

論説 Article

Typology of Informal Settlements and Distribution of Slums in the NCT, Delhi

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Abstract: The present paper deals with the typology of informal settlements and zone-wise distribution of slums in the National Capital Territory (NCT) of Delhi. The Economic Survey of Delhi (2002) has identified eight types of settlements with six informal settlements. Since these six types of settlements do not qualify to be classified as formal settlement because of lack of basic amenities, they may also be called as slums in one way or the other. The paper is based on both secondary and primary data. The secondary data were collected from the slum wing of Delhi Municipal Corporation, while the primary data were generated through field survey in South Delhi District for a case study. The study reveals that smaller size of slum clusters is more in number and thus a major chunk of slum population live in them. As far as zone-wise distributions of slums are concerned the Central Zone witnessed having the lowest number of slums i.e. 127 constituting 9.95% to the total slums in the Capital Territory as against the South Zone in which maximum number of slums i.e. 389 contributing 30.49% of the total slums in the NCT, Delhi.

Key words: Informal settlement, Jhuggi-Jhonpri clusters, Slum Designated Area, Unauthorized colonies, Resettled Colonies, Urban Villages

I. Introduction

Urban housing may broadly be classified into formal and informal settlements. Formal settlements are those which have been constructed and developed by the government agencies or by the housing societies on duly approved plans. Besides physical, social, economic and many other considerations are taken in account for the development of such colonies so that living conditions become congenial and comfortable to the residents. The planners also put emphasis on environmental suitability and economic viability for the houses constructed through the concerned authorities. On the other hand informal settlements are those which have come up illegally either on the government land or private land in a haphazard manner. They are unplanned and violating all norms of government planning. They have both permanent/semi-permanent and temporary structure edging the city drains, railway tracks, low-lying flood prone areas and also occupying agriculture land and green belts in and around the city. They lack potable water and regular electricity supply, sanitation, garbage

disposal, road network, park etc. Bad houses with inadequate light, air, toilet and bathing facility; extreme over crowding and high density of population are some of the features of these informal settlements (Ali, 2006 and Bose, 1995). As such these residential areas are both physically and socially very much deteriorated in which satisfactory family life is almost impossible. As these settlements have come up one illegally, most of them lack not only basic amenities but also legal right of the occupancy even though some of them may have been in existence for a longtime (Centre for Urban and Regional Excellence, 2005).

The growth of informal settlements may largely be attributed to the rural migration. The rural migrants to the urban centres are engaged in the informal sectors and their saving is not sufficient to live in healthy environment of formally planned colonies. Thus, they are forced to live in the slums or similar type of settlements (Jha, 1986). One may notice some variations in terms of quality of life among these informal settlements as some of them have been provided few basic amenities. Therefore,

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the quality of life in those colonies is comparatively better. For example unauthorized colonies and urban villages are better than the J. J. Clusters, Harijan Bastis, resettled colonies and pavement dwellings.

The informal settlements/ slums are prevalent in many urban areas of the world. Its forms and types vary from Country to Country. They constitute 43% of the total population in the developing Countries of the world while in more developed nations, they make up only about 6%. Reddy (1996) estimated that the slum dwellers or like wise population constituted about one-fifth of the total population in India while the Census of India 2001 registered 22.8 per cent. The census data also reported that almost 15.72% population of the NCT, Delhi reside in slum clusters while the Delhi Government declared that 52% of its population residing in JJ Clusters, Slum Designated Area, Unauthorized Colonies, Resettled Colonies etc. may be considered as slum dwellers.

Turner and Fichter (1972) observed that in the Third World Countries housing choice for the urban poors is very difficult and confusing. They have to solve a complex equation and try of optimize housing cost, tenure security, quality of shelter, journey to work and sometimes, personal safety. For some people including many pavement- dwellers, housing is more important than food (Turner, 1968).

In a more sophisticated analysis, housing expert Ahmed Soliman discusses for basic shelter strategies for the poors in Cairo (Soliman, 2004). First is access to job and renting an apartment; the second option is centrally located informal shelter (a very small room or rooftop). As there is no hope of securing tenureship, such dwellers will eventually forced to move to squatter camps or semi-informal housing. The third and cheapest housing solutions is to squat on public owned land, usually on Cairo's outskirts with almost absence of infrastructure. The fourth solution, eventually preferred by most poor Cairenes, is to move to the vast semi-informal settlements with legal tenure but without official building authorization. After a considerable community mobilization and political negotiation, they are usually provided with basic municipal services (Soliman, 2004)

The situation in the NCT, Delhi is not much different from the above two case studies but the latter seems closer to ours. Similarly in our country, the poor urban migrants after taking up job, their first decision is to find

a low-cost affordable or free housing in J. J. Clusters. Once their job becomes permanent or semi-permanent, they move to Unauthorized Colonies or Legally Notified Slums, in which at least some urban facility is available. With legal tenure some of them have been resettled on the outskirts of the city in which some basic amenities have been extended to them.

The latest survey reveals that out of the total population, in the NCT, Delhi, about three-fourth people live in sub-standard housing with a break-up of 1.2 millions in Regularized Colonies, 0.5 million in Unauthorized Colonies, 1.3 millions in J. J. Clusters, 1.2 millions in Resettlement Colonies, 0.5 million in Urban Villages, 0.5 million in Rural Areas and 1.8 millions in Slum Designated Areas (Ali and Singh, 1998). Based on the type, the settlements are entitled to basic amenities and other urban facilities. There are large number of settlements in which basic amenities are either absent or very minimum. For example Jhuggi- Jhonpri Clusters (JJ clusters), and other informal settlements in which only few basic infrastructure has been provided. Similarly there are some old villages which have come under the urban sprawl do not have sufficient infrastructural facilities. Only those settlements which have been developed by the government authorities or by the housing societies, have been provided basic amenities. Such a large variation in the nature of settlements with regards to the basic infrastructure and amenities the Economic Survey of Delhi (2002) classified them into eight types of settlements. They include, Jhuggi- Jhonpri Clusters (JJ clusters), Slum Designated Areas, Unauthorized Colonies, Resettlement Colonies, Rural Villages, Regularized-Unauthorized Colonies, Urban Villages, Planned Colonies. Out of the total, six of them have been designated as informal settlements in which more than half of the total population of the NCT, Delhi finds accommodation.

II. Objectives

Keeping in view of the various types of informal settlements, which are distributed across the city varying both in terms of their size and infrastructural facilities, the efforts in this paper have been made to study the following objectives.

1. To study the characteristics of informal settlements.

2. To study the zone-wise and constituency-wise distribution of slum clusters.
3. To highlight the discrepancy that exists between the secondary and primary data with regard to the number of clusters.

III. Database and Methodology

The paper is based on both secondary and primary data. The secondary data were collected from the JJ Department, Slum Wing of the Municipal Corporation of Delhi. The primary data were collected through field work conducted during 2006. Since the nature of the work does not require the use of any sophisticated statistical technique, only classification, tabulation was made. Percentages were also calculated wherever required. The entire South Delhi was covered during the field survey to find out how many slum clusters have been displaced and resettled and how many of them are still waiting for their turn to be relocated.

IV. Typology

Typology is an important aspect of study of residential settlements especially in urban area of the developing world having varied type of house structures and the availability of basic amenities in them. The scheme of typology may differ from one person to another depending upon the purpose of the study. For example Nangia and Thorat (2000) have classified four types of informal settlements in NCT, Delhi. They include Notified Slums, Unauthorized Colonies, Resettlements Colonies and Squatters (jhuggies). While Sharma (1998) have classified them into Illegal and Unauthorized Colonies, Historical Settlements (katras), Resettled Colonies, Urban Villages and Rural Village. Sabir Ali whose works are well-cited as far as the studies on slums of NCT, Delhi is concerned. Thus the authors have adopted his scheme of classification as he suggests that for the purpose of better understanding and research on slums, the following classification is more appropriate (Ali, 2003).

1. Unauthorized Colonies

Unauthorized colonies are those residential pockets, which have come up generally on private land developed by private colonizers. They have come up through an unplanned manner in violation of the Master Plan and

Zonal Plan Regulations. Though the buildings in these colonies are of concrete structures, they have been constructed without the authority's approved plans and, therefore, the planning norms of landuse restrictions and building norms of height and front and rear have not been followed. These colonies do not have proper road networks, drainage and sewage system, parks, playgrounds, community centres and other common facilities. The approaches of the government towards these colonies have been found purely ad hoc. Over the years many such colonies have been regularized, usually on political compulsions (Mitra, 2003). As such the authority levied for redevelopment of these colonies but it could succeed only partially because the rate of such charges or the recovery of the same was found far too inadequate to implement redevelopment plans. Thus, these colonies have been lagging far behind the pace of growth, making most of such colonies only marginally better than many slum resettlements colonies.

Unauthorized colonies are not as dense as the urban villages of the NCT, Delhi but do support higher order commercialization and home-base manufacturing units as well as dairy farming. As some of these colonies get regularized they become more attractive for residential rather than commercial use. Thus there is a high level of tenancy found in such colonies. They are again the results of the shortage of houses in planned residential colonies. According to the *Hindustan Times*, New Delhi, (dated 3rd July 2003) there are about 1,600 unauthorized colonies in the NCT, Delhi, out of which, 155 are handled by DDA, 44 by Slum Department and the remaining by MCD.

2. Urban Villages

Altogether there are about 106 villages mostly found on the outskirts of the NCT, Delhi, They were de-notified in 1985 as urban villages. As they are outside the jurisdiction of Municipal Corporation of Delhi (MCD) they have become urbanized in a haphazard and unplanned manner. Therefore these areas are devoid of the facilities of assured potable water, surface drainage system and sanitation arrangement. Due to the proximity with urban centers the rural character of these villages in terms of land use pattern and occupational structure has undergone drastic changes. The real estate contractors/builders and developers/speculators have acquired large tract of land

in these villages and buildings were constructed in an unplanned and haphazard manner. As a result, the original habitants have either migrated to the city or switched over the tertiary occupation, while the new settlers have changed the demographic character of these urban villages. The ill-planned construction in these localities has made a difficult task for the authorities to extend urban amenities in a proper way.

Since urban villages are over crowded, dense with unchecked, unplanned building activity, they accommodate tenants both for residential and higher order commercial activities. Home based manufacturing units are common and the areas have high levels of tenancy. Dairy farming activities are common in the area.

3. Legally Notified Slum Areas

The notified slums are those, which have been declared/notified as slum areas under section 3 of the Slum Areas (Improvement and Clearances) Act, 1956. Under this Act those areas of the city where buildings are unfit for human habitation by reasons of dilapidation, overcrowding, faulty arrangement and design or where due to faulty arrangements of streets, lack of ventilation, light sanitation facilities, or any combination of these factors the living environment are detrimental to safety, health or morals. The major proportion of such notified slums are found in the medieval walled city of Shahjahanabad and its extensions, which was originally meant to accommodate sixty thousand population, but where an estimated two million population is now living. Neither the provisions of Slum Areas Act nor the Master Plan for the walled city have been implemented since the

city was overtaken by problems of a different magnitude, which were created by the unending waves of fresh migrations and therefore the old city was left to fend for itself, leading to further deterioration of its living conditions (Ali and Singh, 1998).

4. Jhuggi-Jhonpri Clusters

These are the slum clusters or squatter settlements, which have come up illegally on public or private lands all over the city to accommodate the poor migrants from the rural areas. These squatter settlements are made of straw, mud loose bricks, tin, wood corrugated sheets etc. Without a regular foundation, jhuggis are not arranged in a particular order (Nangia and Thorat, 2000). The numbers of such squatter settlements have consistently been on the rise despite the efforts made to demolish and/or resettle them. As per the last survey made by the Slum and JJ Department of Municipal Corporation of Delhi in 1994 there were 480,000 households in 1,080 slum clusters in the Capital Territory (refer to Table-1). The MCD has not conducted any survey after 1994 to discourage fresh registration of new slums, but unofficial surveys indicate that their numbers have proliferated nearly double that number during the last decade.

Unlike Kolkata or Mumbai, the NCT, Delhi does not have large slum settlements in specified areas. Historically slum pockets in Kolkata and Mumbai have developed near large factories and mills during the colonial period and over the years these have got further extended and densified, but in the Capital Territory these are scattered all over the city in small settlements, usually along the railway tracks and roads, river banks, parks,

Table 1 Size of slum squatter settlements

Class Size of Jhuggies	No. of Clusters in 1990	%	No. of Clusters 1994	%
50 or less than 50	496	53.39	227	21.02
51-100			169	15.65
101-200	231	24.87	181	16.76
201-300			103	9.54
301-500	80	8.61	125	11.57
501-1,000	59	6.35	101	9.35
1,001-1,500	30	3.23	49	4.54
1,501 and above	33	3.55	63	5.83
Size details not available	—	—	62	5.74
Total	929	100.00	1080	100.00

Source: Slum Wing, MCD, New Delhi

public places and other vacant lands, which make the task of in-situ rehabilitation quite difficult and cost ineffective.

5. Resettlement Colonies

As the name suggests resettlement colonies, comprise of JJ cluster households that have been resettled from their original settlements. The first resettlement programme was carried out in 1961 and subsequently many JJ clusters have been shifted to resettlement colonies.

A total of 46 clusters have been resettled mainly on the outskirts of the city for about 216,000 squatter families. These colonies suffer from various infrastructural inadequacies like water supply, sewerage, drainage, garbage disposal, electricity, schools, hospitals, roads etc. A survey conducted by the Council for Social Development indicates that half of the families do not have individual water connections or toilet facilities and have to depend on community latrines and bath rooms which are either so inadequate or maintained so poorly that many of the residents defecate in the open. The system of solid waste disposal is extremely unsatisfactory and hardly 30% of the waste is collected for disposal. The experiences of rehabilitation of squatter families from the city heartlands to these outskirt settlements have not been uniform. The proximity of some of the colonies to the new work centers made them success stories, but most of these colonies are so far away from the places of work that about thirty to forty percent of the squatters returned to the slums for employment. 'Livelihood rather than habitation' was a priority for the poor squatters who found it more convenient to sell their plot at a premium and come back near their places of work in new slum settlements. In some of the resettlement colonies fresh squatter settlements have come up on the open and public land, giving rise to a phenomenon that has been described as 'slums within slums' (Ali, 2006).

6. Pavement Dwellers and Harijan Bastis

Pavement Dwellers are those squatters who don't have even a roof over their head. On the other hand the Harijan Bastis are those unauthorized colonies, which are inhabited by the low caste families (Ali, 2003). It is estimated that about 70,000 people live on the pavements in busy market places in the Capital Territory, where they

work as wage earners. They are mostly adult male workers who have left their families back in their villages. They cannot afford to commute from a distance since their earning is meager. In an attempt to reduce their communication cost they settle in an around their work places (Mitra, 2003). They are mostly load carriers, porters, shoe-shine boys, rag pickers and other types of odd workers. They are mostly concentrated near the railway stations, inter-state bus terminus, wholesale markets and transport depots. The Harijan Bastis

V. Spatial Distribution of Slums

Distribution of slums is influenced by factors like availability of government open land, nearness to workplace, access to transport facilities, etc. These are some of the major factors responsible for location of slums (hutment areas) in different parts of the National Capital Territory of Delhi. Most slum areas are located in low lying areas and in areas where the chances for the residents to stay is high without the threat of eviction. Some of the slums have been developed along roads and railway margins for easy access to work place. Many slum settlements are also situated along the Yamuna river embankments (Pushta). It is to be remembered that slum squatters contribute a significant share of labour force to urban labour market and generate adequate income for urban economy but the slum dwellers are denied the very basic amenities for their sustenance (Nangia and Thorat, 2000). In the absence of drinking water and sewerage and sanitation facilities in slums creates serious environmental problems to the people (Kundu, 1991).

According to the survey conducted by the Slum Wing of the Municipal Corporation of Delhi in 1994, it was found that about 75% of the slum clusters in the Capital Territory have 500 or less jhuggies and only 10.5% have more than 1,000 jhuggies. The strength of the squatter settlements as per their size classification has been provided in Table-1 for a detailed analysis. A unique characteristic of the slum squatter settlements in the NCT, Delhi is that the majority of them are small in size as show in Table-1 and they are scattered all over the Capital Territory.

The type of house people live in is an important determinant of the quality of life (Methew, 1987). The type of materials used in the construction of houses, they are classified into *pucca*, *Semi-pucca* and *Kutchha*.

Information regarding the housing of squatter settlements in NCT, Delhi reveals that more than half (52.6%) of the juggies are kutcha, one-fourth (25.5%) are semi-pucca and only 22% are pucca houses (Nangia and Thorat, 2000). These settlements are generally formed along lines of regional, linguistic and caste affiliations, though there exists many clusters heterogeneous in character (Chakravarti, 2002 and Chug, 2004).

The distribution of slum in the National Capital Territory of Delhi can be classified into the following zone in order to understand the nature of their concentration and also for the purpose of a comparative study.

1. The South Zone

There exists the largest concentration of squatter settlements in the South Zone. It had 282 clusters in 1990-91 with a population of 435,175 persons living in about 87,000 jhuggies with an average of 308 families in each cluster. In 1994 the total number of clusters has gone up to 389. These constitute approximately 30.49% of the total number of squatter families in the NCT, Delhi. The reasons for higher concentration in this zone are: predominance of high income residential neighborhoods; many important/major commercial centres; proximity to Okhla Industrial Estate; major national level educational and research institutions and massive construction activities.

2. The North Zone

It has the second largest concentration of squatter clusters having 300 clusters constituting about 23.51% to the total squatter families. During 1990-91, it had 227 clusters with a total population of 329,505 persons living in about 66,000 jhuggies with an average of 290 families in each cluster. This zone is predominantly middle and low income residential colonies with a large scale industrial establishments particularly Karol Bagh and Anand Parbat are major trade centres.

3. The Central Zone

It is the CBD and having the location of most of the Central Administrative Offices. With an organized and controlled developed zone as well as lack of unorganized/unusual open space, this zone does not provide favourable place for squatter settlements. In 1990-91, this zone had 92 clusters with a population of 109,385 persons living

in 21,877 jhuggies with an average of 237 families in each cluster. Altogether there were 127 cluster recorded in the Central Zone in 1994 constituting about 9.95% of the total squatter families of the Capital Territory living closer to railway station and other areas in scattered manner.

4. The East Zone

This zone is also having a higher concentration of squatter families as compared to the central zone. In 1990-91 it had 123 clusters which have gone up to 190 in 1994 constituting about 14.89% of the total clusters. The average household in each cluster was 341. The concentration of squatter families in this zone is high due to: predominance of land use for residential purpose with a mix of high, middle and low income groups and they are both planned and unplanned in nature; availability of large open lands which are not properly managed; existence of scattered commercial and industrial developments; and large scale resettlement colonies established since 1960.

5. The West Zone

It has low concentration of squatter settlements as compared to the North and South Zones but has the higher concentration than the East and the Central Zones. It had 204 number of squatter settlements with an average of about 209 families in each cluster. The number of clusters has increased to 270 in 1994 constituting about 21.16% of the total clusters in the NCT, Delhi. Large concentration of clusters is mainly due to the availability of open land in this zone (Table-2 and Fig. 1).

Please note that there exists some discrepancy in the total number of clusters recorded by Srirangan and the figure provided by the Slums Wing, MCD, for 1990-91 and 1994. It is to be noted that Srirangan recorded 1,276 clusters while the Slum Wing of MCD registered 1,080 clusters during 1994. It means the difference between these two recorded figures is 196 clusters. But such a large variation does not appear in recording the slum clusters for the period of 1990-91.

While analyzing the distribution of JJ clusters constituency wise, it is found that only 20 constituencies out of 70 in the Capital Territory of Delhi are having 44% of total JJ clusters constituting 63% of total

Table 2 Spatial distribution of slum squatter settlements in Delhi

Zone	Number of clusters in 1990-91	Number of Jhuggies in 1990-91	Squatter population in 1990-91	Number of clusters in 1994	%
East Zone	123	41,958	209,790	190	14.89
Central Zone	92	21,877	109,385	127	9.95
North Zone	227	65,901	329,505	300	23.51
West Zone	204	42,573	212,865	270	21.16
South Zone	282	87,035	435,175	389	30.49
Total	928	259,344	1,296,720	1,276	100.00

Source: Adapted from Srirangan (1997)

**Figure 1 Zone-wise distribution of slum clusters in N.C.T., Delhi 1991-1994**

Source: Adapted from Srirangan (1997)

jhuggies of the NCT of Delhi (Ali and Singh, 1998). The following Table-3 indicates that Badarpur Constituency is having the highest number of jhuggies (404,329) while Adarsh Nagar and Wazirpur occupy the second and third positions with 23,621 and 22,915 jhuggies respectively. It also indicates that there are five constituencies belonging to South Delhi together having 132 clusters with 4,48,580 jhuggies.

VI. Case Study

South Delhi District, having with the largest

construction of slums clusters in the NCT, Delhi has been selected for the field survey. According to Slum wing estimates altogether there were 245 clusters with a total number of 82,010 jhuggies in 1990. The distribution of these jhuggies has been shown constituency-wise in the following Table-4. The table also indicates that Badarpur Constituency had the highest number (60) of slum clusters followed by Okhla (31), Jangpura (29), R.K. Puram (26) and Hauz Khas with 20 slum clusters. The remaining constituencies had less than 20 slum clusters each (Table-4).

Table 3 Constituencies having higher number of jhuggies in 1994

S.No.	Name of Constituency	Number of JJ clusters	Number of Jhuggies
1	Badarpur*	60	404,329
2	Adarsh Nagar	35	23,621
3	Wazirpur	27	22,951
4	Minto Road	46	18,842
5	Moti Nagar	39	16,136
6	Sahibabad Daultpur	7	14,533
7	Bhalswa Jahangirpuri	25	14,300
8	Tuglaqabad*	17	13,404
9	Gole Market	39	13,061
10	Badli	14	13,018
11	Patel Nagar	11	12,817
12	Seelampur	12	12,065
13	Geeta Colony	14	11,975
14	Okhla*	33	11,785
15	Matia Mahal	4	11,485
16	Model Town	30	11,458
17	Seemapuri	18	11,246
18	Mahipalpur	22	10,518
19	Saket*	2	10,344
20	Hauz Khas*	20	8,718
	Total	475	666,606

Note: *South Delhi Constituencies

Source: Slum and JJ Department, Municipal Corporation of Delhi

Table 4 South Delhi-distribution of slum Clusters and jhuggies

Name of the Constituency	Slum Clusters (1990)	No. of Jhuggies (1990)	Slum Resettled till 1994	New Slum Found (1994)	Total Clusters (1994)	No. of Jhuggies (1994)
Sarojini Nagar	11	1,905	1	—	10	3,108
Nizamuddin	8	2,381	4	—	4	1,355
Kasturba Nagar	7	1,149	3	—	4	361
Jangpura	29	5,926	3	—	26	5,042
Okhla	31	8,247	7	2	26	4,683
Kalkaji	9	2,573	0	1	10	3,949
Malvia Nagar	13	1,406	2	—	11	1,657
Hauz Khas	20	5,635	5	—	15	3,927
R. K. Puram	26	4,898	2	6	29	4,719
Mehrauli	8	1,822	1	—	7	2,041
Saket	2	7,571	1	—	1	10,000
Ambedkar Nagar	4	1,662	0	—	4	1,724
Tughlaqabad	17	9,788	0	—	16	13,497
Badarpur	60	27,047	5	—	53	37,238
Total	245	82,010	34	9	216	93,301

Source: Slum Wing, Municipal Corporation of Delhi-1994

Under the rehabilitation programme, 34 JJ clusters from the South Delhi District were evicted from their original sites and rehabilitated on the outskirts of the Capital Territory. As a result the number of JJ clusters have gone down from 245 in 1990 to 207 in 1994. But it is to be noted that another nine new slums clusters have come up in South Delhi District between 1990 and 1994. As a result the number of Slum clusters has increased

from 207 to 216 (207+9=216) with a total number of 93,301 jhuggies (Table-4).

The Survey Report of ICSSR, New Delhi which was submitted by M. Ishtiyag found that till 2006, eleven more JJ clusters were rehabilitated at the new sites. Thus the number of JJ clusters further reduced to 205. But at the same time 30 slum clusters were not found in existence. On the other hand another 29 slum clusters

have been evicted by the administration and they have not been rehabilitated as yet. As such the number clusters has further reduced to 146($205-(30+29)=146$). The respondents during the field work replied that as many as eight new slum clusters have come up between 1994 to 2006 in the district. As a result the total number of the slum of clusters rose to 154 ($146+8=154$) with a total number of jhuggies of about 111,150 (Table-5).

Variation that exists between the official recorded figure of slum clusters and the field work conducted by researchers or any private agency is bound to take place as the approach in collection of data varies from person to agency and the authority. It is a normal tendency of the respondents here to avoid or conceal many serious questions asked by the government authority. On the other hand if researchers approach them with a personal touch, the respondents happily oblige the researcher and speak critically with open mind. Sometimes the respondents exaggerate the fact especially when they expect funds during the development plans from the authority or relocation of their clusters. It seems that the thirty clusters which were not found in existence in the district during the field survey but they were recorded by the authority may be an outcome of such an exaggeration. As far as eight new clusters are concerned which have come up recently, they did not get entry in the government record as the authority has stopped registering new clusters to discourage their growth and also to avoid the

burden of their relocation.

VII. Conclusion

The NCT, Delhi out of its eight type of settlements, does not have more than two type of formal settlements. As many as six types of settlements are informal ones. It is pertinent to point out here that some of the slum clusters have occupied prime piece of land which are meant for the construction of government offices, hospitals, educational institutions and the development of parks etc. The authorities have been displacing these slum clusters for the above mentioned purposes. As per the official record and consequently the findings of the filed study revealed that not all these slum clusters were fortunate to find relocation. Few of them were relocated but at a far distant places from their original site while many others still waiting the priority list of rehabilitation. It was also found that many slum dwellers in the relocated colonies have sold out their plots allotted to them by the authority as the relocated sites did not suit to them. Consequently they moved to the nearby to their work place and new clusters have come up there Ishtiyaq (2007). It is unfortunate to note that in spite of a huge expenditure incurred in the name of development of slums the efforts of the authority could not bring much change the destiny of slum dwellers.

The slum clusters are spread over in every part of the city while their size varies from one corner to

Table 5 Distribution of jhuugis and slum cluster in 2006 (South Delhi)

Name of the Constituency	Rehabilitation after 1994	Slum Clusters (2006)	Slum displaced but not rehabilitated/ Slums Not Found	Slum New Found	Total Clusters	No. of Jhuggies*
Sarojini Nagar	2	8	4	-	4	1,800
Nizamuddin	-	4	2	3	5	7,000
Kasturba Nagar	-	4	1	-	3	350
Jangpura	2	24	3	1	19	4,800
Okhla	-	26	10	-	16	6,300
Kalkaji	-	10	3	-	7	3,500
Malvia Nagar	-	11	2	-	9	2,900
Hauz Khas	4	15	6	-	9	3,600
R. K. Puram	-	25	5	-	20	8,100
Mehrauli	-	7	2	2	7	8,000
Saket	-	1	-	-	1	10,000
Ambedkar Nagar	-	4	1	-	3	1,700
Tughlaqabad	-	16	5	1	12	13,100
Badarpur	3	50	12	1	39	40,000
Total	11	205	59	8	154	111,150

Note: * The researchers have collocated this figure during field survey. These may be considered as the factual number of Jhuggis.

Source: Based on Field Survey conducted by the authors in 2006.

another. The concentration of slums is found less in the Central Zone and prominent in peripheral zones especially in South, North and West Zones. The conditions of Unauthorized Colonies are not much different from Juggi- Jhonpri, Harijan Basti and resettled colonies as far as basic amenities and other infrastructural facilities are concerned. All these six informal settlements types lack proper electricity, sewer system, supply of water, sanitation etc.

The NCT, Delhi being a metropolitan city, its economy is likely to be affected by the globalisation and liberalisation and subsequent increase in the employment opportunity which will further accelerate the pace of rural migration. This, in turn would lead to further increase in the population living in slums as the slums are often the first stopping point for the poor rural migrants that provide low-cost affordable housing.

Although slum cluster perceived as socio-economic and environmental menace to the urban habitat, it plays an important role in building the city economy, particularly through their works in the informal sector, which is a vibrant support to the city economic system. They should not be considered merely the victims of dire poverty but should be seen as dynamic agents capable of accepting challenges posed by urban environments (Dupont, 2000). Thus, urban policy needs to find ways of integrating slum clusters into the city's formal settlement system and ensuring that these settlements have access to basic services.

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[References]

Ali, S. (2003): *Environmental Situation of Slums in India*. Uppal Publishing House, New Delhi.

Ali, S. (2006): *Managing Slums in Delhi*. Sabir Ali ed.: *Managing Urban Poverty*, Uppal Publishing House, New Delhi, 432-517.

Ali, S. and S. N. Singh (1998): *Major Problems of Delhi Slums*. Uppal Publishing House, New Delhi.

Bose, A. (1995): *Urbanisation and Slums*. Prodipto Roy and S. D. Gupta ed.: *Urbanization and Slums*, Har-Anand Publication, New Delhi, 19-42.

Chakravarti, D. (2002): *Delhi's Ongoing Debate on Informal Settlements and Work Places- Issues of Environmental Jurisprudence*. *Economic Survey of Delhi*, Government of Delhi, 2001-02.

Chugh S. (2004): *Why Children Drop Out? Case Study of a Metropolitan Slum*. Bookwell New Delhi.

Centre for Urban and Regional Excellence (2005): *Draft Final Report 2005*. (<http://www.cureindia.org>).

Dupont, V. (2000): *Spatial and Demographic Growth of Delhi and the Main Migration Flows in Delhi*. V. Dupont, E. Tarlo, and D. Vidal eds.: *Urban Space and Human Destinies*, Manohar Publisher, Delhi, 229-240.

Planning Department, Government of Delhi (2002): *Economic Survey of Delhi*, Urban Development. (<http://www.delhiplanning.nic.in>)

Ishtiyag, M. (2007): *Displacement and Rehabilitation of Migrant Workers in Informal Sector: A Case Study of South Delhi District*. A Project Report submitted to ICSSR, New Delhi.

Jha. S. S. (1986): *Situation of Urban Poverty: The Case of Bombay Slums*. Popular Publisher, Mumbai.

Kundu, A. (1991): *Micro-Environmental in Urban Planning — Access of the Poor to the Water Supply and Sanitation*. *Economic and Political Weekly*, 26(37), 2167-2171.

Mathew, T. (1987): *Economic Aspects of Housing*. *Financial Express*, 30th December.

Mitra, A. K. (2003): *Occupational choices, Networks and Transfers: An Exegesis Based on Micro Data from Delhi Slums*. Manohar Publishers, Delhi, 21-24.

Nangia S. and Thorat S. K. (2000): *Slum in a Metropolis — The Living Environment*. Shipra Publication, Delhi.

Reddy, A. M. (1996): *Slum Improvement*. M. S. Publication, Delhi.

Sharma, S. (1998): *Management of Urban Water Services in Delhi: A Conceptual Framework and Applications, an Unpublished Thesis for Master (Honors) Programme at the Graduate School of Environment*. Macquarie University, Sydney.

Srirangan, K. (1997): *Public Land and Property Development and Cross-Subsidization for Low-Income Housing in Delhi*. *Draft Final Report*, March 2000.

Soliman, A. (2004): *A Possible Way Out: Formalizing Housing Informality in Egyptian Cities*. University Press of America, Inc., Maryland.

Turner, J. (1968): *Housing Priorities, Settlement Patterns and Urban Development in Modernizing Counties*. *Journal of the American Institute of Planners*, 34, 354-63.

Turner, J and R. Fichter (eds.) (1972): *Freedom to Build: Dweller Control of the Housing Process*. Macmillan, New York, 148-175.

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