

PART II

# JHUGGI JHONPRI SETTLEMENTS IN DELHI

A SOCIOLOGICAL STUDY OF LOW-INCOME MIGRANT COMMUNITIES

SOCIOLOGY DIVISION :

TOWN AND COUNTRY PLANNING ORGANISATION

MINISTRY OF WORKS AND HOUSING, GOVERNMENT OF INDIA

NEW DELHI

APRIL, 1975

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## PREFACE

The urbanising of millions of rural migrants does not imply only physical movement of people from villages to cities but also involves changes in their pattern of economic activity, network of social relations, life-styles, values and the living environment. This study of the low-income migrant communities living in the squatter settlements in the metropolis of Delhi, undertaken by the Town & Country Planning Organisation, is an attempt to inquire into the characteristics of the process of their socio-economic transformation and incorporation in the social, economic, and physical system of the city in the context of the emerging pattern of urbanisation in India.

The first part of the study brought out in October 1973 focussed attention on the settlement pattern of squatter communities, their magnitude and locational characteristics. The second part of the study is based on a field survey of 21,000 families in the 103 sample squatter settlements and deals with the socio-economic life of the inhabitants of the squatter settlements, their physical environment and the relationship between their social structure, life-styles and spatial organisation. It examines the nature of adaptation and adjustment to and identification

with values of urban living, the emerging pattern of changes arising from interaction between modern and traditional and folk social and cultural patterns, their income and occupation characteristics and the extent of mobility, the extent of contribution made to the social and economic development of the city, and the environmental quality of their residential areas in which they live and grow. In brief, the living environment of the low-income communities is seen in its totality and in its interactive context of social, economic and environmental factors instead of itemised segments of their situation in the city. The study has also suggested a framework of integrated social and environmental development action programme based on the improvement of the quality of human resources and the mobilisation of community resources and effort aimed at upgrading the existing squatter settlements and restraining the proliferation of such settlements.

There has been a rapid growth in urban population during the last decade. All indications in the present show that pace of urbanisation will be further accelerated in the subsequent decades. Much of this growth has been and will be so in future due to rural-urban migration. It is not simply that the population of the cities has been increasing but that their socio-economic structure and the physical

environment is being altered rapidly leading to the emergence of the new social groups, and a new pattern of social fabric. Planning and development of urban environment must therefore respond to the changing pattern of urban society and its future direction, and consciously oriented to the social needs of the great majority of urban dwellers so that it ensures a minimum acceptable living environment to all. This would imply a greatly increased supply of low-cost settlements supported with all necessary physical facilities, social services and community facilities needed for establishing viable communities and aimed at redistributing housing opportunities in favour of the low-income groups and weaker sections of the community.

The present study has analysed the various issues involved in devising a development action programme for low income communities and weaker sections of the society and provides a methodology to plan similar studies in other cities. It is hoped that this study will be found useful by policy makers and planners involved in urban development in developing strategies and programmes of action for social development of the urban poor.

4.8.1975.

*Cs Chandrasekhara*  
( C.S. Chandrasekhara )  
Chief Planner

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	<u>Page</u>	<u>Line No.</u>	<u>Read</u>	<u>For</u>
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	27	2	It	In
	30	5	organised	unorganised
	32	11	see household	see households
Chapter II.	36	1	greater proportion	greater percent
	39	14	majority in the city	majority of rural migrants in the city
	43	8	for machinery	for machinery
	54	columns of table	1.5 to 2.5 Kms & so on	2.5 Kms.
	69	9	meandering	meandering
	73	5	94 percent	92 percent
	73	6	3 percent	5 percent
Chapter III.	81	10	730 females over 1000 males	730 females 1000 males
	106	3	excluded	included
	114	16	average with	average household
	116	7	Appendix D	Appendix
	142	2	The squatters	The squatter
	144	15	Rs.200	Rs.300
Chapter IV.	166	15	workers who	workers and
	169	8	The proportion	In proportion
	171	11	However in	However is
	180	6	unhygienic	inhygienic
	199	15	reorganise	recognise
	201	3	schooling and	schooling a
Chapter V	205	10	there are hawkers	there hawkers
	217	11	they emphasise	they emphasises
	218	8	ever shifting	over shifting
	218	10	they may be	then may be
	225	3	point for	point fo
	256	18	integration of	integration to
Chapter VI	269	17	community latrines	community facilities
	279	7	1,42,000	14,000
	281	8	sites	sited
	285	13	from other	from the
	290	1	achieving its	achieving it
	290	1	unless it	unless its
	313	Col.third	1 Km or	1 Km are
	313	Col.third	7 Km or	7 Km are
	322	3	would be to	would to
	343	14	Rs.52 million	Rs.250 million
	344	2	Rs. 250 million	Rs. 360 million
	359	15	immunisation	innusation
	360	10	support at	support of

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A P P E N D I X - A

SAMPLING DESIGN AND ESTIMATION PROCEDURE

In the first phase of survey operations cluster units scattered all over the area were spotted and number of jhuggies in each were enumerated. Some information on socio-economic predominant group characteristics such as occupation age of the cluster, regional background of jhuggi dwellers and the caste and religion were also collected

Demarcation of strata and sub-strata

The cluster units were classified into five classes according to size. 'Size' here means the number of jhuggis in a cluster. The five size classes are : 10-50, 51-100, 101-300, 301-1000 and above. Within each size class the cluster units were further sub-classified into occupational groups. The seven occupational groups are : construction labour, quarry worker brick kiln labour, service occupations and cultural trades, manual workers in the organised sector, and manual workers in the unorganised sectors and mixed occupation.

The sampling Design

A two stage stratified random sampling technique has been applied for selection of sample units and building up of the estimates therefrom. At the first stage a cluster of jhuggies has been taken as a sampling unit and at the second stage a household within a selected cluster unit has been taken as a sampling unit.

determination of sample size and allocation of sample units at the first stage

ize of a cluster unit has been taken as the value of the characteristic for determination of sample size. In the first instance with an idea of proportional allocation of sample units between and within strata the sample size was worked out according to the specifications of 95% accuracy in the overall estimate within 95% probably limits. The size for such an allocation and precision works out as 395 cluster units. On consideration of the lead of work such a big sample size did not seem feasible. It was therefore decided to drop the idea of proportional allocation between strata and to bring down the precision limits as below :

Within 95% probability limits a minimum accuracy of 90% at each stratum level and an accuracy of 90% or more in the overall estimate. The units between sub-strata within a stratum were to be allocated proportionally. The sample size for each stratum was worked out independently.

the method followed is as under

The desired variance in the estimate at the stratum level was computed by the formula

$$V_h = d^2/t^2$$

where :

$V_h$  is the desired variance for the hth stratum

$d$  is the 10% deviation value of the average size of a stratum

$t$  is the 95% probability normal deviate = 1.96

$n_h$  sample size at the stratum level for proportional allocation of unit between sub-stratum

$n_h$  is worked out by the formula :

$$n_h = \frac{\sum_{j=1}^7 W_{hj} S_{hj}^2}{V_h + \frac{1}{N_h} \sum_{j=1}^7 W_{hj} S_{hj}^2}$$

where

$n_h$  is the sample size for the  $h$ th stratum.

$N_{hj}$  is the number of cluster units in the  $j$ th occupational group of the  $h$ th stratum

$N_h$  is the total number of cluster units in the  $h$ th stratum

$$W_{hj} = \frac{N_{hj}}{N_h}$$

$$S_{hj}^2 = \frac{1}{N_{hj}-1} \sum_{i=1}^{N_{hj}} (x_{hji} - \bar{x}_{hj})^2$$

$x_{hji}$  is the size of  $i$ th cluster units in the  $j$ th occupational groups of the  $h$ th stratum.

$$\bar{x}_{hj} = \frac{1}{N_{hj}} \sum x_{hji}$$

$$\text{Total sample size } n = \sum_{h=1}^5 n_h$$

The computational results are as under :

TABLE NO. 1

Size Class	Nh	Vh	$\sum_j$	Whj Shj <sup>2</sup>	$\frac{1}{Nh}$	Whj Shj <sup>2</sup>	nh	nh/n
Below 50	808	2.33		115.92		0.143	41	0.345
51 - 100	280	12.76		167.13		0.590	30	0.252
101 - 300	191	71.03		3157.00		16.50	35	0.294
301 - 1000	81	6,387.50		48714.35		601.00	10	0.084
1001 & above	13	10,312.70		40,209.53		3093.81	3	0.025
	1373	-		-		-	119	1.000

Accuracy limits in respect of size classes 2, 3 & 4 have been kept higher than 90% within the 95% probability limits. The variance level ( $V_h$ ) in respect of size code I has been kept a little higher. However a sample size of 41 in respect of this size group has been considered sufficient to give complete information about the socio-economic factors under study.

Computations for precision in the overall estimate

With the  $n_h/n$  ratios as computed in table No. 1 the computations for variance of the overall estimate and its accuracy level have been worked out by the formula.

$$V = \sum_{h=1}^5 \frac{W_h S_h^2}{n_h} - \frac{1}{N} \sum_{h=1}^5 W_h S_h^2$$

Computations are given in Table No.2 below

TABLE NO.2

Size class	Nh	$Wh = \frac{Nh}{N}$	$Sh^2$	$WhSh^2$	$Wh^2 Sh^2$	$\sum_{h=1}^5 \frac{Wh^2 Sh^2}{nh}$
Below 50	808	0.59	142.5	84.05	42.035	1.025
51 - 100	280	0.20	174.0	34.80	6.960	0.232
101 - 300	191	0.14	3489.0	488.46	68.384	1.953
301 - 1000	81	0.06	41,061.0	2463.71	149.393	14.939
100 & above	13	0.01	76,266.0	762.66	7.526	2.542
	1373	1.00	-	3833.68	274.398	20.691

$$\frac{1}{N} \sum_{h=1}^5 W_h S_h^2 = \frac{1}{1373} \times 3833.68 = 2.79$$

$$V = 20.691 - 2.792 = 17.899$$

$$s = \sqrt{17.899} = 4.23$$

$$d = t_s = 1.96 \times 4.23 = 8.2908$$

8.2908 is 8.033% of 103.2 the overall average size of a cluster unit in the universe. This sample size of 119 under the above allocation scheme would provide the overall estimate with 92% of accuracy within 95% probability limits.

Tables showing the distribution of sampled jhuggi-clusters and their jhuggis according to caste groups, regional background age, occupation, size groups, and planning divisions according to Delhi Master Plan.

	C A S T E G R O U P S										
	Hindu Upper Castes	Hindu Inter- mediary Castes	Hindu Lower castes	Lower & Inter- mediary castes	Lower & Upper castes	Inter- mediary & Upper castes	Upper, Inter- mediary & Lower	Muslims	Other Irrelig- ious groups	Mixed relig- ious groups	Total
Clusters	4	4	67	8	11	2	14	1	-	4	11
Jhuggis	200	110	9560	474	1632	201	5270	156	-	4593	221

	R E G I O N A L B A C K G R O U N D										
	Rajasthan	U.P.	Haryana	Mixed of adjo- ining states	Southern Region	Eastern Region	Central & Western	Mixed	Refugees	Delhi	Total
Clusters	30	25	3	43	1	1	2	7	3	1	119
Jhuggis	3267	1923	776	14359	266	168	94	1050	1271	12	22196



A G E G R O U P S							
	1951 & before	1952-56	1957-61	1962-66	1967-71	1972 & After	Total
Clusters	19	8	19	24	30	19	119
Jhuggis	8203	1338	3452	3826	3579	1798	22196

OCCUPATIONAL BACKGROUND

OCCUPATION GROUPS								
	Const- ruction workers	Quarry workers	Brick kiln workers	Service occupat- ion and traditional trades	Manual workers in org- anised sector	Manual workers in unor- ganised sector	Mixed group	Total
No. of clusters	23	2	21	10	9	9	45	119
No. of jhuggis	2406	1295	1498	834	2090	702	13371	22196

P L A N N I N G D I V I S I O N S										
	A	B	C	D	E	F	G	H	R	Total
No. of clusters	7	2	10	30	4	22	11	7	26	119
No. of jhuggis	1220	4457	1264	4978	275	5172	1002	775	3053	22196

---

SIZE OF CLUSTERS						
	50 or below	51-100	101-300	301-1000	1001 +	Total
No. of clusters	41	30	35	10	3	119
No. of jhuggis	1105	2113	5833	6069	7076	22196

---

A P P E N D I X - B

JHUGGI JHONPRI CLUSTER OBSERVATION SCHEDULE

Name of the cluster ..... Name of the investigators

Cluster No..... 1.....  
 2.....  
 3.....

(i) LAND

Area of the cluster Length (i) .....M (ii) .....M (iii).....M Total Area ..... S  
 Breadth .....M .....M .....M

Open land around the cluster, its approximate size and discription and its use by the cluster d

(ii) OWNERSHIP OF THE LAND

M.C.D.	N.D.M.C.	D.D.L.	Cantonment	Railways	Central	Private	Trust	Gram	Any other
		Delhi			Govt.			Panchayat	
		Admn.							

(iii) TYPES OF THE LAND

Plain	Hillock	River Bed	Low Lying	Railway Line	Storm water drain	Any of
-------	---------	-----------	-----------	--------------	-------------------	--------

(iv) COMMITTED OR PROPOSED USE OF THE LAND

Residential	Commercial	Industrial	City open green	Park or community facility in built up area	Roads foot paths	Open land for safety	Nil
-------------	------------	------------	-----------------	---	------------------	----------------------	-----





(iii) Jhuggi pattern of the cluster

Rectangular	Square	Nil	Any other (Describe)
Chowk	Streets with Js. on both sides	Nil	Any other (Describe)

(iv) JHUGGI DIMENSIONS (If different type for more than one Jhuggi)

Jhuggi (i) Length .....metres Breadth ..... metres Height.....

Jhuggi (ii) .....metres ..... metres .....

Area of open private space in front of jhuggi (i) ..... Sq. metres

(ii) ..... Sq. metres

CLUSTER TYPE

(i) 

Temporary	Permanent
-----------	-----------

If temporary give expected duration

'Less than six months	'Less than one year	'Less than 2 years	'Not known'
-----------------------	---------------------	--------------------	-------------

Check one of the following :

No. of Jhuggis have not changed for last two years or since the cluster started.

No. of jhuggis have increased during last two years or since the cluster started.

No. of jhuggis have decreased for last two years or since the cluster started.

(ii) Whether formed by uprooting of the cluster from some other site? Yes/No

If yes	Self choice	Work on previous site over	Private Authority Demolition	Public Authority Demolition
--------	-------------	----------------------------	------------------------------	-----------------------------

(iv) Has the structure of Jhuggis improved over years? Yes/No

If yes, check the improvement :

From	Mud wall and thatch roof	Khokha	Brick and mud wall thatch roof	Brick and mud wall
To	Pacca	Brick & Mud wall & thatch	Brick & mud wall and asbestos roof	Khokha

LIVING ENVIRONMENT

(i) WATER

	Wells	Hand pumps	Public taps	House connections	If not available in the cluster source from wher people get water
No. working					.....
No. out of working order					.....
Total					.....

(ii) ELECTRICITY

No. Electric poles ..... No. house connections..... Any other arrangement of lighting .....

PUBLIC LAVATORIES

	MALE	FEMALE	TOTAL
No. seats (water borne)			
No. seats (dry)			

Any other alternate arrangement by the residents, with difficulties.

BATH ROOMS

	MALE	FEMALE	TOTAL
No. with availability of water (tap)			
No. without arrangement of water			

Any other alternate arrangement by the residents with difficulties.

SANITATION

Describe : Street cleaning system .....

Garbage disposal system .....

AVAILABILITY OF STREET PAVEMENT      Yes/No      If yes  
Percentage paved of total streets

0-25%	25-50%	50-75%	75-100%
-------	--------	--------	---------

DRAINS      Availability of cemented or pacca drains      Yes/No      If yes, percentage of total drains in the cluster

0-25%	25-50%	50-75%	75-100%
-------	--------	--------	---------



Describe where the water flows out of the cluster .....

(viii) EDUCATION

Whether available in the cluster

Creche	Balwari	Nursery	Primary School	Middle school	If any other describe .....
Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	.....

(ix) HEALTH Availability within the cluster or exclusively meant for the cluster

Malaria Eradication scheme Surveyalance	D.D.T. Spray	Vaccination facility	Primary health centres	Visiting Govt. doctors	Visiting mobile dispensary	Private Doctors
Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

If yes (applicable for private doctors) their No. according to :

	Allopathic	Homeopathic	Vaid	Hakim	Any other
Nos.					

Availability of nutrition Programme Yes/No If yes, number of beneficiaries .....

(x) Religious & Recreation Programme

Give numbers

	Mandirs	Mosques	Churches	Gurdwaras	Any other
Nos.					

Describe any organised religious or recreation programmes in the cluster

Subjective Scale (Leadership response in group setting)  
(Group satisfaction and Requirement for the following eleven items)

<u>Satisfaction Goods</u> applicable where a particular facility is available and to item No. (vii)	<u>Fully Satisfied</u>	1	<u>Requirement Codes</u> applicable where a particular facility is not available	<u>Very much required</u>	4
	<u>Partly satisfied</u>	2		<u>Indifferent</u>	5
	<u>Dis-satisfied</u>	3		<u>Not required at present</u>	6

	Remarks if any	Satisfaction Codes						Requirement Codes					
		1	2	3	4	5	6	1	2	3	4	5	6
(i)	Water	1	2	3	4	5	6	1	2	3	4	5	6
(ii)	Street lights	1	2	3	4	5	6	1	2	3	4	5	6
(iii)	Lavatories and bath rooms	1	2	3	4	5	6	1	2	3	4	5	6
(iv)	Street Pavement	1	2	3	4	5	6	1	2	3	4	5	6
(v)	Street cleaning and garbage disposal system	1	2	3	4	5	6	1	2	3	4	5	6
(vi)	Medical facilities	1	2	3	4	5	6	1	2	3	4	5	6
(vii)	Law and order (security)	1	2	3	4	5	6	1	2	3	4	5	6
(viii)	Education for children	1	2	3	4	5	6	1	2	3	4	5	6
(ix)	Organised recreation, cultural activities	1	2	3	4	5	6	1	2	3	4	5	6
(x)	Ration shop	1	2	3	4	5	6	1	2	3	4	5	6
(xi)	Non convenience goods shopping	1	2	3	4	5	6	1	2	3	4	5	6

Priorities :-

Out of the above eleven items, please give the three most needed in the cluster, according to priority.

- (i).....
- (ii).....
- (iii).....

(xi) SOCIAL EDUCATION

Whether available in the cluster?

<u>Craft Class</u>	<u>Library</u>	<u>Family Planning and related organised programmes</u>	<u>Adult Education</u>	<u>Any other</u>
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Yes/No	Yes/No	Yes/No	Yes/No	
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(xii) SHOPPING

Ration shop : Within cluster Yes/No If no distance from the cluster .....Kms.

Names of the markets where cluster dwellers shop for non-convenience goods (distance from the cluster)

- (i) ..... Kms.
- (ii) ..... Kms.
- (iii) ..... Kms.

(xiii) TYPE & NUMBER OF ANIMALS IN THE CLUSTER

	Type	Nos.
1.	.....	.....
2.	.....	.....
3.	.....	.....
4.	.....	.....



A P P E N D I X - C

TOWN AND COUNTRY PLANNING ORGANISATION  
GOVT. OF INDIA

Serial No.

AREA SCHEDULE FAMILY ENQUIRY  
PHASE I

Number & Name of cluster ..... Jhuggi No.....

Date ..... Investigator ..... Supervisor .....

1. Name ..... F's/H's Name .....

2. No. of Jhuggis occupied ..... Owned Rent Rs.....  
Rented  
Rent free

3. Structure of Jhuggis :-

PAKKA	KACHHA	BRICK & MUD WALL			PAKKA WALL	
Mud & Thatch Roof	Khokha	Asbestos Roof	Tin Roof	Thatch Roof	Asbestos Roof	Tin Roof

4. Use of Jhuggis

Residential	Residential cum commercial	Residential cum Industrial	Commerc
-------------	----------------------------	----------------------------	---------

5. Size of Household

Male	ADULTS		CHILDREN		TOTAL		TOTAL
	Female	Male	Female	Male	Female		

6. Migration :-

i) Year of arrival in - Delhi .....

Present cluster .....

ii) Whether moved from Jhuggis elsewhere Yes/No

If yes, name of place .....

If no, from, servant qrs./Relatives/Native place/Rent free/Rented house

iii) Place of birth State .....

District ..... R/U

7. Occupation & Income

Male	ADULTS		CHILDREN	
	Female	Male	Female	
Head of household.....	1.....	1.....	1.....	
2.....	2.....	2.....	2.....	
3.....	3.....	3.....	3.....	

3. Religion ..... Caste .....

4. Family Income Rs. .... P.M.

0. Remarks .....

: APPENDIX - D

OCCUPATION CATEGORIES

1. Hawkers & Vendors

All Hawkers and Vendors of goods, excluding hawking of services.

2. Petty Business

Selling of goods at a shop; Repairs shops of cycles, stoves, scooters, umbrellas; owners of the wheel scooters, thelas, tongas who only rent them; contractors, owners of eating places; dairy

3. Unskilled construction workers

Beldars, Road construction labour, quarry and brick kiln workers.

4. Skilled construction workers

Masons, Jamadars, white-washers and door painters.

5. Other unskilled manual workers

Cooks other than those in Hotels and Restaurants, peons chowkidars, policemen, soldiers, cable wiremen; sweepers, watermen, khalasis, waiters, domestic servants and shop assistants, porters station and other commercial activities.

6. Other skilled manual workers

Mechanics, electricians, plumbers and sanitary workers, spray painters, drivers, moulders, cocs hotels and restaurants, polish workers, fitter, pump operators, workers in photography, embroidery and farm labour.

7. Traditional skills and trades

Dhobis, carpenters, potters, blacksmiths, goldsmiths, cobblers, tailors, barbers and other traditional skills and gardeners.

8. Industrial skilled workers

Factory labour with some acquired skill on the job or through training.

Industrial Unskilled workers

Delhi Electric Supply Undertaking, Water Supply Department, D.T.C. and organised factories have been considered as industries

Semi-Professional workers

Teachers, Nurses, Compounders, Midwife, Dressing orderly, Hakims and Homeopaths.

White collar workers

Working in offices, conductors, munshis and clerks.

Non-working head of household.



APPENDIX - E

Cost of Developing one settlement at current prices

1. Cost of development of land : (including sewer points, water main points, over-head wiring, paving down of streets and roads).  
  
At Rs.50 per sq. metre net, the land for 540 jhuggi households comes to 16,200 (30 x 540) Sq. metres (30 sq. metres per household)  
  
So  $16200 \times 50 = \text{Rs.}8,10,000$  Rs.8,10,000
  
2. Cost of providing lavatories :  
  
A set of 4 lavatory seats in each primary group and a total of 18 primary groups (18 x 4 = 72 seats).  
  
Presuming the sewer line is available the cost of each seat would be around Rs.1500 per seat.  
  
So  $1500 \times 72 = 1,08,000$ . Rs.1,08,000
  
3. Cost of providing bath rooms :  
  
A set of 2 bath rooms in each primary group and a total of 18 primary groups (18 x 2 = 36 rooms).  
  
At Rs.1500 per room, for 36 rooms.  
  
So  $1500 \times 36 = \text{Rs.}54,000$  Rs.54,000
  
4. Cost of providing potable water :  
  
2 water taps for each primary group and a total of 18 primary groups (18 x 2 = 36 taps)  
  
At Rs.1000 per tap for 36 taps.  
  
So  $36 \times 1000 = 36,000$  Rs.36,000

5. Cost of providing street lights :

3 light poles for each primary group and a total of 18 primary groups  
(20 x 3 = 60 light poles).

At Rs.1000 per pole for 60.

60 x 1000 = 60,000 Rs.

Rs.60,000

6. Other over-hand charges for the settlement :

Rs.12,000

TOTAL

Rs.10,80,000

N.B

The cost estimates have been worked out according to the costs of various items, supplied by Office of the Slum Commissioner, Delhi.

APPENDIX - F

The Investment and recovery pattern of developing 10800 plots per annum, at the monthly instalment rate of Rs.20

1	No. of settlements rehabilitated	ANNUAL RETURN FROM THE SETTLEMENTS		5 Net amount to be invested in thousand Rs. (Total cost of Rs.216 lakhs for 20 settlements excluding the returns from previous column.
		3 No. of settlements	4 Amount in thousand Rs.	
First year	20	Nil	Nil	Rs.21600
II year	40	20	2592	Rs.19008
III year	60	40	5184	Rs.16416
IV year	80	60	7776	Rs.13824
V year	100	80	10368	Rs.11232
VI year	120	100	12960	Rs.8640
VII year	140	120	15552	Rs.6048
VIII year	160	140	18144	Rs.3456

1	2	3	4	5
IX year	180	160	20736	Rs.864
X year	200	180	20736 from 160 groups 864 from I group	Nil
				101088

N.B.

- (i) Instalment per household Rs.20 per month. The total recovery for one year, per household Rs.240.
- (ii) The time taken to pay the cost of the plot Rs.2000. 8 years and 4 months (100 months).
- (iii) Total recovery from twenty settlements of 540 households each per month Rs.216,000, per annum Rs.25,92,000.
- (iv) The cost of resettling twenty settlements = 216,00,000 (two crores and sixteen lakhs).

APPENDIX - F

The Investment and recovery pattern of developing 5400 plots per annum, at the monthly instalment rate of Rs. 20

	No. of settlements rehabilitated	ANNUAL RETURN FROM THE SETTLEMENTS		Net amount to be invested (the cost of 108 lakhs but excluding returns). In thousand Rs.
		No. of settlements	Amount in thousand Rs.	
1	2	3	4	5
I year	10	Nil	Nil	10800
II year	20	10	1296	9504
III year	30	20	2592	8208
IV year	40	30	3888	6912
V year	50	40	5184	5616
VI year	60	50	6480	4320
VII year	70	60	7776	3024
VIII year	80	70	9072	1728
IX year	90	80	10368	432

1	2	3	4	5
X. year	100	90	10368 from 80 groups 432 from 10 groups	Nil

N.B.

- (i) Instalment per household Rs.20 per month. The total recovery for one year Rs.240.  
Households Rs.240.
- (ii) The time taken to pay the cost of the plot Rs.2000. 8 years 4 months  
(100 months).
- (iii) Total recovery from ten settlements of 540 households each. Per month  
Rs.108,000, per annum Rs.12,96,000.
- (iv) The cost of resettling ten settlements - 108,00,000 (Rs.108 lakhs).

APPENDIX - F

The Investment and recovery pattern of developing 5400 plots per annum at the monthly instalment rate of Rs.15

	No. of settlements rehabilitated	ANNUAL RETURN FROM THE SETTLEMENTS		Net amount to be invested (Total costs of Rs.108 lakhs per 10 settlements and excluding the returns from Col. 4 (In thousand)
		No. of settlements	Amount in Ps. (In thousand)	
1	2	3	4	5
I year	10	Nil	Nil	108,00
II year	20	10	972	9828
III year	30	20	1944	8856
IV year	40	30	2916	7884
V year	50	40	3888	6912
VI year	60	50	4860	5940
VII year	70	60	5832	4968
VIII year	80	70	6804	3996
IX year	90	80	7776	3024
X year	100	90	8748	2052

1	2	3	4	5
XI year	110	100	9720	1080
XII year	120	110	10692	108
XIII year	130	120	10692 for latter 11 groups* 108 for 1 group	Nil

Over 12 years Rs.65448

\* At Rs.20 per household for the last month.

N.B

- (i) Instalment per household Rs.15 per month. The total recovery for one year per household Rs.180.
- (ii) The time taken to repay the cost of the plot Rs.2000. 11 years and 1 month.
- (iii) Total recovery from ten settlements of 540 households each per month Rs.81000, per annum Rs.9,72,000.
- (iv) The cost of resettling 10 settlements - Rs.108,00,000 (hundred and eight lakhs).



APPENDIX - G : THE DETAILS OF AREAS INCLUDED IN VARIOUS PLANNING DIVISIONS

Zone A : The area is bounded by Yamuna River in the east, by Old Delhi Railway Station, Rani Jhansi Road, Faiz Road, Panch Kuian Road, and city walls in the south, comprising walled city, Sadar Bazar, Jhendewalan, Pahar Ganj etc.

Zone B : It is enveloped by Faiz Road, Ras Behari Marg, Northern Railway Lines in the west, Ganga Ram Hospital Road and Pusa Institute boundary covering the Anand Parbat, part of Sarai Rohilla, Karol Bagh, Rajendra Nagar, Pusa Institute and Naraina Residential areas.

Zone C : It is enclosed by Northern Railway main line towards Ambala, city walls in the South and Yamuna River in the East, comprising Kashmiri Gate, Delhi University area, Shakti Nagar, Kamla Nagar, Timarpur, Kingsway camp, Adarsh Nagar, Rana Pratap Bagh, Model Town etc.

Zone D : This area is bounded by city wall in the north, Panch Kuian Road, Upper Ridge Road joining at Dhaula Kuan, Ring Road in the South, and Yamuna River in the east, comprising the president's estate, Chankya Puri, Lodi Estate, Lody Colony, Meena Bagh, Moti Bagh, Sarojini Nagar, Kidwai Nagar, Defence Colony, Lajpat Nagar etc.

Zone E : This zone includes all the area, east of Yamuna river, upto the boundary of Union Territory of Delhi comprising Shahdara, Bhole Nagar, Vishwas Nagar,

Ram Nagar, Gandhi Nagar etc.

Zone F : It is enclosed by Ring Road from Dhaula Kuan in the north, Yamuna River in the east, Gurgaon Road in the west, Mehrauli Road and Badarpur Road from Qutab Minar, joining at Mathura Road, extending up to the Union Territory border in the south, including the residential areas of Ramakrishna Puram, Moti Bagh, Hauz Khas, Green Park, Safdarjung Enclave, Anand Niketan, Vasant Vihar, Mehrauli, Malviya Nagar, Kalkaji, Greater Kailash etc.

Zone G : This zone is bounded by Northern Railway Lines, that is Rohtak Railway Lines in the north, and Northern Railway Line, towards Rewari, upto the crossing of Ring Road and Ring Road extending upto Dhaula Kuan, and Gurgaon Road, enclosing numerous residential colonies like Ramesh Nagar, Moti Nagar, Rajouri Garden, Tilak Nagar, Delhi Cantonment, Madhipur, New Jail area, Palam Airport etc.

Zone H : It covers the area falling between the two northern Railway Lines, one in the south and the other in the North, and the Ras Bihari Marg in the East, comprising Shastri Nagar, Kishan Ganj, Trinagar, Rani Bagh, Haiderpur etc.

Zone R : The entire rural area outside the urban limits of Delhi and falling within the Union Territory of Delhi.