

REPORT OF THE COMMITTEE ON SLUM STATISTICS/CENSUS



सत्यमेव जयते

Government Of India
Ministry of Housing and Urban Poverty Alleviation
National Buildings Organisation

**REPORT OF THE COMMITTEE
ON
SLUM STATISTICS/CENSUS**



**GOVERNMENT OF INDIA
MINISTRY OF HOUSING AND URBAN POVERTY ALLEVIATION
NATIONAL BUILDINGS ORGANISATION
NEW DELHI**

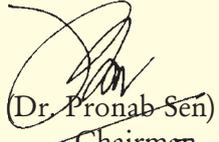
Kumari Selja
Hon'ble Minister of Housing & Urban Poverty Alleviation
Government of India

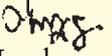
Subject: Report of the Committee to look into various aspects of Slum Statistics/Census and issues regarding the conduct of Slum Census 2011

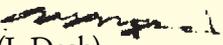
Dear Madam,

We are pleased to submit the Report of the Committee to look into various aspects of Slum Statistics/Census and issues regarding the conduct of Slum Census 2011 constituted vide the NBO, Ministry of HUPA, Office Order dated 4th July, 2008.

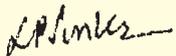
Yours faithfully


(Dr. Pronab Sen)
Chairman

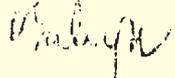

Members
(Dr. P.K. Mohanty)
Additional Secretary (JNNURM)
M/o HUPA


(J. Dash)
Director General, NSSO
M/O Statistics & PI,
Govt. of India

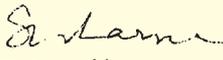

(Dr. C. Chandramouli)
Registrar General
and Census Commissioner
of India

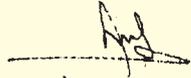

(L.P. Sonkar)
Sr. Advisor
Planning Commission

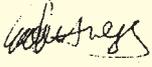

(Girish Shonkar)
Secretary (Urban
Development & Housing),
Govt. of Bihar


(Pushpa Subramanian)
Pr. Secretary, Municipal
Administration,
Govt of Andhra Pradesh


(S.R. Kunte)
Secretary (Housing),
Govt of Maharashtra


(K. Suresh)
Principal Secretary
(Planning & Statistics)
Govt of Madhya Pradesh


(Navneet Sehgal)
Secretary (UE & PA),
Govt. of Uttar Pradesh


(D.S. Negi)
Director (NBO) & OSD
(JNNURM & RAY),
M/o HUPA

डॉ. प्रणव सेन
DR. PRONAB SEN
प्रधान सलाहकार
PRINCIPAL ADVISER



भारत सरकार
योजना आयोग
योजना भवन, संसद मार्ग
नई दिल्ली-११० ००१
Government of India
Planning Commission
Yojana Bhavan, Parliament Street
New Delhi-110 001
Telefax : 23096579
E-mail : pronab@nic.in

P R E F A C E

The Millennium Declaration of the United Nations, to which India is a signatory, specifically recognizes the need to improve the lives of slum dwellers. The existence and proliferation of slums is especially acute in developing countries as the pace of urbanization accelerates, and India is no exception. Recognising the gravity of the issue, and our commitments to both our own people and the global community, the Government of India has launched a major programme for improvement of the lives of slum dwellers. However, it has been found that the design of this programme is severely constrained by the paucity of data, not only regarding the living conditions in Indian slums, but indeed even the magnitude and dispersion of the slum population. As a consequence of this recognition, a Committee on Slum Statistics/Census was constituted by the Ministry of Housing and Urban Poverty Alleviation under my chairmanship to look into various aspects of Slum Statistics/Census and issues regarding the conduct of Slum Census 2011.

The Committee held five meetings and one special meeting was convened by the Hon'ble Minister of Housing and Urban Poverty Alleviation. This report is the outcome of these deliberations, and the studies that were commissioned to fill our knowledge gaps. It cannot be claimed that this report in any manner represents the final word on the subject. The dynamics of urbanization and migration in a large and rapidly growing country like India are too complex to be easily captured. The best we can hope to do is to bring about incremental improvements in our knowledge and understanding through the existing administrative systems and statistical activities. In the longer run it is hoped that as our understanding improves, we will be able to evolve more appropriate data capture methodologies and more efficient statistical techniques to obtain more accurate estimates with greater frequency than is possible at present.

The Committee commissioned the Indian Agricultural Statistics Research Institute (IASRI), a premier statistical research institute in the country to carry out an estimation exercise using the latest statistical techniques to fill the information gaps that exist at present. We are deeply grateful to IASRI and research team of National Buildings Organisation (NBO) for having undertaken this exercise at short notice and doing a commendable job.

Dr.C.Chandramouli, Registrar General & Census Commissioner of India, and his team of dedicated officers went beyond the call of duty in contributing to this report. We are deeply grateful to them for conducting the pilot study on identifying small slum clusters and rendering valuable suggestions to the Committee. The National Sample

Survey Office (NSSO), especially its Survey Design and Research Division, assisted the Committee at every step, especially on conceptual issues and data support.

The Committee appreciates the valuable inputs provided by Mrs. Kiran Dhingra, Secretary (HUPA), Dr. P.K.Mohanty, Additional Secretary (JNNURM), Ministry of Housing and Urban Poverty Alleviation. It also places on record its appreciation for the valuable services provided by Shri D.S.Negi, Director (NBO) & OSD (JnNURM & RAY), Shri Avanish Kr. Mishra, Deputy Director (NBO) and Shri V. Ethiraj, Research Officer, NBO in preparation of background papers needed for effective deliberations of the committee. Last but not the least, we wish to place on record our deep appreciation of the interest and commitment of the Hon'ble Minister of Housing and Urban Poverty alleviation, who encouraged us at every step.



(Dr. Pronab Sen)
Chairman
Committee on Slum
Statistics/Census

New Delhi
Dated: August 30, 2010

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LIST OF ACRONYMS

AHIP	Affordable Housing in Partnership
BPL	Below Poverty Line
BSUP	Basic Services to the Urban Poor
CDP	City Development Plans
CDS	Community Development Society
CSC	Central Statistical Commission
CSO	Central Statistical Office
DFID	Department for International Development
EB	Enumeration Block
EIUS	Environmental Improvement of Urban Slums
EWS	Economically Weaker Sections
FAR	Floor Area Ratio
FHH	Female-headed Households
GIS	Geographic Information System
GDP	Gross Domestic Product
HCR	Head-count Ratio
HFI	Housing Finance Institution
HH	Household
HUDCO	Housing & Urban Development Corporation
HLB	House listing Blocks
IASRI	Indian Agricultural Statistics Research Institute
IDSMT	Integrated Development of Small and Medium Towns
IHSDP	Integrated Housing & Slum Development Programme
IHSUP	Interest Subsidy Scheme for Housing the Urban Poor
ILCS	Integrated Low-cost Sanitation Scheme
JNNURM	Jawaharlal Nehru National Urban Renewal Mission

LIG	Lower Income Group
MHH	Male-headed Households
MIS	Management Information System
MPCE	Monthly per-capita Consumption Expenditure
MRP	Mixed Recall Period
NBO	National Buildings Organisation
NCU	National Commission on Urbanization
NCUES	National Commission for Enterprises in the Unorganised Sector
NHB	National Housing Bank
NHC	Neighborhood Committees
NHG	Neighborhood Groups
NPV	Net Present Value
NRV	Nehru Rozgar Yojana
NSS	National Sample Survey
NSSO	National Sample Survey Organization
NUHHP	National Urban Housing & Habitat Policy
OG	Urban Out-Growths
PCA	Principal Component Analysis
PMIUPEP	The Prime Minister's Integrated Urban Poverty Eradication Programme
PPP	Public-Private Partnership
RAY	Rajiv Awas Yojana
RCC	Reinforced Cement Concrete
RGI	Registrar General of India
% AV SE	Percentage average standard Error
SEZ	Special Economic Zones
SDP	State Domestic Product
SEB	Slum Enumeration Blocks

SJSRY	Swarna Jayanti Shahari Rozgar Yojana
TCPO	Town and Country Planning Organisation
TDR	Transferable Development Rights
TOR	Terms of Reference
UA	Urban Agglomerations
UFS	Urban Frame Survey
URP	Uniform Recall Period
UBS	Urban Basic Services
UBSP	Urban Basic Services for the Poor
UCD	Urban Community Development
UCDN	Urban Community Development Network
UIDSSMT	Urban Infrastructure Development Scheme for Small & Medium Towns
UIG	Urban Infrastructure & Governance
ULB	Urban Local Bodies
URP	Universal Recall Period
USHA	Urban Statistics for HR and Assessments
USEP	Urban Self-Employment Programme
UT	Union Territories
UWEP	Urban Wage Employment Programme
UWSP	Urban Women Self-help Programme
WPI	Wholesale Price Index



CHAPTER - I

INTRODUCTION

Increasing urbanization is emerging as the most pervasive and dominant challenge as well as opportunity facing our country, today. Urban population in India has grown from 78.9 million in 1961 to 286 million in 2001 and is estimated to be doubled in next 25 years. Cities and towns are centres of agglomeration economies, investments, technology, innovation, economic growth and tertiary jobs. Their contribution to countries' GDP is immense. They are reservoirs of skills, capital and knowledge. They are the centres of innovation and creativity. They are the generators of resources for the national and state exchequers. They are also the hopes of millions of migrants from the rural hinterland and smaller settlements. With growth of the service sector and surge of the knowledge economy, the population pressure on cities is bound to escalate. They are increasingly face the negative consequences of rapid urbanization, such as polarization of population in large cities, high density, slums and squatter settlements, acute shortage of housing and basic civic amenities, degradation of environment, traffic congestion, pollution, poverty, unemployment, crime and social unrest.

An estimated 25% of urban population (810 lakh in 2001) still subsists on incomes that are below the poverty line. Eighty percent of their meager earnings go towards food and energy, leaving very little for meeting the costs of living in an increasingly monetized society. The majority of them lives in slums and squatter settlements, in inhuman conditions that deny them dignity, shelter, security, and the right to basic civic amenities or social services, in an environment in which harbors crime, ill-health and disease, frequently raise demands on their resources that draws them deeper into vulnerability and poverty. Urbanization accompanied by sustained population growth due to large scale migration from rural areas to urban centers leads to mushrooming slum settlements in all cities and towns in India.

As urbanization grows, and the share of urban households rises in the next two decades from the current 28% to 50% of the country's population, we may expect that slums will tend to grow even faster rates. This is a corollary of urbanization in developing countries. Unless this possibility is consciously taken note of, and corrective action initiated early, it could lead to serious crippling of the productive capacities of a growing number of people by the denial of basic services, shelter and security, increasing inequity and retarding the GDP potential of urban areas. Given the relentless growth of urban population and the difficult economic environment for the poor, the housing problem will further worsen unless concerted measures are taken to ameliorate the living conditions of vast majority of vulnerable sections of the society i.e. the slum dwellers/urban poor.



As the current pace of urbanization is bound to accelerate due to the factors of rural-urban migration and in-situ population growth, we need to put our minds together to find meaningful solutions to these problems. If urbanization has to act as a positive force in economic development, we should avoid the past mistakes and aim at an urban and regional planning system that is inclusive and does not exclude the poor and the informal sector. For considerations of social and economic growth, and the Constitutional mandate, it is necessary to break away from past trends and practices and to take decisive action for inclusive urban development that acknowledges the presence of the poor in cities, recognizes their contribution as essential to the city's functioning, and redresses the fundamental reasons for inequity that ties them down to poverty.

Comprehensive information/data on the slums is essential for formulation of an effective and coordinated policy for improvement/rehabilitation of the slum dwellers in the country.

1.1 Slum Definition

I. The Encyclopedia Britannica defines slums as "... residential areas that are physically and socially deteriorated and in which satisfactory family life is impossible. Bad housing is a major index of slum conditions. By bad housing is meant dwellings that have inadequate light, air, toilet and bathing facilities; that are in bad repair, dump and improperly heated; that do not afford opportunity for family privacy; that are subject to fire hazard and that overcrowd the land, leaving no space for recreational use.

II. Registrar General of India has adopted the following definition for the purpose of Census of India, 2001, the slum areas broadly constitute of:

- All specified areas in a town or city notified as 'Slum' by State/Local Government and UT Administration under any Act including a 'Slum Act'.
- All areas recognized as 'Slum' by State/Local Government and UT Administration, Housing and Slum Boards, which may have not been formally notified as slum under any act
- A compact area of at least 300 populations or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.

III. The NSSO, for the purpose of survey in 1976-77 defined slum as declared and undeclared slums. The declared slums were areas which have been formally declared as slum by the respective municipalities, corporations, local bodies or the development authorities. The undeclared slums were defined as "an aerial unit having twenty five or more katcha



structures mostly of temporary nature, or inhabited by persons with practically no private latrine and inadequate public latrine and water

IV. For the purpose of the survey in 1993 and 2002, NSSO adopted the definition of slums as “A slum is a 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. Such an area, for the purpose of this survey, was considered as “non notified slum” if at least 20 households lived in that area. Areas notified as slums by the respective municipalities, corporations, local bodies or development authorities are treated as “notified slums”.

V. UN-HABITAT defines “A slum is a contiguous settlement where the inhabitants are characterized as having inadequate housing and basic services. A slum is often not recognized and addressed by the public authorities as an integral or equal part of the city.”

Slum households as a group of individuals living under the same roof that lack one or more of the conditions listed below:

- i. Insecure residential status;
- ii. Inadequate access to safe water;
- iii. Inadequate access to sanitation and other infrastructure;
- iv. Poor structural quality of housing;
- v. Overcrowding.

1.2 Definition of the “Slum” as adopted by State Governments

The definition of slum area adopted by the State Governments is based on Slum Acts of the respective States i.e. based on legal stipulations unlike the definitions adopted by RGI and NSSO. The concept, perception and definition of slums vary across the states, depending on their socio-economic conditions but their physical characteristics are almost similar. Slums are usually a cluster of hutments with dilapidated and infirm structures having common toilet facilities, suffering from lack of basic amenities, inadequate arrangements for drainage and for disposal of solid waste and garbage. There are discrepancies between the parameters adopted by State Governments, RGI and NSSO. Generally the State laws provide for a procedure to ‘notify’ or ‘recognize’ slums but the stipulation regarding the number of households in the definition of slums, which is part of the Census and NSSO definitions, is absent in the definitions adopted by State laws which do not place a limit on the number of households for the purpose of identifying a slum.



I. Andhra Pradesh

a) The Definition of Notified Slum Area as provided in “Andhra Pradesh Slum Improvement (Acquisition of Land) Act, 1956. Act. No. XXXIII of 1956” is “Where the government are satisfied that any area is or may be a source of danger to the public health, safety or convenience of its neighborhood by reason of the area being low lying, insanitary, squalid, or otherwise, they may by notification in the Andhra Pradesh gazette declare such area to be a slum area.”

b) The Slum areas recognized by Local Governments (ULBs) but not notified by the State Government as above are “Non-notified Slum areas”.

II. Madhya Pradesh

Slums are defined as per the Clause 3 given in the Madhya Pradesh Gandi Basti Kshetra (Sudhar thatha Nirmulan) Adhiniyam, 1976 which states that:

“Where the Competent Authority upon report from any of its officers or other information in its possession is satisfied in respect of any area that the buildings in that area-

-are in any respect unfit for human habitation; or

-area by reason of dilapidation, overcrowding, faulty arrangement and design of such buildings. hazardous and unwholesome trade carried on therein, narrowness and faulty arrangement of streets, lack of ventilation, light or sanitation facilities, or any combination of these factors, are detrimental to safety, health or morals,

it may, by notification, declare such area to be a slum area.”

Under the DFID assisted Project UTTHAN (Madhya Pradesh Urban Services for the Poor the state is in the process of developing slum notification guidelines. The guidelines are based on the above mentioned act and also the definition of slum as defined in the Census of India for the purpose of the 2001 census which defines slum as a compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.

III. Haryana

Govt. of Haryana had issued a notification on 16.4,1990 for constitution of Haryana Slum Clearance Board and adopted the Punjab Slum Areas (improvement and clearance Act 1961) As per section 3(1) of this Act, the definition of Slum area is:



Where the competent authority upon report from any its officers or other information in its possession is satisfied as respect of any area that the buildings in that area ‘

- a) are in any respect unfit for human habitation, or
- b) are by reason of dilapidation, overcrowding, faulty arrangements and design of such buildings narrowness or faulty arrangements of streets lack of ventilation, light or sanitation facilities, or any combination of those factors detrimental to safety, health or morals” it may by notification in the official Gazette, declare, such an area a slum area.

In determining whether a building is unfit for human habitation for the purpose of this act. regard shall be had to its condition in respect of the following matters, that is to say

- a) repairs.
 - b) stability:
 - c) freedom from damp:
 - d) natural light and air
 - e) water-supply
 - f) drainage and sanitary conveniences.
 - g) facilities for storage preparation and cooking of food and for the disposal of waste water.
- and the building shall be deemed to be unfit as aforesaid if any only if it is so far defective in one or more of the said matters that it is not reasonably suitable for occupation in that condition.

IV. Maharashtra

There is no definition of “Slum” in the Maharashtra Slum Areas (Improvement, Clearance & Redevelopment) Act, 1971.

However, Sec.2 (ga) defines “Slum Area” as;

“Slum Area” means any area declared as such by the Competent Authority under sub-section (1) of section 4;

As per the provisions of sub-section (i) of section 4 to declare an area as slum area, it must satisfy the following conditions:-

- i) any area is or may be a source of danger to the health, safety or convenience of the public of that area or of its neighborhood, by reason of the area having inadequate or no basic amenities, or being insanitary, squalid, overcrowded or otherwise;
- ii) the buildings in any area, used or intended to be used for human habitation are- in any respect, unfit for human habitation; or - by reasons of dilapidation, overcrowding, faulty arrangement and design of such building, narrowness or faulty arrangement of streets, lack of ventilation, light or sanitation facilities or any combination of these factors, detrimental to the health, safety or convenience of the public of that area.



iii) To decide whether the buildings are unfit for the purpose of human habitation, the following conditions should be fulfilled: -

- (a) repairs;
- (b) stability;
- (c) freedom from damp
- (d) natural light and air;
- (e) provision for water-supply;
- (f) provision for drainage and sanitary conveniences;
- (g) facilities for the disposal of waste water.

V. Uttar Pradesh

Where the Competent Authority upon information received or otherwise in its possession is satisfied as respects any area that a majority of the buildings in the area are-

(a) by reason of dilapidation, overcrowding; faulty arrangements of design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation; light or sanitation facilities, or any combination of these factors, detrimental to safety, health or morals of inhabitants in the area, or

(b) otherwise in any respect unfit for human habitation, it may by notification in the official Gazette, declare such area to be slum area;

(2) In determining whether a building is unfit for human habitation, regard shall be had to the following matters, that is to say-

- (a) extent of necessary repairs;
- (b) stability;
- (c) extent of dilapidation
- (d) water supply;
- (e) arrangements for privies, drainage and sanitation;
- (f) facilities for storage, preparation and cooking of food and for the disposal of waste matter and water;

and the building shall be deemed to be unfit as aforesaid if it is so far defective in one or more of the aforesaid matters that is not reasonably suitable for occupation in that condition.



1.3 Definition used in the Report

As may be noted, there are significant differences in the various definitions of slums used internationally and in India. On careful consideration of the various alternatives available and keeping in mind the need to use a definition which is suitable for public policy purposes, the Committee decided to adopt the definition used by the NSSO as its working concept. To reiterate, the Committee defined slums as:

“A slum is a compact settlement of at least 20 households with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions.”

It should be noted that this definition is broad enough to encompass almost all of the others, except in one important dimension – the number of households. It is quite possible to have slums with a lesser number of households which are quite as insupportable, but it was felt that any smaller agglomeration would be difficult to identify through any large scale survey procedure. The Report also makes no distinction between recognized and unrecognized or notified and non-notified slums, since the processes of recognition and notification are informed by considerations other than the living conditions of the people.



CHAPTER - II

BACKGROUND AND OBJECTIVES

In 2001 Census, detailed demographic data about slums across the country was collected by Register General of India (RGI). The 2001 Census, covered slums in cities/towns with a population of 50,000 or above in 1991 census. Slum population was reported from only 640 cities/towns. RGI came out with the publication of Slum Population of 640 cities/towns with a population of 50,000 or above as per 1991 census reporting slums (Phase I Report).

After detailed deliberations and on the recommendation of the Parliamentary Standing Committee on Demands for Grants, the Ministry of Housing and Urban Poverty Alleviation requested the Office of the Registrar General to further identify the slum population in towns which have not been covered at the 2001 Census. After consideration and due discussion, it was mutually decided to cover those towns which have less than 50,000 but more than 20,000 population in 2001. It was anticipated that these medium size population towns, may also be having a sizeable slum population and estimation of slum population in them may then be vital for planning their improvement.

The salient features of the RGI Report are as follows:

2.1 Coverage

In the first phase, 640 cities/towns with more than 50,000 population as per 1991 census were covered. In the second phase 1321 towns were covered [1151 with 20,000 to 50,000 population and 170 with more than 50,000 population]. Out of the 1321 towns covered in 2nd phase, 1103 reported having slums [958 towns - 20,000-49,999 population and 145 with more than 50,000].

Total 1961 (640+1321) towns - covered for identification of slums. Out of 1961 towns, 1743 cities/towns having more than 20,000 population have reported slums.

2.2 Size and Distribution of the Slum Population

640 cities:

A total of 42.6 million people living in 8.3 million households have been enumerated in slums of 640 cities/towns spread across 26 States and Union Territories in 2001 Census. The slum population constitutes 4.1 per cent of the total population of the country. The slum



dwellers of these cities constitute 15 percent of the total urban population of the States and Union Territories reporting slum population

1103 cities:

A total of 9.8 million people living in 1.9 million households have been enumerated in slums of 1103 cities/towns spread across 26 States and Union Territories in 2001 Census. The slum population constitutes one per cent of the total population of the country. The slum dwellers of these cities constitute 3.5 percent of the total urban population of the States and Union Territories reporting slum population

1743 cities (combined):

A total of 52.4 million people living in 10.2 million households have been enumerated in slums of 1743 cities/towns spread across 26 States and Union Territories in 2001 Census. The slum population constitutes 5.1 per cent of the total population of the country. The slum dwellers in 1743 cities constitute 18.5 percent of the total urban population of the States and Union Territories reporting slum population.

2.3 Availability of slum data at present

- ❑ Since there was no Slum population data available (before Census 2001) on full count basis at the national level, the slum population was estimated by Town and Country Planning Organisation (TCPO) a subordinate office under the then Ministry of Urban Employment and Poverty alleviation for 2001 on the basis of 1991 Census results. As per these estimates, the slum population in 2001 was 61.82 million.
- ❑ The Registrar General of India enumerated slum population in the country for the first time on the basis of Census of India, 2001. Accordingly, slum population has been identified in 1174 towns/cities having urban population of 20,000 or more spread over 26 State/Union Territories all over the country. As per Census of India, 2001, a total of 52.4 million people are living in slums in 1743 towns reporting slums which constitutes 23.5 % of the population of these towns.
- ❑ As per UN Population Report (by Mid-year 2001), India's urban slum population is estimated at 158.42 million.
- ❑ National Sample Survey Organisation (NSSO) provides the basic data/information on slums from various National Sample Surveys conducted at different points of time. The first Survey on Slums (31st Round) namely "Conditions of slum area in



Cities' was conducted in 1977 which was restricted to class I cities. The second survey (49th Round) "Slums in India' was conducted in 1993; slum data was collected separately for rural and urban areas. The third survey (58th Round) was conducted exclusively for urban slums namely "Conditions of Urban Slums' in 2002. NSSO surveys provide information on slum condition.

2.4 Data Gaps in Slum Report, 2001 by Registrar General of India

The census 2001 report on slums has left out smaller States like Himachal Pradesh, Sikkim, Nagaland, Manipur, Mizoram etc. Many states are reluctant to accept these slum data. In some States, the district/town authorities have not reported all the towns/enumeration blocks that needed enumeration. In some States, in case of cities/towns covered under Slum Census 2001 the district/town authorities have not considered non-notified / non-recognized slums where there are land disputes.

RGI and NSSO are using different definitions of slums for the purpose of collecting slum statistics in the country. The definition of slums also varies from State to State. According to two reports by the RGI covering all towns/cities with population more than 20,000, the slum population is 52.4 million whereas the TCPO has suggested 61.8 million as the estimated slum population in the year 2001. As per the UN Population Report (by Mid-year 2001), India's urban slum population is estimated at 158.42 million.

RGI is counting an Enumeration Block (EB) as slum area only when in that area at least 300 population or about 60-70 households of poorly built congested tenements exist. This definition excludes pockets or EB with less than 60 households having slum like features. In many States/smaller towns, slums may be found having 20-25 households.

This has resulted in gross under-estimation/under-coverage of slum population in the country and the slum estimates do not reflect the real picture on slum population in many States. Some of the major States like Andhra Pradesh, Uttar Pradesh, Maharashtra, Bihar, Madhya Pradesh etc. have approached the Ministry of Housing & Urban Poverty Alleviation for fresh estimation of slum population in urban areas of the States.

In the above background the Ministry of HUPA constituted the Committee under the chairpersonship of Secretary (MOSPI) to look into various aspects of slum statistics/census.



2.5 Programmes and Policies Implemented By Ministry of Housing and Urban Poverty Alleviation

The Ministry of Housing and Urban Poverty Alleviation is implementing various Plan and policies in the country to address the concerns of Housing, infrastructure, slum development and basic civic amenities with special emphasis to urban poor. Various programmes implemented by the Ministry of HUPA is one way or other for the benefit of urban poor with special emphasis to slum dwellers. Some of the Major Programmes of this Ministry are:

- ❑ Jawaharlal Nehru National Urban Renewal Mission: Basic Services to the Urban Poor (BSUP) & Integrated Housing & Slum Development Programme (IHSDP)
- ❑ Swarna Jayanti Shahari Rozgar Yojana (SJSRY)
- ❑ Affordable Housing in Partnership (AHIP)
- ❑ Interest Subsidy Scheme for Housing the Urban Poor (ISHUP)
- ❑ Urban Statistics for HR and Assessments (USHA)
- ❑ Integrated Low Cost Sanitation Scheme (ILCS)
- ❑ Projects/ Schemes for the Development of North Eastern States, including Sikkim

Vision of Slum Free India: Launch of Rajiv Awas Yojana (RAY)

Urban poverty and slums are emerging as critical issues of public policy. The locus of poverty appears to be shifting to cities. The conditions of the poor in slums are in some respect inferior to those in rural areas. Recognizing the need to focus on the development and up gradation of slums with basic amenities and affordable housing, Her Excellency the President of India has announced Rajiv Awas Yojana aimed at ushering in Slum-free Urban India.

PM's Announcement on Independence Day

“We had started the Jawaharlal Nehru National Urban Renewal Mission for the urban areas. We will accelerate this programme also. Today, lakhs of our citizen live in slums which lack basic amenities. We wish to make our country slum free as early as possible. In the next five years, we will provide better housing facilities to slum dwellers through a new scheme, Rajiv Awas Yojana”.



President's Speech in Joint Session of Parliament

“My Government proposes to introduce a Rajiv Awas Yojana for the slum dwellers and the urban poor on the lines of the Indira Awas Yojana for the rural poor. The schemes for affordable housing through partnership and the scheme for interest subsidy for urban housing would be dovetailed into the Rajiv Awas Yojana which would extend support under JNNURM to States that are willing to assign property rights to people living in slum areas. My Government's effort would be to create a slum free India in five years through the Rajiv Awas Yojana.”

Rajiv Awas Yojana for the slum dwellers and the urban poor envisages a ‘Slum-free India’ through encouraging States/UTs to tackle the problem of slums in a definitive manner. This would be achieved by a multi-prolonged approach focusing on:

- ❑ bringing existing slums within the formal system and enabling them to avail of the same level of basic amenities as the rest of the town;
- ❑ redressing the failures of the formal system that lie behind the creation of slums; and
- ❑ tackling the shortages of urban land and housing that keep shelter out of reach of the urban poor and force them to resort to extra-legal solutions in a bid to retain their sources of livelihood and employment.

2.6 Necessity for a reliable Slum Data Base

6.1 JNNURM, which is a flagship programme of the Government of India, was initiated with focus on urban renewal, urban infrastructure development and basic services to the urban poor. The Sub-Mission on Basic Services to the Urban Poor (BSUP) aims to provide integrated services to the urban poor including slum-dwellers, in these 65 cities. These include affordable housing and both basic physical and social amenities. Slum development and basic services to the urban poor in these cities and towns are taken up under the scheme of Integrated Housing & Slum Development Programme (IHSDP).

6.2 The advent of JNNURM has led to a realization that the data base for undertaking such a huge programme like JNNURM is grossly inadequate. JNNURM calls for the preparation of City Development Plans (CDPs) and meaningful development of CDPs requires a strong data base. In the absence of adequate and reliable data, the CDPs of cities and towns already prepared after the launching of JNNURM have not adequately addressed the concerns of the urban poor, especially slum-dwellers. The Ministry of Urban Development and the Ministry of Housing & Urban Poverty Alleviation are currently undertaking an exercise for the preparation of second-generation CDPs. The preparation of municipal level action plans will require a considerable amount of data.



6.3 For the effective implementation of JNNURM and other programmes like Swarna Jayanti Shahari Rozgar Yojana (SJSRY), a large amount of data pertaining to the slums in various parts of the country needs to be collected. There is a need for the development of a national information system and knowledge base with focus on urban poverty for the purpose of planning, policy-making, project formulation, implementation, monitoring and review, especially in the areas of slum development, provision of basic services to the poor, and affordable housing. This is in consonance with the objective of the 11th Five Year Plan which has adopted 'inclusive growth' as the key development paradigm for the country.

6.4 Due to non-availability of authentic statistics on State-wise slum population, the State-wise fund allocation under JNNURM was done by the Planning Commission on the basis of TCPO estimates. This has led to faulty planning and under-estimation of financial requirements in the absence of a true picture on magnitude of the problem. There is an urgent need to have slum definition which is acceptable to all states and Union Government. Moreover, inclusive Growth necessitates proper planning to uplift the major segment of urban poor. Since Slum Dwellers constitute major segment of the urban poor there is an imperative need to know the correct count on them in the country. The development of robust estimates of slum population would thus help in better targeting of JNNURM funds.

6.5 Authentic database is a pre-requirement to assess the magnitude of the problem and undertake formulation of plans, policies and schemes so that potential beneficiaries are targeted in a meaningful manner. Developing a robust database on slums and to get a definitive understanding of the size of the problem and its distribution across cities is critical for implementation of the proposed Rajiv Awas Yojana (RAY). The vision of Slum Free India can be achieved only on the foundations of sound plans based on sound data.



CHAPTER - III

ESTIMATING SLUM POPULATION

For the first time in the history of the Population Census in the country, slum demography has been presented on the basis of actual count in Census 2001. Detailed demographic data about slum areas across the cities in the country having population more than 50,000 in 1991 Census have been enumerated. This process of systematic delineation of slums for collection of their demographic characteristics is the probably first such exercise in the history of census not only in India but also internationally. attempt in the World census history. The concept, perception and definition of slums vary across the states, depending on their socio-economic conditions but their physical characteristics are almost similar. Slums are usually a cluster of hutments with dilapidated and infirm structures having common toilet facilities, suffering from lack of basic amenities, inadequate arrangements for drainage and for disposal of solid waste and garbage (Slum population, 2005). Inadequacies of basic amenities and infrastructural resources make living conditions in these slums highly unhygienic and disease prone.

Under Section-3 of the Slum Area Improvement and Clearance Act, 1956, slums have been defined as mainly those residential areas where dwelling are in any respect unfit for human habitation by reasons of dilapidation overcrowding, faulty arrangements and designs of such buildings, narrowness or faulty arrangements of streets, lack of ventilation, light or sanitation facilities or any combination of these factors which are detrimental to safety, health and morals (Slum population 2005).

In Census 2001, slum areas in the municipal towns of each state/union territory, having population of 50,000 or more in 1991 Census were selected for tabulation. Slum Enumeration Blocks (SEB) were identified during formation of Enumeration Blocks (EB) in wards of a town. Clusters of 60-70 households with at least 300 populations were carved out as a separate SEB. A detail of this slum demographic evaluation is provided in Slum population of India, 2001. During this exercise, slum population has been reported from 640 cities and towns of twenty six states/union territories. More than 72,000 SEBs were identified which was approximately 22% of total EBs.

Recently, Government of India introduced Rajiv Awas Yojana (RAY) which would extend support to states that are willing to assign property rights to people living in slum areas. The main focus of the RAY is an integrated approach aimed at bringing within the formal system those who are forced to live in extra-formal spaces and in denial of right to services and



amenities available to those with legal title to city spaces, and at correcting the deficiencies of the formal system of urban development and town planning that have failed to create conditions of inclusiveness and equity, so that, henceforth, new urban families, whether by way of migration or natural growth of population, have recourse to housing with civic amenities, and are not forced from lack of options to create encroachments and slums and live extralegal lives in conditions of deprivation of rights and amenities and indebtedness to informal moneylenders.

3.1 The Problem

Initially, the Census coverage was restricted to cities/towns having population of 50,000 or above in 1991 Census. Therefore, phase I report of slum Census reported only 640 cities/towns. However, as a follow up of recommendation of Parliamentary Standing Committee, Ministry of Housing & Urban Poverty Alleviation requested Registrar General of India (RGI) to cover these towns/cities with population of 20,000-50,000 as per 2001 census. In this phase II census 958 towns with 20,000 to 50,000 reported slum population were covered. Therefore, total slum population of the country reported in 1743 cities/towns was 52.4 million. However, the TCPO has suggested 61.8 million as the estimated slum population of India in 2001. Further, U.N. Population report estimated urban slum population in India as 158.42 million by mid 2001.

It has been found that in many states, the district/town authorities have not reported all the towns/enumeration blocks that need enumeration. Many smaller States, like Himachal Pradesh, Sikkim, Nagaland, Manipur and Mizoram were not included. Also, in many States, cities/towns covered under slum Census 2001 have not considered, non-notified slums, where there are land disputes. As a consequence of this, it is expected that the slum population of the country was grossly underestimated. There were differences/anomalies between estimates of National Sample Survey Organization (NSSO) and RGI. This may be due to the fact that, in case of NSSO, slum area was stipulated with 20-30 households, where as RGI considered clusters of 60-70 households as slum. Further, there were some of the States like Andhra Pradesh, Uttar Pradesh, Maharashtra, Bihar, Madhya Pradesh have approached the Ministry of Housing and Urban Poverty Alleviation for fresh estimation of slum population in urban areas of the States. A committee has been set up under the Chairmanship of Secretary, Ministry of Statistics and Programme Implementation (MOSPI) to look into various aspects of slum statistics/Census.

Due to non-availability of any authentic statistics on State wise slum population, the State wise fund allocation under Jawaharlal Nehru National Urban Renewal Mission (JNNURM)



was done by the Planning Commission on the basis of the TCPO estimates. The underestimation of slum population in States like Bihar, Uttar Pradesh etc. has resulted in less allocation of funds for slum development and basic services to the urban poor in these States. Therefore, the first priority of the Committee is to suggest suitable adjustments/corrections to arrive at State-wise urban slum population for 1743 cities/towns in the country based on suitable statistical techniques. Further, in order to get overall estimates of slum population in the country, the Ministry has requested to include 3427 small towns of various States in this study. Therefore, this report consists of state-wise estimates of slum population from all 5161 cities in the country. The estimates obtained may be useful for allocation of resources under RAY to the states.

3.2 Analytical Approach

Slum population data for the year 2001 of 1743 cities/towns was provided by the Ministry along with indicator of bad estimates. Along with this data, total population and number of households of these cities/towns were also provided. The cities/towns of each State were divided in two groups, first group consists of those cities in which estimates of slum population are reasonably reliable and cities/towns with slum population with suspicious estimates were put into second group. Ward wise information of each city/town was extracted from data set of Census 2001. This data set consists of data of each urban ward on 119 original and derived parameters. These parameters are related to population demographic pertaining to various social groups/categories such as gender, literacy, working categories, social groups etc. After suitable aggregation and matching with the help of total population of the cities/towns provided by the Ministry, two data sets, i.e. data from Census 2001 and data of slum population provided by the Ministry, were integrated along with all the variables of Census 2001 on one to one basis.

In order to identify important covariate for slum population, data set on 119 parameters of cities/towns with reasonable estimate of slum population from all the cities of the country were considered and correlation matrix was obtained. With the help of this correlation matrix, variables from Census with significant correlation coefficient with slum population were identified and segregated for further analysis. Again, state wise data was taken up for identification of important variables for each state. The important variables were identified with the help of fitting multiple regression models using stepwise technique. The results of this analysis shows that six covariates viz. (i) number of schedule caste, (ii) number of schedule tribe, (iii) number of illiterate persons, (iv) number of persons under non-workers group, (v) number of persons under other marginal worker group and (vi) number of persons under casual labourer worker group are most important to determine slum population of cities/



towns in most of the states. Therefore, for further analysis, these variables were considered. It was observed that, these covariates were also highly correlated with each other. Therefore, in fitting of multiple regression models there was problem of multi-collinearity among independent variables of this model. Hence, need was felt to apply Principal Component Analysis (PCA) technique to generate independent transformed covariates with the help of these original covariates.

Principal component scores were calculated for six principal components for each state separately for cities/towns with reliable estimates of slum population as well as cities/towns for suspicious estimates of slum population. Now these PCA scores were used as covariates for estimation of regression coefficients and its standard errors based on slum population of cities and towns with reliable data for each state separately.

These estimated regression coefficients were used to estimate the slum population of other cities/towns which had no estimates of slum population or estimates of slum population were not reliable. Note that the models for estimation are based on PCA scores based on six earlier identified variables. There was problem of estimation of regression coefficients for those states in which no city/town has authenticated estimates of slum population or number of cities/towns with authenticated estimates of slum population was less than desired numbers, i.e. approximately 20, as the reliable estimates of regression coefficients of the model cannot be obtained under this situation. Mixed model or multilevel model was used for estimation of slum population based on PCA scores and data from all the cities/towns.

In case of small cities/towns, there was no data of slum population available since such data has not been collected at any point of time by official agencies. Therefore, the estimates of slum population for small towns in different states were obtained based on model from 210 cities in the country which has population ranging between 20000 to 25000. Since, these estimates were based on model of larger cities, therefore a correction factor has been applied on the estimates of slum population obtained from this model based average population in both groups of cities and relationship between urban population growth and slum population growth as the growth in urban slum are faster than the grown in urban population.

3.3 Results:

The data has been analysed with approach and methodology described in previous sections. The percentage average standard error and coefficient of determinations of State wise multiple regression models fitted for major States to estimate urban slum population has been given in Table 1.

**Table 1: Percentage average standard error and coefficient of determination of model for major States used for prediction of urban slum population**

States	Coefficient of determinant	No of Cities	% AV SE
Andhra Pradesh	0.91	99	5.87
Chhattisgarh	0.97	25	12.55
Gujarat	0.99	28	8.26
Haryana	0.99	30	6.66
Karnataka	0.84	104	10.07
Kerala	0.91	99	4.95
Maharashtra	0.99	69	5.11
Madhya Pradesh	0.88	102	10.68
Orrisa	0.86	46	14.84
Punjab	0.99	40	3.85
Rajasthan	0.99	50	7.01
Tamil Nadu	0.92	145	8.24
Uttar Pradesh	0.88	140	14.68
Uttarakhand	0.98	12	14.40
West Bengal	0.99	54	4.96
Bihar	0.83	48	15.33

It can be seen from Table 1 that coefficient of determinant of different major states lies between 0.83 and 0.99. These values clearly show that the variation in the data pertaining to various cities/towns within states has been well captured through these fitted models. Further the percentage average standard error (% AV SE) of models fitted to different states ranges between 3.85 % and 15.33 %. Out of 16 major states % AV SE of 9 states are below 10%. In few states like Uttaranchal (14.40%), Uttar Pradesh (14.68%), Orissa (14.84%) and Bihar (15.33%) have marginally higher % AV SE. A critical examination of the data and results indicated that this was either due to small number of observation or due to large variation in the demography of cities/towns in the state. Overall these results provide an evidence of reliability of the fitted model used for the estimation of urban slum population. The state-wise aggregated slum and slum like population estimated by the models fitted for all 5161 towns has been given in Table 2A. Estimated slum population from 3799 (5161-1362) towns in 2001 (Excluding Census Towns) are provided in Table 2B. State wise projected slum population from year 2011 to 2017 are provided in Table 2C.



3.4 Remarks:

The estimates of the statewise slum population provided in this chapter are synthetic estimates based on a combination of hard data from Census 2001 and statistical techniques. It is, therefore, necessary to clearly lay down the inherent weaknesses of these estimates. First and foremost, it needs to be recognized that the correlates of slum population that have been used in deriving these estimates are not in any manner related to either spatial or living conditions, but to the social characteristics of the population. The error in both direction and magnitude introduced by this methodology is difficult to assess precisely. On the one hand, since the base data relates to large slum clusters, these estimates may not pick up the characteristics relevant to smaller slums, thereby underestimating the slum population. On the other hand, it could well be the case that the estimated population may be living in substandard or slum-like conditions, but in non-contiguous or non-compact areas, which would violate the definition of slums used in this report, and thereby lead to over-estimation.

Second, these estimates of necessity are valid only for the year of the Population Census, i.e. for 2001. The projections that have been presented in Table 2C are at best only indicative. Assumptions have had to be made about the growth rates of the various correlates that have been used in the analysis. Some data were available from the 61st quinquennial round of NSSO for 2004-05, but these can only be treated as proxies. By and large, therefore, these projections should be treated with great circumspection since they mostly reflect natural growth rates without really taking account of either migration or increases in the boundaries of existing urban areas. At a broad level, the point that is being made out can be seen from the fact that the estimated growth of the slum population in the country comes to about 2 per cent per annum. This appears to be distinctly on the lower side.

Nevertheless, even with these caveats, the estimates provided in this chapter are a marked improvement over the other estimates that exist at present. Since the allocations made by the Ministry in any case are based on the 2001 Census figures, the Committee is confident that the base-line estimates provided in Tables 2A and 2B are appropriate for this particular purpose.

**Table 2A: State wise estimated slum population for all 5161 towns in 2001**

State/UT	Urban Population	Slum Population	% of Slum Population in Urban Population of state	% of State Slum Population in Total Slum Population of India
Andaman and Nicobar Island	116198	20303	17.47	0.03
Andhra Pradesh	20808940	7254399	34.86	9.64
Arunachal	227881	56538	24.81	0.08
Assam	3439240	805701	23.43	1.07
Bihar	8681800	1422155	16.38	1.89
Chandigarh	808515	208057	25.73	0.28
Chhattisgarh	4185747	1578285	37.71	2.10
Dadra and Nagar Haveli	50463	7653	15.17	0.01
Daman & Diu	57348	7420	12.94	0.01
Delhi	12905780	2318635	17.97	3.08
Goa	670577	100365	14.97	0.13
Gujarat	18930250	3708127	19.59	4.93
Haryana	6115304	2350269	38.43	3.12
Himachal	595581	69310	11.64	0.09
Jammu & Kashmir	2516638	395696	15.72	0.53
Jharkhand	5993741	762025	12.71	1.01
Karnataka	17961529	2951441	16.43	3.92
Kerala	8266925	499498	6.04	0.66
Lakshadweep	26967	1683	6.24	0.00
Madhya Pradesh	15967145	5107505	31.99	6.79
Maharashtra	41100980	14319132	34.84	19.03
Manipur	575968	68967	11.97	0.09
Meghalaya	454111	172223	37.93	0.23
Mizoram	441006	87309	19.80	0.12
Nagaland	342787	73523	21.45	0.10
Orissa	5517238	1401973	25.41	1.86
Pondicherry	648619	92495	14.26	0.12
Punjab	8262511	2164649	26.20	2.88
Rajasthan	13214375	3118120	23.60	4.14
Sikkim	59870	9609	16.05	0.01
Tamilnadu	27483998	7340271	26.71	9.75
Tripura	545750	104281	19.11	0.14
Uttar Pradesh	34539582	8527840	24.69	11.33
Uttaranchal	2179074	638467	29.30	0.85
West Bengal	22427251	7520116	33.53	9.99
India	286119689	75264040	26.31	100.00



**Table 2B. Estimated slum population from 3799 (5161-1362) towns in 2001
(Excluding Census Towns)**

State/UT	Statutory town Urban Population	Slum Population	% of Slum Population in Urban Population of state	% of State Slum Population in Total Slum Population of India
Andaman and Nicobar Island	99984	16325	16.3	0.02
Andhra Pradesh	18825938	6918681	36.8	9.77
Arunachal Pradesh	0	0	-	0.00
Assam	3023468	744875	24.6	1.05
Bihar	8641459	1413470	16.4	2.00
Chandigarh	808515	208135	25.7	0.29
Chhattisgarh	3915174	1504139	38.4	2.12
Dadra and Nagar Haveli	0	0	-	0.00
Daman & Diu	57348	7420	12.9	0.01
Delhi	10306452	2021667	19.6	2.86
Goa	411041	27309	6.6	0.04
Gujarat	17933370	3481136	19.4	4.92
Haryana	5827148	2287657	39.3	3.23
Himachal Pradesh	590347	69310	11.7	0.10
Jammu & Kashmir	2501317	395696	15.8	0.56
Jharkhand	3797343	484334	12.8	0.68
Karnataka	17542974	2870440	16.4	4.05
Kerala	6047422	225775	3.7	0.32
Lakshadweep	0	0	-	0.00
Madhya Pradesh	15465716	4995427	32.3	7.06
Maharashtra	39387645	13979091	35.5	19.75
Manipur	545086	87545	16.1	0.12
Meghalaya	321626	135366	42.1	0.19
Mizoram	441006	87309	19.8	0.12
Nagaland	326283	67862	20.8	0.10
Orissa	5253524	1366364	26.0	1.93
Puducherry	648619	73932	11.4	0.10
Punjab	8101169	2136946	26.4	3.02
Rajasthan	12822696	3037838	23.7	4.29
Sikkim	45513	5367	11.8	0.01
Tamil Nadu	26095643	6177353	23.7	8.73
Tripura	370328	28575	7.7	0.04
Uttar Pradesh	33397523	8322218	24.9	11.75
Uttarakhand	2049230	613831	30.0	0.87
West Bengal	19504990	7006367	35.9	9.90
India	265105897	70797763	26.7	100.00

**Table 2C: State wise projected slum population from year 2011 to 2017**

State	2011	2012	2013	2014	2015	2016	2017
Andaman and Nicobar Island	33722	35294	36867	38265	39663	41060	42633
Andhra Pradesh	8188022	8273434	8357451	8440074	8521999	8602530	8681318
Arunachal Pradesh	98248	103459	108669	114127	119833	125788	131494
Assam	1070835	1100118	1129636	1159857	1190780	1222406	1253798
Bihar	1683954	1707378	1730148	1752590	1774376	1795671	1816639
Chandigarh	332473	348685	365154	381881	397321	411474	429744
Chhattisgarh	2111546	2169237	2228058	2287634	2347964	2409802	2470886
Dadra and Nagar Haveli	26083	28813	31542	34424	37305	40035	43219
Daman & Diu	9187	9316	9316	9445	9445	9575	9575
Delhi	3163430	3260984	3360874	3463999	3570716	3681745	3793313
Goa	154759	161494	168229	174815	180801	185741	192476
Gujarat	4662619	4759581	4856740	4954094	5051840	5149782	5245569
Haryana	3288292	3390907	3495059	3600364	3707207	3815202	3923582
Himachal Pradesh	87281	89143	91005	92983	94845	96707	98685
Jammu & Kashmir	494180	504243	514306	524369	534275	544180	553771
Jharkhand	931912	948949	966239	983530	1001202	1019382	1036673
Karnataka	3631147	3700490	3770161	3839998	3910162	3980656	4049341
Kerala	533278	536057	538776	541314	543671	545906	548021
Lakshadweep	1560	1560	1498	1435	1435	1435	1373
Madhya Pradesh	6393040	6523229	6654059	6785528	6917636	7050705	7181214
Maharashtra	18151071	18549628	18950624	19352665	19754009	20152914	20557046
Manipur	75197	75915	76514	76993	77592	78190	78789
Meghalaya	205176	208590	212003	215416	219209	222622	226415
Mizoram	105720	107700	109679	111659	113639	115619	117599
Nagaland	83220	84292	85365	86223	87295	88368	89226
Orissa	1736064	1770623	1805436	1840503	1876078	1912161	1948244
Puducherry	136899	143316	149876	156435	162282	167131	174118
Punjab	2798256	2864014	2930296	2996316	3062598	3128094	3193590
Rajasthan	3826160	3894590	3962311	4029561	4095395	4160049	4224939
Sikkim	13321	13803	14124	14605	14926	15408	15729
Tamil Nadu	8644892	8862969	9081045	9298651	9515080	9729624	9940165
Tripura	131080	134137	137003	140061	143118	146175	149232
Uttar Pradesh	10878336	11127210	11378552	11631376	11885434	12139739	12394291
Uttarakhand	826257	846181	866105	886615	906832	927342	947559
West Bengal	8546755	8640642	8733188	8825399	8918616	9014179	9106055
India	93055983	94977993	96907923	98845216	100786594	102729415	104668340



CHAPTER - IV

CONDUCTING SLUM CENSUS

4.1 Background of Census 2001 data on slums:

In the Houselisting phase of Census, data on housing condition, amenities and assets available to the households are recorded. Based on the population figures at this phase, the blocks are re-carved to ensure a more equitable workload to the enumerators. Thus, both the Houselisting Block (HLB) numbers and the HLB boundaries, created during the Houselisting phase in the year 2000, has undergone modification at the time of Population Enumeration in 2001.

The census Enumeration Blocks (EB), the basic frame of the population enumeration, covers the entire geography of the country without omission or duplication. In the Census 2001, the EBs carved out in the slum areas of large towns were identified separately and population data for them were presented.

Since the identification of the slums were done using the EBs formed at the time of population enumeration, exact details of housing condition, amenities and assets of households are not available separately for the slum and non-slum areas. However, in urban areas, the results of many census indicators are published at the ward level. Thus, it is possible to identify wards which were consisting of predominantly slum blocks. Using this ward level information, one can look at the information available in the different Houselisting Blocks of the same ward.

4.2 Methodology - Identification of variables:

To form a normative approach, the first step is to identify the variables which can distinguish between the slum and non-slum areas. The definition followed by the UN Habitat with respect to categorising slum has first been studied to arrive at the definition. The UN-HABITAT defines¹ a slum household which lack one or more of the four criteria, namely,

- i. Durable housing of a permanent nature,
- ii. Sufficient living space, which means not more than three people sharing the same room,
- iii. Easy access to safe water in sufficient amounts at an affordable price, and
- iv. Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of households.



It may be noted that the UN-HABITAT definition is based on the conditions prevailing at a particular household, while the approach to be followed in the Indian context would be area-based, which would have a cluster of households lacking of basic amenities. However, the UN-HABITAT provides a good starting point for short-listing the variables and analyse the results in the Indian context for firming up the final criteria.

In a cluster approach, the condition of slum-areas are characterised by dilapidated and infirm housing structure, poor ventilation, acute overcrowding, faulty alignment of streets, inadequate lighting, paucity of safe drinking water, water logging during rains, absence of toilet facilities and non-availability of basic physical and social services to a group of contiguous households at a specific urban or peri-urban location. Many of these areas have already been earmarked by the State government/ local administration in India, particularly at the metropolis and bigger towns.

In Census 2001², the 'slum EBs' were demarcated in all statutory towns with a population of 50,000 or more as per the Census 1991. Slum population was reported from 640 towns of 26 States/UTs. More than 23 percent of the population from these 640 towns were from the 'slum EBs'. A total of six States (Himachal Pradesh, Sikkim, Nagaland, Arunachal Pradesh, Manipur and Mizoram) and three UTs (Daman & Diu, Dadra & Nagar Haveli and Lakshadweep) did not report any slum population. Three types of slum areas considered for demarcating the 'slum EB's in Census 2001 were:

- ❑ Notified slum: All areas notified as 'Slum' by the State Government / UT administration under any Act.
- ❑ Recognised slum: All areas recognised as 'Slum' by the State/ Local Government and UT administration, which have not been formally notified as slum under any Act.
- ❑ Identified slum: A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.

It may be noted that all EBs formed in entire notified and recognised slum areas were considered as 'slum EBs'. Further, the 'identified slum' areas were identified by the Census Charge Officers, who were from the respective municipalities, at the time of forming the Census EBs. The Charge Officers were instructed not to mix the slum and non-slum areas while demarcating the census EBs. Thus, 'slum EBs' were from all the three types of areas mentioned above.

With respect to the housing condition and amenities available at the household, the Census provides, among others, data on predominant material of floor, wall and roof of a census

¹ UN-HABITAT: State of the World's Cities, 2006-7.

² Slum Population, India Vol I. Series -1, Census of India 2001: ORGI publication.



house, number of dwelling rooms exclusively in possession of a household, major source of lighting, main source of drinking water, distance from the source of drinking water, type of drainage, type of latrine, etc.

In view of the definitions followed and availability of relevant data, a set of five variables was first short-listed, from among the various data-items available from the Houselisting phase data of Census 2001, for testing the normative definition. These are:

- Type of structure of the census house, which requires data on two variables, namely, predominant material used for the wall and predominant material used for roof;
- Number of dwelling rooms in exclusive possession of a household,
- Availability of drinking water source,
- Type of latrine and,
- Type of drainage facility.

4.2 Methodology – procedure of data analysis:

General:

First, it may be noted that the ‘slum EB’ demarcated during the population enumeration phase were used for generating the slum PCA in the Census 2001. As one-to-one onto mapping between HLB number and EB number was not planned, it was not possible to exactly get the ‘slum HLB’ numbers. Hence, the results on housing condition, amenities, etc. separately for the entire slum area could not be processed. However, at each town, there were some wards which did not have ‘slum EBs’. These wards have been considered to check the normative criteria with respect to the ‘test towns’, namely, Agra MC and Pune MC.

All the Houselisting Blocks of the shortlisted wards (wards which did not report any ‘slum EB’ in Census 2001) of Agra and Pune were considered for the data analysis. In each HLB, the households satisfying a criterion (a set of 4/5 conditions taken together, as would be explained subsequently) were identified. If the total number of such households exceeded 20, the HLB has been earmarked as one where we may find a slum-like cluster. Let us call these HLBs as ‘slum-like HLBs’.

Preparing town level summary:

After finding the ‘slum-like HLBs’, the total number of households satisfying the criteria and located in the ‘slum-like HLBs’ were counted. This number, together with the number of slum-households found in Census 2001 has then been compared with the number of slum

households reported in Census 2001. This has been done to gauge the effect of the criteria and, judge its extent of inclusiveness in identifying 'slum-like' HLBs.

Setting the initial criteria:

As explained above, five different facets were short-listed for determining whether the living condition of a household is 'slum-like' or not. The next step was to fix a set of conditions with respect to each facet. Whenever a household satisfies a particular set of conditions, it would be considered 'slum-like' under a given criteria. Two different criteria, one a bit restrictive and the second one, a more liberal one, were fixed initially for the experimentation. The two criteria can be seen at Table 1 below.

Table 1: Criteria to qualify a household as 'slum-like' based on Census 2001 data of Houselisting Schedule

Any household which satisfied all the under-mentioned criteria was considered as 'slum-like' household	
Criterion A	Criterion B
i) Type of house: Katcha or semi-pucca	i) Type of house: Katcha or semi-pucca
ii) Availability of drinking water source: not within premises	ii) Availability of drinking water source: not within premises
iii) Availability of latrine: not within house	iii) Availability of latrine: not within house
iv) Drainage facility: no drainage or open drainage	iv) Drainage facility: no drainage or open drainage
v) No. of dwelling rooms: at most 1	

Note: A house is considered as pucca if it is predominantly built of the following wall and roof materials. All the other houses are either katcha or semi-pucca
Wall material: stone, GI/metal/asbestos sheet, brick, concrete
Roof material: tiles, stone, slate, GI/metal/asbestos sheet, brick, concrete

Initial set of results:

The number of wards, HLBs and households in Census 2001, for the towns of Agra and Pune are given at Table 2 below. The summary results based on the criteria mentioned above, depicting the number of 'slum-like' households in 'slum-like' HLBs are shown at Table 3.



Table 2: Number of wards and no. of Household in Agra and Pune, Census 2001

Town	No. of wards (Census 2001)			No. of households (in thousands, Census 2001)	
	Total	With 1 or more slum EBs	Without any slum EB	Total	Slum households
Agra	80	44	36	197	28
Pune	162	86	76	555	99

Note: Slum EBs were delineated at the time of population enumeration phase of Census 2001.

Table 3: Number of 'slum-like' HLBs in the non-slum wards and no. of 'slum-like' Household in these HLBs, Agra and Pune, Census 2001

Town	Numbers as per Houselisting phase data of Census 2001				
	Non-slum wards	HLBs with at least 20 'slum-like' households	'Slum-like' households in earmarked HLBs	HLBs with at least 20 'slum-like' households	'Slum-like' households in earmarked HLBs
		Criterion A		Criterion B	
Agra	36	21	785	41	1,635
Pune	76	80	3,679	130	3,679

However, even with a relatively relaxed criterion, the number of 'slum-like' HLBs in the non-slum wards was very few. The number of slum-like households using this relaxed criterion added another 3 to 4 percent of the existing slum-households in these towns. The number increased by only 1600 households in Agra and 3700 households at Pune.

Ground verification:

It was then decided to actually visit the identified households at their actual location. For this, the first job was to identify the clusters. In Census, layout maps are prepared by the enumerators which depict all the buildings visited by them. The building numbers are written both on the Schedule and the layout map. Data of a few earmarked HLBs were processed to cull out the household numbers and the Houselisting Schedules were manually examined to find the corresponding building numbers and census house numbers. Then, these numbers were encircled on the layout maps to identify the location of the cluster(s) within the earmarked HLB. Officers of the ORGI personally visited some of the HLBs with the layout maps to assess the ground situation and took photographs of the actual condition prevailing at this point in time.

**Revision of criteria:**

In some of the locations, the actual situation on the ground has to some what and the houses have changed from Katcha to pucca. Moreover, all the slum-like households were not present at a single cluster within the HLB. In sme places, the smaller clusters, consisting of 5-10 households, were located in between two multi-storied buildings, or on the roadside at one of the boundaries of the HLB. However, the most significant observation was, in many cases, the roofs of the houses were actually made of either tiles or GI metal. In some cases, the walls were also made of GI sheets. It may be noted that both ‘tiles’ and ‘GI metal’, as per the definition followed, are pucca material. Thus, although the situation of the cluster is quite ‘slum-like’ (the drainage system is either non-existing or has broken down, public latrines are the only latrine facility available to households, etc.), according to the predefined criteria, these households are not being considered as ‘slum-like’, since most of the houses are built of ‘pucca’ material. Hence, the criterion was further revised and it was decided that houses with concrete roof would only be excluded. The revised criteria and the results using the revised criterion (Criterion C) are presented at Table 4. It may be seen that using the revised criterion, about 25 percent households get added over and above the existing slum-households enumerated in Census 2001.

Table 4: Revised Criteria (Criterion C) to qualify a household as ‘slum-like’ based on Census 2001 data of Houselisting Schedule

Any household which satisfied all the four under-mentioned criteria was considered as ‘slum-like’ household	Numbers as per Houselisting phase data of Census 2001			
Criterion C i) Predominant roof material: any material other than concrete (RBC/ RCC) ii) Availability of drinking water source: not within premises of the census house iii) Availability of latrine: not within premises of the census house iv) Drainage facility: no drainage or open drainage	Town	Non-slum wards	HLBs with at least 20 ‘slum-like’ households	‘Slum-like’ households in earmarked HLBs
	Criterion C			
	Agra	36	105	5,356
	Pune	76	333	20,278



4.5 Summary and recommendations:

Coverage: All the Statutory Towns notified till 31st December 2009 will be covered in this exercise.

Methodology:

1. The ORGI will use exactly the same definition used in Census 2001 for delineating the 'slum blocks' in the notified, recognised and identified slum areas of each Statutory town. The M/O Housing and Urban Poverty Alleviation (M/O HUPA) will issue suitable instructions requesting all the State Governments and Municipal Commissioners to extend necessary support in earmarking these areas during the Houselisting Operations scheduled to commence from April 2010.
2. In addition, the Houselisting and Housing Census data will be used for earmarking the 'slum-like' clusters uniformly throughout the country, since the condition of census house where the households live, the amenities available to the households, etc. is recorded at this phase of the Census operations.
3. The ORGI will identify all the HLBs where at least 20 households satisfying the set criterion exist. Subsequently, the ORGI will hand over the layout maps of these HLBs to the M/O Housing and Urban Poverty Alleviation (M/O HUPA).
4. The M/O HUPA will undertake independent ground verification at these HLBs to decide whether these blocks can be additionally earmarked as blocks with 'slum-like' clusters. The ORGI will not be involved in the ground verification phase.

Recommended criteria to decide a slum-like household based on Census 2011 Houselisting and Housing Census data:

1. Any household which satisfy all the four conditions mentioned underneath will be considered as a 'slum-like' household. The four conditions are:
 - i. **Predominant material of Roof of the Census House:** Roof should be made of any material other than concrete. "Concrete" would include both RBC and RCC,
 - ii **Availability of drinking water source:** Source of drinking water should not be available within the premises of the census house,
 - iii **Type of latrine:** Household does not have any latrine facility within the premises of the census house, i.e., they either have public latrine or no latrine.
 - iv **Type of drainage:** Household does not have closed drainage.



2. Any HLB with at least 20 households devoid of the four facilities with respect to housing condition, drinking water, latrine and drainage, as explained at paragraph 5 (c) above, will be considered as a HLB having a chance of having a 'slum-like' cluster.
3. The ORGI would provide the layout maps of these earmarked HLBs to M/O HUPA.
4. The M/O HUPA would confirm the same after independent ground verification of these earmarked HLBs, whose layout maps would be provided by the ORGI.



CHAPTER – V

TOWARDS AN URBAN INFORMATION MANAGEMENT SYSTEM

In the previous chapters, two main sets of issues have been addressed. The first relates to obtaining a more complete and comprehensive set of estimates of the slum population in India on a state-wise basis. This has been based upon a critical appraisal of the slum census conducted by the ORGI and with the use of appropriate statistical techniques for addressing the infirmities of the census data. This exercise addressed the first three Terms of Reference (TOR) of the Committee. The second exercise has been to develop a methodology that can be used in the forthcoming 2010 house listing operations for Census 2011, which would enable a better estimate of the actual slum population without having to go through synthetic procedures of statistical analysis. This addresses the fourth and fifth TOR of the Committee. However, the Committee is also required to make recommendations on the following:

TOR VI – To guide the Ministry of Housing and Urban Poverty Alleviation in evolving sustainable and viable methodology for conducting slum and other surveys between successive censuses.

TOR VII – To suggest measures to build a robust Urban Information Management System on slums and urban poverty, housing and construction duly taking into account the data collected by different agencies like NSSO and RGI etc.

In so far as TOR VI is concerned, the main hurdle towards conducting slum and other surveys by the Ministry of Housing and Urban Poverty Alleviation was the absence of an appropriate frame for designing the surveys. With the data that would be provided by the census as outlined in Chapter 4, the first step towards developing a proper frame would be taken. However, before any survey can be carried out on the physical and social aspects of slums in India, it would be necessary to obtain a more precise enumeration of the location of slums in the country. The census data would only indicate the enumeration blocks which could possibly contain smaller sized slums. The Ministry will need to follow up this information by conducting surveys in each of the indicated enumeration blocks that would be indicated by the Census.

In carrying out this enumeration, the Ministry would need to use the definition of slums that has been recommended by this Committee in Chapter 1 of this Report. In other words, a slum would be defined as a continuous and compact settlement of at least 20 households with a collection of poorly built tenements, mostly of temporary nature, created usually



with inadequate sanitary and drinking water facilities in unhygienic conditions. Although this definition does leave a certain amount of space for subjective evaluation, the Committee is of the opinion that it is better to err on the side of greater inclusion than inadvertent exclusion.

The above survey exercise will require a substantial amount of trained manpower which will not be available either in the RGI office or in the NSSO. It is, therefore, recommended that the Ministry may seek the assistance of reputed Non-Government Organisations (NGOs) and, wherever possible, of the State Government agencies to carry out the operation. The training needs for the field investigators could be carried out either by the RGI Office or the NSSO in collaboration with the officers of the Ministry.

At the conclusion of the above exercise, the Ministry should have available a complete enumeration of all slum clusters in the country on a city and town wise basis. Follow up surveys can be based on the frames so generated by selecting samples appropriately designed for the purpose of the survey. Since the NSSO has very strong technical expertise in survey design methodology, their help could be sought in designing these surveys.

It should be noted, however, that these exercises will only provide information on the number and distribution of slums for the year 2011. Since, on the one hand, the pace of urbanization is expected to accelerate, it is likely to lead to a proliferation of new slums; and, on the other hand, the Ministry's Slum Development Programme will take off thereby reducing the incidence of some of the existing slums, the Master Frame generated will undergo significant change in the inter-censal years. It is necessary to evolve a methodology for adding and deleting slum clusters from the master frame that would be available from 2011. This process is by no means easy and the Committee suggests the following procedures:

First, every State Government which receives funds from the Ministry for slum development purposes under any of its programmes, should be required to indicate exactly which slum clusters would be addressed and over what period of time. At the end of the stipulated period, the Ministry would again have to seek the assistance of NGOs to re-evaluate the status of the slum cluster in order to continue or drop the cluster from its list of slums.

Second, the more difficult problem is on the inclusion of new slums into the master frame. There are two main channels leading to an increase in the slums in an urban area. The first arises from the absorption of peri-urban areas within the urban boundary. The second arises from new settlements in vacant spaces within the urban limits.

In so far as, the first is concerned, since the concept of census towns, by and large, captures most of the peri-urban areas, a combination of information on the expansion of urban



boundaries by the State and the census data on census towns would cover most of them. This would, however, require the development of methodologies to geo-spatially match to the expanded urban boundaries with the census information. The Ministry may work closely with the RGI Office to develop such a system.

As far as new settlements within existing urban boundaries are concerned, the only available instrument that exists in the country today is the Urban Frame Survey (UFS) of the NSSO. In earlier years, the UFS was carried out over a cycle of five years which would cover all statutory and census towns in the country. Recently, however, it has been decided by the NSSO that this exercise would be carried out over a two year period. The latest such exercise is due to end in 2010. Thus with the new UFS data and the 2011 Census data, it would be possible to develop a concordance between the two sets of information. The Ministry should engage with the NSSO so that in each of its future UFS rounds the NSSO identifies UFS blocks which are likely to contain slum clusters in the same manner as the census is doing in the 2010 house listing operations. The details of this procedure and the definitions used have been given in Chapter 4. This information can provide a fairly sensitive basis for carrying out independent ground verification of the possible new slums hopefully soon after they come into existence.

It is, of course, recognized by the Committee that the proposals made above do not constitute a robust Urban Information Management System. However, in view of the vastly different capacities and motivations of the different urban local bodies of the country, it was not found possible to evolve a system based only on administrative records. The proposal that has been made should be seen as a stop gap arrangement which would provide at least the minimum necessary information until such time as the capacities and capabilities of urban local bodies are strengthened to a point where administrative records can provide all the necessary information.



CHAPTER - VI

SUMMARY OF RECOMMENDATIONS OF THE COMMITTEE

6.1 Estimation of Slum Population in the Country

The first priority of the Committee was to suggest suitable adjustments/corrections to arrive at State-wise urban slum population for 1743 cities/towns in the country based on suitable statistical techniques. Further, in order to get overall estimates of slum population in the country, the Committee decided to include rest of the 3427 small towns of various States in this study.

The Committee entrusted Indian Agricultural Statistics Research Institute (IASRI) the task of examining the City-wise slum population figures arrived at by the RGI in two spells and develop State-wise and All India urban slum population estimates duly correcting the anomalies observed by the use of appropriate statistical tools, with following responsibilities:

- 1) Examine city wise slum population figures arrived by RGI in 2 spells
- 2) Suggest adjustments required to arrive at state wise urban slum population and for the country as a whole.
- 3) Develop state wise and all India urban slum population estimates statistically correcting the anomalies observed.
- 4) Projection on state wise and all India slum population as on 1-4-2010 based on the urban population project by RGI-Census 2001

Based on the Report on Estimation of Slum Population in the Country done by IASRI the *estimates for the slum population in every state of the country is given in Chapter III.*

6.2 Coverage for Slum Census 2011

The Slum Report based on Population Census 2001 published by RGI has covered the 1743 cities/towns having more than 20,000 population in the Country out of total 5161 cities/towns as per Census 2001. RGI covers all the notified slums during the census operations and the problem of under-estimation occurs mainly in the case of under coverage of non-notified slums.

The Committee is of the view that for policy formulation purposes it is absolutely essential to count the slum population even in cities having less than 20000 population.



For the purpose of planning for Rajiv Awas Yojana and Slum-free India it would be necessary to count the population of slums in all statutory towns in the country in the 2011.

6.3 Definition to be adopted

The Committee suggested to adopt a normative definition based on appropriate indicators/checklists for the purpose of identification of slum areas and enumeration of population of area with 20-25 HHs having slum like characteristics in an Enumeration Block for in census 2011.

Based on the pilot studies carried out by the ORGI, the following criterion have been identified:

- i) **Predominant roof material:** any material other than concrete (RBC/ RCC)
- ii) **Availability of drinking water source:** not within premises of the census house
- iii) **Availability of latrine:** not within premises of the census house
- iv) **Drainage facility:** no drainage or open drainage

6.4 Methodology/Road Map for Slum Census 2011

The Committee recommended for a pilot study to estimate the slum population of one city in 2001 will be undertaken by RGI by identifying and marking out the contiguous area of 20-25 HHs in the layout maps of non-slum EB as slum area using the definition suggested by the Committee, in order to test and validate indicators/the slum characteristics identified.

If validated, the indicators of slums would be used for the 2011 Census to identify clusters of less than 60-70 households that may exist in a non slum EB on the layout maps. The contiguous areas having 20-25 HHs having slum-like characteristics in the EB of 600 populations may be identified as a slum using the layout maps of the EBs released by RGI.

Once the layout maps are prepared after the identification of EB and house listing operation, a contiguous area with 20-25 HHs having slum-like characteristics would be counted as slum. These households and the households in slum EBs would together give the slum population in the country. By this method, the data on total urban slum household including slum household in urban agglomerations as per Census definition would be available in 2011 (latest 2012). This method would be employed in every Census so that the Ministry would have periodic and comparable updates and growth trends.



The RGI would share the layout maps with the Ministry with marking of the contiguous areas having slum like characteristics once the lay out maps is released before the general census in 2011, for it to use for planning purpose and as an aid to slum surveys.

The Ministry would take up with the Ministry of Home Affairs at the appropriate time or consider providing financial support for the 2011 Census with augmentation of budget under USHA scheme to meet the additional costs required to be incurred for slum population enumeration in connection with the 2011 Census.

The Ministry would undertake to carry out the ground verification of slum clusters within the identified EBs to finalise the Master Frame of slums in the country.

The Master Frame of slum clusters would be shared by the Ministry with the state governments and the concerned ULBs, which should take these into account while planning their slum improvement programmes. In fact, the state governments/ULBs should be encouraged to constantly update the Master Frame, whether or not the new slum clusters are recognized.

6.5 Urban Information Management System on Slums

Every State Government which receives funds from the Ministry for slum development purposes under any of its programmes, should be required to indicate exactly which slum clusters in the Master Frame would be addressed and over what period of time. At the end of the stipulated period, the Ministry would re-evaluate the status of the slum cluster in order to continue or drop the cluster from its list of slums.

Second, since the concept of census towns, by and large, captures most of the peri-urban areas, a combination of information on the expansion of urban boundaries by the States and the census data on census towns would cover most slums arising out of urban expansion. This would, however, require the development of methodologies to geo-spatially match the expanded urban boundaries with the census information. The Ministry may work closely with the RGI Office to develop such a system.

The Ministry should engage with the NSSO so that in each of its future UFS rounds the NSSO identifies UFS blocks which are likely to contain slum clusters in the same manner as the census is doing in the 2010 house listing operations. The details of this procedure and the definitions used have been given in Chapter 4.

*Annexure – I*

No. – 28/4/2008-SE (NBO)
 Government of India
 Ministry of Housing and Urban Poverty Alleviation

Nirman Bhawan, New Delhi
 Dated 4th July, 2008

Office Order

**Subject: Setting up of a Committee to look into various aspects of Slum Statistics/
 Census and guide conduct of Slum Census 2011**

The Ministry of Housing and Urban Poverty Alleviation has decided to set up a Committee to look into various aspects of Slum Statistics/Census and issues regarding the conduct of Slum Census 2011. The Committee shall comprise of the Following:

1.	Secretary, Ministry of Statistics & Programme Implementation, Government of India	Chairman
2.	Registrar General of India or his representative	Member
3.	Joint Secretary (JNNURM), Ministry of Housing and UPA, Government of India	Member
4.	Director General, NSSO, Ministry of Statistics & Programme Implementation, Government of India	Member
5.	Adviser (HUD), Planning Commission, Government of India	Member
6.	Secretary (UE & PA), Government of Uttar Pradesh	Member
7.	Secretary (Urban Development), Government of Bihar	Member
8.	Secretary (Urban Development), Government of Andhra Pradesh	Member
9.	Secretary (Urban Development), Government of Maharashtra	Member
10.	Secretary (Planning & Statistics), Government of Madhya Pradesh	Member
11.	Director, NBO, Ministry of Housing and UPA, Government of India	Convener

The Chairman of the Committee may co-opt other officers/experts to facilitate its deliberations.



2. Terms of Reference for the Committee will be the following:
 - i) Examine City-wise slum population figures arrived at by the RGI in two spells with respect to methodology and coverage.
 - ii) Suggest adjustments required, if any, to arrive at State-wise urban slum population and for the Country as a whole.
 - iii) Develop State-wise and All India urban slum population estimates duly correcting the anomalies observed, if any.
 - iv) Suggest changes/improvement in all aspects of slum census including the definition, methodology, coverage etc.
 - v) Make suggestions to RGI regarding the effective conduct of Slum Census 2011 covering definition, methodology and other aspects.
 - vi) Guide the Ministry of Housing and Urban Poverty Alleviation in evolving sustainable and viable methodology for conducting slum and other surveys between successive censuses.
 - vii) Suggest measure to build a robust Urban Information Management System on slums and urban poverty, housing and construction duly taking into account the data collected by different agencies like NSSO and RGI etc.
 - viii) Any other item considered relevant.

3. Secretarial assistance to the Committee shall be provided by National Buildings Organisation, Ministry of Housing and Urban Poverty Alleviation.

4. This issues with the approval of Minister of State (I/C), Ministry of Housing and Urban Poverty Alleviation.

Sd/-
(Dr. P.K.Mohanty)
Joint Secretary & Mission Director (JNNURM)

To
Chairman and Other Members of the Committee
(as per the list attached)

Copy to:

1. PS to Hon'ble MHUPA
2. Sr. PPS to Secretary (HUPA)

*Annexure- II***MINUTES OF FIRST MEETING OF THE COMMITTEE TO LOOK INTO VARIOUS ASPECTS OF SLUM STATISTICS/CENSUS AND GUIDE CONDUCT OF SLUM CENSUS 2011 HELD UNDER THE CHAIRMANSHIP OF SECRETARY, MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION, GOVERNMENT OF INDIA ON 23rd OCTOBER, 2008 IN NEW DELHI**

The first meeting of the committee set up under the Chairmanship of Secretary (MOSPI), Ministry of Statistics and Programme Implementation to look into various aspects of Slum Statistics/Census and guide conduct of Slum Census 2011 was held in Sardar Patel Bhawan, New Delhi on 23rd October, 2008 at 3.00 PM.

2. At the outset, Dr. P.K.Mohanty, Joint Secretary (JNNURM), Ministry of Housing and Urban Poverty Alleviation, Government of India welcomed the participants and made a detailed presentation on the background and objectives of the committee under the chairmanship of Secretary (MOSPI) set up with the approval of Hon'ble MHUPA to look into various aspects of Slum Statistics/Census. Discussing the background for setting up the committee, he outlined the following points:

- a) In 2001 Census, detailed demographic data about slums across the country was collected by the RGI. The coverage was restricted to cities/towns having population of 50,000 or above in 1991 census.
- b) Slum population was reported from only 640 cities/towns. RGI came out with the publication of Slum Population of 640 cities/towns reporting slums with a population of 50,000 or above as per 1991 census (phase I Report).
- c) Based on the recommendations of Parliamentary Standing Committee, the Ministry of Housing & UPA approached RGI to further identify the Slum population in uncovered towns/cities. It was mutually decided to cover those towns/cities with population of 20000-50000 as per 2001 census.
- d) Out of 1321 towns covered in phase II, 1103 reported having slums: 958 towns with 20,000 to 50,000 population and 145 with more than 50,000 population.
- e) According to the RGI report (both phase I & II), the total slum population of the country is 52.4 million. It constitutes 5.1% of the total population of the country and 23.5 % of the population of the 1743 cities/towns reporting slums.



- f) Various organizations are using different definition of slums for the purpose of collecting slum statistics in the country. The definition of slums also varies from State to State.
- g) According to two reports by the RGI covering all towns/cities with population more than 20,000, the slum population is 52.4 million whereas the TCPO has suggested 61.8 million as the estimated slum population in the year 2001.
- h) As per the UN Population Report (by Mid-year 2001), India's urban slum population is estimated at 158.42 million.
- i) The RGI report on slums has left out smaller States like Himachal Pradesh, Sikkim, Nagaland, Manipur, Mizoram etc.
- j) In many States, the district/town authorities have not reported all the towns/ enumeration blocks that needed enumeration.
- k) In many States, in case of cities/towns covered under slum census 2001, the district/ town authorities have not considered non-notified slums where there are land disputes. This has resulted in gross underestimation/under coverage of slum population in the country. For example out of the total of 627 cities/towns in Uttar Pradesh, the slum census has covered only 84 towns.
- l) Some of the major States like Andhra Pradesh, Uttar Pradesh, Maharashtra, Bihar, Madhya Pradesh etc. have approached the Ministry of Housing & UPA for fresh estimation of slum population in urban areas of the States.

In this background the Ministry of HUPA has constituted the committee with the following terms of reference/ agenda:

- i) Examine City-wise slum population figures arrived at by the RGI in two spells with respect to methodology and coverage.
- ii) Suggest adjustments required, if any, to arrive at State-wise urban slum population and for the Country as a whole.
- iii) Develop State-wise and All India urban slum population estimates duly correcting the anomalies observed, if any.
- iv) Suggest changes/improvements in all aspects of slum census including the definition, methodology, coverage etc.
- v) Make suggestions to RGI regarding the effective conduct of Slum Census 2011 covering definition, methodology and other aspects.



- vi) Guide the Ministry of Housing and Urban Poverty Alleviation in evolving sustainable and viable methodology for conducting slum and other surveys between successive censuses.
- vii) Suggest measures to build a robust Urban Information Management System on slums and urban poverty, housing and construction duly taking into account the data collected by different agencies like NSSO and RGI etc.

3. JS(JNNURM) further informed that JNNURM, which is a flagship programme of Government of India, was initiated with focus on urban renewal, urban infrastructure development and basic services to the urban poor. The Sub-Mission on Basic Services to the Urban Poor (BSUP) aims to provide integrated services to the urban poor including slum-dwellers, in these 63 cities. These include affordable housing and both basic physical and social amenities. Slum development and basic services to the urban poor in these cities and towns are taken up under the scheme of Integrated Housing & Slum Development Programme (IHSDP). The Government of India has committed a sum of Rs.50,000 Crores as Grant to States and UTs under JNNURM and about Rs.20,000 Crores out of this amount are meant for the slum upgradation, housing and basic amenities to the poor.

Due to the non-availability of any authentic statistics on State-wise slum population, the State wise fund allocation under JNNURM was done by the Planning Commission on the basis of the TCPO estimates. The under-estimation of slum population in States like Bihar, Uttar Pradesh etc. has resulted in less allocation of funds for slum development and basic services to the urban poor in these States.

4. Secretary (MOSPI), in his opening remarks, observed that objectives of this committee are confined to the needs of Ministry of HUPA which is the nodal Ministry for implementation of various Plan and policies in the country to address the concerns of slum development and provision of basic civic amenities to the urban poor. Authentic database is a pre requirement to access the magnitude of the problem and formulation of plans, policies, and schemes so that potential beneficiaries are targeted in a meaningful manner.

He observed that the first focus of the committee should be to look into the definition of Slums using some common yardsticks applicable for every State, then the committee can suggest suitable adjustments/corrections to arrive at State-wise urban slum population by statistically mapping the results of 1743 cities/towns to all the cities/towns.

5. Ms. Suman Parasar, Joint Director, RGI informed that for the first time RGI came out with the reports on slums and the reports were generated from the data collected for the



population census 2001. She informed that RGI follows the area concept for the purpose of defining slums unlike the UN HABITAT which defines a slum based on household approach. The definition adopted by RGI takes into account both the recognized slums and identified slums. For the purpose of the slum report, the enumeration blocks were identified as slum area based on the definition of slums adopted by RGI and flexibility was maintained in identifying the slums depending on characteristic of the specific city/town. She informed that the size of the enumeration blocks were fixed as per the 2001 census and no new area was added for the purpose of slum survey. The existing EBs were treated as slums where at least 75% of the population was slum population. The slum reports brought out by RGI have constraints of having backward census. Some of the smaller States particularly the N-E States were left out since they were not fitting into the area concept/approach adopted by RGI.

6. Ms. Pushpa Subramaniam, Secretary, Housing, Government of Andhra Pradesh suggested to include the smaller towns for the purpose of Slum Census. She observed that some of the smaller towns in A.P are covered under the Integrated Housing and Slum Development Programme component of JNNURM. She wanted to know if all the 5161 cities/towns are eligible for the purpose of slum survey since some of them are too small to have any slum. Joint Director, RGI clarified that out of the 5161 towns, only 3799 are statutory towns and the rest are census towns. The census towns are identified only for the purpose of collecting the population statistics and they cannot be treated as towns for any other purposes. JS (JNNURM) observed that JNNURM covers only those towns/cities which are having a Municipal body in place and as per the guidelines only statutory towns are eligible for funding under JNNURM.

7. Shri Sitaram Kunte, Secretary, Housing, Government of Maharashtra observed that slum report has under estimated the slum population in cities/towns of Maharashtra. He cited the example of Kalyan and observed that as per the RGI report only 2.89% of population of Kalyan is slum whereas Kalyan is largely a slum town. He observed that there is gross under estimation of slum population in the country and suggested for adopting certain indicators for defining slums as done by the UN Global Report on Slums.

8. Shri (Dr.) D. K. Shukla, Special Secretary, Urban Development, Government of Bihar informed that there are no notified slums in Bihar. He observed that RGI report has not reflected actual slum population in Bihar and it is grossly under estimated/ under represented. He suggested that the committee may look into adjustments required to arrive at State-wise urban slum population and special attention may be given to the under represented States like Bihar, Uttar Pradesh, West Bengal etc. He also suggested for adopting a definition which



can be applicable to every State and we should not depend on notification status of slums by the State Governments.

9. Shri D.S.Negi, Director, NBO observed that the approach and definition should be flexible enough to take into account the different characteristics of Hilly and Non-hilly States. The fact that some States which have not recognized or identified the slums does not indicate that slums do not exist in those States. The Committee may look into adopting a uniform, systematic definition of slums for the country, duly considering the regional characteristics. He suggested for a mid-term estimation of State-wise Slum population based on NSSO and Census figures and statistically correcting the anomalies observed.

10. Secretary (MOSPI) observed that area approach adopted by the RGI for defining slums is perfectly alright and the committee should focus on defining the slums and then estimate the slum population on comparable basis with NSSO and RGI in order to implement the beneficiary oriented programs/schemes of Ministry of HUPA. Joint Director, RGI informed that suggestions of the committee in regard to slum data will be welcomed and the same will be examined for their suitability/feasibility and placed before the Technical Advisory Committee (TAC) of RGI. Secretary (MOSPI) requested the representative from RGI and NSSO to provide soft copies of the data on Slum and related reports to the Committee to examine the feasibility of statistical corrections. The representatives from the RGI and the NSSO readily agreed to provide all necessary support to the Committee.

11. After detailed deliberation, it was decided that the Committee will-

- (i) examine the definitions adopted by different states and different agencies;
- (ii) suggest a definition of slums based on area approach duly taking into consideration all aspects including the methodology, coverage etc;
- (iii) suggest adjustments required, if any, to arrive at State-wise urban slum population and for the Country as a whole;
- (iv) develop State-wise and All India urban slum population estimates duly correcting the anomalies observed, if any.

12. The meeting concluded with a vote of thanks to the Chair.

*Annexure-III***MINUTES OF SECOND MEETING OF THE COMMITTEE TO LOOK INTO VARIOUS ASPECTS OF SLUM STATISTICS/CENSUS AND GUIDE CONDUCT OF SLUM CENSUS 2011 HELD UNDER THE CHAIRMANSHIP OF SECRETARY, MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION, GOVERNMENT OF INDIA ON 1ST DECEMBER, 2008 AT SARDAL PATEL BHAWAN, NEW DELHI**

The Second Meeting of the Committee set up under the Chairmanship of Secretary (MOSPI), Ministry of Statistics and Programme Implementation to look into various aspects of Slum Statistics/Census and guide conduct of Slum Census 2011 was held in Sardar Patel Bhawan, New Delhi on 1st November, 2008 at 4.00 PM.

2. Welcoming the participants, Joint Secretary & Mission Director (JNNURM) Ministry of Housing and Urban Poverty Alleviation gave a brief account of the decisions arrived at in the first meeting of the Committee and follow-up action taken thereon. He made a detailed presentation on the definitions of slum area adopted by different States before the Committee. He outlined the following points:

- a) The definition of slum area adopted by the State Governments is based on Slum Acts of the respective States.
- b) The definitions adopted by State Governments are based on legal stipulations unlike the definitions adopted by RGI and NSSO. There are discrepancies between the parameters adopted by State Governments, RGI and NSSO.
- c) Generally the State laws provide for a procedure to 'notify' or 'recognize' slums but the stipulation regarding the number of households in the definition of slums, which is part of the Census and NSSO definitions, is absent in the definitions adopted by State laws which do not place a limit on the number of households for the purpose of identifying a slum.

The definitions of slum areas adopted by Madhya Pradesh, Haryana, Uttar Pradesh, Maharashtra, and Andhra Pradesh and by NSSO and RGI were discussed in detail. JS (JNNURM) pointed out that there is a distinct similarity in the definitions adopted by these States. He also informed that the definition adopted for the purpose of identification of slums through census/survey should be based on objective parameters like structural quality of housing, overcrowding, access to basic services and amenities etc. irrespective of the number of households in one location.



3. Director General, National Sample Survey Organisation (NSSO) narrated the definition adopted in the 58th Round of Slum Survey. DG (NSSO) informed that NSSO's definition of a slum area stipulated 20-30 households for the purpose of survey to suit the operational feasibility of such survey and in the case of RGI, 60-70 households were taken as the lower limit for the identification of a slum area for operational reasons.

4. Joint Director, RGI informed that the definition adopted by RGI takes into account all slums i.e. notified, non notified/recognized and identified slums. The first and second criteria adopted by RGI takes into account the notified/non-notified/recognized slums by the State Government/Local Authority concerned and the third criterion for identification of slum area is related to compact areas of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities. She informed that RGI identifies the slums using the 3rd criteria for areas which are not notified or recognized as slums by the State Government/Local Authority concerned and all the 3 criteria are simultaneously taken into account for identification of a slum area. However, citing the example of slum census in Delhi where even an area with limited number of households was also considered as slum area, she informed that in practice areas with less than 60-70 households have also been identified as slums in Census 2001. She argued that keeping in view the enormous work involved in the census operation it may not be feasible to reduce the criteria of 60-70 household to 20-30 households.

5. Secretary (MOSPI), in his opening remarks, observed that the primary objective of the Committee is to devise a common definition of slum area which caters to the needs of the Ministry of HUPA for the purpose of estimating the slum population in the country in connection with proper targeting under schemes like JNNURM. While formulating the definition, we must take into account the issues of States which are relatively less dynamic in notifying slum so that the State-wise urban slum population arrived at must be comparable among the States. The Chairman observed that whatever the definition adopted, the main objective should be to get the actual urban slum population prevailing in the country estimated on the basis of objective parameters that do not depend on the approach of any single State or agency. He also suggested that RGO, NSSO and the Ministry of Housing & Urban Poverty Alleviation should have broadly similar approaches.

6. Principal Secretary, Planning, Government of Madhya Pradesh made a suggestion for evolving a comprehensive definition which reflects the changing demographic conditions in the States. He observed that the definitions of slums under Slum Acts / State directives, framed in the past do not suit the current situation. Legally defined slums are likely to



provide underestimates of slum population which may not reflect the ground realities. The slums notified in the past continue to remain so even though the surrounding areas have become well developed areas. He stressed on the need for a more practical definition of slum which would reflect the actual reality in cities and towns in the States/ Country based on factors like access to housing and basic amenities.

7. Secretary (MOSPI) observed that the slum definition adopted by States have their own purpose and which may not ideally suit any census or survey of slums. He however, observed that the definition of slums should be operative and not an ideal one and that the same should enable comparability of data across States. JS & Mission Director (JNNURM), MoHUPA observed that slum population results revealed by the 2001 census are not satisfactory or acceptable to many states and this fact cannot be ignored. He suggested that a framework for identification of slums may be fixed before starting the house listing operation.

8. Joint Director, RGI informed that RGI is going to use the GIS mapping for identification of the slum areas in all the State capital cities in the forthcoming 2011 census. She suggested that since the census operations are carried out by RGI with the help of State Government officials, there is an urgent need to sensitise the State officials regarding the importance of identification of slum areas in the States so that the census results could reflect the true picture. JS & Mission Director (JNNURM), MoHUPA agreed to the suggestions made by Joint Director (RGI) and advocated for capacity building programmes for the State Government officials regarding census operations in general and slum census in particular. He requested the Joint Director (RGI) to prepare the modalities and guidelines for such training and assured cooperation of Ministry of Housing and UPA in this regard.

9. Secretary (MOSPI) observed that that the area approach adopted by the RGI for identification of slums is perfectly alright. To eliminate the element of subjectivity in the definition, we may prepare a check list for identification of slum area. He suggested looking into aspects of quality of housing and availability of some basic amenities in the enumeration blocks considered as slum area for a city by RGI in the Slum census 2001 and in the enumeration block considered as slum area in a city by NSSO in the 58th round slum survey. He suggested DG, NSSO and JD, RGI to select one or two common cities on experimental basis and study the aspects of housing quality and availability of some basic amenities so that the data can be compared and based on that appropriate indicators/checklists for identification of slum areas can be formulated.



10. After detailed deliberation, the following decisions were taken:

(i) DG, NSSO and JD, RGI to select one or two common cities/towns for study of housing and availability of basic amenities like water, drainage, electricity etc. in the enumeration blocks considered as slum area in Slum Census 2001 and 58th round slum survey respectively: DG, NSSO and JD, RGI may come up with parameters/ indicators or proxies thereof in this regard. Some suggested parameters/indicators are:

- a) Housing structure.
- b) Availability of drinking water within premises.
- c) Availability of sanitation facility like toilet
- d) Density (total number of persons in the household/ number of rooms)
- e) Access to electricity

(ii) Ministry of HUPA to coordinate between RGI and NSSO and compile the results of the study for consideration of the Committee in the next meeting.

11. The meeting concluded with a vote of thanks to the Chair.

*Annexure-IV***MINUTES OF THE THIRD MEETING OF THE COMMITTEE TO LOOK INTO VARIOUS ASPECTS OF SLUM STATISTICS/CENSUS AND GUIDE CONDUCT OF SLUM CENSUS 2011 HELD UNDER THE CHAIRMANSHIP OF SECRETARY, MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION, GOVERNMENT OF INDIA ON 19th MAY, 2009 AT S.P.BHAWAN, NEW DELHI**

The third meeting of the Committee set up under the Chairmanship of Secretary (MOSPI), Ministry of Statistics and Programme Implementation to look into various aspects of Slum Statistics/Census and guide the conduct of Slum Census 2011 was held in Sardar Patel Bhawan, New Delhi on 19th May, 2009 at 4.00 PM.

2. Welcoming the participants, Director (NBO), Ministry of Housing and Urban Poverty Alleviation gave a brief account of the decisions arrived at in previous two meeting, follow-up action taken thereon and agenda of the current meeting. He informed that it was decided in the last meeting that NSSO and RGI would select one or two common cities/towns for study of housing and availability of basic amenities like water, drainage, electricity etc. in the enumeration blocks considered as slum area in Slum Census 2001 and 58th NSSO round slum survey respectively. Some suggested parameters/indicators include:

- a) Housing structure
- b) Availability of drinking water within premises.
- c) Availability of sanitation facility like toilet
- d) Density (total number of persons in the household/ number of rooms)

Director (NBO) informed that the cities of Delhi and Pune were selected for the above mentioned study and requested the representatives from RGI and NSSO to present their reports before the Committee.

3. Assitant RGI, O/o RGI and Census Commissioner presented the finding of their study on “availability of the basic amenities in Delhi and Pune” based on Census 2001 results before the Committee. The inference from RGI study suggests that a combination of parameters such as

- non-permanency of residential structures
- households with no facility of drinking water within premises
- households with no latrine facility
- households with open drainage, and
- population density



along with the criteria of compactness of households may perhaps be helpful in defining slums more objectively.

4. Director, National Sample Survey Organisation (NSSO) also presented the finding of their study on “availability of the basic amenities in Delhi and Pune” based on survey results of “Condition of Urban Slums” (NSSO 58th Round) before the Committee.

5. Secretary (MOSPI), in his opening remarks, observed that the main objective of the Committee is to eliminate the element of subjectivity in the definition for identifying a slum area and suggested that we may prepare a check list for identification of slum area. He observed that the Committee has to suggest a common definition of slum which is acceptable to Central and State Governments so that the agencies/authorities who are engaged in the collection of slum data are guided by standard definition. Slum population data so collected would reflect the true picture in the country and will be compatible/comparable. He stressed that whatever the definition that is adopted, the main objective should be get an accurate and comparable estimates of slum population in the country.

6. On a query by Secretary (MOSPI) regarding procedure for notifying slums, Secretary (Housing), Govt. of Maharashtra informed that slums on private land are generally notified in order to enable entry by Government agencies for providing services to improve the quality of life and for making available basic civic amenities to the slum dwellers. In the State of Maharashtra, only slums on private land are notified so as to avoid the unwanted litigations in providing the public utility services in slums located on private land.

7. Secretary (MOSPI) reiterated that the Committee should find out few common characteristics in order to evolve a comprehensive definition of slums. He suggested some of the parameters for identifying slums such as: a) at least 20% of houses in slum should be katcha/non-permanent houses; b) settlements having no closed drainage system etc.

8. JS (JNNURM), M/o HUPA observed that the criterion for identification of slum area by RGI takes into consideration the compact areas of at least 300 population or about 60-70 households, which is on a higher side. In many States/smaller towns, slums may be found having 20-25 households. He also observed that the definition adopted for the purpose of identification of slums through census/survey should be based on objective parameters like structural quality of housing, overcrowding, access to basic services and amenities etc. irrespective of the number of households in one location. He referred to the definitions of slums adopted by several states which center around the above three parameters. Additional RGI explained that keeping in view the enormous work involved in the census operation it may not be feasible to reduce the criteria of 60-70 household to 20-25 households. Census identifies an enumeration block (EB) as “slum EB” based on household criteria and due to administrative, logistics and financial limitations an EB cannot be less than 60-70 HHs/300 population. He informed that RGI is going to use GIS mapping for identification of the slum areas in all the State capital cities in the forthcoming 2011 census. He suggested that a



framework for identification of slums may be fixed before starting the house listing operation.

9. Special Secretary, Housing & U.D, Government of Bihar enquired whether the city maps available with every city administration can be used for mapping the census enumeration block and for identifying a slum area irrespective of the number of household/population. Additional RGI informed that for census operations, RGI creates a notional map of the city in order to cover every household in the area without any scaling and it is quite different from the city map. Hence the linking of census map with the city map cannot be done easily in the present circumstances. However, with digitized maps, this could be possible.

10. Chairman & Secretary, MoSPI observed that that the area approach adopted by the RGI for identification of slums is perfectly all right, and it is not practically possible for them to reduce the size of enumeration blocks for the purpose of identifying a slum EB. He observed that the committee may look into the possibility of suggesting RGI to flag an EB where the surveyor feels that a sufficient part of the area qualifies as a slum based on the defined parameters but does not meet the criteria of 60-70 HHs. Although this would involve a degree of subjectivity, it was unavoidable under the circumstances. He suggested the RGI to explore the possibility of instructing census enumerators to identify areas having less than 60-70 HHs (i.e. areas having more than 20-25 but less than 60-70 HHs) possessing slum-like characteristics while identifying the EBs during house listing and flagging these EBs. Census/ Ministry of Housing & UPA may then take up necessary survey in fagged off areas to arrive at the slum population in the country. The Committee members agreed to this suggestion made by the Chairman. Additional RGI informed that he will discuss with the concerned officers and field staff of RGI and give the necessary feedback to the Chairman on this issue.

11. JS (JNNURM), Ministry of Housing and Urban Poverty Alleviation observed that the slum population available from Census 2001 is an under-estimate for some of the States and requested Chairman to suggest some methodology to arrive at a more reasonable estimate of slum population from the Census 2001 result. The Chairman suggested to go in for small area estimation for suitable adjustments/corrections to arrive at State-wise urban slum population by statistically mapping the results of the NSSO 58th Round and/or the 1743 cities/towns (for which 2001 slum census data) are available to all the cities/towns. He advised the Ministry of HUPA for taking the guidance of Dr.U.C.Sud, Head (A) Sample Survey, Indian Agricultural Statistics Research Institute (IASRI), New Delhi. The Committee unanimously agreed to assign the task to IASRI, New Delhi. JS (JNNURM) informed that the Ministry will take the necessary action in the matter and will assign the study to IASRI. The Chairman observed that the results of the study will be discussed in the Committee and it will be included in the report of the Committee to be submitted to the Ministry of HUPA.

12. The meeting ended with vote of thanks to the chair.

*Annexure-V***MINUTES OF THE MEETING HELD ON ON 4TH NOVEMBER 2009 UNDER THE CHAIRPERSONSHIP OF HON'BLE M (HUPA & T) REGARDING SLUM POPULATION ENUMERATION IN THE FORTHCOMING CENSUS 2011**

A meeting under the Chairpersonship of Hon'ble M (HUPA & T) was held on 4th November, 2009 at Nirman Bhawan, New Delhi to discuss the issues relating to slum population enumeration in the forthcoming census operation so that the 2011 Census counts slum population in a proper manner.

2. Welcoming the participants, Joint Secretary & Mission Director (JNNURM) Ministry of Housing and Urban Poverty Alleviation gave a brief account of the slum population estimates for 1743 cities having above 20,000 or more population brought out by the RGI in their two reports. He outlined the difficulties faced by the Ministry of HUPA and other Ministries while using the slum population data arrived at by RGI in two spells, first for 640 towns with population of more than 50,000 and then for 1103 towns, with population between 20,000 and 50,000.. He mentioned that various organizations, e.g. RGI and NSSO are using different definitions of slums for the purpose of collecting slum statistics in the country. The definition of slums also varies from State to State. According to two reports by the RGI covering all towns/cities with population more than 20,000, the slum population is 52.4 million whereas the TCPO has suggested 61.8 million as the estimated slum population in the year 2001. As per the UN Population Report (by Mid-year 2001), India's urban slum population is estimated at 158.42 million. The RGI report on slums has left out smaller States like Himachal Pradesh, Sikkim, Nagaland, Manipur, Mizoram etc. In many States, the district/town authorities have not reported all the towns/enumeration blocks that needed enumeration.

3. Secretary (HUPA) in her opening remarks stated that authentic database is a pre-requirement to assess the magnitude of the problem and undertake formulation of plans, policies and schemes so that potential beneficiaries are targeted in a meaningful manner. She observed that on the basis of existing methodology used by Census, there is a gross under-estimation of slum population in the country and the slum estimates do not reflect the real picture on slum population in many States. This has led to faulty planning and under-estimation of financial requirements in the absence of a true picture on magnitude of the problem. She informed that the Government has announced Rajiv Awas Yojana for the slum dwellers and the urban poor in an effort to create a Slum-free India. Developing a robust database on slums is critical for implementation of the proposed Rajiv Awas Yojana (RAY).



She mentioned that covering the Cities/towns having more than 50,000 population for the slum survey in 2011, as proposed by RGI will lead to the same criticism and would neither satisfy planning nor the statistical needs. The problems would remain the same which we are facing with the 2001 estimates of slum population. She suggested RGI to work closely with the Ministry in order to arrive at an authentic estimate of slum population in 2011 census to facilitate a definitive understanding of the size of the problem and its distribution across cities.

4. Secretary (HUPA) emphasized the necessity for change in the slum definition adopted by RGI in 2001 Census. RGI is counting an Enumeration Block (EB) as slum area only when in that area at least 300 population or about 60-70 households of poorly built congested tenements exist. This definition will leave pockets or EB with less than 60 households having slum like features. In order to have a realistic count on the slum population the methodology and coverage needs change in the forthcoming census 2011.

5. Secretary, Ministry of Statistics and PI referred to the two-dimensions of issues relating to slums in the country i) Correction in slum locations by way of interventions and ii) Prevention of occurrence of slums especially in small and medium towns. He emphasized that for policy formulation purposes it is absolutely essential to count the slum population even in cities having less than 20000 population. He mentioned that RGI covers all the notified slums during the census operations and the problem of under-estimation occurs mainly in the case of under coverage of non-notified slums. He suggested that urban slum frame may be fixed before starting the house listing operations for 2011 Census.

6. RGI & Census Commissioner observed that for the first time RGI came out with the reports on slums and the reports were generated from the data collected for the population census 2001 i.e. this constituted an offshoot of the population census. Elaborating on the methodology used for census operations in the country, he informed that in course of general Census operations, under the Census Act, the Municipal Commissioner/Executive Officer is authorized to earmark/identify an area as slum area. Separate records are maintained for these slum areas and the enumerator appointed by RGI strictly follows the identification done by the Municipal Authority for marking any area as slum or non-slum and has no discretion to use his own judgment for identification of slums. His/her job is restricted to only count the population. Explaining the reasons for under-coverage of slum areas especially in cases of non-notified slums which ultimately results in under-reporting of slum population of a city/town, he stated that the past experience has shown that the Municipal Authorities are generally reluctant to declare an area as slum for census purpose due to the fact that once a non-notified slum is declared as slum by the municipality the problems of regularization and other legal/extra legal problems crop in. Thus, there is an inherent tendency not to declare an area with slum-like features as a 'slum'. He stated that under-estimation of slum



population in the last census may be mainly attributed to the fact that municipalities refused to recognize/identify the non-notified slums existing within their municipality limits which led to their enumeration as a part of non-slum population of the town/city.

7. Hon'ble Minister for Housing & Urban Poverty Alleviation and Tourism observed that the criterion for identification of slum area by RGI takes into consideration the compact areas of at least 300 population or about 60-70 households, which is on a higher side. In many States/smaller towns, slums may be found having 20-25 households. She observed that slum population results revealed by the 2001 census are not satisfactory or acceptable to many states and this fact cannot be ignored. She observed that maximum numbers of slums are on non-notified area and suggested to explore a new methodology to capture the population of non-notified slum pockets and pockets having slum-like features. She mentioned the importance and necessity of reliable slum estimates for the Ministry in its policy implementation especially in implementing the agenda of inclusive growth of the government. She stressed that whatever the approach that is adopted, the main objective should be get timely, accurate and comparable estimates of slum population in the country so that the 12th Plan programmes or allocations would not be based on the under estimated slum population. M (HUPA & T) explained the vision of Slum-free India that requires Slum-free States and Slum-free Cities. This vision can be achieved only on the foundations of sound plans based on sound data. Regarding the enumeration of population of non-notified slums or areas with slum-like characteristics the Minister suggested that RGI may consider enumeration of population of slums as well as extra-legal settlements with slum-like conditions calling them slum-like settlements or by any other name.

8. RGI & Census Commissioner explained that keeping in view the enormous work involved in the census operation it may not be feasible to reduce the criteria of 60-70 household to 20-25 households. Census identifies an enumeration block (EB) as "slum EB" based on household criteria/identification by the Municipal Authorities and due to administrative, logistics and financial limitations an EB cannot be less than 60-70 HHs/300 population. He also explained the procedure followed by RGI like forming an enumeration blocks, layout maps and house listing for census operations in detail. He informed that RGI has undertaken the exercise of preparing GIS mapping for all the State capital cities in the forthcoming 2011 census. The RGI also referred to the enormous costs to be incurred on enumeration if the size of an enumeration is reduced to count population of habitations with 20-25 households having slum-like characteristics.

9. Director (NBO) & OSD (JNNURM) informed that the Ministry has set up a Committee under the Chairmanship of Secretary (MOSPI) to look into various aspects of



slum statistics/census. The Committee has entrusted Indian Agricultural Statistics Research Institute (IASRI) the task of examining the City-wise slum population figures arrived at by the RGI in two spells and develop State-wise and All India urban slum population estimates duly correcting the anomalies observed by the use of appropriate statistical tools. Director (JNNURM) observed that 'census' towns are defined by RGI exclusively for census operation in addition to statutory towns and on the similar pattern they can also identify slum areas based on some pre-defined characteristics for the purpose of slum population estimation calling them 'census' slums. MD/JS (JNNURM) pointed out that under the present methodology adopted by RGI, if a slum is divided between two EBs, there is likelihood that the census counts of slum population will not include such slum.

10. Secretary (MOSPI) observed that the RGI may identify an area as slum based on a normative definition taking into account some defined parameters i.e. area possessing slum like characteristics while identifying the Enumeration Blocks (EBs) during house listing operation. The contiguous areas having 20-25 HHs having slum-like characteristics in the EB of 600 populations may be identified as a slum using the layout maps of the EBs released by RGI. He observed that the Committee working under his guidance may suggest a normative definition to identify a slum based on a check list to eliminate the element of subjectivity in the definition for identifying a slum area. In this regard, it was decided that the RGI, who has both municipal and census administration experience, would send a paper to Secretary, MOSPI.

11. After detailed deliberations, the following decisions were taken:

- i) For the purpose of planning for Rajiv Awas Yojana and Slum-free India it would be necessary to count the population of slums in all statutory towns in the country in the 2011.
- ii) The Committee working under the chairmanship of Secretary (MOSPI) would suggest a normative definition based on appropriate indicators/checklists for the purpose of identification of slum areas and enumeration of population of area with 20-25 HHs having slum like characteristics in an Enumeration Block for in census 2011.
- iii) A pilot study to estimate the slum population of Agra in 2001 will be undertaken by RGI by identifying and marking out the contiguous area of 20-25 HHs in the layout maps of non-slum EB of Agra as slum area using the definition suggested by the Committee, in order to test and validate indicators/the slum characteristics identified.
- iv) If validated, the indicators of slums would be used for the 2011 Census to identify



clusters of less than 60-70 households that may exist in a non slum EB on the layout maps. Once the layout maps are prepared after the identification of EB and house listing operation, a contiguous area with 20-25 HHs having slum-like characteristics would be counted as slum. These households and the households in slum EBs would together give the slum population in the country. By this method, the data on total urban slum household including slum household in urban agglomerations as per Census definition would be available in 2011 (latest 2012). This method would be employed in every Census so that the Ministry would have periodic and comparable updates and growth trends.

- v) The RGI would share the layout maps with the Ministry with marking of the contiguous areas having slum like characteristics once the lay out maps is released before the general census in 2011, for it to use for planning purpose and as an aid to slum surveys.
- vi) The Ministry and RGI would work together in the GIS mapping of slums undertaken as a part of preparatory exercise for implementation of Rajiv Awas Yojana. RGI would render necessary assistance as it had used the GIS technology fair extensively already.
- vii) The Ministry would take up with the Ministry of Home Affairs at the appropriate time or consider providing financial support for the 2011 Census with augmentation of budget under USHA scheme to meet the additional costs required to be incurred for slum population enumeration in connection with the 2011 Census based on the methodology suggested by the Committee under the Chairmanship of Secretary (MOSPI).

The meeting ended with vote of thanks to the chair.

*Annexure-VI***MINUTES OF FINAL MEETING OF THE COMMITTEE TO LOOK INTO VARIOUS ASPECTS OF SLUM STATISTICS/CENSUS AND GUIDE CONDUCT OF SLUM CENSUS 2011 HELD UNDER THE CHAIRMANSHIP OF DR. PRANOB SEN ON 26th AUGUST, 2010 AT NBO, NIRMAN BHAWAN, NEW DELHI**

The final meeting of the Committee to look into various aspects of Slum Statistics/Census and issues regarding the conduct of Slum Census 2011 under the Chairmanship of Dr. Pranob Sen, Principal Adviser, Planning Commission (former Secretary, Ministry of Statistics & P.I, Govt. of India) was held in NBO- MIS Centre, Room No. 120, G-Wing, NBO Building, Nirman Bhawan, New Delhi at 11.00 A.M on 26th August, 2010 to discuss and submit final Report of the Committee to Ministry of HUPA.

2. Welcoming the participants, Director (NBO) & OSD (JNNURM & RAY), Ministry of Housing and Urban Poverty Alleviation gave a brief background and drew attention of the participants to the agenda of the meeting.

3. In his opening remarks, Chairperson observed that this Committee was set up by M/o HUPA with a mandate to develop State-wise and All India urban slum population estimates duly correcting the anomalies observed, suggest changes/improvement in all aspects of slum census, suggest a road map regarding the effective conduct of Slum Census 2011 covering definition, methodology, and coverage issues and suggest measure to build a robust Urban Information Management System on slums and urban poverty, housing and other related statistics. The final meeting of the Committee was convened to discuss the recommendations of the Committee and submit the final report to the Ministry of HUPA for necessary follow up actions on these recommendations. He observed that the Report is based on the discussions held during the past meetings and suggestions/observations of the Committee members. He mentioned that the draft final report was circulated to all members and the Committee would like to discuss the observations of members on the draft report so that amendments, if any could be suitable incorporated in the report before submitting it to the Ministry of HUPA. He requested Director (NBO) to present the summary of recommendations before the Committee members.

4. Following the opening remarks by Chairperson, Director (NBO) made a power point presentation on the recommendations of the Committee. He outlined the following points:

- a) The Committee entrusted Indian Agricultural Statistics Research Institute (IASRI) the task of examining the City-wise slum population figures arrived at by the RGI in two spells and develop State-wise and All India urban slum population estimates duly correcting the anomalies observed by the use of appropriate statistical tools



Accordingly, IASRI submitted its report before the Committee and it was discussed in detail during the last two meetings. As per the new estimates, as on 2001 the slum population in the country was estimated to be 75.26 million as against 52.4 million reported by Census 2001 and the slum population constituted 26.31 % of the urban population of the country in 2001.

- b) The Slum Report based on Population Census 2001 published by RGI covered the 1743 cities/towns having more than 20,000 population in the Country out of total 5161 cities/towns as per Census 2001. RGI covers all the notified slums during the census operations and the problem of under-estimation occurs mainly in the case of under coverage of non-notified slums.

The Committee is of the view that for policy formulation purposes it is absolutely essential to count the slum population even in cities having less than 20,000 population. For the purpose of planning for Rajiv Awas Yojana and Slum-free India it would be necessary to count the population of slums in all statutory towns in the country in the 2011.

- c) The Committee suggested to adopt a normative definition based on appropriate indicators/checklists for the purpose of identification of slum areas and enumeration of population of area with 20-25 HHs having slum like characteristics in an Enumeration Block for in census 2011. Based on the pilot studies carried out by the ORGI, the following criterion have been identified:

- Predominant roof material: any material other than concrete (RBC/RCC)
- Availability of drinking water source: not within premises of the census house
- Availability of latrine: not within premises of the census house
- Drainage facility: no drainage or open drainage

- d) Methodology/Road Map for Slum Census 2011:

- The Committee recommended for a pilot study to estimate the slum population of one city in 2001 will be undertaken by RGI by identifying and marking out the contiguous area of 20-25 HHs in the layout maps of non-slum EB as slum area using the definition suggested by the Committee, in order to test and validate indicators/the slum characteristics identified.
- If validated, the indicators of slums would be used for the 2011 Census to identify clusters of less than 60-70 households that may exist in a non slum EB on the layout maps. The contiguous areas having 20-25 HHs having slum-like characteristics in the EB of 600 populations may be identified as a slum using the layout maps of the EBs released by RGI.
- Once the layout maps are prepared after the identification of EB and house listing operation, a contiguous area with 20-25 HHs having slum-like characteristics would be counted as slum. These households and the households in slum EBs would together give the slum population in the



country. By this method, the data on total urban slum household including slum household in urban agglomerations as per Census definition would be available in 2011 (latest 2012).

- This method would be employed in every Census so that the Ministry would have periodic and comparable updates and growth trends.
- The RGI would share the layout maps with the Ministry with marking of the contiguous areas having slum like characteristics once the layout maps is released before the general census in 2011, for it to use for planning purpose and as an aid to slum surveys.
- The Ministry would take up with the Ministry of Home Affairs at the appropriate time or consider providing financial support for the 2011 Census with augmentation of budget under USHA scheme to meet the additional costs required to be incurred for slum population enumeration in connection with the 2011 Census.
- The Ministry would undertake to carry out the ground verification of slum clusters within the identified EBs to finalize the Master Frame of slums in the country.
- The Master Frame of slum clusters would be shared by the Ministry with the state governments and the concerned ULBs, which should take these into account while planning their slum improvement programmes. In fact, the state governments/ULBs should be encouraged to constantly update the Master Frame, whether or not the new slum clusters are recognized.

e) Urban Information Management System on Slums:

- Every State Government which receives funds from the Ministry for slum development purposes under any of its programmes, should be required to indicate exactly which slum clusters in the Master Frame would be addressed and over what period of time.
- At the end of the stipulated period, the Ministry would re-evaluate the status of the slum cluster in order to continue or drop the cluster from its list of slums.
- Second, since the concept of census towns, by and large, captures most of the peri-urban areas, a combination of information on the expansion of urban boundaries by the States and the census data on census towns would cover most slums arising out of urban expansion.
- This would, however, require the development of methodologies to geo-spatially match the expanded urban boundaries with the census information. The Ministry may work closely with the RGI Office to develop such a system.
- The Ministry should engage with the NSSO so that in each of its future UFS rounds the NSSO identifies UFS blocks which are likely to contain slum clusters in the same manner as the census is doing in the 2010 house listing operations



5. The RGI and Census Commissioner of India welcomed the recommendations of the Committee and observed that use of statistical tools have their own limitations and past experiences have shown that statistically estimated figures may not reflect the ground realities. He further mentioned that at the instance of O/o RGI, the Ministry of HUPA has written to State/UT Governments to identify and demarcate the slum enumeration block properly and as per directions of O/o RGI so that slum population are reported correctly during Census 2011. However, the experiences from the field during the first phase of House listing operations for Census 2011 has shown that no efforts are being made by the Cities/towns to identify and demarcate the slum EBs and the same EBs used for 2001 census are being earmarked. In this scenario, the problems of coverage are still going to remain the same and slum population will not be reported correctly. He requested AS (JNNURM) to take up the matter at the highest level to address these issues on priority basis as second phase of house listing operations are going to be started shortly. AS (JNNURM) assured RGI that the Ministry will flag these issues and letter from Hon'ble MHUPA to Chief Minister of all State/UTs will be issued in this regard. On the issues of GIS mapping of cities/towns in the country, RGI informed that O/o RGI has already prepared GIS/digital maps for 33 capital cities in the country using Quick Bird and other software available and requested the Ministry to share the information regarding GIS mapping of cities/towns being carried out under different schemes of the Ministry in order to avoid duplication of work. AS (JNNURM) informed that under the Slum Free City Planning of Rajiv Awas Yojana, the Ministry of HUPA has released funds to States/UTs to carry out preparatory activities and to develop a GIS enabled Slum Information System. He mentioned that the Ministry of HUPA and RGI would work together in the GIS mapping of slums undertaken as a part of preparatory exercise for implementation of Rajiv Awas Yojana. He requested RGI to render necessary assistance as it had already used the GIS technology fair extensively.

6. Regarding estimation of Slum Population in the country, Chairman observed that IASRI has come out with the estimates using sound statistical tools and the estimation of slum population are fairly reliable taking into account the average standard error and coefficient of determination of model for major States used for prediction of urban slum population. He observed that the estimated figures will be re-verified once the results of Slum population based on Census 2011 are published by RGI. In absence of any reliable estimate of slum population available, the Ministry of HUPA may use these estimates for planning and formulation of slum development programmes/policies in the country. He requested Director, IASRI to explain the methodology and statistical model used for estimation of slum population

7. Following the observations of Chairperson, Director, IASRI thanked the Committee for entrusting the task of estimation of slum population to IASRI and also thanked the Research Team of NBO for working closely with IASRI and providing valuable inputs during the exercise. He explained the methodology and statistical modeling used in arriving on the estimation of slum population as summarized below:



- Slum population data for the year 2001 of 1743 cities/towns was provided by the Ministry along with indicator of bad estimates. The cities/towns of each State were divided in two groups, first group consists of those cities in which estimates of slum population are reasonably reliable and cities/towns with slum population with suspicious estimates were put into second group.
- Ward wise information of each city/town was extracted from data set of Census 2001. This data set consists of data of each urban ward on 119 original and derived parameters. These parameters are related to population demographic pertaining to various social groups/categories such as gender, literacy, working categories, social groups etc. After suitable aggregation and matching with the help of total population of the cities/towns, two data sets, i.e. data from Census 2001 and data of slum population, were integrated along with all the variables of Census 2001 on one to one basis.
- In order to identify important covariate for slum population, data set on 119 parameters of cities/towns with reasonable estimate of slum population from all the cities of the country were considered and correlation matrix was obtained. With the help of this correlation matrix, variables from Census with significant correlation coefficient with slum population were identified and segregated for further analysis.
- Again, state wise data was taken up for identification of important variables for each state. The important variables were identified with the help of fitting multiple regression models using stepwise technique. The results of this analysis shows that six covariates viz. (i) number of schedule caste, (ii) number of schedule tribe, (iii) number of illiterate persons, (iv) number of persons under non-workers group, (v) number of persons under other marginal worker group and (vi) number of persons under casual labourer worker group are most important to determine slum population of cities/towns in most of the states.
- Therefore, for further analysis, these variables were considered. It was observed that, these covariates were also highly correlated with each other. Therefore, in fitting of multiple regression models there was problem of multi-collinearity among independent variables of this model. Hence, need was felt to apply Principal Component Analysis (PCA) technique to generate independent transformed covariates with the help of these original covariates.

Using the methodology explained above and fitting the appropriate statistical modeling, the state wise slum population was estimated.

8. After detailed deliberations, the Committee unanimously approved the Report and decided to submit the report of the Committee to the Ministry of HUPA.

The meeting ended with vote of thanks to the Chair.



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For Further Details Please Contact :

Additional Secretary & Mission Director (JNNURM)

Ministry of Housing & Urban Poverty Alleviation

116-G Wing, NBO Building,

Nirman Bhavan, New Delhi-110108

Tel: +91-11-23061419, Telefax: +91-11-23061420

E-mail : as-jnnurm@nic.in

Director (NBO) & OSD (JNNURM & RAY)

Ministry of Housing & Urban Poverty Alleviation

210-G Wing, NBO Building,

Nirman Bhavan, New Delhi-110108

Tel: +91-11-23061692, Fax: +91-11-23061542

E-mail: dnbo-mhupa@nic.in