंकलित तल क्षेत्रफल TDC पर अंकित कर भू-स्वामी को प्राधिकरण द्वारा जारी किया जायेगा जो स्थानांतरणीय अथवा विक्रय योग्य होगा। उक्त तल क्षेत्र की गणना निम्न दो विकल्पों के आधार पर की जानी प्रस्तावित है:-

fodYi &1 ग्रीन बैल्ट/मार्गाधिकार में पड़ने वाली प्र नगत भूखण्ड के पीछे का भू-उपयोग (जो ग्रीन बैल्ट न होने की स्थिति में मार्ग तक होता) को आधार माना जायेगा। ऐसे भू-उपयोग के अन्तर्गत प्रचलित भवन निर्माण एवं विकास उपविधि के अनुसार विभिन्न क्रियाओं हेतु एफ.ए.आर. तथा भू-स्वामी के भूखण्ड के क्षेत्रफल के आधार पर तल क्षेत्र की गणना की जायेगी।

fodYi &2 सम्पूर्ण महायोजना क्षेत्र में चिन्हित ग्रीन बैल्टस तथा मार्गाधिकार में पड़ने वाले अनधिग्रहित भूमि हेतु औसत 1.60 एफ.ए.आर. के आधार पर तल क्षेत्र की गणना की जाये।

*uk%& mi jkDr nkuk fodYi ka es l s dkkz , d fodYi bl fu; ekoyh ds v/khu ykx@p; fur fd; k tkuk "kk l u }kjk vi f{kr gM*

प्र नगत TDR के अन्तर्गत TDC जारी होने के प चात भू-स्वामी द्वारा अपनी भूमि से होने वाले विकास का पूर्ण लाभ अन्यत्र ले लिया जायेगा परन्तु ऐसी भूमि का स्वामित्व यथावत् रहेगा। ऐसी स्थिति में विकास क्रिया अनुमन्य न होने पर भी भू-स्वामी द्वारा अपनी भूमि पर ग्रीन बैल्ट में प्रचलित जोनिंग रैग्युले न्स के अनुसार अनुमन्य क्रियाएं यथा-बागवानी, नर्सरी, पार्किंग स्थल इत्यादि के रूप में प्रयोग करके लाभ लिया जाता रहेगा, जो सामान्यतः TDR की अनुमन्यता न होने की द ा में सम्भव न होता। उक्त दोहरे लाभ को बैलेन्स करने के उद्दे य से आंकलित तल क्षेत्रफल में से 20 प्रति ात की कटौती की जायेगी। 20 प्रति ात कटौती के प चात अव ेश कुल तल क्षेत्र को अंकित करते हुये प्राधिकरण द्वारा TDC जारी किया जायेगा। इस नियमावली के अधीन विभिन्न परिस्थितियों हेतु उदाहरण संलग्नक-1 पर दिये गये हैं।

7- TDC dk iz ksx%

भू-स्वामी द्वारा TDC को अपने किसी अन्य भूखण्ड पर (जो ग्रीन बैल्ट अथवा मार्गाधिकार में न हो) स्थानांतरित करने अथवा विक्रय करने का अधिकार होगा। स्थानांतरण/ विक्रय एकमु त अथवा एक से अधिक भागों में किया जा सकेगा। TDC में अंकित तल क्षेत्रफल प्रयोग किये जाने वाले भवन के विक्रय योग्य एफ.ए.आर. की अधिकतम सीमा तक किया जा सकेगा।

8- TDC vfhkys[kka dk j [kj [kko%

प्राधिकरण द्वारा जारी किये जाने वाले TDC का रखरखाव नियमित रूप से किया जायेगा, जिसकी प्रतिमाह अध्यावधिक सूचना आवास एवं भाहरी नियोजन विभाग, उ0प्र0 भासन की भासकीय वैबसाइट पर तथा आवास बन्धु, लखनऊ को मॉनिटरिंग हेतु प्रेषित की जायेगी। प्राधिकरण द्वारा उक्त सूचना का रखरखाव एक रजिस्टर पर किया जायेगा, जिसकी तालिका संलग्नक-2 पर संलग्न है।

9- TDC tkjh djus grq Qhl %

इस नियमावली के अन्तर्गत TDR किसी भू-स्वामी को अधिकार स्वरूप स्वतः प्राप्त नहीं होगा। TDR अन्तर्गत TDC प्राप्त करने हेतु भू-स्वामी द्वारा सम्बन्धित प्राधिकरण में प्रार्थना-पत्र देना होगा। ऐसे प्रार्थना-पत्र प्राप्त होने के एक माह में प्राधिकरण को TDC जारी करना होगा। TDC जारी करने हेतु प्राधिकरण द्वारा प्र नगत भूखण्ड के कुल क्षेत्रफल पर रू0 5.00 प्रति वर्गमीटर की दर से प्रोसेसिंग भुल्क लिया जायेगा, जो भू-स्वामी द्वारा प्रार्थना-पत्र देते समय ही प्राधिकरण कोश में जमा करना होगा।

10- , fQMfoV%

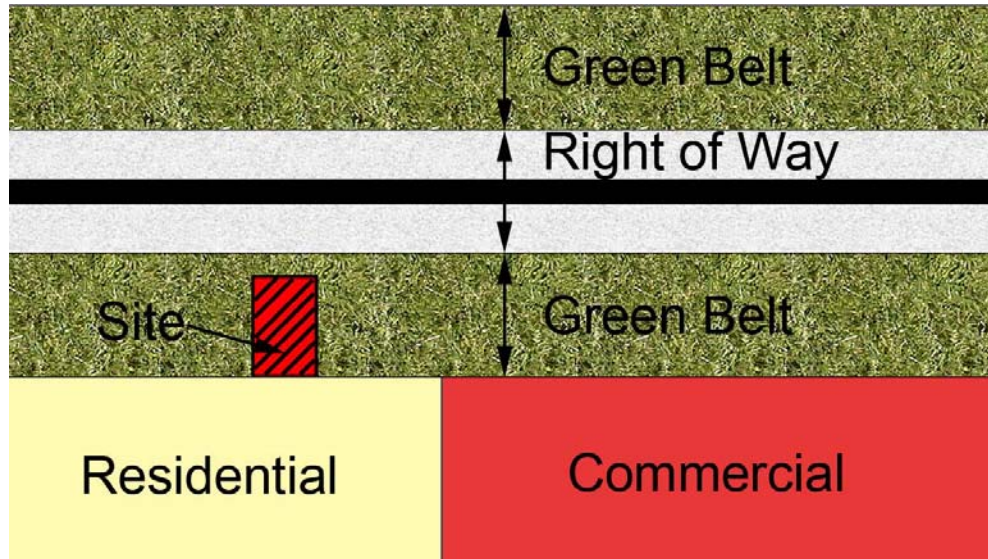
TDC प्राप्त करने हेतु प्रार्थना-पत्र के साथ ही भू-स्वामी द्वारा एक ऐफिडेविट प्राधिकरण को देना होगा, जिसके अनुसार TDC प्राप्त होने की तिथि के प चात प्राधिकरण अथवा किसी अन्य अधिकृत भासकीय विभाग /अभिकरण द्वारा उक्त भूमि को स्वैच्छा से तत्समय प्रचलित सर्किल रेट्स पर हस्तगत करेगा, जिसमें से 80 प्रति ात धनराि । प्राधिकरण के अवस्थापना सुविधा कोश में सीधे अधिग्रहण करने वाले विभाग/संस्था द्वारा जमा किया जायेगा तथा अव ेश 20 प्रति ात धनराि । भू-स्वामी को प्राप्त होगी।

## 1 अक्षर 1

mnkgj.k&1% gfjr iV\h l s iHkkfor , s Hkw[k.M] ftl ds ihNs vkokl h;  
 Hkw&mi ; kx iLrkfor gkA , s h fLFkr ea fodz;  
 ; kx ; @gLrkUrj.kh; ry {k= dh x.kuk fuEuor~gkxh%&

भूखण्ड का कुल क्षेत्रफल	100 वर्ग मीटर
भूखण्ड का हरित पट्टी से प्रभावित क्षेत्रफल	100 वर्ग मीटर
हरित पट्टी से प्रभावित क्षेत्र पर अनुमन्य एफ.ए.आर. (आवासीय भू-उपयोग में अनुमन्य एफ.ए.आर. के आधार पर)	2.0
एफ.ए.आर. के आधार पर प्रभावित भाग पर अनुमन्य तल क्षेत्र	200 वर्गमीटर
टी.डी.आर. के अधीन विक्रय योग्य/हस्तान्तरणीय तल क्षेत्र	*(200 वर्गमीटर का 80 प्रति ात) 160 वर्ग मीटर

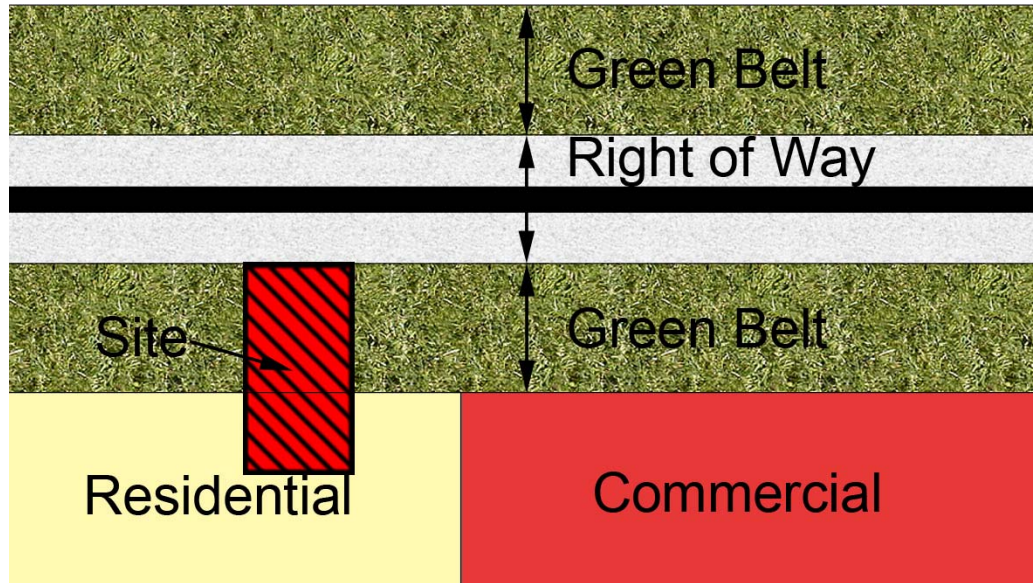
\*प्रस्तावित नीति के अधीन अनुमन्य एफ0ए0आर0 के आधार पर आंकलित कुल तलक्षेत्र में 20 प्रति ात की कटौती करने के उपरांत भोश विक्रय योग्य/स्थानांतरणीय तलक्षेत्र (160 वर्गमीटर) को ही विक्रय/स्थानांतरित किया जा सकेगा।



mngj .k&2% gfjr iV\h l s iHkkfor , \$ s Hkk[k.M] ftl ds ihNs ds "ks'k Hkkx  
 ea vkokl h; Hkk&mi ;ks iLrkfor gkA , \$ h fLFkfr ea fodz;  
 ; kx; @gLrkUrj.kh; ry {ks= dh x.kuk fuEuor~gksxh%&

भूखण्ड का कुल क्षेत्रफल	300 वर्ग मीटर
भूखण्ड का हरित पट्टी से प्रभावित क्षेत्रफल	200 वर्ग मीटर
भूखण्ड के पीछे प्रस्तावित आवासीय भू-उपयोग के सम्मुख हरित पट्टी से प्रभावित भूखण्ड के आंिक भाग का क्षेत्रफल	100 वर्ग मीटर
भूखण्ड के हरित पट्टी से प्रभावित भाग पर अनुमन्य एफ.ए.आर. (आवासीय भू-उपयोग में अनुमन्य एफ.ए.आर. के आधार पर)	2.0
एफ.ए.आर. के आधार पर प्रभावित भाग पर अनुमन्य तल क्षेत्र	200 वर्गमीटर
टी.डी.आर. के अधीन विक्रय योग्य/हस्तान्तरणीय तल क्षेत्र	*(200 वर्गमीटर का 80 प्रति ात) 160 वर्ग मीटर

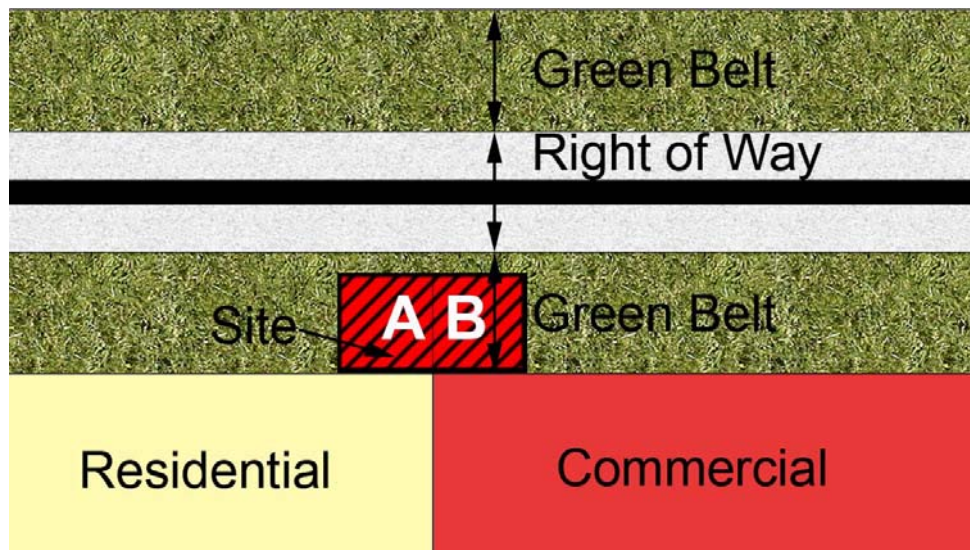
\*प्रस्तावित नीति के अधीन अनुमन्य एफ0ए0आर0 के आधार पर आंकलित कुल तलक्षेत्र में 20 प्रति ात की कटौती करने के उपरांत भोश विक्रय योग्य/स्थानांतरणीय तलक्षेत्र (160 वर्गमीटर) को ही विक्रय/स्थानांतरित किया जा सकेगा।



mngkj .k&3% gfjr i V\h l s i Hkkfor , d s Hkw[k.M] ftl ds i hNs , d l s vf/kd  
 i d kj ds Hkw&mi ; ksx i Lrkfor gka ¼mngkj .kkFk&0; ol kf; d , oa  
 vkokl h; Hkw&mi ; ksx¼ , d h fLFkfr ea fodz ; kX; @gLrkUrj .kh;  
 ry {ks= dh x.kuk fuEuor~gksxh%&

भूखण्ड का कुल क्षेत्रफल	200 वर्ग मीटर
भूखण्ड का हरित पट्टी से प्रभावित क्षेत्रफल	200 वर्ग मीटर
भूखण्ड के पीछे प्रस्तावित व्यवसायिक भू-उपयोग के सम्मुख हरित पट्टी से प्रभावित भूखण्ड के आंिक भाग (भाग-अ) का क्षेत्रफल	100 वर्ग मीटर
भूखण्ड के पीछे प्रस्तावित आवासीय भू-उपयोग के सम्मुख हरित पट्टी से प्रभावित भूखण्ड के आंिक भाग (भाग-ब) का क्षेत्रफल	100 वर्ग मीटर
भूखण्ड के भाग-अ पर अनुमन्य एफ.ए.आर. (व्यवसायिक भू-उपयोग में अनुमन्य एफ.ए.आर. के आधार पर)	1.2
एफ.ए.आर. के आधार पर भाग-अ पर अनुमन्य तल क्षेत्र	120 वर्ग मीटर
भूखण्ड के भाग-ब पर अनुमन्य एफ.ए.आर. (आवासीय भू-उपयोग में अनुमन्य एफ.ए.आर. के आधार पर)	2.0
एफ.ए.आर. के आधार पर भाग-ब पर अनुमन्य तल क्षेत्र	200 वर्गमीटर
अनुमन्य कुल तलक्षेत्र	120+200=320 वर्गमीटर
टी.डी.आर. के अधीन विक्रय योग्य/हस्तान्तरणीय तल क्षेत्र	*(320 वर्गमीटर का 80 प्रति ात) 256 वर्ग मीटर

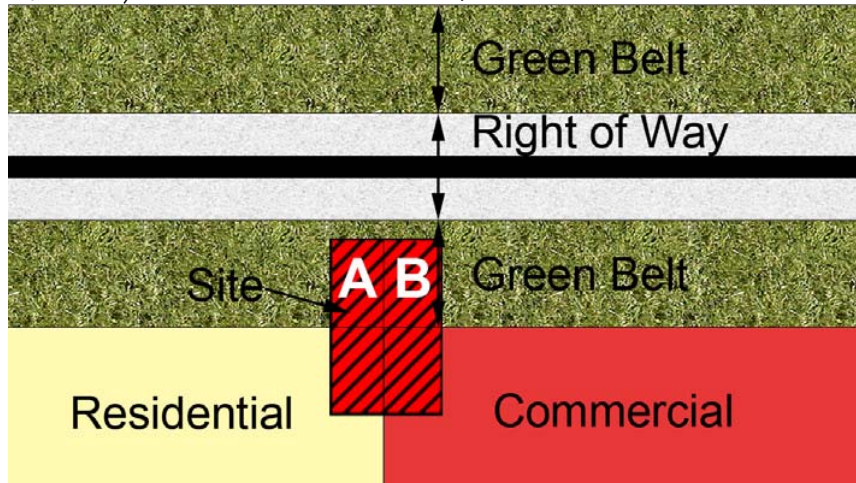
\*प्रस्तावित नीति के अधीन अनुमन्य एफ0ए0आर0 के आधार पर आंकलित कुल तलक्षेत्र में 20 प्रति ात की कटौती करने के उपरांत भोश विक्रय योग्य/स्थानांतरणीय तलक्षेत्र (256 वर्गमीटर) को ही विक्रय/स्थानांतरित किया जा सकेगा।



mknkj .k&4% gfjr i V\h l s i Hkkfor , d s Hk[k.M] ftl ds ihNs , d l s vf/kd  
 i zdkj ds Hk&mi ; ks i Lrkfor gka ¼mknkj .kkFk&0; ol kf; d , oa  
 vkokl h; Hk&mi ; ks¼ , d h fLFkfr ea fodz ; k& ; @gLrkUrj .kh;  
 ry {ks= dh x.kuk fuEuor~gksxh%&

भूखण्ड का कुल क्षेत्रफल	400 वर्ग मीटर
भूखण्ड का हरित पट्टी से प्रभावित क्षेत्रफल	200 वर्ग मीटर
भूखण्ड के पीछे प्रस्तावित व्यवसायिक भू-उपयोग के सम्मुख हरित पट्टी से प्रभावित भूखण्ड के आर्िक भाग (भाग-अ) का क्षेत्रफल	100 वर्ग मीटर
भूखण्ड के पीछे प्रस्तावित आवासीय भू-उपयोग के सम्मुख हरित पट्टी से प्रभावित भूखण्ड के आर्िक भाग (भाग-ब) का क्षेत्रफल	100 वर्ग मीटर
भूखण्ड के भाग-अ पर अनुमन्य एफ.ए.आर. (व्यवसायिक भू-उपयोग में अनुमन्य एफ.ए.आर. के आधार पर)	1.2
एफ.ए.आर. के आधार पर भाग-अ पर अनुमन्य तल क्षेत्र	120 वर्ग मीटर
भूखण्ड के भाग-ब पर अनुमन्य एफ.ए.आर. (आवासीय भू-उपयोग में अनुमन्य एफ.ए.आर. के आधार पर)	2.0
एफ.ए.आर. के आधार पर भाग-ब पर अनुमन्य तल क्षेत्र	200 वर्गमीटर
अनुमन्य कुल तलक्षेत्र	120+200=320 वर्गमीटर
टी.डी.आर. के अधीन विक्रय योग्य/हस्तान्तरणीय तल क्षेत्र	*(320 वर्गमीटर का 80 प्रति ात) 256 वर्ग मीटर

\*प्रस्तावित नीति के अधीन अनुमन्य एफ0ए0आर0 के आधार पर आंकलित कुल तलक्षेत्र में 20 प्रति ात की कटौती करने के उपरांत भोश विक्रय योग्य/स्थानांतरणीय तलक्षेत्र (256 वर्गमीटर) को ही विक्रय/स्थानांतरित किया जा सकेगा।



## TDC jftLVj

क्रमांक	ग्राम का नाम	सजरा संख्या	भू-स्वामी का नाम	हरित पट्टी/ मार्गाधिकार में पड़ने वाला क्षेत्रफल	आधार भू-उपयोग तथा उसमें पड़ने वाला क्षेत्रफल						TDC हेतु मान्य कुल तल क्षेत्रफल	TDC संख्या व दिनांक	भू-स्वामी के हस्ताक्षर व हस्ताक्षर का नाम	सक्षम प्राधिकारी का नाम व हस्ताक्षर		
					भू-उपयोग -I			भू-उपयोग -II								
					भू-उपयोग	कुल क्षेत्रफल	अनुमत्य F.A.R.	हस्तांतरणीय तल क्षेत्रफल	भू-उपयोग	कुल क्षेत्रफल					अनुमत्य F.A.R.	हस्तांतरणीय तल क्षेत्रफल
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.

## TDC LFKukurj.k/fodz jftLVj

क्रमांक	भू-स्वामी का नाम	प्रथम TDC सं0 व दिनांक	TDC के अन्तर्गत तल क्षेत्रफल	स्थानांतरण/विक्रय स्थल का विवरण				स्थानांतरण/ विक्रय तल क्षेत्रफल	TDC के भू-स्वामी के हस्ताक्षर	स्थानांतरण/ विक्रय TDC के भू-स्वामी के हस्ताक्षर	पुनरीक्षित TDC		सक्षम प्राधिकारी का नाम व हस्ताक्षर				
				भवन का प्रकार	भू-स्वामी का नाम	भवन का प्रकार	भू-उपयोग				स्वीकृत मानचित्र आदे 1 संख्या व दिनांक	महायोजना में दे रिया गया भू-उपयोग		स्थानांतरण/ विक्रय तल क्षेत्रफल	अव शेष तल क्षेत्रफल	संख्या व दिनांक	तल क्षेत्रफल
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.		