GOVERNMENT OF MAHARASHTRA

A REPORT ON

'PARTICULARS OF SLUMS'

BASED ON DATA COLLECTED IN STATE SAMPLE OF

69th ROUND OF NATIONAL SAMPLE SURVEY

(JULY, 2012 – DECEMBER, 2012)

VOL.I

Directorate of Economics and Statistics, Planning Department,

Government of Maharashtra,

Mumbai

PREFACE

The Directorate of Economics and Statistics has prepared a report on 'Particulars of Slums' based on the data of state sample collected in the 69th round of National Sample Survey(July, 2012 - December, 2012).

2. Vol. I of the report contains important findings of the survey in 'Executive Summary' while detailed results are given in 'Survey Findings'. Estimation procedure, concepts and definitions and detailed statistical tables are given in vol. II, which is available on the website "http://mahades.maharashtra.gov.in".

3. I hope the results of this survey will be useful to senior officers of the Government involved in policy framing, researchers, economists and academicians.

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Mumbai
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CONTENTS

Chapter-1

Executive Summary

According to 69th round of National Sample Survey, there were 7957 estimated no. of slums in the State during 2012, of which about 48.4 per cent were Notified. About 65 per cent of the total slum-dwelling households lived in Notified slums. The average number of households per slum is much higher for Notified compared to the Non-notified slums.

Important Survey Results

1. About 86 per cent of *Notified* slums occupied public land, with majority of them occupying the land belonging to the local bodies. About 21.1 per cent of slums were located on private land.

2. About 64.9 per cent of *Notified* and 66.3 per cent of *Non-notified* slums were surrounded by residential areas.

3. In *Notified* slums, about 72.8 per cent of households had pucca and about 21.6 per cent had semi-pucca houses as against 52.2 per cent and 32.2 per cent respectively in *Non-notified* slums.

4. Tap was the major source of water for drinking purposes in 96.2 per cent of households in *Notified* slums compared to 83.7 per cent in *Non-notified* slum areas.

5. About 99.7 per cent of slums had electricity connections either for household use or for street lights or for both during 2012 compared to 98 per cent during *2008-09*.

6. About 82 per cent of slums had pucca roads within slum area while about 73 per cent of the slums had motorable approach roads.

7. About 60.6 per cent of slum dwellers used public/community latrine facility. However, about 8.4 per cent slum dwellers in *Notified* and 19 per cent in *Non-notified* slums did not have any latrine facility.

8. Underground sewerage system was available in 71.1 per cent of *Notified* and 54.9 per cent of N*on-notified* slums. About 46.9 per cent of slums had underground drainage system.

9. In 81 per cent of slums, the garbage disposal system was arranged by local bodies like municipal councils/corporations. In 15.2 per cent of *Non-notified* slum, there was no arrangement of garbage disposal.

10. In about 87.8 per cent of *Notified* slums and 89.6 per cent of *Non-notified* slums, the primary school facility was available within one kilometer. About 58.7 per cent of *Notified* and 38.1 per cent of *Non-notified* slums had the facility of Government hospital within one kilometer. About 96 per cent of total slums had the facility of Government hospital within five kilometers.

11. It is seen that in both *Notified* and *Non-notified* slums, improvement was done mostly by the Government. The contribution of Non-Government Organisation (NGO) is noticeable as far as street lights and electricity are concerned in *Notified* and drainage, roads within slums, approach roads and water supply are concerned in *Non-notified* slums.

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Chapter – 2

Survey findings

Introduction

2.1 **Past surveys:** The first nationwide survey on the 'economic condition of slum dwellers in urban cities' was conducted by the NSSO in its 31st round (July 1976 - June 1977). The next survey on slum dwellers was carried out in the 49th round (January – June 1993), which covered rural as well as urban areas. After a gap of nearly ten years, the (third survey was conducted in the 58th round and the fourth survey was carried out in the 65th round (July 2008 – June 2009), covering only the urban slums.

2.2 **The present survey:** In the 69th round (July 2012- Dec 2012) also, the survey was restricted to urban slums only. Schedule 0.21 had been framed to collect information on the present condition of the slums and on the changes in the condition of some facilities available therein. The schedule was canvassed for urban blocks having slum(s). Information on each slum, Notified or Non-notified, found in the entire selected First Stage Unit (FSU) was collected even if sub-block formation had been resorted to. In some cases, the slum covered such a large area that it cut across more than one FSU, and the selected FSU was part of the slum. In such cases, all the slum particulars recorded would relate to only that part of the slum, which fell in the selected FSU. However, if the FSU contained a part of a Notified slum with at least 20 households, then the part of the slum falling in the FSU was regarded as a Notified slum and the schedule was canvassed accordingly.

About the survey

2.3 The period of the survey was of six months duration, starting from 1st July 2012 and ending on 31st December 2012. This survey period was divided into two sub-rounds of three months duration each as follows:

Sub-round 1: July – September 2012

Sub-round 2: October – December 2012

In each of these two sub-rounds, equal number of sample blocks (First Stage Units i.e. FSUs) were surveyed with a view to ensure uniform spread of sample FSUs over the entire survey period. The results presented in this report are based on information collected from 246 sample slums spread over 492 urban blocks.

2.4 According to the 69th round of NSS, there were 7957 estimated number of slums in the State, of which 3852 were Notified and 4105 were Non-notified. The estimated number of households living in the slums was 33.43 lakh (about 150.47 lakh persons). About 48.4 per cent of total slums in the State were Notified, while out of the total households residing in slums, 65 per cent lived in Notified slums. Thus, the average number of households per slum was much higher for notified compared to the non-notified slums.

Table 1A
Percentage distribution of slums and households living within these slums

Slums			Households		
Notified	Non-notified	All	Notified	Non-notified	All
48.4	51.6	100.0	65.0	35.0	100.0

Table 1B
Average slum size in terms of number of households per slum

Notified slums	Non-notified slums	all
564	285	420

2.5 Table 2 gives the division wise percentage distribution of slums and households living within slum. It may be observed that Konkan division has the maximum percentage of slums (25.1 per cent) in the State wherein maximum (56.2 per cent) households are residing. Pune division also has a major percentage share (25 per cent) of slums, though the households living in them form only 11.1 per cent of the total households in the State residing in slums. Nagpur division has the least share (9.6 per cent) of slums as well as of households (7.3 per cent) living in slums.

Table 2
Division wise percentage distribution of slums and households living within slum

Division	Slums			Households		
	Notified	Non-notified	All	Notified	Non-notified	All
Konkan	17.1	32.6	25.1	51.8	63.2	56.2
Pune	28.6	21.6	25.0	14.6	5.5	11.1
Nashik	23.9	12.8	18.2	15.3	10.8	13.6
Aurangabad	12.5	9.8	11.1	3.1	2.2	2.8
Amravati	7.4	14.3	11.0	8.5	10.2	9.2
Nagpur	10.4	8.8	9.6	6.7	8.1	7.3
All	100.0	100.0	100.0	100.0	100.0	100.0

2.6 Enquiry was made regarding the ownership of land occupied by the slum. Based on the responses, the percentage distribution of slums by type of ownership of land is given in table 3. About 21.1 per cent of total land occupied by slums belonged to private owners while out of the total land occupied by Notified and Non- notified slums, 14 per cent and 31 per cent belonged to private owners respectively. Majority 78.9 per cent land belonged to the Government of which major part belonged to Local bodies.

Table 3
Percentage distribution of slums by type of ownership of land

Type of slum	Ownership of land					
	Private	Public				All
		Railway	Local bodies	Others	Not Known	
Notified	14.0	2.4	72.6	10.6	0.4	100.0
Non-notified	31.0	2.9	45.4	19.8	0.9	100.0
All	21.1	2.6	61.3	14.5	0.5	100.0

2.7 Division wise percentage distribution of slums by type of ownership of land is given in Table 4. It was reported that about 47 per cent of land occupied by Notified slums in Pune and 56.7 per cent by Non- notified slums in Aurangabad division belongs to private owners.

Table 4
Division wise percentage distribution of slums by type of ownership of land

Division	Households	Ownership of land				
		Private	Public			Not known
			Railway	Local body	Others	
Notified slums						
Konkan	51.8	0.0	0.1	82.7	16.0	1.2
Pune	14.6	47.0	0.0	48.2	4.8	0.0
Nashik	15.3	13.8	1.3	74.8	10.1	0.0
Aurangabad	3.1	0.0	0.0	87.5	12.5	0.0
Amravati	8.5	0.0	3.0	96.0	1.0	0.0
Nagpur	6.7	3.6	21.4	62.0	13.0	0.0
All	100.0	14.0	2.4	72.6	10.6	0.4
Non-notified slums						
Konkan	63.2	44.2	6.7	29.1	18.2	1.8
Pune	5.5	33.4	0.0	34.3	32.4	0.0
Nashik	10.8	3.9	0.0	96.1	0.0	0.0
Aurangabad	2.2	56.7	0.0	43.3	0.0	0.0
Amravati	10.2	19.8	0.0	67.9	12.3	0.0
Nagpur	8.1	5.2	0.0	60.5	34.3	0.0
All	100.0	31.0	2.9	45.4	19.8	0.9

2.8 Table 5 gives the percentage distribution of slums by type of area surrounding them. It may be observed that as many as 65.5 per cent slums in the State are surrounded by residential area followed by 20.6 per cent surrounded by other slums. More Non-notified slums (66.3 per cent) have residential surroundings compared to Notified slums (64.9 per cent). About 4.9 per cent slums are surrounded by industries, while 7.9 per cent are surrounded by commercial areas.

Table 5
Percentage distribution of slums by type of area surrounding them

Type of slum	Type of area surrounding the slum					
	Residential	Industrial	Commercial	Others	Slum	All
Notified	64.9	3.7	11.1	0.6	19.7	100
Non notified	66.3	6.5	3.5	1.9	21.8	100
All	65.5	4.9	7.9	1.1	20.6	100

2.9 Table 6 gives the percentage distribution of slums by physical location. It may be observed that maximum 31.3 per cent of slums are located in park /open spaces.

Table 6
Percentage distribution of slums by physical location of slum

Type of slum	Along Nallah/ Drain	Along Railway Line	River Bank/ river bed	Hilly Terrain/ slope	Park/ open space	Others	all
Notified	24.2	8.0	2.2	5.6	32.0	28.0	100.0
Non notified	15.5	13.1	3.1	10.5	30.3	27.5	100.0
All	20.6	10.1	2.6	7.6	31.3	27.8	100.0

2.10 Table 7 gives the percentage distribution of slums by type of structures of the houses. It may be observed that though majority of the houses in slums are pucca, their percentage is much higher (72.8 per cent) in Notified slums compared to those in Non-notified slums (52.2 per cent).The semi-pucca and serviceable katcha structures are more prevalent in Non-notified slums (32.2 per cent and 15.4 per cent respectively). Overall in the State, about 0.1 per cent houses have no structure, (i.e. houses made of cloth, dried leaves etc).

Table 7
Percentage distribution of slums by type of structure of the houses

Type of slum	Type of structure of the houses.					
	Pucca	Semi pucca	Serviceable Katcha	Unserviceable Katcha	No structure	All
Notified	72.8	21.6	5.6	0.0	0.0	100.0
Non-notified	52.2	32.2	15.4	0.0	0.2	100.0
All	64.2	26.0	9.7	0.0	0.1	100.0

2.11 The percentage distribution of slums by major source of drinking water is given in table 8. The major source of drinking water is found to be tap for about 96.2 per cent Notified slums, followed by tube well/hand pump for about 3.3 per cent. In case of Non-notified slums, 83.7 per cent have 'tap' and 14.4 per cent have tube well/hand pump as the major source of drinking water.

Table 8
Percentage distribution of slums by major source of drinking water

Type of slum	Major source of drinking water					
	Tap	Tube Well/ Hand Pump	Protected well	Unprotected well	Others	All
Notified	96.2	3.3	0.0	0.0	0.5	100.0
Non-notified	83.7	14.4	0.0	0.6	1.3	100.0
All	91.0	7.9	0.0	0.2	0.9	100.0

2.12 Percentage distribution of slums by status of electricity connection is given in Table 9. About 73.9 per cent of slums in the State are found to have electricity connections both for street lights and for household use. This percentage is higher in Notified (76.8 per cent) compared to Non-notified (70.1 per-cent) slums. All the Notified slums are found to have electricity connection either for households or for streetlights or for both, while about 0.7 per cent Non-notified slums do not have electricity.

Table 9
Percentage distribution of slums by status of electricity connection

Type of slum	Electricity for				
	Both street lights and household use	Household use only	Street light only	No electricity	All
Notified	76.8	13.1	10.1	0.0	100.0
Non-notified	70.1	9.4	19.8	0.7	100.0
All	73.9	11.6	14.2	0.3	100.0

2.13 Table 10 gives the percentage distribution of slums according to the type of roads within the slums and approach roads to the slums. It may be observed that about 82.2 per cent slums in the State had pucca internal roads. Higher percentage of Notified slums (89.7 per cent) had pucca roads within the slums compared to the Non-notified slums (71.8 per cent). About 78.6 per cent slums had motorable approach roads while about 21.4 per cent slums had Non-motorable approach roads.

Table 10
Percentage distribution of slums according to the type of roads within slums and approach roads

Type of slum	Type of road/lane/constructed path within the slum			Type of approach road/lane/constructed path to slum						
	Pucca	Katcha	Total	Motorable			Non-motorable			All
				Pucca	Katcha	Total	Pucca	Katcha	Total	
Notified	89.7	10.3	100.0	75.5	4.5	80.0	20.0	0.0	20.0	100.0
Non-notified	71.8	28.2	100.0	68.5	8.2	76.7	14.8	8.4	23.3	100.0
All	82.2	17.8	100.0	72.6	6.1	78.6	17.8	3.6	21.4	100.0

2.14 Table 11 gives the percentage distribution of slums in different slum size classes by type of road / lane / constructed path within the slum, separately for million-plus cities and other urban areas. From the table it is observed that 91.2 per cent of Notified slums and 60.5 per cent of Non-notified slums have pucca road / lane / constructed path within the slum in million plus cities. In other urban areas, it is 86.8 per cent and 78.3 per cent respectively in Notified and Non- notified slums.

Table 11
Percentage distribution of slums in different slum size classes by type of road/ lane/ constructed path within the slum, separately for million-plus cities and other urban areas

Sector	Size class of slum (No. of Households)	Type of road/lane/ constructed path within the slum	
		Pucca	Katcha
Slum: NOTIFIED			
Million plus-cities	less than 60	90.1	9.9
	60-120	100.0	0.0
	120-180	100.0	0.0
	180-240	100.0	0.0
	more than 240	45.8	54.2
All		91.2	8.8
Other urban areas	less than 60	78.7	21.3
	60-120	95.7	4.3
	120-180	88.6	11.4
	180-240	100.0	0.0
	more than 240	62.7	37.3
All		86.8	13.2
Maharashtra		89.4	10.6
Slum: NON-NOTIFIED			
Million plus-cities	less than 60	79.4	20.6
	60-120	57.7	42.3
	120-180	17.4	82.6
	180-240	75.0	25.0
	more than 240	69.6	30.4
All		60.5	39.5
Other urban areas	less than 60	76.5	23.5
	60-120	76.5	23.5
	120-180	79.7	203.0
	180-240	10.0	0.0
	more than 240	92.3	7.7
All		78.3	21.7
Maharashtra		72.1	27.9

Sector	Size class of slum (No. of Households)	Type of road/lane/ constructed path within the slum	
		Pucca	Katcha
Slum: All			
Million plus-cities	less than 60	86.1	13.9
	60-120	82.8	17.2
	120-180	82.9	17.1
	180-240	95.8	4.2
	more than 240	50.7	49.3
All		82.1	17.9
Other urban areas	less than 60	77.3	22.7
	60-120	86.6	13.4
	120-180	84.9	15.1
	180-240	100.0	0.0
	more than 240	79.8	20.2
All		82.3	17.7
Maharashtra		82.2	17.8

2.15 Table 12 gives the percentage distribution of slums by underground sewerage and drainage systems. It may be observed that about 71.1 per cent Notified slums had underground sewerage system as against only 54.9 per cent in Non-notified slums. Among Notified slums, about 52.6 per cent had underground drainage system and 25.4 per cent had open pucca drainage system, while among Non-notified slums, 38.9 per cent had underground drainage system and 31.3 per cent had open pucca drainage system.

Table 12
Percentage distribution of slums by underground sewerage and drainage systems

Type of slum	Underground sewerage system			Type of drainage system					
	Available	Not available	All	Under ground	Covered pucca	Open pucca	Open katcha	No drainage	All
Notified	71.1	28.9	100.0	52.6	11.6	25.4	4.3	6.1	100.0
Non - notified	54.9	45.1	100.0	38.9	8.8	31.3	6.0	15.0	100.0
All	64.3	35.7	100.0	46.9	10.4	27.8	5.1	9.8	100.0

2.16 Table 13 gives the percentage distribution of slums by arrangement of garbage disposal. About 81 per cent of slums, (87 per cent of Notified and 72.7 per cent of Non-notified slums) garbage was disposed of by Municipality/Corporation. About 9.4 per cent of slums had no arrangement of garbage disposal.

Table 13
Percentage distribution of slums by arrangement of garbage disposal

Type of slum	Arrangement for garbage disposal by			No arrangement	All
	Municipality/ corporation	Resident	Others		
Notified	87.0	5.7	2.0	5.3	100.0
Non - notified	72.7	9.0	3.1	15.2	100.0
All	81.0	7.1	2.5	9.4	100.0

2.17 The percentage distribution of slums by frequency of garbage collection is given in table 14. About 62.6 per cent Notified and 61.7 per cent Non-notified slums are reported to have daily garbage collection facility provided by muncipal council / corporation. Residents themselves also do garbage collection/disposal in 8.2 per cent Notified and 14.2 per cent Non-notified slums.

Table 14
Percentage distribution of slums by frequency of garbage collection

Type of slum	Garbage Collected by	daily	once in			Others (No arrangement)	all
			2 days	3 to 7 days	8 to 15 days		
Notified	Municipality/ Corporation	62.6	11.1	13.0	0.8	4.3	91.8
	Residents	5.7	0.8	0.0	0.8	0.9	8.2
	All	68.3	11.9	13.0	1.6	5.2	100.0
Non- notified	Municipality/ Corporation	61.7	7.5	8.9	5.7	2.0	85.8
	Residents	9.8	0.2	1.6	0.0	2.6	14.2
	All	71.5	7.7	10.5	5.7	4.6	100.0

2.18 Table 15 gives the percentage distribution of slums by latrine facility used by most of the residents of the slums. It can be seen that about 60.6 per cent households in the slums are using public/ community latrine facility. About 2.8 per cent households have shared latrine while 23.8 per cent have own latrines. About 8.4 per cent and 19 per cent households from Notified and Non-notified slums respectively did not have any latrine facility.

Table 15
Percentage distribution of slums by latrine facility used by most of the residents of the slums

Slum Description	Public community latrine						Shared latrine			Own latrine			No latrine facility	All
	without payment			with payment										
	Dry pit	Flush/ pour-flush	Others	Dry pit	Flush/ pour-flush	Others	Dry pit	Flush/ pour-flush	Others	Dry pit	Flush/ pour-flush	Others		
Notified	6.2	25.7	3.7	8.4	21.0	0.0	3.1	0.4	0.0	0.8	17.5	4.8	8.4	100.0
Non- notified	4.5	26.5	1.7	2.4	19.1	0.0	0.0	1.6	0.5	3.1	19.8	1.8	19.0	100.0
All	5.5	26.1	2.9	5.9	20.2	0.0	1.8	0.8	0.2	1.7	18.5	3.6	12.8	100.0

2.19 The percentage distribution of slums by water logging during monsoon is given in Table 16. Out of the total slums, about 74.5 per cent slums do not usually get water logged during monsoon. Out of these slums that do not usually get water logged, 10.3 per cent slums reported that the approach road/ lane/ constructed path usually get water logged in monsoon.

Table 16
Percentage distribution of slums by water logging during monsoon

Type of slum	Slum usually waterlogged during monsoon			Slum not usually waterlogged during monsoon			All
	Approach road/ lane/ constructed path usually waterlogged in monsoon			Approach road/ lane/ constructed path usually waterlogged in monsoon			
	Yes	No	All	Yes	No	All	
Notified	17.0	3.5	20.5	8.0	71.5	79.5	100.0
Non- notified	29.3	3.2	32.5	13.4	54.1	67.5	100.0
All	22.1	3.4	25.5	10.3	64.2	74.5	100.0

2.20 The percentage distribution of slums by availability of primary schools and government hospitals is given in Table 17. For about 54.5 per cent of Notified slums and 63.8 per cent of Non-notified slums, the primary school facility was available at less than 0.5 kilometer. About 58.7 per cent of Notified and 38.1 per cent of Non-notified slums had the facility of government hospital within one kilometer. About 96 per cent of all slums had the facility of government hospital within five kilometers.

Table 17
Percentage distribution of slums by availability of primary schools and Government hospitals

Type of slum	Description	Percentage distribution of slums with distance from nearest primary school and government hospital/health care					
		less than 0.5 km	0.5 to 1.0 km	1 to 2 km	2 to 5 km	5 km or more	All
Notified	Primary School	54.5	33.3	8.9	3.3	0.0	100.0
	Government Hospital/Health Care	28.3	30.4	19.0	18.5	3.8	100.0
Non- notified	Primary School	63.8	25.8	6.7	3.7	0.0	100.0
	Government Hospital/Health Care	17.4	20.7	20.4	37.1	4.4	100.0
All	Primary School	58.4	30.1	8.0	3.5	0.0	100.0
	Government Hospital/Health Care	23.8	26.3	19.6	26.3	4.0	100.0

2.21 Table 18 gives the percentage distribution of slums according to the area covered. It may be observed that maximum 31.9 per cent slums cover an area of 0.05-1.00 hectares.

Table 18
Percentage distribution of slums according to area

Type of slum	Approximate area of slum(in hectare)								All
	<0.05	0.05-1.00	1.00-2.00	2.00-3.00	3.00-4.00	4.00-6.00	6.00-8.00	>8.00	
Notified	14.6	36.1	7.8	11.8	9.3	6.0	5.0	9.4	100.0
Non- notified	8.7	26.0	21.4	7.8	10.8	15.1	3.4	6.8	100.0
All	12.2	31.9	13.5	10.1	9.9	9.8	4.3	8.3	100.0

2.22 Table 19 gives the percentage distribution of slums not having motorable road. About 89.9 per cent of slums were situated within 0.5 km of motorable road and 10.1 per cent of slums were situated within 0.5-1.0 km. Thus all the slums were situated within one kilometer of motorable road.

Table 19
Percentage distribution of slums not having motorable road with distance from nearest motorable road

Slum Description	Distance in km					All
	Less than 0.5 km	0.5 to 1.0 km	1 to 2 km	2 to 5 km	5 km or more	
Notified	97.7	2.3	0.0	0.0	0.0	100.0
Non-Notified	80.6	19.4	0.0	0.0	0.0	100.0
ALL	89.9	10.1	0.0	0.0	0.0	100.0

2.23 Table 20 gives the percentage distribution of slums by availability of an association for improving the condition of slum. About 18.1 per cent Notified slums and 21.7 per cent Non-notified slums reported availability of such associations.

Table 20
Percentage distribution of slums by availability of an association for improving the condition of the slum

Slum Description	Yes	No	All
Notified	18.1	81.9	100.0
Non-notified	21.7	78.3	100.0
ALL	19.6	80.4	100.0

2.24 Enquiry was made with the residents of slums whether they have experienced improvement or deterioration as regards various aspects like drainage, sewage, garbage disposal and medical facilities, in last five years. The responses have been consolidated and classified into size class of slums and given in table 21. It may be observed that overall, an improvement is reported for all facilities in last five years.

Table 21
Percentage of slums by change during the last five years in the condition of slum

Sector/Slum type	Size class of slum (No. of Households)		Percentage of slums that experienced improvement (I)/ deterioration (D) over last 5 years in			
			drainage	sewerage	garbage disposal	medical facilities
1	2	3	4	5	6	7
Notified slums in million plus-cities	less than 60	I	5.5	0.6	40.2	0.6
		D	0.0	0.0	0.0	0.0
	60-120	I	60.8	21.2	33.2	9.2
		D	0.0	0.0	0.0	0.0
	120-180	I	62.6	63.9	70.0	62.9
		D	0.0	0.0	0.0	2.7
	180-240	I	65.7	60.8	54.8	51.8
		D	0.0	0.0	1.9	0.0
	> 240	I	0.0	0.0	0.0	14.9
		D	0.0	0.0	0.0	0.0
	all	I	40.8	31.8	45.2	29.6
		D	0.0	0.0	0.3	0.8
Notified slums in other urban areas	less than 60	I	58.0	39.5	52.1	51.8
		D	0.0	0.0	0.0	0.0
	60-120	I	41.9	30.6	68.3	58.8
		D	0.0	0.0	4.1	4.1
	120-180	I	23.5	20.6	39.7	7.4
		D	2.2	4.8	0.0	0.0
	180-240	I	20.0	0.0	70.3	4.9
		D	0.0	0.0	3.8	0.0
	> 240	I	1.7	0.0	0.0	61.0
		D	0.0	0.0	0.0	0.0
	all	I	39.4	27.2	53.5	44.1
		D	0.3	0.8	1.8	1.5
Non-notified slums in million plus-cities	less than 60	I	2.2	2.2	3.1	0.9
		D	0.0	0.0	0.0	0.0
	60-120	I	48.0	32.3	59.7	55.5
		D	0.0	0.0	0.0	0.0
	120-180	I	13.5	24.6	33.3	0.0
		D	11.1	0.0	0.0	0.0
	180-240	I	46.6	21.6	17.5	42.6
		D	0.0	0.0	0.0	0.0
	> 240	I	0.0	30.3	30.3	56.5
		D	0.0	26.2	0.0	0.0
	all	I	21.1	18.7	28.8	24.1
		D	2.0	1.9	0.0	0.0

Sector/Slum type	Size class of slum (No. of Households)		Percentage of slums that experienced improvement (I)/ deterioration (D) over last 5 years in			
			drainage	sewerage	garbage disposal	medical facilities
1	2	3	4	5	6	7
Non-notified slums in other urban areas	less than 60	I	65.7	59.0	69.8	64.7
		D	0.0	0.0	0.0	0.0
	60-120	I	42.6	30.6	57.5	7.7
		D	0.0	3.2	1.6	0.0
	120-180	I	50.0	44.4	45.2	24.6
		D	0.0	0.0	0.0	0.0
	180-240	I	0.0	0.0	30.2	0.0
		D	0.0	0.0	0.0	0.0
	> 240	I	29.5	24.5	25.9	12.9
		D	0.0	0.0	0.0	0.0
	all	I	53.8	46.0	59.4	39.6
		D	0.0	0.9	0.4	0.0

2.25 Enquiry was made regarding the agency which did improvements in various facilities in slums. Table 22 gives the percentage distribution of slums reporting improvement in facility during last five years by type of agency. It can be seen that higher percentage of slums reported improvement of all the facilities during last five year by government followed by NGO.

Table 22
Percentage of slums reporting improvement of facilities during last five years by type of concerned agency

Facility	Government	NGO	Residents	Others
Water supply	92.6	6.6	0.6	0.2
Street light	93.1	6.7	0.0	0.2
Electricity	82.7	16.9	0.2	0.2
Latrine	79.3	10.3	10.1	0.3
Sewerage	90.5	8.2	1.0	0.3
Drainage	92.6	7.2	0.0	0.2
Garbage disposal	87.5	10.8	1.7	0.0
Road within the slum	93.0	6.8	0.0	0.2
Approach road to slum	92.3	6.6	0.1	1.0
Primary education facility	81.0	14.5	0.0	4.5
Medical facility	70.2	20.6	2.4	6.8

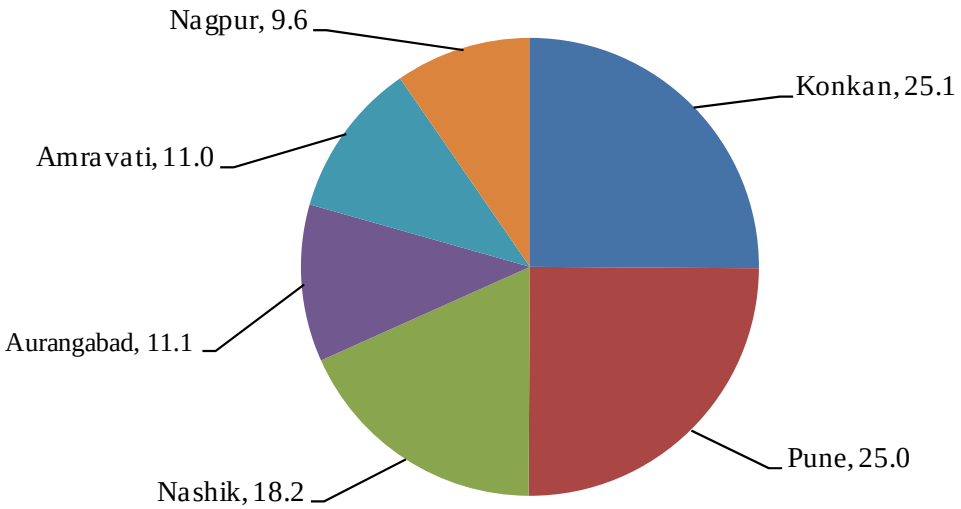
2.26 Table 23 gives modified estimates of 65th round which are comparable with that of 69th round. These are calculated using the concept no. of UFS blocks (k) intersecting the ith observed slum. Having the data of $\mathbf{K_i}$, approximate estimates of Notified and Non-notified slums are obtained by dividing earlier estimates of Notified and Non-notified slums of 65th round by K*, where K* is the Harmonic mean of the $\mathbf{K_i}$ values, defined as $\frac{\mathbf{1}}{\boldsymbol{K^*}} = \left(\frac{\mathbf{1}}{\boldsymbol{n}}\right)\sum\frac{\mathbf{1}}{\boldsymbol{K_i}}$ the sum ranging over all n sample slums, K* being derived separately for Notified and Non-notified slums. However the procedure for estimating the number of slum households remains the same as past NSS procedures.

Table 23
Estimated number of slums as per NSS 65th round and NSS 69th round

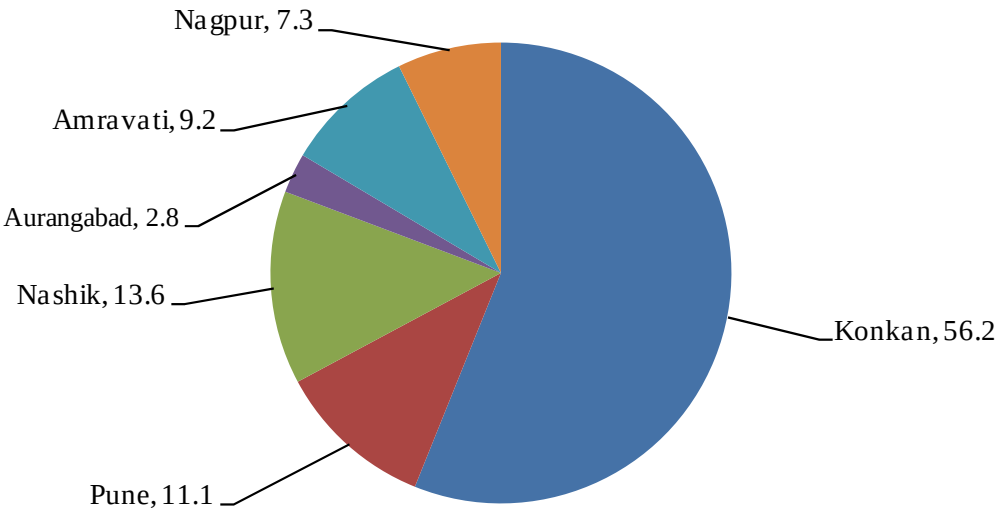
Sample	Estimated number of slums								
	NSS 65th Round			NSS 65th Round Modified			NSS 69th Round		
	Notified	Non-notified	Total	Notified	Non-notified	Total	Notified	Non-notified	Total
Central	9282	7736	17019	1783	4348	6131	1954	5769	7723
State	15737	4237	19984	7829	2157	9986	3852	4105	7957

GRAPHS

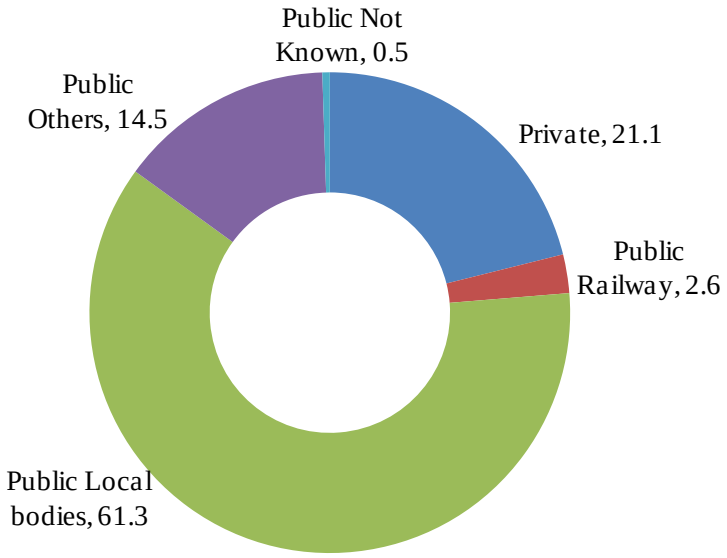
Graph 1 : Division wise percentage distribution of all slums



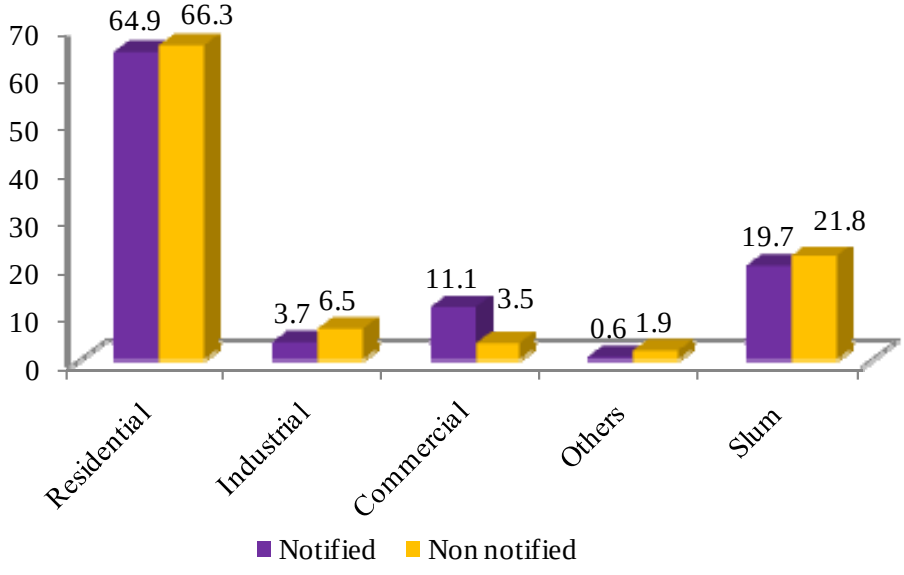
Graph 2 : Division wise percentage distribution of all households living in slums



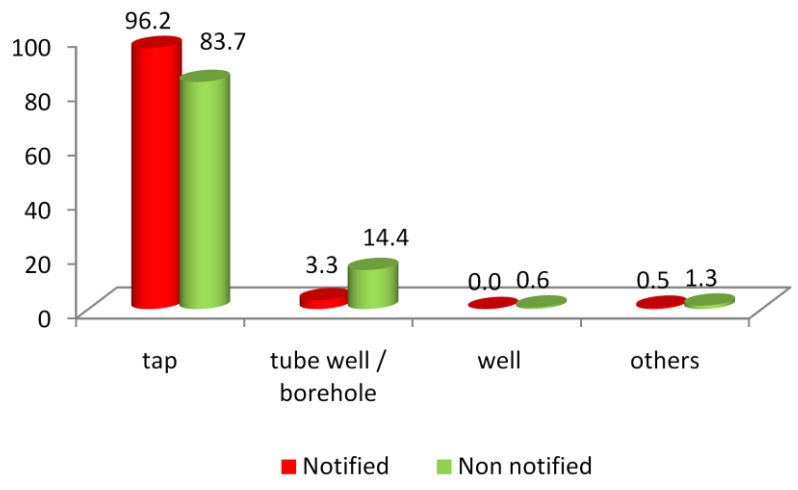
Graph 3 : Percentage distribution of land by type of ownership of land



Graph 4 : Percentage distribution of slums by type of area surrounding them



Graph 5: Percentage distribution of slums by major source of drinking water



COMPARATIVE STATEMENT

Estimated number of Slums and estimated approximate number of households within these slums

Sample	Estimated					
	number of slums			approximate number of households in slums		
	Notified	Non-notified	All	Notified	Non-notified	All
State	3852	4105	7957	2172404	1171348	3343752
Central	1954	5769	7723	2033799	1311307	3345106

Percentage distribution of slums and households living within these slums

Sample	Slums			Households		
	Notified	Non-notified	All	Notified	Non-notified	All
State	48.4	51.6	100.0	65.0	35.0	100.0
Central	25.3	74.7	100.0	60.8	39.2	100.0

Average slum size in terms of number of households per slum

Sample	Notified	Non-notified	All
State	564	285	420
Central	1041	227	433

Percentage distribution of slums by major source of drinking water

Sample	Major source of drinking water					
	Tap	Tube Well / Borehole	Protected Well	Unprotected Well	Others	All
State	91.0	7.9	0.0	0.2	0.9	100.0
Central	81.5	13.1	1.7	0.8	2.9	100.0

GOVERNMENT OF MAHARASHTRA

A REPORT ON

'PARTICULARS OF SLUMS'

BASED ON DATA COLLECTED IN STATE SAMPLE OF

69Th ROUND OF NATIONAL SAMPLE SURVEY
(JULY, 2012 – DEC, 2012)

VOL.II

Directorate of Economics and Statistics, Planning Department,
Government of Maharashtra,
Mumbai

CONTENTS

Chapter I

List of Tables

Sr. No.	Table No. as per Tabulation Plan	Title
1	1	Number of sample blocks allotted and surveyed, number of sample slums surveyed
2	3.1	Estimated number of Slums and estimated approximate number of households within the slums
3	4	Per 1000 distribution of slums by type of ownership of the land
4	5	Per 1000 distribution of slums by type of area surrounding the slum
5	6	Per 1000 distribution of slums in by type of structure of the majority of houses
6	7	Per 1000 distribution of slums by major source of drinking water
7	8	Per 1000 distribution of slums by status of electricity connection
8	9.1	Per 1000 distribution of slums by type of road/lane/constructed path within the slum
9	9.2	Per 1000 distribution of slums in different slum size classes by type of road/ lane/ constructed path within the slum, separately for million-plus cities and other urban areas
10	10.1	Per 1000 distribution of slums by type of road/ lane/ constructed path to the slum
11	11	Per 1000 distribution of slums by latrine facility used by most of the residents
12	12.1	Per 1000 distribution of slums by availability of underground sewerage system
13	13.1	Per 1000 distribution of slums by type of drainage system
14	14.1	Per 1000 distribution of slums by arrangement of garbage disposal
15	15	Per 1000 distribution of slums not motorable road by distance from nearest motorable road
16	16.1	Per 1000 distribution of slums by distance from nearest government primary school
17	17.1	Per 1000 distribution of slums by distance from nearest government hospital / health centre
18	18	Per 1000 distribution of slums by approximate area of slum
19	19.1	Per 1000 distribution of slums by nature of waterlogging due to rainfall
20	20.1	Per 1000 distribution of slums by agency and frequency of garbage collection
21	21	Per 1000 distribution of slums by location of slum
22	23	Per 1000 distribution of slums by availability of an association for improving the condition of the slum
23	30.2	Per 1000 distribution of slums in different slum size classes by

Sr. No.	Table No. as per Tabulation Plan	Title
		change in condition of drainage facility during last 5 years, separately for million-plus cities and other urban areas
24	31.2	Per 1000 distribution of slums in different slum size classes by change in condition of sewerage facility during last 5 years, separately for million-plus cities and other urban areas
25	32.2	Per 1000 distribution of slums in different slum size classes by change in condition of garbage facility during last 5 years, separately for million-plus cities and other urban areas
26	34.2	Per 1000 distribution of slums in different slum size classes by change in condition of medical facilities during last 5 years, separately for million-plus cities and other urban areas
27	35	Per 1000 distribution of slums where water supply improved during last 5 years by source of improvement
28	36	Per 1000 distribution of slums where street lighting improved during last 5 years by source of improvement
29	37	Per 1000 distribution of slums where electricity improved during last 5 years by source of improvement per 1000 slums
30	38	Per 1000 distribution of slums where condition of latrine facility improved during last 5 years by source of improvement
31	39	Per 1000 distribution of slums where condition of sewerage facility improved during last 5 years by source of improvement
32	40	Per 1000 distribution of slums where condition of drainage facility improved during last 5 years by source of improvement
33	41	Per 1000 distribution of slums where condition of garbage disposal improved during last 5 years by source of improvement
34	42	Per 1000 distribution of slums where condition of road within the slum improved during last 5 years by source of improvement
35	43	Per 1000 distribution of slums where condition of approach road to the slum improved during last 5 years by source of improvement
36	44	Per 1000 distribution of slums where condition of educational facility at primary level improved during last 5 years by source of improvement
37	45	Per 1000 distribution of slums where condition of medical facilities improved during last 5 years by source of improvement

Chapter Two

Concepts and Definitions

2.1 For collection of data on the presence and condition of slums, certain concepts and definitions were formulated. These are explained below.

2.2 Notified slums: These are areas notified as slums by the concerned State governments, municipalities, corporations, local bodies or development authorities.

2.3 Non-notified slums: Any compact settlement with a collection of poorly built tenements, mostly of temporary nature, crowded together, usually with inadequate sanitary and drinking water facilities in unhygienic conditions, was considered a slum for the survey, provided at least 20 households live there. If such a settlement was not notified as a slum, it was called a *non-notified* slum. Note that while a *non-notified* slum had to consist of at least 20 households, no such restriction was imposed in case of *notified* slums.

2.4 Slums: The word "slum" refers to both *notified* slums and *non-notified* slums.

2.5 Slums eligible for survey: For each sample UFS block, any slum (*notified* or *non-notified*) lying wholly or partly within the block was eligible for survey and had to be covered. If, for a sample block, more than one slum was eligible for survey, particulars of each such slum were obtained separately.

2.6 Part-slums: When the slum lay only partly within the sample UFS block, the part of the slum which fell within the block was called a part-slum. In such cases all the slum particulars recorded relate to only the part-slum. Such 'part-slums' were surveyed even if the approximate number of households in the part-slum (i.e., the part of the slum within the sample UFS block) was less than 20. **This differed from the procedure followed in the last survey (NSS 65th round), where a part-slum qualified for survey only if it contained 20 or more households.**

2.7 Procedure for identifying a slum: *Notified* slums were identified with the help of knowledgeable persons and, if necessary, by obtaining a list of *notified* slums from the concerned municipalities, corporations, local bodies or development authorities. *Non-notified* slums were identified by the investigator with the help of knowledgeable persons by applying the definition of *non-notified* slums given above.

2.8 Squatter Settlement: Slum like settlements with less than 20 households are considered as squatter settlements. The criterion of 20 households is not restricted within an FSU only but by considering the whole of such an area, which may cut across more than one FSU.

2.9 Household: A group of person's normally living together and taking food from a common kitchen constituted a household.

2.10 Pucca structure: A pucca structure is one whose walls and roofs are made of pucca materials such as cement, concrete, oven burnt bricks, hollow cement / ash bricks, stone, stone blocks, jack boards (cement plastered reeds), iron, zinc or other metal sheets, timber, tiles, slate, corrugated iron, asbestos cement sheet, veneer, plywood, artificial wood of synthetic material and polyvinyl chloride (PVC) material.

2.11 Katcha structure: A structure which has walls and roof made of non-pucca materials is regarded as a katcha structure. Non-pucca materials include unburnt bricks, bamboo, mud, grass, leaves, reeds, thatch, etc. Katcha structures can be of the following two types:
(a) **Unserviceable katcha** structure includes all structures with thatch walls and thatch roof, i.e., walls made of grass, leaves, reeds, etc. and roof of a similar material and
(b) **Serviceable katcha** structure includes all katcha structures other than unserviceable katcha structures.

2.12 Semi-pucca structure: A structure which cannot be classified as a pucca or a katcha structure as per definition is a semi-pucca structure. Such a structure will have either the walls or the roof but not both, made of pucca materials.

2.13 Type of Latrine: Descriptions of the broad types of latrine are as follows:
(i**) Pit latrine:** This could be (a) Ventilated improved pit latrine (b) Pit latrine with slab and (c) Pit latrine without slab / open pit. Detailed descriptions of each of these are as follows:
(a) **Ventilated improved pit latrine:** This is a dry pit latrine ventilated by a pipe that extends above the latrine roof. The open end of the vent pipe is covered with gauze mesh or fly-proof netting and the inside of the superstructure is kept dark.
(b) **Pit latrine with slab:** This is a dry pit latrine that uses a hole in the ground to collect the excreta and a squatting slab or platform that is firmly supported on all sides, easy to clean and raised above the surrounding ground level to prevent surface water from entering the pit. The platform has a squatting hole, or is fitted with a seat. Unlike ventilated pit latrine, in this type of latrine vent pipe is not used.
(c) **Pit latrine without slab/ open pit:** Pit latrine without slab uses a hole in the ground for excreta collection and does not have a squatting slab, platform or seat.
(ii) **Flush/pour-flush:** Flush latrine uses a cistern or holding tank for flushing water, and a water seal (which is a U-shaped pipe below the seat or squatting pan) that prevents the passage of flies and odours. A pour-flush latrine uses a water seal, but unlike a flush latrine, it uses water poured by hand for flushing (no cistern is used). Depending on the system/site to which human excreta and wastewater are carried off, flush/ pour-flush latrine can be of the following types: (i) piped sewer system, (ii) septic tank, (iii) flush/pour-flush to pit latrine, (iv) other (flush/pour-flush to open drain, open pit, open field, etc.).

2.14 Underground Sewerage System: An underground sewerage system contains underground pipes or conduits for carrying off drainage water, waste matter, discharge from water closets, etc.

2.15 Drainage System: A system, if any exists, for carrying off waste water and liquid wastes of the area are called a drainage system. Drainage could involve natural or artificial removal of surface and sub-surface water from a given area. However, if water flows down by its own weight under gravity, in an unregulated manner, then it is considered a case of 'no drainage'.

2.16 Garbage Disposal: In the urban areas, some arrangements usually exist to carry away the refuse and waste of households to some dumping place away from the residential areas. In some places, the public bodies collect the garbage from the premises of the household or from some fixed points in the locality where the residents put their garbage. In some places, a body of residents themselves makes arrangements for carrying the garbage to the dumping place away from residential areas without participation of any public body till the final disposal. Information on the arrangement prevailing for the colony/locality of the slum was obtained in the survey.

2.17 Whether benefited from JNNURM/RAY/any other slum improvement scheme: Any scheme run by the Central Government, State Government or any local body for improvement of slums, such as Jawaharlal Nehru National Urban Renewal Mission (JNNURM), Rajiv Awas Yojana (RAY), was considered here.

Chapter III

Sample Design and Estimation Procedure

3.0 Sample Design

3.1 **Sampling Frame:** The latest updated list of Urban Frame Survey (UFS) blocks (2007-12) was taken as the sampling frame.

3.2 **Sample units:** The sampling units were the UFS blocks (UFS 2007-12).

3.3 **Stratification:** Within the urban areas of a district, each town with population 10 lakhs or more as per Population Census 2011 formed a separate basic stratum and the remaining urban areas of the district were together considered as another basic stratum.

3.4 **Sub-stratification:** Each stratum was divided into 2 sub-strata as follows:

sub-stratum 1: all UFS blocks having area type 'slum area'
sub-stratum 2: remaining UFS blocks

3.5 **Total sample size:** For Maharashtra State, the sample size was 890 FSUs.

3.6 **Allocation of total sample to States and UTs**: The total number of sample UFS blocks had been allocated to the States and UTs in proportion to population as per Census 2011subject to a minimum sample allocation to each State/UT. While doing so, the resource availability in terms of number of field investigators was taken into consideration, as well as comparability with the previous round of survey on the same subjects.

3.7 **Allocation to strata**: Within a State/UT, the sample size was allocated to the different strata in proportion to the population as per Census 2011. Allocations at stratum level were adjusted to multiples of 2 with a minimum sample size of 2. For the special stratum in Nagaland and A & N Islands, 4 UFS blocks were allocated to each.

3.8 **Allocation to sub-strata**: Stratum allocations were distributed among the two sub-strata in proportion to the number of UFS blocks in the sub-strata. Minimum allocation for each sub-stratum was 2. Equal number of samples had been allocated among the two sub-rounds.

3.9 **Selection of UFS blocks**: The NSS Urban Frame Survey (UFS 2007-12 phase) blocks were used for all towns and cities. From each stratum/sub-stratum UFS blocks were selected using Simple Random Sampling Without Replacement (SRSWOR). Samples were drawn in the form of two independent sub-samples and equal sized samples were allocated to the two sub rounds. Also, an additional sample of UFS blocks in the form of sub-sample 3, equal to the number of sample UFS blocks in each of the sub-samples 1 & 2, was allocated to substratum 1 only.

3.10 Estimation Procedure

Notations: The notations used for describing the procedure of estimation are given below:

s = subscript for s-th stratum

t = subscript for t-th sub-stratum

m = subscript for sub-sample (m =1, 2, 3)

i = subscript for i-th FSU

d = subscript for a hamlet-group/ sub-block (d = 1, 2)

j = subscript for j-th second stage stratum in an FSU/ hg/sb

[j = (1, 2 or 3 for schedule 1.2)]

k = subscript for k-th sample household under a particular second stage stratum within an FSU/hg/sb

D = total number of hg's/ sb's formed in the sample FSU

D* = 0 if D = 1

= (D-1) for FSUs with D > 1

N = total number of FSUs in any urban (UFS) sub-stratum

Z = total size of a rural stratum (= sum of sizes for all the FSUs of a sub-stratum)

z = size of sample village used for selection

n = number of sample FSUs surveyed including zero cases but excluding casualty for a particular sub-sample and stratum/ sub-stratum.

L = total number of slums (whole or part) found within the sample urban FSU.

b =total no of UFS blocks intersecting the slum.

H =total no of households listed in a second-stage stratum of an FSU / hamlet-group or sub-block of sample FSU

x, y = observed value of characteristics *x*, *y* under estimation

$\hat{X}, \hat{Y}$ = estimate of population total X, Y for the characteristics x, y

Under the above symbols,

$y_{stmidjk}$ = observed value of the characteristic y for the k-th household in the j-th second stage stratum of the d-th hg/ sb (d = 1, 2) of the i-th FSU belonging to the m-th sub-sample for the t-th sub-stratum of s-th stratum;

However, for ease of understanding, a few symbols have been suppressed in following paragraphs where they are obvious.

3.11 Formulae for Estimation of Aggregates for a particular sub-sample and stratum/sub-stratum in Rural / Urban sector:

Schedule 0.21:

Urban (for sub-samples 1, 2 and 3):

(i) For estimating the number of slums in a stratum × sub-stratum possesing a characteristic:

$$\widehat{\boldsymbol{Y}} = \frac{\boldsymbol{N}}{\boldsymbol{n}} \sum_{\boldsymbol{i=1}}^{\boldsymbol{n}} \sum_{\boldsymbol{a=1}}^{\boldsymbol{L_i}} \frac{\mathbf{1}}{\boldsymbol{b_{ia}}} \boldsymbol{y_{ia}}$$

where $\mathbf{y_{ia}}$ is taken as 1 for a-th slum of i-th sample block possesing the characteristic and 0 otherwise.

(ii) For estimating the number of slum households or slum population in a stratum × sub-stratum possesing a characteristic:

$$\widehat{\boldsymbol{Y}} = \frac{\boldsymbol{N}}{\boldsymbol{n}} \sum_{\boldsymbol{i=1}}^{\boldsymbol{n}} \sum_{\boldsymbol{a=1}}^{\boldsymbol{L_i}} \frac{\mathbf{1}}{\boldsymbol{b_{ia}}} \boldsymbol{y_{ia}}$$

where $\mathbf{y_{ia}}$ is taken as the number of households/ population possesing the characteristic y belonging to the a-th slum of i-th sample block.

3.12 Overall Estimate for Aggregates for a sub-stratum:

Overall estimate for aggregates for a stratum $\boldsymbol{(\hat{Y}st)}$ based on all sub-samples in a sub-stratum is obtained as:

(i) For sub-stratum with 2 sub-samples: $\hat{\boldsymbol{Y}}_{\boldsymbol{st}} = \frac{\mathbf{1}}{\mathbf{2}} \sum_{\boldsymbol{m=1}}^{\mathbf{2}} \widehat{\boldsymbol{Y}}_{\boldsymbol{stm}}$

(ii) For sub-stratum with 3 sub-samples: $\hat{\boldsymbol{Y}}_{\boldsymbol{st}} = \frac{\mathbf{1}}{\mathbf{3}} \sum_{\boldsymbol{m=1}}^{\mathbf{3}} \widehat{\boldsymbol{Y}}_{\boldsymbol{stm}}$

3.13 Overall Estimate of Aggregates for a stratum:

Overall estimate for a stratum $(\widehat{\boldsymbol{Y}}_{\boldsymbol{s}})$ will be obtained as

$$\widehat{\boldsymbol{Y}}_{\boldsymbol{s}} = \sum_{\boldsymbol{t}} \widehat{\boldsymbol{Y}}_{\boldsymbol{st}}$$

3.14 Estimates of Ratios:

Let $\hat{Y}$ and $\hat{X}$ be the overall estimate of the aggregates Y and X for two characteristics y and x respectively at the state level.

Then the combined ratio estimate $(\hat{R})$ of the ratio $(R = \frac{Y}{X})$ will be obtained as $\hat{R} = \frac{\hat{Y}}{\hat{X}}$

--X--

Table 1 :Number of First stage units (FSUs) alloted, surveyed and number of sample households surveyed for Maharashtra State
Number of sample slums

State	Number of sample blocks surveyed	Notified	Non-notified
Maharashtra	233	133	113

Table 3.1 : Estimated number of Slums and estimated approximate number of households within these slums

State	Estimated						Number of sample		
	Number of			Approximate number of households in					
	Notified slums	Non-notified slums	All	Notified slums	Non-notified slums	All	Notified slums	Non-notified slums	All
Maharashtra	3852	4105	7957	2172404	1171348	3343752	133	113	246

Table 4 : Per 1000 distribution of slums in each state/UT by type of ownership of the land

Slum Description	Per 1000 no. of slums by land of ownership type								
	Private	Public			Not known	n.r.	All	Number of slums	
		Railway	Local bodies	Others				Estd.	Sample
Notified	519	22	348	107	4	0	1000	3852	133
Non-notified	309	29	453	201	8	0	1000	4105	113
n.r.	0	0	0	0	0	0	0	0	0
All	431	25	392	146	6	0	1000	7957	246

Table 5 : Per 1000 distribution of slums in each state/UT by type of area surrounding the slum

Slum Description	Per thousand no. of slums with area surrounding the slum of type						All	Number of slums	
	Residential	Industrial	Commercial	Others	Slum	n.r.		Estimated	Sample
Notified	649	37	111	6	197	0	1000	3852	133
Non-notified	662	65	35	19	218	0	1000	4105	113
n.r.	0	0	0	0	0	0	0	0	0
All	654	49	79	11	206	0	1000	7957	246

Table 6 : Per 1000 distribution of slums in each state/UT by type of structure of the majority of houses

Slum Description	Per thousand no. of slums with structure of the majority of houses of type							Number of slums	
	Pucca	Semi-pucca	Serviceable Katcha	Unserviceable Katcha	No structure	n.r.	All	Estd	Sample
Notified	728	216	56	0	0	0	1000	3852	133
Non-notified	522	322	154	0	2	0	1000	4105	113
n.r.	0	0	0	0	0	0	0	0	0
All	642	260	97	0	1	0	1000	7957	246

Table 7 : Per 1000 distribution of slums in each state/UT by major source of drinking water

Slum Description	Per thousand no. of slums with major source of drinking water								
	Tap	Tube well/ borehole	Protected well	Unprotected well	Others	n.r.	All	Number of slums	
								Estimated	Sample
Notified	962	33	0	0	5	0	1000	3852	133
Non-notified	837	144	0	6	14	0	1000	4105	113
n.r.	0	0	0	0	0	0	0	0	0
All	910	79	0	2	9	0	1000	7957	246

Table 8 : Per 1000 distribution of slums in each state/UT by status of electricity connection

Slum Description	Per 1000 no. of slums with						Number of slums	
	Electricity for			No electricity	n.r.	All	Estimated	Sample
	Both street lights and household use	Household use only	Street light only					
Notified	767	131	101	0	0	1000	3852	133
Non-notified	701	94	198	7	0	1000	4105	113
n.r.	0	0	0	0	0	0	0	0
All	740	116	142	3	0	1000	7957	246

Table 9.1 : Per 1000 distribution of slums in each state/UT by type of road/lane/constructed path within the slum

Slum Description	Per thousand no. of slums with road / lane / constructed path within the slum of type				Number of slums	
	Pucca	Katcha	n.r.	All	Estimated	Sample
Notified	897	103	0	1000	3852	133
Non-notified	718	282	0	1000	4105	113
n.r.	0	0	0	0	0	0
All	822	178	0	1000	7957	246

Table 9.2 : Per 1000 distribution of slums in different slum size classes by type of road/ lane/ constructed path within the slum, separately for million-plus cities and other Urban areas

Sector	Size class of slum(No. of Households)	Per thousand no. of slums with road / lane / constructed path within the slum of type			
		Pucca	Katcha	All	Number of slums
					Sample
Slum: Notified					
million plus-cities	less than 60	901	99	1000	9
	60-120	1000	0	1000	9
	120-180	1000	0	1000	24
	180-240	1000	0	1000	13
	more than 240	458	542	1000	8
ALL		912	88	1000	63
other urban areas	less than 60	787	213	1000	15
	60-120	957	43	1000	28
	120-180	886	114	1000	19
	180-240	1000	0	1000	6
	more than 240	627	373	1000	3
ALL		868	132	1000	71
Maharashtra		894	106	1000	134
Slum: Non-notified					
million plus-cities	less than 60	794	206	1000	8
	60-120	577	423	1000	12
	120-180	174	826	1000	7
	180-240	750	250	1000	4
	more than 240	696	304	1000	3
ALL		605	395	1000	34
other urban areas	less than 60	765	235	1000	29
	60-120	765	235	1000	29
	120-180	797	203	1000	13
	180-240	1000	0	1000	1
	more than 240	923	77	1000	6
ALL		783	217	1000	78
Maharashtra		721	279	1000	112
Slum: All					
million plus-cities	less than 60	861	139	1000	17
	60-120	828	172	1000	21
	120-180	829	171	1000	31
	180-240	958	42	1000	17
	more than 240	507	493	1000	11
ALL		821	179	1000	97
other urban areas	less than 60	773	227	1000	44
	60-120	866	134	1000	57
	120-180	849	151	1000	32
	180-240	1000	0	1000	7
	more than 240	798	202	1000	9
ALL		823	177	1000	149
Maharashtra		822	178	1000	246

Table 10.1 : Per 1000 distribution of slums in each state/UT by type of road/lane/constructed path within the slum

Slum Description	Per 1000 no. of slums with approach road lane constructed path of type								Number of slums	
	Motorable			Non-motorable			n.r.	All	Estimated	Sample
	Pucca	Katcha	Total	Pucca	Katcha	Total				
Notified	755	45	800	200	0	200	0	1000	3852	133
Non-notified	685	82	766	148	85	234	0	1000	4105	113
n.r.	0	0	0	0	0	0	0	0	0	0
All	726	61	786	178	36	214	0	1000	7957	246

Table 11: Per 1000 distribution of slums by latrine facility used by most of the residents

Slum Description	Per thousand no. of slums with latrine facility of the type															
	Public / community (without payment)			Public / community (with payment)			Shared			Owned			No latrine	n.r.	All	Number of slums	
	dry pit	flush pour flush	others	dry pit	flush pour flush	others	dry pit	flush pour flush	others	dry pit	flush pour flush	others				Estd.	Sample
Notified	62	257	37	84	210	0	31	4	0	8	175	48	84	0	1000	3852	133
Non-notified	45	265	17	24	191	0	0	15	5	31	198	18	190	0	1000	4105	113
n.r.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All	55	261	29	59	202	0	18	9	2	17	185	36	128	0	1000	7957	246

Table 12.1 : Per 1000 distribution of slums in each state/UT by availability of underground sewerage system

Slum Description	Per thousand no. of slums with underground sewerage system				Number of slums	
	Available	Not available	n.r.	All	Estimated	Sample
Notified	711	289	0	1000	3852	133
Non-notified	549	451	0	1000	4105	113
n.r.	0	0	0	0	0	0
All	643	357	0	1000	7957	246

Table 13.1 : Per 1000 distribution of slums in each state/UT by type of drainage system

Slum Description	Per thousand no. of slums with drainage system of type							Number of slums	
	Underground	Covered Pucca	Open Pucca	Open Katcha	No drainage	n.r.	All	Estimated	Sample
Notified	526	116	254	43	61	0	1000	3852	133
Non-notified	389	88	313	61	150	0	1000	4105	113
n.r.	0	0	0	0	0	0	0	0	0
All	469	104	278	51	98	0	1000	7957	246

Table 14.1 : Per 1000 distribution of slums in each state/UT by arrangement of garbage disposal

Slum Description	Per thousand no. of slums with							
	Garbage disposal arrangement by			No Garbage disposal arrangement	n.r.	All	Number of slums	
	municipality	residents	Others				Estimated	Sample
Notified	870	57	20	53	0	1000	3852	133
Non-notified	727	90	31	152	0	1000	4105	113
n.r.	0	0	0	0	0	0	0	0
All	810	71	25	94	0	1000	7957	246

Table 15 : Per 1000 Distribution of Slums not having motorable road by distance from nearest mot orable road

Slum Description	Per 1000no. of slums not having motorable road with distance from nearest motorable road							Number of Slums not having motorable road	
	Less Than 0.5 km	0.5 to 1.0 km	1 to 2 km	2 to 5 km	5 km or more	N.R.	All	Estimated	Sample
Notified	977	23	0	0	0	0	1000	1345	26
Non-Notified	806	194	0	0	0	0	1000	1770	23
N.R.	0	0	0	0	0	0	0	0	0
ALL	899	101	0	0	0	0	1000	3115	49

Table 16.1 : Per 1000 distribution of slums in each state/UT by distance from nearest government primary school

Slum Description	Per thousand no. of slums with distance from nearest primary school							Number of slums	
	Less than 0.5 km	0.5 to 1.0 km	1 to 2 km	2 to 5 km	5 km or more	n.r.	All	Estimated	Sample
Notified	545	332	89	33	0	0	1000	3852	133
Non-notified	638	258	67	37	0	0	1000	4105	113
n.r.	0	0	0	0	0	0	0	0	0
All	584	301	80	35	0	0	1000	7957	246

Table 17.1 : Per 1000 distribution of slums in each state/UT by distance from nearest government hospital/health centre

Slum Description	Per thousand no. of slums with distance from nearest government hospital health care							Number of slums	
	Less than 0.5 km	0.5 to 1.0 km	1 to 2 km	2 to 5 km	5 km or more	n.r.	All	Estimated	Sample
Notified	283	304	190	185	38	0	1000	3852	133
Non-notified	174	207	204	371	44	0	1000	4105	113
n.r.	0	0	0	0	0	0	0	0	0
All	238	263	196	263	41	0	1000	7957	246

Table 18 : per 1000 distribution of slums in each state/UT by approximate area of slums

Slums	per 1000 no. of slums										number of slums	
	n.r.	less than 0.05	0.05 to 1.00	1.00 to 2.00	2.00 to 3.00	3.00 to 4.00	4.00 to 6.00	6.00 to 8.00	8.00 to more	all	estimated	sample
Notified	0	146	361	78	118	93	60	50	94	1000	3852	133
Non-notified	0	87	260	214	78	108	151	34	68	1000	4105	113
All	0	122	319	135	101	99	98	43	83	1000	7957	246

Table 19.1 : Per 1000 distribution of slums in each state/UT by type of road/lane/constructed path within the slum

Slum Description	Per thousand no. of slums											
	Usually waterlogged during monsoon				Not usually waterlogged during monsoon				n.r.	All	Number of slums	
	Approach road / lane / Constructed path usually waterlogged in monsoon											
	Yes	No	n.r.	all	Yes	No	n.r.	all			estimated	sample
Notified	170	35	0	205	80	715	0	795	0	1000	3852	133
Non-notified	293	31	0	325	134	541	0	675	0	1000	4105	113
n.r.	0	0	0	0	0	0	0	0	0	0	0	0
All	221	33	0	255	103	643	0	745	0	1000	7957	246

Table 20.1 : Per 1000 distribution of slums in each state/UT by type of road/lane/constructed path within the slum

Slum Description	per thousand no. of slums with																		Number of slums	
	Collection of garbage by municipality / corporation						Collection of garbage by residents / others						Any system of garbage collection							
	daily	once in				all	daily	once in				all	daily	once in				all	estd	sample
		2 days	3 to 7 days	8 to 15 days	others			2 days	3 to 7 days	8 to 15 days	others			2 days	3 to 7 days	8 to 15 days	others			
Notified	627	111	130	8	42	918	56	8	0	8	9	82	683	119	130	16	52	1000	3852	133
Non-notified	617	76	89	57	20	857	99	2	15	0	27	143	715	77	105	57	46	1000	4105	113
n.r.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All	623	97	114	27	33	895	73	5	6	5	16	105	696	102	120	32	50	1000	7957	246

Table 21 : per 1000 distribution of slums in each state/UT by location of slums

Type of slum	per 1000 no. of slums								number of slums	
	Along Nallah / Drain	Along Railway Line	River Bank / River Bed	Hilly Terrain / Slope	Park / Open Space	Others	n.r.	all	estimated	sample
Notified	242	80	22	56	320	280	0	1000	21520	133
Non- notified	155	131	31	105	303	275	0	1000	15245	113
all	206	101	26	76	313	278	0	1000	36765	246

Table 23 : Per 1000 number of Slums in each Stateby avaibility of an association for improving the c ondition of the slum

Slum Description	Per 1000 No. of Slums				Number of Slums	
	Association for improving the condition of slum				Estimated	Sample
	Yes	No	N.R.	All		
Notified	181	819	0	1000	3852	133
Non-notified	217	783	0	1000	4105	113
All	196	804	0	1000	7957	246

Table 30_2 : Per 1000 distribution of slums in different slum size classes by change in condition of drainage facility during the last five years, separately for million-plus cities and other urban areas

Sector	Size class of slum (No. of Households)	per 1000 no. of slums where drainage facility					Number of slums sample
		Improved	Did not Change	Neither existed earlier nor exists now	Deteriorated	all	
Slum : NOTIFIED							
million plus-cities	less than 60	55	945	0	0	1000	9
	60-120	608	392	0	0	1000	9
	120-180	626	374	0	0	1000	24
	180-240	657	343	0	0	1000	13
	more than 240	0	970	30	0	1000	8
all		407	589	3	0	1000	63
other urban areas	less than 60	580	385	35	0	1000	15
	60-120	418	534	47	0	1000	28
	120-180	235	743	0	22	1000	18
	180-240	200	800	0	0	1000	6
	more than 240	17	983	0	0	1000	3
all		394	574	29	3	1000	70
Maharashtra		402	583	14	1	1000	133
Slum : NON-NOTIFIED							
million plus-cities	less than 60	22	930	48	0	1000	8
	60-120	480	441	79	0	1000	12
	120-180	135	754	0	111	1000	7
	180-240	466	534	0	0	1000	4
	more than 240	0	1000	0	0	1000	3
all		211	727	42	20	1000	34
other urban areas	less than 60	657	342	1	0	1000	29
	60-120	425	570	4	0	1000	28
	120-180	501	469	31	0	1000	14
	180-240	0	1000	0	0	1000	2
	more than 240	295	705	0	0	1000	6
all		538	457	5	0	1000	79
Maharashtra		423	552	18	7	1000	113
Slum : ALL							
million plus-cities	less than 60	43	939	18	0	1000	17
	60-120	556	412	32	0	1000	21
	120-180	525	452	0	23	1000	31
	180-240	625	375	0	0	1000	17
	more than 240	0	976	24	0	1000	11
all		349	630	15	6	1000	97
other urban areas	less than 60	630	357	13	0	1000	44
	60-120	421	551	27	0	1000	56
	120-180	351	623	13	12	1000	32
	180-240	172	828	0	0	1000	8
	more than 240	177	823	0	0	1000	9
all		471	512	16	2	1000	149
Maharashtra		411	570	15	4	1000	246

Table 31_2 : Per 1000 distribution of slums in different slum size classes by change in condition of sewerage facility during the last five years, separately for million-plus cities and other urban areas

Sector	Size class of slum (No. of Households)	per 1000 no. of slums where sewerage facility					number of slums sample
		Improved	Did not Change	Neither existed earlier nor exists now	Deteriorated	all	
Slum : NOTIFIED							
million plus-cities	less than 60	6	994	0	0	1000	9
	60-120	212	788	0	0	1000	9
	120-180	639	361	0	0	1000	24
	180-240	608	392	0	0	1000	13
	more than 240	0	970	30	0	1000	8
all		318	679	3	0	1000	63
other urban areas	less than 60	396	593	12	0	1000	15
	60-120	306	678	16	0	1000	28
	120-180	206	712	34	48	1000	18
	180-240	0	885	115	0	1000	6
	more than 240	0	1000	0	0	1000	3
all		272	696	24	8	1000	70
Maharashtra		299	686	12	3	1000	133
Slum : NON-NOTIFIED							
million plus-cities	less than 60	22	930	48	0	1000	8
	60-120	323	598	79	0	1000	12
	120-180	246	754	0	0	1000	7
	180-240	216	784	0	0	1000	4
	more than 240	304	435	0	262	1000	3
all		188	752	42	19	1000	34
other urban areas	less than 60	590	362	48	0	1000	29
	60-120	306	645	17	32	1000	28
	120-180	444	445	111	0	1000	14
	180-240	0	1000	0	0	1000	2
	more than 240	245	705	50	0	1000	6
all		460	485	46	9	1000	79
Maharashtra		365	579	44	12	1000	113
Slum : ALL							
million plus-cities	less than 60	12	970	18	0	1000	17
	60-120	257	711	32	0	1000	21
	120-180	558	442	0	0	1000	31
	180-240	542	458	0	0	1000	17
	more than 240	63	860	24	54	1000	11
all		279	701	15	5	1000	97
other urban areas	less than 60	522	443	35	0	1000	44
	60-120	306	662	16	15	1000	56
	120-180	310	595	68	27	1000	32
	180-240	0	901	99	0	1000	8
	more than 240	141	830	29	0	1000	9
all		372	584	36	8	1000	149
Maharashtra		326	641	25	7	1000	246

Table 32_2 : Per 1000 distribution of slums in different slum size classes by change in condition of garbage disposal facility during the last five years, separately for million-plus cities and other urban areas

Sector	Size class of slum(No. of Households)	per 1000 no. of slums where garbage disposal facility					number of slums sample
		Improved	Did not Change	Neither existed earlier nor exists now	Deteriorated	all	
Slum : NOTIFIED							
million plus-cities	less than 60	402	598	0	0	1000	9
	60-120	332	668	0	0	1000	9
	120-180	700	274	27	0	1000	24
	180-240	549	433	0	19	1000	13
	more than 240	0	970	30	0	1000	8
all		452	534	11	3	1000	63
other urban areas	less than 60	521	473	6	0	1000	15
	60-120	683	260	16	41	1000	28
	120-180	397	603	0	0	1000	18
	180-240	703	259	0	38	1000	6
	more than 240	0	1000	0	0	1000	3
all		536	439	8	18	1000	70
Maharashtra		486	496	10	9	1000	133
Slum : NON-NOTIFIED							
million plus-cities	less than 60	31	921	48	0	1000	8
	60-120	597	324	79	0	1000	12
	120-180	333	667	0	0	1000	7
	180-240	175	291	534	0	1000	4
	more than 240	304	435	262	0	1000	3
all		287	615	97	0	1000	34
other urban areas	less than 60	698	209	93	0	1000	29
	60-120	574	397	12	16	1000	28
	120-180	452	516	32	0	1000	14
	180-240	302	698	0	0	1000	2
	more than 240	259	691	50	0	1000	6
all		594	342	60	4	1000	79
Maharashtra		487	437	73	3	1000	113
Slum : ALL							
million plus-cities	less than 60	263	719	18	0	1000	17
	60-120	440	528	32	0	1000	21
	120-180	624	355	21	0	1000	31
	180-240	486	409	90	16	1000	17
	more than 240	63	860	78	0	1000	11
all		403	558	37	2	1000	97
other urban areas	less than 60	636	302	63	0	1000	44
	60-120	632	324	14	30	1000	56
	120-180	421	565	14	0	1000	32
	180-240	647	320	0	33	1000	8
	more than 240	149	822	29	0	1000	9
all		567	387	36	11	1000	149
Maharashtra		486	471	36	6	1000	246

Table 34_2 : Per 1000 distribution of slums in different slum size classes by change in condition of medical facilities during the last five years, separately for million-plus cities and other urban areas

Sector	Size class of slum (No. of Households)	per 1000 no. of households where medical facilities					number of slums sample
		Improved	Did not Change	Deteriorated	Neither existed earlier nor exists now	all	
Slum : NOTIFIED							
million plus-cities	less than 60	6	994	0	0	1000	9
	60-120	92	908	0	0	1000	9
	120-180	630	335	27	9	1000	24
	180-240	518	482	0	0	1000	13
	more than 240	149	851	0	0	1000	8
all		297	693	8	3	1000	63
other urban areas	less than 60	518	447	0	35	1000	15
	60-120	588	276	41	95	1000	28
	120-180	74	904	0	22	1000	18
	180-240	49	691	0	260	1000	6
	more than 240	610	390	0	0	1000	3
all		441	474	15	70	1000	70
Maharashtra		355	605	11	30	1000	133
Slum : NON-NOTIFIED							
million plus-cities	less than 60	9	943	48	0	1000	8
	60-120	555	183	262	0	1000	12
	120-180	0	889	111	0	1000	7
	180-240	426	574	0	0	1000	4
	more than 240	565	435	0	0	1000	3
all		241	642	117	0	1000	34
other urban areas	less than 60	647	299	54	0	1000	29
	60-120	77	897	26	0	1000	28
	120-180	246	715	39	0	1000	14
	180-240	0	698	302	0	1000	2
	more than 240	129	821	50	0	1000	6
all		396	557	47	0	1000	79
Maharashtra		341	587	72	0	1000	113
Slum : ALL							
million plus-cities	less than 60	7	975	0	18	1000	17
	60-120	280	613	0	107	1000	21
	120-180	499	450	21	30	1000	31
	180-240	503	497	0	0	1000	17
	more than 240	234	766	0	0	1000	11
all		280	678	5	37	1000	97
other urban areas	less than 60	602	351	0	47	1000	44
	60-120	351	564	22	63	1000	56
	120-180	149	822	0	29	1000	32
	180-240	42	692	0	266	1000	8
	more than 240	332	639	0	29	1000	9
all		417	519	7	58	1000	149
Maharashtra		349	597	6	47	1000	246

Table 35 : Per 1000 distribution of slums where water supply improved during last 5 years by source of improvement for each state/UT

Slum Description	Per 1000 no. of slums with improvement in water supply effected by						Number of slums where water supply improved during last 5 years	
	Government	NGO	Residents	Others	N.R.	All	Estimated	Sample
Notified	857	132	11	0	0	1000	2568	49
Non-notified	986	8	1	4	0	1000	3144	48
All	926	66	6	2	0	1000	5712	97

Table 36 : Per 1000 distribution of slums where street lighting improved during last 5 years by source of improvement for each state/UT

Slum Description	Per 1000 no. of slums with improvement in street lighting effected by						Number of slums where street lighting improved during last 5 years	
	Government	NGO	Residents	Others	N.R.	All	Estimated	Sample
Notified	889	111	0	0	0	1000	2787	60
Non-notified	986	8	0	5	0	1000	2258	48
All	931	67	0	2	0	1000	5045	108

Table 37 : Per 1000 distribution of slums where electricity improved during last 5 years by source of improvement per 1000 slums for each state/UT

Slum Description	Per 1000 no. of slums with improvement in electricity facilities effected by						Number of slums where electricity facilities improved during last 5 years	
	Government	NGO	Residents	Others	N.R.	All	Estd.	Sample
Notified	867	129	4	0	0	1000	2817	48
Non-notified	783	8	0	5	0	1000	2474	40
All	827	169	2	2	0	1000	5290	88

Table 38 : Per 1000 distribution of slums where condition of latrine facility improved during last 5 years by source of improvement for each state/UT

Slum Description	Per 1000 no. of slums with improvement in latrine facility effected by						Number of slums where latrine facility improved during last 5 years	
	Government	NGO	Residents	Others	N.R.	All	Estimated	Sample
Notified	790	135	75	0	0	1000	2563	45
Non-notified	795	8	134	6	0	1000	1543	32
All	793	104	101	3	0	1000	4106	77

Table 39 : Per 1000 distribution of slums where condition of sewerage facility improved during last 5 years by source of improvement for each state/UT

Slum Description	Per 1000 no. of slums with improvement in sewerage facility effected by					All	Number of slums where sewerage facility improved during last 5 years	
	Government	NGO	Residents	Others	N.R.		Estimated	Sample
Notified	851	149	0	0	0	1000	2576	35
Non-notified	969	8	21	6	0	1000	1862	31
All	906	82	10	3	0	1000	4438	66

Table 40 : Per 1000 distribution of slums where condition of drainage facility improved during last 5 years by source of improvement for each state/UT

Slum Description	Per 1000 no. of slums with improvement in drainage facility effected by						Number of slums where drainage facility improved during last 5 years	
	Government	NGO	Residents	Others	N.R.	All	Estimated	Sample
Notified	882	118	0	0	0	1000	2983	52
Non-notified	983	8	0	5	0	1000	2195	42
All	925	72	0	2	0	1000	5178	94

Table 41 : Per 1000 distribution of slums where condition of garbage disposal improved during last 5 years by source of improvement for each state/UT

Slum Description	Per 1000 no. of slums with improvement in garbage disposal effected by						Number of slums where garbage disposal improved during last 5 years	
	Government	NGO	Residents	Others	N.R.	All	Estimated	Sample
Notified	799	182	19	0	0	1000	2998	55
Non-notified	979	8	15	0	0	1000	2451	44
All	874	108	17	0	0	1000	5449	99

Table 42 : Per 1000 distribution of slums where condition of road within the slum improved during last 5 years by source of improvement for each state/UT

Slum Description	Per 1000 no. of slums with improvement in road effected by						Number of slums where road within the slum improved during last 5 years	
	Government	NGO	Residents	Others	N.R.	All	Estimated	Sample
Notified	885	111	0	4	0	1000	2783	68
Non-notified	988	8	0	0	0	1000	1796	47
All	930	68	0	2	0	1000	4579	115

Table 43 : Per 1000 distribution of slums where condition of approach road to the slum improved during last 5 years by source of improvement for each state/UT

Slum Description	Per 1000 no. of slums with improvement in approach road effected by						Number of slums where approach road to the slum improved during last 5 years	
	Government	NGO	Residents	Others	N.R.	All	Estimated	Sample
Notified	878	122	0	0	0	1000	2326	56
Non-notified	967	8	2	20	0	1000	2278	58
All	923	66	1	10	0	1000	4604	114

Table 44 : Per 1000 distribution of slums where condition of educational facility at primary level improved during last 5 years by source of improvement for each state/UT

Slum Description	Government	NGO	Residents	Others	N.R.	All	Estimated	Sample
Notified	713	8	0	73	0	1000	2833	54
Non-notified	934	56	0	9	0	1000	1951	39
All	810	145	0	45	0	1000	4784	93

Table 45 : Per 1000 distribution of slums where condition of medical facilities improved during last 5 years by source of improvement for each state/UT

Slum Description	Per 1000 no. of slum-dwelling households with improvement in medical facilities effected by					All	Number of slums where medical facilities improved during last 5 years	
	Government	NGO	Residents	Others	N.R.		Estimated	Sample
Notified	680	272	26	22	0	1000	2550	41
Non-notified	731	8	22	136	0	1000	2544	29
All	701	206	24	68	0	1000	5093	70