

Levels of Development in Central National Capital Region 1981 – 2001

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Abstract

The paper studies the levels of development in the settlements of Central NCR, which is one of the three policy zones of NCR as per NCR Regional Plan 2021. Central NCR is an inter-state metropolitan region pivoted upon NCT of Delhi, and comprises six urban complexes in two states, Haryana and Uttar Pradesh. This is a micro-level study, involving 514 settlements (24 towns and 490 villages) comprising Central NCR. The study is based on secondary data available from Census of India for the years 1981, 1991 and 2001. Development has been conceptualized in terms of levels of demographic urban influence and functional hierarchy of infrastructure. Simple statistical techniques have been used to arrive at a composite index for each settlement, which was then grouped into three categories high, medium and low.



1. INTRODUCTION

Development is a social and economic change that is qualitative in some sense, and progressive according to some moral judgment. In practice, it is the central purpose of state power, which is exercised to create a better future for the people (Gore, 1984).

NCR Planning Board delineated the NCR, and till date has formulated two Regional Plans with perspective years 2001 and 2021. Both the plans aim to achieve harmonious growth and development in the NCR by decentralizing economic activities and dispersing services from the NCT of Delhi to the rest of the NCR by reducing its population pressure.

The present work attempts to determine the patterns of development in the Central NCR excluded the NCT of Delhi, which was earlier known as Delhi Metropolitan Area (DMA). The work primarily focuses on the formulation of suitable indicators of development, and to comprehend the emerging patterns over three time periods, 1981, 1991 and 2001. The aim of the study is to determine levels of development in the Central NCR. The objectives of the study are to evaluate the stages of urban influence on settlements; and to examine the ranks of functional hierarchy of settlements.

The Central NCR excluding the NCT of Delhi has been selected for the present study. It is an inter-state metropolitan region centered upon the NCT of Delhi. The Central NCR excluding the NCT of Delhi has an area of 2,331 square kilometers,

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with population of 48 lakhs in 2001. The Central NCR comprises six urban complexes in two neighboring states Sonipat-Kundli, Bahadurgarh, Gurgaon-Manesar, and Faridabad-Ballabhgarh in Haryana; and NOIDA and Ghaziabad-Loni in Uttar Pradesh (Fig. 1). The names of the settlements may be referred to against the numbers given in Table 1.

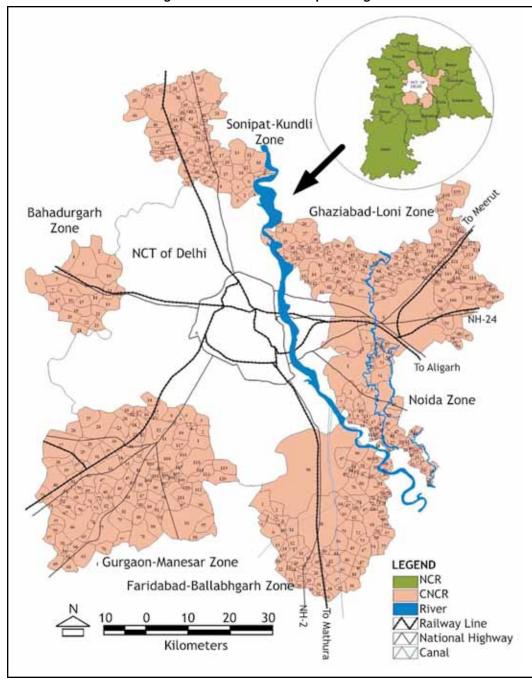


Fig. 1 Central National Capital Region



Table 1 List of Settlements in Central NCR

Sonipat-Kundli Zone						
1 Dahesra	2 Janti Kalan	3 Janti Khurd	4 Kundli	5 Sersa		
6 Khatkar	7 Basantpur	8 Baqipur	9 Khurampur	10 Manoli		
11 Pabsra	12 Hansapur	13 Jakhauli	14 Aterna	15 Nangal Kalan		
16 Patla	17 Seoli	18 Badh Khalsa	19 Asawarpur	20 Ferozepur Khadar		
21 Bahalgarh	22 Joshi Chohan	23 Kishora	24 Dipalpur	25 Murshidpur		
26 Kamashpur	27 Nangal Khurd	28 Morthal Khas	29 Hassanpur	30 Karar Ibrahimpur		
31 Abdulapur	32 Jawahri Part	33 Tharu	34 Uldaipur	35 Barwasni		
36 Mahlana	37 Sonipat	38 Dewarhu	39 Rewali	40 Shahpur Turak		
41 Shahjahanpur	42 Fazlpur	43 Raipur	44 Kabirpur	45 Shadipur		
46 Lahrana	47 Bayyanpur	48 Bandepur	49 Hasamabad	50 Joshi Jat		
51 Lawanspur	52 Rathdhana	53 Harsana Kalan	54 Harsana Khurd	55 Nasirpur Bangar		
56 Bhawapur	57 Bidhnauli	58 Ladpur	59 Jagdishpur	60 Levan		
61 Rai	62 Jatheri	63 Badh Malak	64 Rasoi	65 Pitampura		
66 Nathupur	67 Bazidpur Saboli	68 Shafiabad Kheri Manajat	69 Akbarpur Barota	70 Kheri Mana Jat		
71 Shafiabad Pana Pa	poshian	72 Munirpur Shafiabad Pa	ana			
Bahadurgarh Zone						
1 Mukandpur	2 Kanonda	3 Barahi	4 Asauda Sew-an	5 Jakhauda		
6 Mandothi	7 Saidpur	8 Kasar	9 Sankhol	10 Bahamnoli		
11 Parnala	12 Hassanpur	13 Bahadurgarh Rural	14 Bahadurgarh	15 Sarai Aurangabad		
16 Kherka Musa- lman	17 Tandaheri	18 Daboda Kalan	19 Nuna Majra	20 Lawa Khurd		
21 Balaur	22 Barkatabad	23 Lowa Kalan	24 Soldha			
Gurgaon-Manesar Zor	ne					
1 Chakarpur	2 Sikanderpur Ghosi	3 Nathupur	4 Sarhol	5 Shahpur		
6 Dundahera	7 Molahera	8 Daulatpur Nasirabad	9 Inayatpur	10 Sukhrali C.T.		
11 Gurgaon	12 Gurgaon Rural C.T.	13 Choma	14 Bajghera	15 Allawardi		
16 Pawala Khasru- pur	17 Babupur	18 Mohmadheri	19 Dharampur	20 Daultabad		
21 Tikampur	22 Dhanwanpur	23 Kharki Majra Dhankot	24 Budhera	25 Mankrola		
26 Kaliawas	27 Sultanpur	28 Chandu	29 Sadhrana	30 Dhankot		
31 Basai	32 Kadipur Part	33 Garoli Khurd	34 Garoli Kalan	35 Gopalpur		
36 Garhi Harsaru	37 Hamirpur		39 Khetawas	40 Patli Hajipur		
41 Dhanawas	42 Wazirpur	43 Harsaru	44 Khandsa	45 Mohammadpur Jharsa		
46 Sihi	47 Hayatpur	48 Badha	49 Meoka	50 Dhorka		
51 Jhund Sarai Viran	52 Jhund Sarai Abad	53 Jarola	54 Babra Bakipur	55 Baslambi		
56 Kharkhari	57 Tatarpur	58 Mokalwas	59 Fakharpur	60 Binola		
61 Chandla Dunger- was	62 Fazalwas	63 Gwaliar	64 Kukrola	65 Sehrawan		
66 Kasan	67 Dhana	68 Basharia	69 Bhang Rola	70 Baskushla		
71 Kankrola	72 Nawada Fatehpur	73 Naharpur Kasaro	74 Khoh	75 Manesar		
76 Nainwal	77 Bar Gujar	78 Gairatpurbas	79 Navrangpur	80 Sakatpur		
81 Shikohpur	82 Lakhnola	83 Sikanderpur Badha	84 Kharki Dola	85 Narsinghpur		



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86 Begampur Kha- tola	87 Darbaripur	88 Hassanpur	89 Palra	90 Tikli		
91 Nurpur Jharsa	92 Aklimpur	93 Bhondsi	94 Sahjawas	95 Rethoj		
96 Kadarpur	97 Dhumaspur	98 Badshahpur	99 Fazilpur Jharsa	100 Behrampur		
101 Tikri	102 Islampur	103 Naharpur Rupa	104 Jharsa O.G.	105 Shamshpur		
106 Fatehpur	107 Ghasula	108 Adampur	109 Tigra	110 Nangli Umarpur		
111 Medawas	112 Ulhawas	113 Ghata	114 Haiderpur	115 Bindapur		
116 Kanahi	117 Silokhara O.G.	118 Wazirabad	119 Gual Pahari	120 Balola		
Faridabad-Ballabhgar	h Zone					
1 Gothda Mohbtabad	2 Pali	3 Pakhal	4 Paota	5 Alawalpur		
6 Fatehpur Taga	7 Nekpur	8 Kheri Gujran	9 Kureshipur	10 Madalpur		
11 Sarurpur	12 Samaipur	13 Firozpur Kalan	14 Karnera	15 Sikrona		
16 Kabulpur Bangar	17 Bhanakpur	18 Kadhaoli	19 Kail Gaon	20 Nagla Jogian		
21 Harphala	22 Mahola	23 Harphali	24 Sikri	25 Sahapur Khurd		
26 Piala	27 Softa	28 Gadhpuri	29 Dundsa	30 Medapur		
31 Asoati	32 Jataula	33 Devli	34 Ladpur	35 Pahladpur Majra Digh		
36 Fatehpur Biloch	37 Digh	38 Sagarpur	39 Jajru	40 Malerna		
41 Shahupura	42 Sunper	43 Shahpur Kalan	44 Ladhauli	45 Bahbalpur		
46 Sotai	47 Phophunda	48 Dayalpur	49 Machhgar	50 Chandaoli		
51 Mujeri	52 Nawada Tigaon	53 Bukharpur	54 Junehera	55 Kurali		
56 Pahladpur Majra Badrola	57 Bahadurpur	58 Badraula	59 Bhainsraoli	60 Landola		
61 Tigaon	62 Nimka	63 Mortzapur	64 Badoli	65 Faizupur Majra Neemka		
66 Faridpur	67 Sadpura	68 Bhuapur	69 Mandhawali	70 Mahmoodpur		
71 Shahabad	72 Fattupura	73 Tajpur	74 Kheri Khurd	75 Bhatola		
76 Kheri Kalan	77 Nachauli	78 Dhahkola	79 Jasana	80 Badarpur Said		
81 Kanaura	82 Dungarpur	83 Bhaskaula	84 Maozmabad	85 Chakmajai		
86 Bhopani	87 Dhadar	88 Mahavatpur	89 Lalpur	90 Kirawali		
91 Sherpur Khadar	92 Rawajpur	93 Tekawli	94 Badshahpur	95 Palwali		
96 Dadsia	97 Tilpal, C.T.	98 Ballabhgarh	99 Faridabad M.C.			
Noida Zone						
1 Noida	2 Sadarpur	3 Hazipur	4 Salarpur Khadar	5 Sultanpur		
6 Asagarpur Jagir	7 Raipur Khadar	8 Chak Basantpur	9 Shahpur Govardhan- pur K	10 Shahpur Govard- hanpur B		
11 Rohilapur	12 Nagla Nagli	13 Basantpur Bangar	14 Nagli Bahrampur	15 Bajidpur		
16 Chhaproli Khadar	17 Mangrola	18 Nagli Sabapur	19 Chak Mangrola	20 Asdullapur		
21 Dostpur Mangroli Bangar	22 Dostpur Mangroli Khadar	23 Kidawali	24 Yakootpur	25 Yakutpur		
26 Dalelpur	27 Gulavali	28 Jhatta	29 Kambakashpur	30 Aurangabad		
31 Kondli Bangar	32 Gari Samastpur	33 Tilwara	34 Sikanderpur	35 Motipur		
36 Gharbarah	37 Momna Thal	38 Shafipur	39 Kondli Khadar	40 Badauli Bangar		
41 Badauli Khader	42 Mubarikpur	43 Begampur	44 Gohiyapur	45 Nalgadha		
46 Chuharpur Bangar	47 Shahdara	48 Suthiyana	49 Kulesara	50 Greater Noida		
51 Sorkha Jahidabad	52 Sharfabad	53 Parthala Khanjarpur	54 Haibatpur	55 Chipyana Khurd urf Tigri		



56 Garhi Chaukhan- di	57 Basi Bahuddin Nagar	58 Bahlolpur	59 Yusufpur Chak Saberi	60 Chautpur		
Ghaziabad-Loni Zon			Japen			
	2 Hazratpur Wajid-		4 Mahiuddinpur	5 Chhajarsi Kuleech-		
1 Khora	pur	3 Lalpur	Kanawani	nagar		
6 Sahabad Urf Mit- thepur	7 Akbarpur Bahram- pur	8 Ghaziabad	9 Nistauli	10 Tila Shahbazpur		
11 Behata Hajipur	12 Dharoti Khurd	13 Ahmad Nagar Nawada	14 Loni	15 Sadullabad		
16 Loni Dehat	17 Ilaichipur	18 Haqiqatpur urf Khudawas	19 Khanpur Japti	20 Harampur		
21 Badarpur	22 Panchayara	23 Nauraspur	24 Allipur	25 Mirpur Hindu		
26 Nanu	27 Madaul	28 Lutfulapur Navada	29 Milk Bamla	30 Masudabad Bamla		
31 Agraula	32 Sadabad Durga- vali	33 Aliabad	34 Pavi Sadanapur	35 Daultabad Mo- tapur		
36 Jafarabad Ga- nauli	37 Nasaratabad Kharkhari	38 Fatiyabad Nihaura	39 Chirauri	40 Badshahpur Sirauli		
41 Mewala Bhatti	42 Kotwalpur	43 Shakar Pulla	44 Sikhrani	45 Banthla		
46 Narainpur urf Rampur	47 Afzalpur	48 Makarmat Pur	49 Sharifabad Rajapur	50 Sharfuddinpur Javli		
51 Aurangabad Ristal	52 Dharipur	53 Ahmadnagar Naya- bans	54 Murtazabad Bhoop- kheri	55 Afjalnagar Siti		
56 Mahmoodpur	57 Bhanera Khurd	58 Asalatpur Farakh Nagar	59 Morti	60 Bhowapur		
61 Ataur	62 Nagla Firoj Mo- hanpur	63 Champat Nagar	64 Shamsher	65 Mathurapur		
66 Bahadurpur	67 Makraida	68 Sirora Salempur	69 Bhadauli	70 Manauli		
71 Sultan Nagar Chhajjupur	72 Roshanpur Salim- abad PP	73 Roshanpur Salaim- abad PJ	74 Kishan Chandpur Patti	75 Sultanpur		
76 Milak/Milk Cha- karpur	77 Mahmudabad	78 Bhikkanpur	79 Shahpur Nij Morta	80 Jagjivanpur		
81 Nabipur	82 Basantpur Saitli	83 Shobhapur	84 Jalalpur Raghu- nathpur	85 Sahbiswa		
86 Mohammadpur Dwedha	87 Asalat Nagar	88 Muhiuddinpur Hisauli	89 Kanauja	90 Matiala		
91 Rasulpur Sikrod	92 Dasna Dehat	93 Dasana	94 Sadat Nagar Ikla	95 Inayatpur		
96 Arifpur	97 Dinanathpur Putti	98 Raghunathpur	99 Masuri	100 Kushaliya		
101 Nahal	102 Muhiddinpur Dabarsi	103 Masauta	104 Nidori	105 Nig Rayati		
106 Karim Nagar Katiyar	107 Samaypur	108 Didwari	109 Muradgam Pur Parsi	110 Baraka Arifpur		
111 Nurpur	112 Bhawanipur	113 Muradnagar	114 Ukhlarsi	115 Muradnagar, Vii		
116 Sarna Murad Nagar	117 Khurrampur	118 Ajabpur Mangavali	119 Abupur	120 Yusufpur Manota		
121 Jalalabad Morta	122 Misbapur	123 Dausa Banjarpur	124 Ganga Rampur	125 Abidpur Maniki		
126 Kajampur	127 Sikri Kalan	128 Sadabad Jakhaiva	129 Mohammadpur Kadim	130 Shahzadpur		
131 Didauli	132 Sikhaida Hajari	133 Fatehpur	134 Saunda	135 Painga		
136 Arifpur Ujaira	137 Puthri	138 Niwari Dehat	139 Niwari			



2. URBAN INFLUENCE ON SETTLEMENTS

To calculate urban influence on settlements, indicators were standardized through the technique of Location Quotient (LQ), where the individual figures of settlements are divided by the Central NCR averages. The standardized LQ figures are then summed up and averaged to obtain a composite index, which represents urban influence on settlements.

Fig. 2 Research Methodology and Data Sources

Step 1 Delineation of Study Area: Central NCR Sonipat-Kundli zone 72 settlements (1 urban 71 rural) Bahadurgarh zone 24 settlements (5 urban 19 rural)

- Gurgaon-Manesar zone 120 settlements (5 urban 115 rural)
 Faridabad-Ballabhgarh zone 99
- Faridabad-Ballabhgarh zone 99 settlements (3 urban 96 rural)
- NOIDA zone 60 settlements (2 urban 58 rural)
- Ghaziabad-Loni zone 139 settlements (8 urban 131 rural)

Step 2A Indicators of Development Part I: Urban Influence

- Population SizePopulation
- Population
- Density
- Sex Ratio
- Literacy RateHousehold Size
- Work Force Participation Rate
- Non-Primary Activities
- N o n -Agricultural Landuses

Step 5 Analysis of Data

- Calculation of Indicators
- Calculation of Location Quotient and Composite Index

Step 2B Indicators of Development Part II: Functional Hierarchy

- E d u c a t i o n Facilities
- Medical Facilities
- Drinking Water Supply
- Power Supply
- Communication Facilities
- Transport Facilities (Access)
- Transport Facilities (Mode)
- Financiál Facilities
- Recreational Facilities

Step 6 Representation of Data

- AutoCAD
- Arc View GIS
- MS Excel

Step 3 Identification of Variables and Data Types

Area, Landuse and Population Data:

- Total Area 2001.
- Land Uses 1981, 1991 and 2001.
- Total Population 1971, 1981, 1991 and 2001.
- Male and Female Population 1981, 1991 and 2001.
- Adult (7+) and Literate Population 1981, 1991 and 2001.
- Households 1981, 1991 and 2001.
- Workers Population 1981, 1991 and 2001.
- Occupational Structure of Main-Workers 1981, 1991 and 2001.

Infrastructure Data:

- Level of Educational Facilities 1981, 1991 and 2001.
- Level of Medical Facilities 1981, 1991 and 2001.
- Sources of Drinking Water Supply 1981, 1991 and 2001.
- Purpose of Power Supply 1981, 1991 and 2001.
- Level of Communication Facilities 1981, 1991 and 2001.
- Level of Transport Access 1981, 1991 and 2001.
- Level of Transport Mode 1981, 1991 and 2001.
- Level of Financial Facilities 1981, 1991 and 2001.
- Level of Recreational Facilities 1981, 1991 and 2001.

Step 4 Data Sources and Collection of Data Census Atlas 2001

- Haryana
- Uttar Pradesh

District Census Handbook

- Sonipat District
- Rohtak District
- Jhajjar District
- Gurgaon District
- Faridabad District
- Gautam Buddha District
- Ghaziabad District
- Bulandshahr
 District

NCR Planning Board Plans

- Regional Plan 2001
- Regional Plan 2021

Other Plans and Reports

- TCPO
- HUDA, GDA and NOIDA

Step 7 Interpretation of Data

- Tables, Figures and Maps
- Cause and Effect Relationship

Source: Computed by the Authors



Composite Index (CI) = $\Sigma LQ/N$;

Where, \(\Sigma LQ\) is sum of all Location Quotient and N is total number of Indicators.

Urban influence has been represented by the composite index with the three different categories high (more than 1), medium (0.67 to 1.0) and low (less than 0.67) during the periods of 1981, 1991 and 2001. Number of settlements under high influence has increased from 44 in 1981 to 58 in 2001 in the Central NCR (see Table 2). These 58 settlements have higher than average potential to become future agro-urban communities within their respective urban complexes. Among the six urban complexes, Gurgaon-Manesar zone recorded the highest urban influence while Faridabad-Ballabhgarh the lowest. (Fig. 3, 4 and 5)

2.1 Functional Hierarchy of Settlements

The settlements around urban complexes are characterized by specialized functions and high intra-regional accessibility. Indicators were standardized by assigning weights as per hierarchical criteria according to the significance of a function. The weighted figures are then summed up and averaged to obtain a composite index.

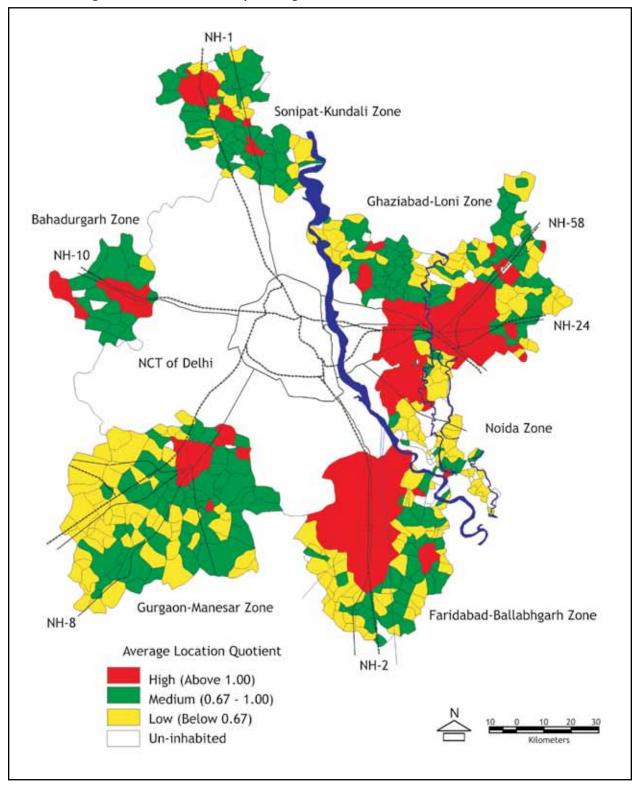
Table 2: Settlements by Urban Influence in Central NCR and Zones, 1981-2001

S.	Zone (with No. of Settle-	Urban Influence		Number of Settlements				
No.	ments)		1981		19	91	20	01
	,		No.	%	No.	%	No.	%
1	Sonipat-Kundli (72)	High (Above 1.00)	06	08	03	04	06	80
		Medium (0.67 - 1.00)	38	53	32	44	31	43
		Low (Below 0.67)	23	32	32	44	30	42
		Uninhabited	05	07	05	07	05	07
2	Bahadurgarh (24)	High (Above 1.00)	06	25	03	13	03	13
		Medium (0.67 - 1.00)	15	63	16	67	10	42
		Low (Below 0.67)	01	04	03	13	09	38
		Uninhabited	02	08	02	08	02	08
3	Gurgaon-Manesar (120)	High (Above 1.00)	06	05	08	07	23	19
		Medium (0.67 - 1.00)	52	43	48	40	51	43
		Low (Below 0.67)	60	50	62	52	44	37
		Uninhabited	02	02	02	02	02	02
4	Faridabad-Ballabhgarh (99)	High (Above 1.00)	07	07	04	04	06	06
		Medium (0.67 - 1.00)	34	34	24	24	34	34
		Low (Below 0.67)	52	53	65	66	53	54
		Uninhabited	06	06	06	06	06	06
5	NOIDA (60)	High (Above 1.00)	03	05	05	08	05	08
		Medium (0.67 - 1.00)	08	13	12	20	15	25
		Low (Below 0.67)	36	60	30	50	27	45
		Uninhabited	13	22	13	22	13	22
6	Ghaziabad-Loni (139)	High (Above 1.00)	16	12	10	07	15	11
		Medium (0.67 - 1.00)	58	42	64	46	58	42
		Low (Below 0.67)	56	40	56	40	57	41
		Uninhabited	09	06	09	06	09	06
	Central NCR Total (514)	High (Above 1.00)	44	09	33	06	58	11
		Medium (0.67 - 1.00)	205	40	196	38	199	39
		Low (Below 0.67)	228	44	248	48	220	43
		Uninhabited	37	07	37	07	37	07

Source: Computed, District Census Handbooks, 1981-2001.



Fig. 3 Central National Captial Region: Urban Influence on Settlements 1981





NH-1 Sonipat-Kundali Zone Ghaziabad-Loni Zone Bahadurgarh Zone NH-58 NH-10 NH-24 NCT of Delhi Noida Zone Gurgaon-Manesar Zone Faridabad-Ballabhgarh Zone NH-8 Average Location Quotient High (Above 1.00) Medium (0.67 - 1.00)

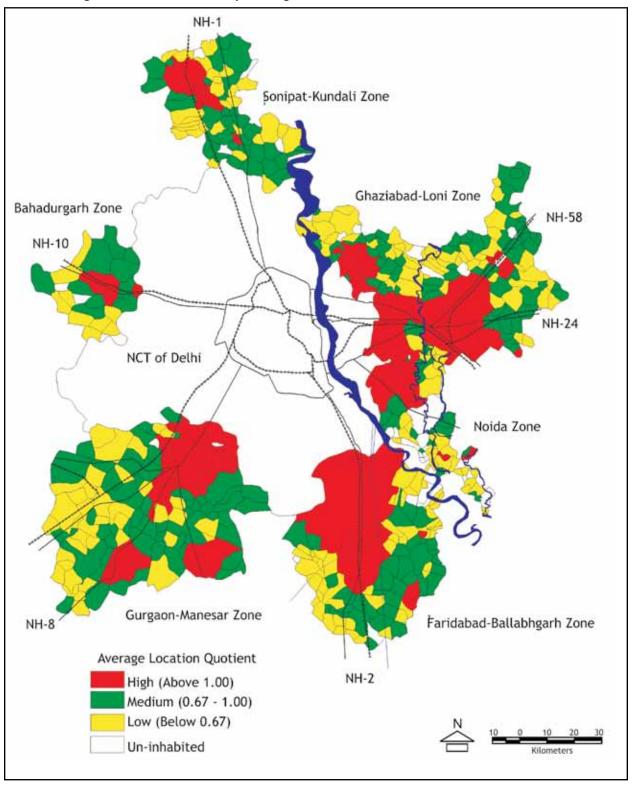
Fig. 4 Central National Capital Region: Urban Influence on Settlements - 1991

Low (Below 0.67)

Un-inhabited



Fig. 5 Central National Capital Region: Urban Influence on Settlements - 2001





Composite Index (CI) = $\Sigma WF/N$;

Where, Σ WF is sum of Weighted Functions; and N is total number of Indicators.

Functional hierarchy are represented by composite index with the three different categories of high, medium and low during the periods of 1981, 1991 and 2001. Number of settlements under high availability of functions has increased from 6 in 1981 to 26 in 2001 in Central NCR (see Table 3). These 26 settlements have urban facilities within their respective urban complexes. Among the six urban complexes, Bahadurgarh zone recorded the highest functional hierarchy while the lowest was found in NOIDA. (Fig. 6, 7 and 8)

3. LEVELS OF DEVELOPMENT

Level of urban influence and functional hierarchy together represent the overall level of development in the settlements of the Central NCR. These settlements

Table 3: Settlements by Functional Hierarchy in Central NCR and Zones, 1981-2001

S.	Zone (with No. of Settlements)	Functional Hierarchy	Number of Settlements					
No.			1981		1991		20	01
			No.	%	No.	%	No.	%
1	Sonipat-Kundli (72)	High (5)	01	01	01	01	05	07
	` ` '	Medium (3 - 4)	11	15	18	25	62	86
		Low (1 - 2)	55	76	48	67	00	00
		Uninhabited	05	07	05	07	05	07
2	Bahadurgarh (24)	High (5)	01	04	01	04	04	17
		Medium (3 - 4)	01	04	09	38	18	75
		Low (1 - 2)	20	83	12	50	00	00
		Uninhabited	02	08	02	08	02	80
3	Gurgaon-Manesar (120)	High (5)	01	01	01	01	04	03
		Medium (3 - 4)	13	11	42	35	114	95
		Low (1 - 2)	104	87	75	63	00	00
		Uninhabited	02	02	02	02	02	02
4	Faridabad-Ballabhgarh (99)	High (5)	02	02	02	02	04	04
		Medium (3 - 4)	06	06	20	20	89	90
		Low (1 - 2)	85	86	71	72	01	01
		Uninhabited	06	06	06	06	05	05
5	NOIDA (60)	High (5)	00	00	01	02	01	02
		Medium (3 - 4)	01	02	01	02	35	58
		Low (1 - 2)	43	72	45	75	11	18
		None (0)	03	05	00	00	00	00
		Uninhabited	13	22	13	22	13	22
6	Ghaziabad-Loni (139)	High (5)	01	01	01	01	08	06
		Medium (3 - 4)	04	03	16	12	113	81
		Low (1 - 2)	122	88	113	81	09	06
		None (0)	03	02	00	00	00	00
		Uninhabited	09	06	09	06	09	06
	Central NCR	High (5)	06	01	07	01	26	05
		Medium (3 - 4)	36	07	106	21	431	84
		Low (1 - 2)	429	83	364	71	21	04
		None (0)	06	01	00	00	00	00
		Uninhabited	37	07	37	07	36	07

Source: Computed, District Census Handbooks, 1981-2001.



Fig. 6 Central National Capital Region: Functional Hierarchy of Settlements 1981

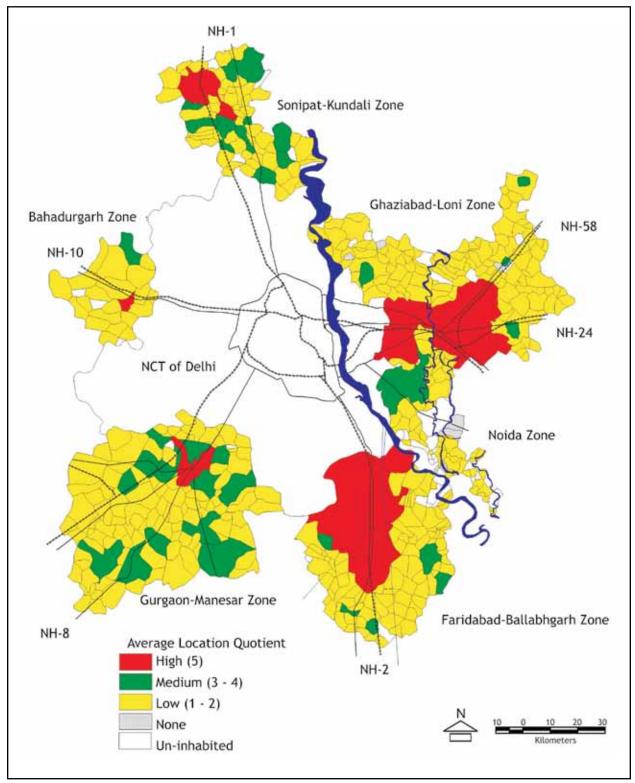




Fig. 7 Central National Capital Region: Functional Hierarchy of Settlements 1991

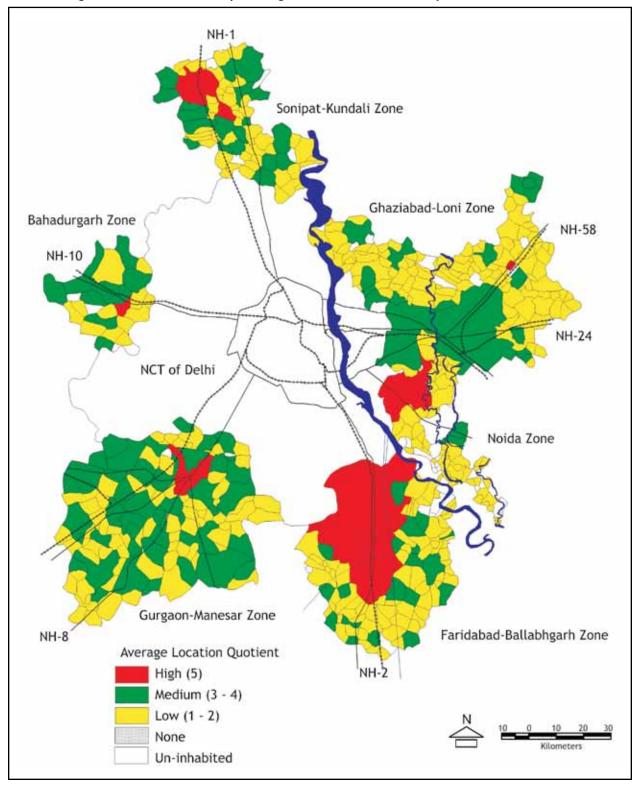
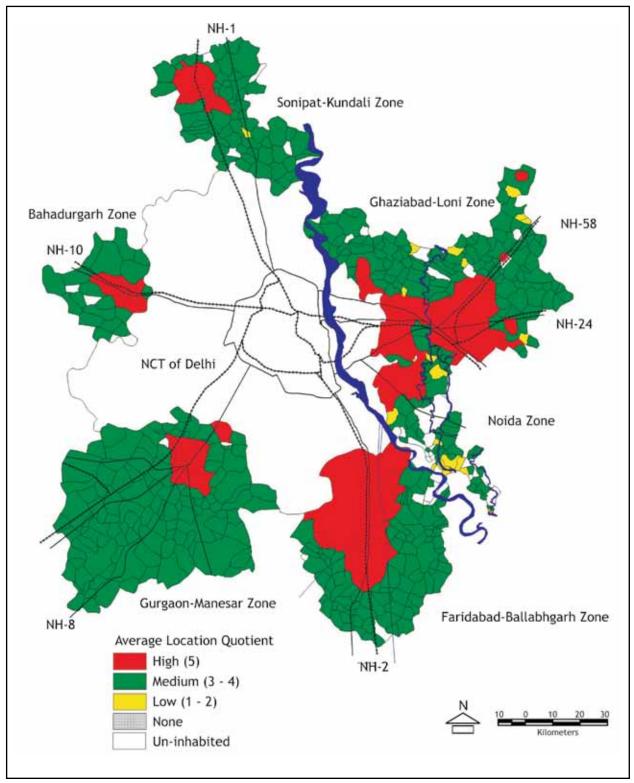




Fig. 8 Central National Capital Region: Functional Hierarchy of Settlements 2001





are grouped into nine sub-groups and three groups according to combination of urban influence and functional hierarchy, which are as follows:

High level of development includes the following three sub-groups:

- High Urban Influence and High Functional Hierarchy
- High Urban Influence and Medium Functional Hierarchy
- Medium Urban Influence and High Functional Hierarchy

Medium level of development includes the following three sub-groups:

- High Urban Influence and Low Functional Hierarchy
- Medium Urban Influence and Medium Functional Hierarchy
- Low Urban Influence and High Functional Hierarchy

Low level of development includes the following three sub-groups:

- Medium Urban Influence and Low Functional Hierarchy
- Low Urban Influence and Medium Functional Hierarchy
- Low Urban Influence and Low Functional Hierarchy

The above Table reveals that the number of settlements with high level of development has increased from 15 in 1981 to 65 in 2001. All these settlements have high or medium urban influence in combination with high or medium functional hierarchy. On the other hand, the number of settlements with low level of development has decreased from 406 in 1981 to 226 in 2001. All these settlements have low or medium urban influence in combination with low or medium functional hierarchy. Among the six urban complexes, Gurgaon-Manesar and Bahadurgarh zones are the most developed while NOIDA zone is the least developed.

Number of settlements is increasing under high urban influence and high functional hierarchy, while decreasing under low urban influence and low functional hierarchy group. The settlements with the highest hierarchy and high urban influence are service centers located adjacent to the NCT of Delhi - Sonipat-Kundli, Bahadurgarh, Gurgaon-Manesar, Faridabad-Ballabhgarh, NOIDA and

Ghaziabad-Loni. The settlements with middle hierarchy are those located along major transport corridors and routes, whether national highways or rail routes. The settlements having lowest hierarchy are those located on the margins, far from both Delhi city or transport routes. All the settlements are grouped under three major categories of highly developed, medium developed and less developed settlements. (Fig. 9, 10 and 11)

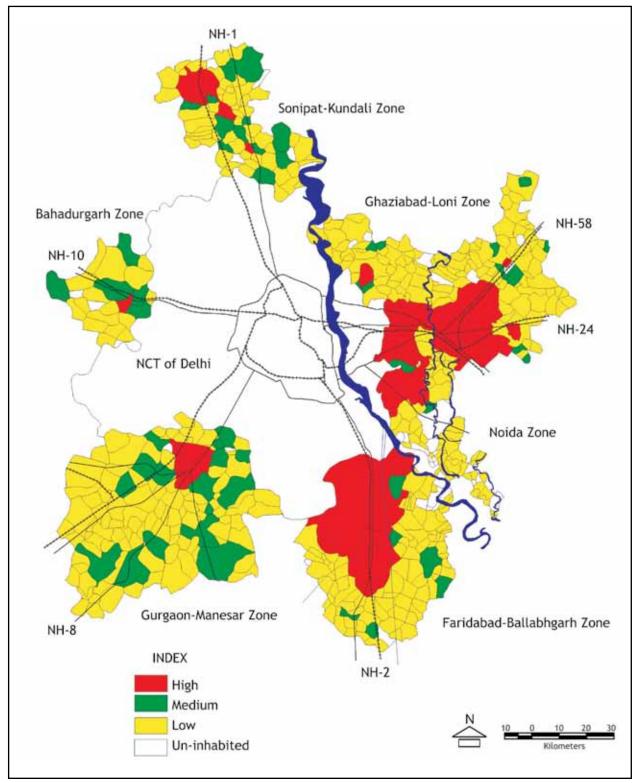
Table 4: Settlements by Levels of Development in Central NCR, 1981-2001

S. No.	Levels of	1981		1991		2001	
	Development	No.	%	No.	%	No.	%
1	High	15	03	18	04	65	13
2	Medium	56	11	71	14	186	36
3	Low	406	79	388	75	226	44
Х	Un-inhabited	37	07	37	07	37	07
	Total	514	100	514	100	514	100

Source: Computed, District Census Handbooks.



Fig. 9 Central Capital Region: Levels of Development 1981





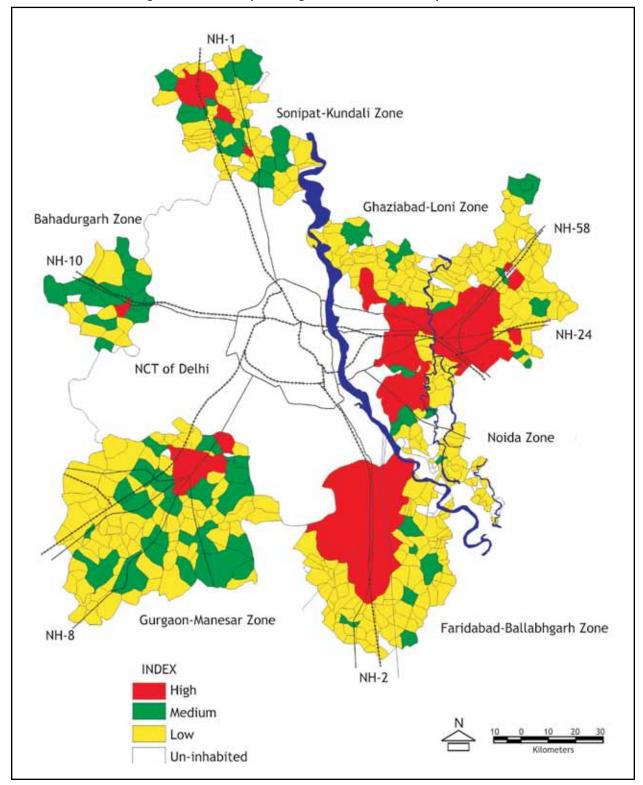
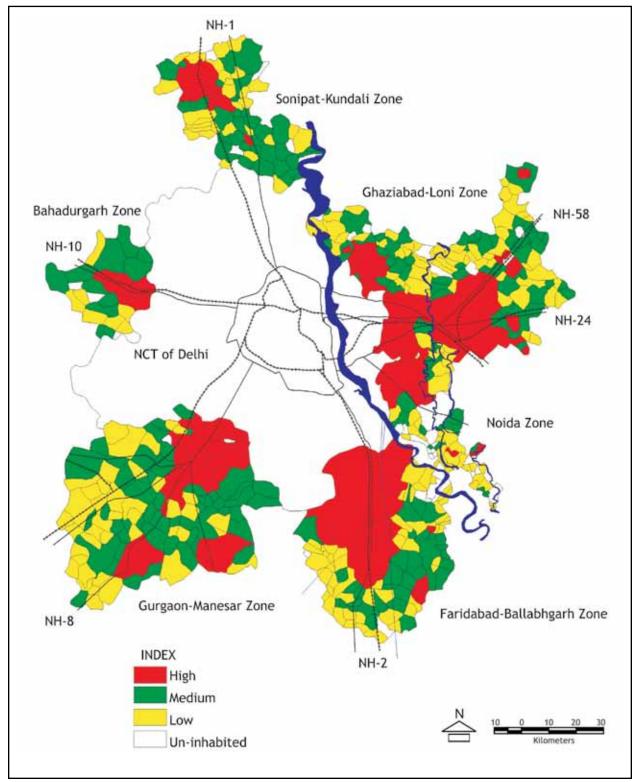


Fig. 10 Central Capital Region: Levels of Development 1991



Fig. 11 Central Capital Region: Levels of Development 2001





4. CONCLUSIONS

The core settlements of the urban complexes are more developed, the settlements immediately surrounding them are moderately developed, while rest of the marginal settlements are least developed. The core settlements have the potential to develop into central places of higher order, which can share the burden of the NCT of Delhi. Governments and planning authorities are also supporting such settlements.

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THE PLANNED CITIES

New Delhi

To build a city is something happy to think of. To create a new town is itself a happy thing. There cannot be a greater joy than to create. It is almost godlike to create. To be associated, therefore, with the construction of a city has been a thing which I appreciate the most.

What I should like in regard to every city is a clear plan of what the city will be like, say, twenty or thirty years later.

And then you can work by that plan slowly, gradually. Nothing should be allowed to come in the way of that plan, as has happened, for example, in our city of Delhi. Amazing structures have been put up in a haphazard manner all over Delhi and they come in our way now and in future.

The sense of beauty has an important role to play on the minds of the young generation. So the new city should be a place of beauty, developing ideas of beauty and everything that should be good so that life might become an adjunct to beauty.

Pt. Jawaharlal Nehru