

Draft

Guidelines for Preparation of a Slum Free City Plan of Action

Under the Rajiv Awas Yojana

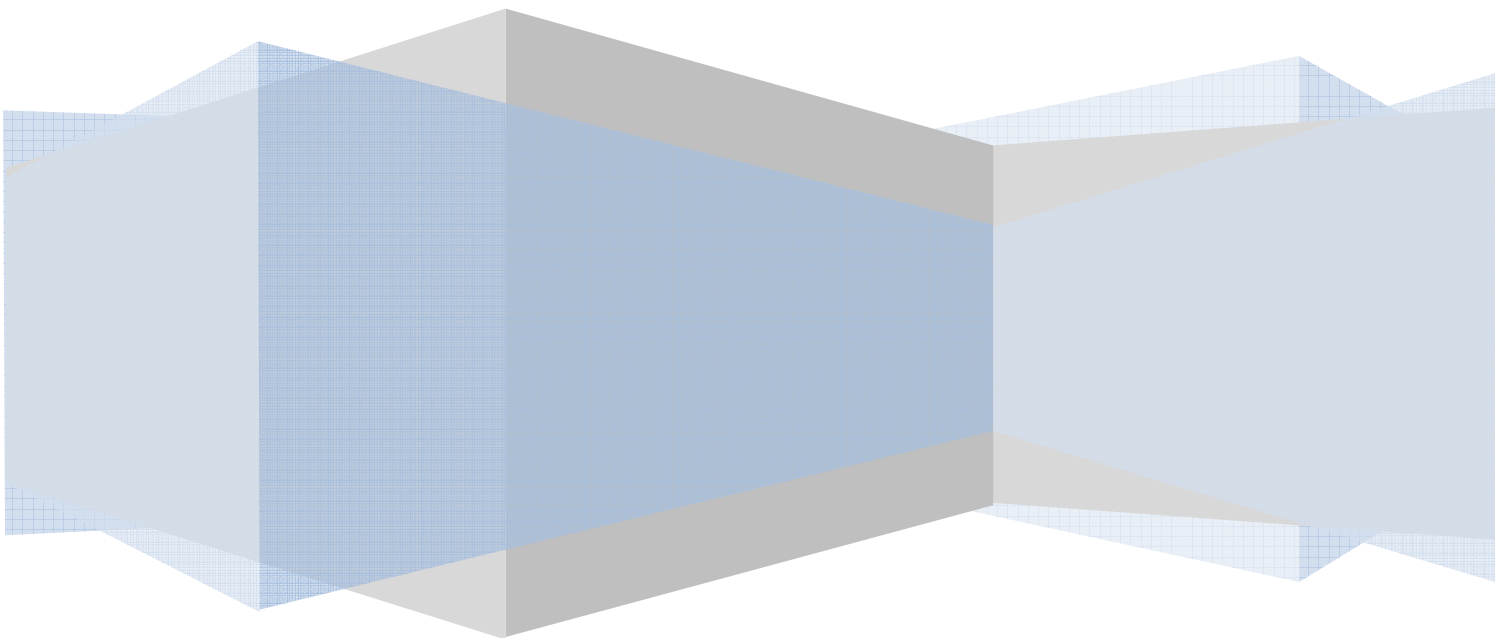


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Abbreviations

BPL	Below Poverty Line
BSUP	Basic Services for Urban Poor
CBO	Community Based Organisation
CDG	Community Development Group
CDP	City Development Plan
CDS	Community Development Societies
CPHEEO	Central Public Health and Environmental Engineering Organisation
CRZ	Coastal Regulation Zone
CSP	City Sanitation Plan
DA	Development Authority
DC	District Collector
DPR	Detailed Project Report
DUDA	District Urban Development Authority
EWS	Economically Weaker Section
EPC	Engineering Procurement Contract
FAR	Floor Area Ratio
FSI	Floor Space Index
GIS	Geographical Information System
Gol	Government of India
IHSDP	Integrated Housing and Slum Development Programme
ILCS	Integrated Low Cost Sanitation Programme
LIG	Low Income Group
MIS	Management Information System
Mo/HUPA	Ministry of Housing and Poverty Alleviation
NBO	National Building Organisation

NGO	Non Governmental Organisation
NNRC	National Network of Resource Centres
PHC	Primary Health Care Center
RAY	Rajiv Awas Yojana
SFCPoA	Slum Free City Plan of Action
SJSRY	Swarna Jayanti Shahari Rojgar Yojana
SUDA	State Urban Development Authority
TDR	Transfer of Development Rights
UAA	Urban Agglomeration Area
ULB	Urban Local Body
ULCRA	Urban Land Ceiling and Regulation Act
UPA	Urban Poverty Alleviation

Terms and Concepts

“Affordable Cost” means a cost that is based on the needs and financial capability of the slum dweller, as determined by the State Government or the authorized agency.

“Below Poverty Line (BPL)” is an economic benchmark and poverty threshold used by the Government of India to indicate economic disadvantage and to identify individuals and households in need of government assistance and aid.

“Building” includes a house, out-house, stable, shed, hut and other enclosure or structure, whether of masonry bricks, wood, mud, metal or any other material whatsoever, whether used as human dwelling or otherwise; and also includes verandahs, fixed platforms, plinths, door-steps, electric meters, walls including compound walls and fencing and the like, but does not include plant or machinery comprised in a building.

“Carpet Area” The covered area of the usable rooms at any floor level (excluding the area of the wall)

“Central Government Land” means land owned by the Central Government or its undertakings.

“Density” – The residential density expressed in terms of the number of dwelling units per hectare.

Note- Where such densities are expressed exclusive of community facilities and provision of open spaces and major roads (excluding incidental open spaces), these will be net residential densities. Where these densities are expressed taking into consideration the required open space provision and community facilities and major roads, these would be gross residential densities at neighbourhood level, sector level or town level, as the case may be. The provision of open spaces and community facilities will depend on the size of the residential community.

“Development / Redevelopment” – with its grammatical variations and cognate expressions, means the carrying out of any building, engineering or other operations in, on, over or under land or the making of any material change in any building or land and includes layout and sub-division of any land.

“Dilapidation” – a state of deterioration due to old age or long use, impairment - a symptom of reduced quality or strength

“Disputed Land” – means land under legal disputes.

“Dwelling Unit/ Tenement” – An Independent housing unit with separate facilities for living, cooking and sanitary requirements

“Economically Weaker Section (EWS)” – means such class of persons as may be notified by the appropriate Government from time to time, for the purpose of providing housing.

“Floor” – means the lower surface in a storey on which one normally walks in a building, and does not include a mezzanine floor.

“Floor Area Ratio (FAR)” – the quotient obtained by dividing the total covered area (plinth area) on all the floors by the area of the plot:

$$\text{FAR} = \frac{\text{Total covered area of all the floors}}{\text{Plot Area}}$$

“Government Land” – means any land owned or acquired by the State Government or its undertakings or the Urban Local Body or Development Authorities situated in a district or an urban area as the case may be.

“Group Housing” – Housing for more than one dwelling unit, where land is shared jointly (as in the case of co-operative societies or the public agencies, such as local authorities or housing boards, etc) and the construction is undertaken by one Agency)

“In-situ Slum Re-development” – means the process of redeveloping slum areas by providing proper access, dwelling unit, open spaces and other basic other services to the slum dwellers on land on which the slum exists

“In situ Slum Up-gradation” – means the process of improving the quality or expanding of dwelling spaces occupied by slum dwellers with provision of basic services and infrastructure services.

“Incremental housing” – Incremental Housing is a process in which given the security of tenure and provision of basic services is done and houses are built or expanded over the time by owners—through phased investments as per their needs and priorities over a period of time.

“Land’ – includes benefits to arise out of land, and things attached to the earth or permanently fastened to anything attached to the earth.

“Low Income Group (LIG)” – means such class of persons as may be notified by the appropriate Government from time to time, for the purpose of providing housing.

“Mezzanine Floor” – means an intermediate floor between two floors overhanging or overlooking a floor beneath.

“Population Density” – is a measurement of population per unit area. Population density is population of a given area divided by total land area.

“Private Land” – means land owned by a private person or entity.

“Property Rights” – means the entitlement to a dwelling space i.e. either land or dwelling house as the case may be, by an eligible slum dweller, to be allotted at an affordable cost as determined by the appropriate authority.

“Public land” – means land owned by Municipal, State Government, Central Government land, or by other public sector undertakings i.e. BHEL, Railways etc.

“Rental Housing” – means the tenants use and occupy the property for a period of time through an agreement between the landlord and the tenant in which the landlord receives payment from the tenant for use of the property.

“Security of Tenure” – is an agreement between an individual or group (with respect) to land and residential property which is governed/ regulated by a legal (formal or customary) and administrative framework. The security derives from the fact that the right of access to and use of land and property is underwritten by a known set of rules, and that right is justifiable.

“Semi Tenable Slums” – are those slums which are located on land zoned for non-residential uses, as prescribed by the Master Plan.

“Slum” or “Slum Area” – is a compact settlement of at least 20 households (For NE & Special Category States it is 10-15 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.

“Slum Dweller” – means any person residing within the limits of a slum area.

“Slum Resettlement” – means the process of relocation and settlement of slum dwellers from the existing untenable slums to an alternative site with provision of dwelling space, basic civic and infrastructural services.

“Squatter Settlements” – is considered as a residential area in an urban locality inhabited by the poor who have no access to tenured land of their own, and hence "squat" on vacant land, either private or public.

“Tenable Slums” – means all slums which are not located on hazardous locations suitable for human habitation and the land is not earmarked for any major public facilities and therefore it can be regularized in the same location.

“Tenure” – the mode by which land/property is held or owned, or the set of relationships among people concerning land/property or its product.

“Transfer of Development Rights (TDR)” – TDR is the process of granting full or part building right which due to some restrictions imposed by the authorities could not be consumed at the original site and therefore is permitted to be used at a different site over and above the far FAR/FSI that would be available to that receiving site subject to further conditions as to how much a single receiving site could be overloaded. If the owner of the original site does not have any other land then he may sell TDR to another person and be compensated by such second site owner.

“Trust Lands” – means land owned or acquired by any Trustee.

“Unauthorized housing” – Means housing units constructed on land to which the occupants have no legal claim, or which they occupy illegally or unplanned settlements and areas where housing is not in compliance with current planning and building regulations (United Nations 1996).

“Untenable slums” – are those slums which are on environmentally hazardous sites (like riverbank, pond sites, hilly or marshy terrains, etc.), ecologically sensitive sites (like mangroves, national parks, sanctuaries, etc.), and on land marked for public utilities and services (such as major roads, railway tracks, trunk infrastructure, etc.).

“Urban Area” – means the area comprised within the limits of all cities and towns classified as urban by Census 2001 including the limits of Municipal Corporation or Municipal Council or Nagar Panchayat as constituted under the respective State Acts, including cantonment board or notified areas, and shall include the planning area as per the Development Plan of a town or city.

1. Preamble

Rajiv Awas Yojana (RAY) for the slum dwellers and the urban poor envisages a 'Slum-free India' by encouraging States/Union Territories to tackle the problem of slums in a definitive manner. It calls for a multi-pronged approach focusing on:

- Bringing existing slums within the formal system and enabling them to avail of similar level of basic amenities as the rest of the town/city;
- 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.

A Slum Free City Plan of Action (SFCPoA) is an important instrument for cities to attain the objectives of RAY. It is a citywide plan of action, which consists of two parts; a plan to bring about the improvement of existing slums through participation of the existing dwellers and strategies for prevention of future slums. In doing so, the 'City Slum Free City Plan of Action' takes into consideration the present status of slums, priorities of slum dwellers, the resources and capabilities of the city in improving the quality of life of the urban poor and the capacity of the urban poor to be partners in this development process.

All urban development initiatives have an impact on the poor within the city. It is now recognised that past process of city planning and city governance has not been sufficiently inclusive. The process of preparing and implementing Slum Free City Plans of Action will involve learning by doing in partnership with slum communities themselves. The SFCPoA will contain a holistic and temporal view of how the city could develop processes and projects targeted on the poor and living conditions in slums. The plan while being developed with a 20 year perspective will need to be updated and modified at regular intervals so as to remain relevant. The SFCPoA planning exercise will help the city to take a holistic view on housing for the urban poor, lead to systematic data gathering and analysis for structuring a city wide strategy on urban poor housing, which could further lead to city level proposals; zone, ward and slum level proposals, as well as proposals which would help to address structural issues which have constrained the access to affordable shelter solutions for the urban poor in the city in the past.

These guidelines have been developed based on the "RAY Guidelines for Slum-free City Planning" issued by the Ministry of Housing and Urban Poverty Alleviation, Government of India, which provided templates to carry out requisite surveys for establishing baseline data. These guidelines seek to provide detailed guidance on the process to be adopted for formulating Slum Free City Plans of Action adopting a "whole city", "all slums" and "whole slum" approach.

1.1 Broad Principles

The Slum Free City Plan of Action is based on the following broad principles:

- The first principle is of inclusion. This implies no-eviction unless there is no alternative and in such cases alternative locations, chosen in consultation with the concerned urban poor communities must be provided.

- In-situ upgradation of slums is the preferred option. Slum Resettlement, if absolutely necessary, will be to the extent possible within the same ward/zone or the adjoining ward/zone to minimize adverse impacts on livelihoods and community assets and access to health and education facilities. Plans are to be prepared with the involvement of the people.
- There should be no or minimum demolitions of incremental housing created by the residents of slum communities themselves.
- Resident led incremental housing to be facilitated through tenure regularisation, in-situ infrastructure extension and financing mechanisms. Incremental housing also creates rental housing in the existing low income settlements for those who prefer rental option.
- Beneficiary identification should be done following a participatory and transparent process. The list of beneficiaries will be verified.
- Community participation should be ensured in all the stages of SFCP i.e. pre-survey activities, including mapping, conduct of survey, development of slum redevelopment model, implementation and monitoring.
- The planning process aims at improvement in the living conditions and level of security of the urban slum dwellers. There should be universal provision of basic services like water supply and sanitation irrespective of land tenure and legal status.
- Linking this slum free city planning process with other urban poverty related programmes as well as the City Development Plans, City Sanitation Plans and Master Plans as may be the case.
- Retaining livelihood linkages and home based economic activities in the slum redevelopment, upgradation and improvement.
- The slum-free city planning begins at ward or zone level exercise in which options for each slum in a ward or zone is decided to form ward or zone level plan. This is to ensure that slum dwellers within a ward or zone continue to live in the same area, which would promote heterogeneous neighbourhoods as well as continuation of residence-livelihood linkages.
- Rental housing is to be developed as an important component of the preventive strategy.
- Total Station Survey needs to be conducted only in prioritized slums for the preparation of DPRs.

These guidelines are being issued to facilitate the processes to be undertaken for slum free city planning and include templates for the preparation of the Slum Free City Plan of Action (SFCPoA).

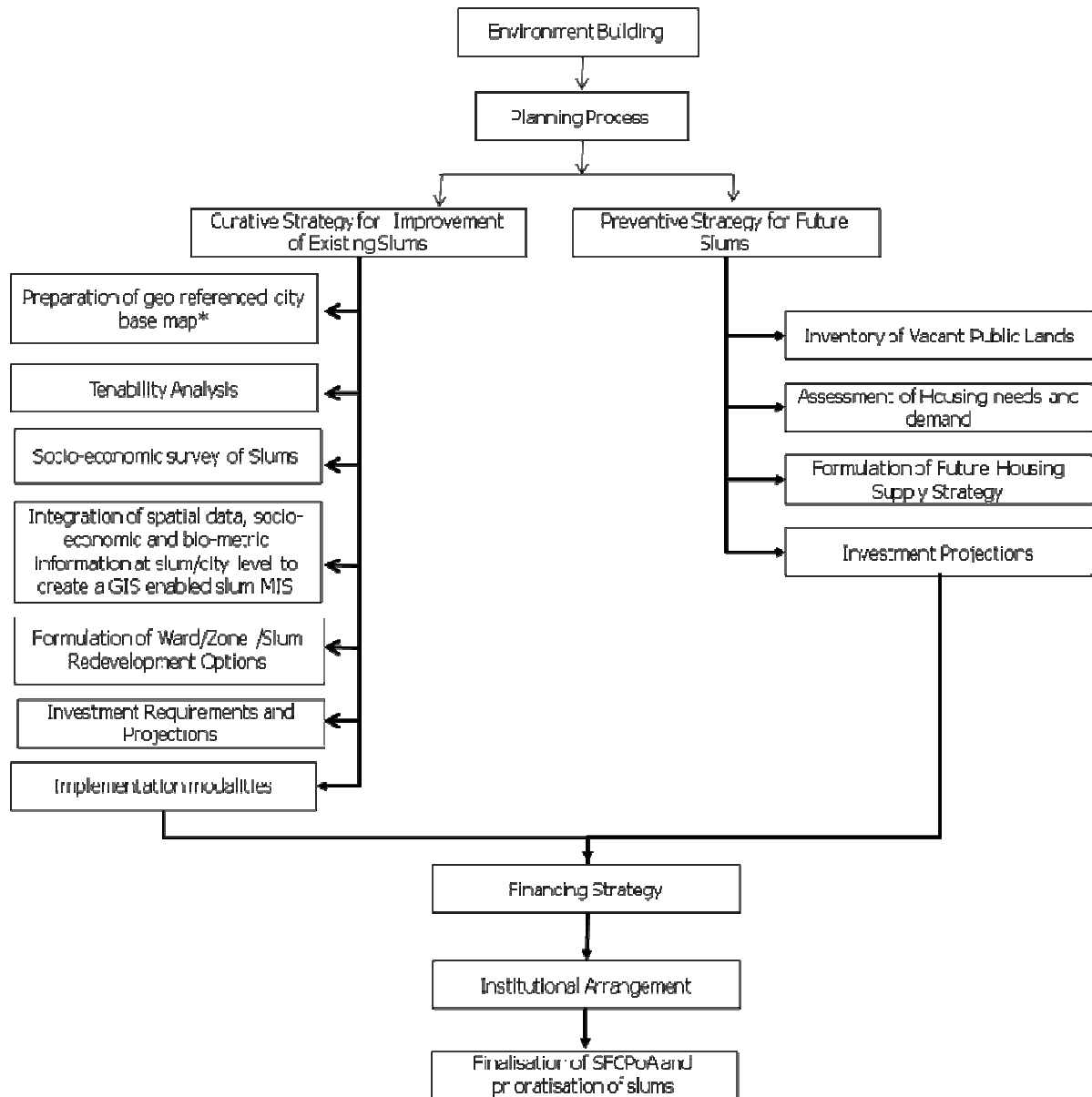
The guidelines are in three parts. Part 1 provides the steps involved in the Slum Free City Plan of Action (SFCPoA) for improvement of existing slums and Part 2 provides the steps for preventing future slums and Part 3 comprises the templates for the preparation of Slum Free City Plan of Action.

2. Planning Process

The Slum Free City Plan of Action would include two strategies -improvement of existing slums (curative strategy) and prevention of formation of new slums (preventive strategy) by organising supply of affordable housing for the urban poor. This section briefly lays out the broad methodology

of the planning process listing out the various steps and activities that need to be undertaken along with the related outputs of each step.

- The process is summarised in the following flow chart:



**Total Station Survey is not necessary to conduct at this stage. It needs to be conducted only in prioritized slums during DPRs preparation stage*

The steps involved in preparation of SFCPoA and possible outputs are presented below:

Steps	Sub Steps	Expected Outputs
1. Situation Analysis	Collection of basic data on the city, its housing situation and housing programme implementation, critical assessment of housing/ slum policies' implementation, Municipal profiles including financial situation etc. Stakeholder consultations at ward/ zone, city level to propose the idea of SFCP	<p>ULB approved situation analysis report and work plan for SFCP exercise including choice of options for Socio-economic survey through-</p> <ul style="list-style-type: none"> ○ Urban Poverty Alleviation Cell, if it exists at ULB level <p style="text-align: center;">or</p> <ul style="list-style-type: none"> ○ Through a professional agency supported by lead NGO(s) <p style="text-align: center;">or</p> <ul style="list-style-type: none"> ○ Through the lead NGO(s)
	2.a. Curative Strategy for Existing Slums	<p>Preparation of geo referenced city base map</p> <p>Tenability Analysis</p> <p>Slum socio-economic survey (as per option chosen by the ULB)</p> <p>Integration of spatial data & Socio-economic (including bio-metric) information at slum/city level to create slum MIS</p> <p>Formulation of Ward/City/Zone level Slum Redevelopment Plan</p> <p>Implementation Modalities</p> <p>Investment Projections</p>
2.b. Preventive Strategy for Future Slums	Inventory of Vacant and underutilised Lands	<ul style="list-style-type: none"> ○ ULB approved GIS integrated profile of vacant and under-utilised lands at Ward/City/ Zonal level ○ Quantity of land available for low income housing
	Assessment of Housing needs and demand - Existing and Future	<ul style="list-style-type: none"> ○ Profile of low income households (present and future) - slum and non-slum ○ Assessment of housing market (both ownership and rental) for low income population. ○ Estimate of housing and Infrastructure needs for future low income population. ○ Assessment of land required for future low income housing needs. ○ Assessment and evaluation of housing

		standards for low income population <ul style="list-style-type: none"> ○ Identification of areas that need redevelopment in future - non slum areas and possibilities if incentive zoning.
	Formulation of Housing Supply Strategy	<ul style="list-style-type: none"> ○ Housing options available for low income housing - models and types ○ Regulatory framework for streamlining low income and affordable housing - standards, procedures, modifications in Master Plans/CDPs and incentives
	Investment projections	<ul style="list-style-type: none"> ○ Indicative estimates of the resources needed over the time to upgrade the living conditions of the slums in the city. ○ Quantification of the resource needs based on the different options.
3. Financing Strategy		<ul style="list-style-type: none"> ○ Resource available for both Curative and Preventive Strategies - GoI, State and ULB level. ○ Estimation of the resource gap between the investment projections and resources that are/will be available
4. Institutional Arrangement		<ul style="list-style-type: none"> ○ Provide a framework for institutional arrangement with roles and responsibilities at different stages of the SFPCoA
5. Finalisation of SFPCoA		<ul style="list-style-type: none"> ○ Prioritisation of the slums ○ Indicative list of reforms to be undertaken and timelines for implementation ○ Consolidation of the outputs from the various steps, processes and the curative and preventive strategies into the Slum Free City Plan of Action

* The above mentioned activities should be completed within a period of 6 months to one year depending on the city-size and number of slums in that city.

3. Preparatory Phase

The preparatory phase would form the base for the detailed plan of action to be prepared for making the city slum free. A suggested schedule of information is described below¹.

NOTE: Primary data collection and analysis should not be carried out at this stage and only information from reliable secondary sources such as City Development Plan/Master Plan/existing database of ULB should be used.

1. **Physical characteristics of the city-** Topography, area and geographical features
2. **Demographic and social profile** –City and slum population growth trends, estimated future population and proportion of low income population, migration estimates, density patterns.
3. **Economic profile** - Economic base, income level and types of employment, affordability² to pay, extent of urban poverty (BPL, APL)

¹ SFPC will consist of improving existing slums and a preventive strategy for formation of new slums

² As defined by Deepak Parekh Committee Report

4. Housing profile

- a.* Existing housing shortage, future estimated housing need and demand
- b.* Land supply mechanisms, land prices, land development and construction cost
- c.* Available information on slums-magnitude, growth trend, location, slums as a proportion of housing stock

5. Infrastructure

- a. Physical Infrastructure:* Spatial coverage and adequacy of water supply, sewerage (as per standard of CPHEEO norms), drainage, solid waste management, carrying capacities of existing networks and proposals for augmentations. This can be reported ward/zone wise.

6. Existing Institutional framework for intervention in slums

- a.* Details of existing State laws related to slums applicable to the city
- b.* Institutions engaged in slum improvement i.e. Slum Clearance Board, ULBs, SUDA/DUDA, Housing Boards, Development Authorities, District Collectorate, NGO, CDS/Neighborhood societies etc. Assessment of Organizational capacities.
- c.* Community participation arrangements (Identification of city level Lead NGOs/UPA Cell and the existing community mobilization and development structure (Refer separate Community Participation Guidelines).

7. Review of existing policies, programmes and projects for slums

- a.* Impact of existing slum improvement policies/programmes (effectiveness, coverage, targeting, institutional set up ,and sustainability of programmes)
- b.* Evaluation of different programmes- status and review of implementation of national programmes at city level i.e. BSUP/IHSDP and Integrated Low Cost Sanitation Programme/City Sanitation Plans (if any) etc.
- c.* Review of existing Master Plan policies for slums, CDPs, review of planning standards, Development Control Regulations prevalent in the city and applicable for slum improvement or redevelopment.
- d.* Provisions for unorganized sector – SJSRY –livelihood plans, if any
- e.* State of Municipal Financial (budgets of last 5 years) and allocations for urban poverty alleviation.
- f.* Social welfare schemes of State/city governments especially health and education programmes (e.g. Mission convergence) at government level, review of ongoing and completed urban poverty related programmes of different departments.

Identification of different stakeholders for making slum free city plan of action (Refer Annexure A)

The RAY Guidelines for Slum-Free City Planning mention the formation and establishment of an institutional platform for stakeholders so as to enable their participation in the policy and decision making at city level. The stakeholder workshops will enable consensus building on issues such as, programme objectives, methodology, broad targets, role of stakeholders, NGOs, programme design and implementation of the slum free city plan.

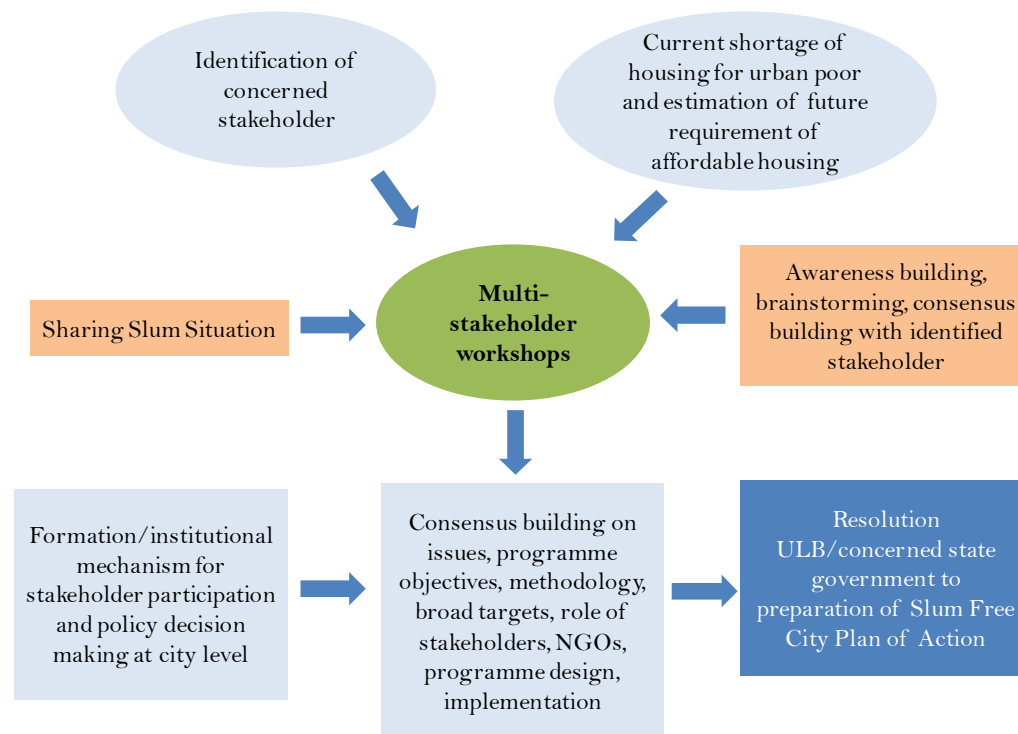
It will clearly identify the role of stakeholders at the following levels:-

- City level
- Zone/Ward Level
- Neighbourhood level etc
- Slum (Settlement) Level

The stakeholders workshops will discuss the roles and responsibilities between state government, local government, communities, NGOs and role of subsidiaries-in financing, implementation, design, maintenance, etc. who initiates, who executes, who supports and who finances.

The following diagram describes the process and outputs of the preparatory Phase:

Initiating the preparation of Slum Free City Plan of Action



Outputs

- Situational analysis report
- Awareness building/brainstorming and consensus building workshops with stakeholders
- Assessment of low income housing and existing options
- Establish institutional mechanism and a platform for stakeholders for their effective participation and involvement in policy decision making.
- Resolution by the urban local body to prepare GIS based slum free city plan of action
- Choice of options for Socio-economic survey through-

Urban Poverty Alleviation Cell, if exists at ULB level/or
Through a professional agency supported by lead NGO(s) or
Through the lead NGO(s)

After the Preparatory Phase, the Slum Free City Plan of Action needs to be prepared as per the steps given below. Preparation of curative strategies for improvement of existing slums and preventive strategies for formation of new slums can be taken up simultaneously.

NOTE: A set of decisions need to be taken up by the state government to enable the finalization of the Slum Free City Plan of Action (SFCPoA). Refer Annexure G for decision points.

4. Curative Strategy for Improvement of Existing Slums

The following section provides the detail description of each of the steps involved in the curative strategy for improvement of existing slums.

4.1 Preparation of Geo Referenced City Base Map and Delineation of Slum Boundaries³

4.1.1 Delineation of Boundary for the Slum Free City Plan

The delineation of boundary for the Slum Free City Plan of Action has to be done with the full involvement of the urban local body and the Metropolitan Planning Committee / Urban Development Authority (or Authorities in the case of larger city agglomerations). In the case of smaller cities/towns not falling under the jurisdiction of any Urban Development Authority, delineation of the planning area for mapping purpose may be done in consultation with the Municipality and District Urban Development Agency/District Office of Town Planning Department/District Planning Committee.

4.1.2 Preparation of GIS Base Map (*city and zone levels*) Indicating Location of all Slums in the City

Prepare an updated list of slums (including authorized or unauthorized, listed or un-listed) notified and non-notified.⁴

The identification and updating of slum list must be done in consultation with institutional stakeholders including the elected members of the ULB, M.P., MLAs, academic institutions working on urban issues, eminent city level civil society groups, NGOs and CBOs - so that the list is comprehensive and includes all the pockets of slums that meet the criteria. The list must include all slums and underserved settlements, characterized by poor basic infrastructure and housing conditions, irrespective of land tenure, notified and non-notified, ownership status excluding the slums which have already been improved/redeveloped in the past. The location of all these settlements must be made on the city base map. The following points must be kept in mind while preparing the list of slums:

³ For Details refer –Guidelines for GIS Mapping, MIS development and Integration of GIS with MIS

⁴ Dynamic GIS monitoring can be taken up for monitoring the future situation at regular intervals

- The existing list of slums with ULB will be cross-checked with satellite imagery to check for any missing slum pockets, which will be added to the list after ground verification.
- Simultaneously, the slum list will also be updated by including those slums which are not identifiable by their physical characteristics in the satellite images. A ground - truthing exercise will be carried out with the help of municipal officers and NGO/CBO representatives.
- The slum list should be publicised and vetted by the communities. To facilitate this ULB should develop a mechanism for inviting objections/suggestions by displaying / publishing the list of updated slums.
- The slums which have already been improved up to an acceptable level or redeveloped and have reached an acceptable standards should be excluded from the list.⁵

4.1.3 Marking the Slum Boundaries on the City Base Map

- After finalisation of the updated slum list, each slum will be identified and then based on either existing information or using GPS survey with the active involvement of the communities the slum boundaries will be delineated on city base map.
- After delineation of the slum boundary in GIS interface, 3 digit Slum code needs to be fed in the GIS attribute field. This 3 digit code should be the same as the slum codes to be given/already given in the NBO format (Slum Profile Annexure I Part C), which will help further integration of socio –economic data and GIS data at slum level. This will become the slum code for all future references to that slum.
- The identified and delineated slum boundaries would then need to be cross checked in the field along with the involvement of community and identifiable physical features should be recorded to describe the slum boundary.

4.1.4 Identification of Slums Located on Environmentally Hazardous Sites, on Non-Conforming Uses Vacant Lands on the City Base Map

Identify slum pockets located on environmentally hazardous sites, as per **Annexure-E** on tenability. This list will be referred as “untenable slums.” Identify slum pockets (on the city base map) which are earmarked for non residential uses as per Master Plan such as roads, trunk infrastructure and public facilities etc. This list of Slums will be called “Semi-tenable” slums and would need further analysis and review. The remaining slums will be identified as tenable slums.

- Vacant usable residential lands need to be identified and mapped on the city base map. These vacant lands offer possibilities for accommodating slum population in a zone /within the same area. Thus, an inventory of all possible lands that could be used for slum relocation or for new housing under the preventive strategy shall be proposed. Sites for slums existing on environmentally hazardous sites will be made and marked out on the base map (zone-wise). The areas of vacant lands will have to be cross-checked at a later stage (while preparing preventive strategy for future slums) as to their appropriateness and adequacy to house the existing slum population.

⁵ Standards and procedure for de-notification of slums should be decided by State Governments

4.1.5 Mapping Land Ownership and Tenure Status of Slum Pockets and Vacant Lands⁶

This step involves collecting information on land ownership details and plot boundaries from land revenue/municipal records for land under each slum pocket and vacant lands. Land parcels with unclear/disputed titles will need to be identified to initiate dispute resolution process for getting clear land titles. All the land ownership & slum boundaries should be digitized and geo-referenced over the slum pockets.

- **Land Ownership Status**
 - **Public land:** *Municipal land, State Government land,*
 - **Central Government land,** *land owned by public sector undertakings i.e. BHEL, Railways, cantonment lands etc.*
 - **Private Land:** *Land belonging to a company or an individual*
 - **Trust Lands:** *Waqf Board land, Temple land, Charitable Trust land etc.*
 - **Disputed :** *Land under legal disputes*
 - **Land in multiple ownership**
- **Status of Revenue of the urban Land Parcels, which unclear at this time, for slum pockets**
 - *Revenue Status (land conversion, registration etc.)*
- **Planning Status :**
 - *Illegal land subdivisions*
 - *Unauthorized colonies, etc.*
- **Tenure status⁷:** information is to be gathered on land tenure status from community leaders.
- Recording applicable legislation and the impact on the land situation especially in slum pockets e.g.:
 - ULCRA, Slum Act, laws restricting development near prohibited heritage/restricted sites, CRZ Act affecting the land parcels.
 - After collecting the land ownership information from the concerned departments, the ownership information needs to enter in the NBO format (Slum profile format, Annexure – I, Part C)

⁶Refer “Guidelines for GIS Mapping, MIS Development and integration of GIS with MIS”

⁷ Tenure status is the mode by which land/property is held or owned, or the set of relationships among people concerning land/property or its product.

- Land Value Mapping: Prevailing land values from the revenue circle rates will need to be mapped as ranges from high medium and low in comparison to the surrounding areas of slums. Slum pockets should be located on this land value map. This will provide information on the possibilities of involving the private sector in housing development.

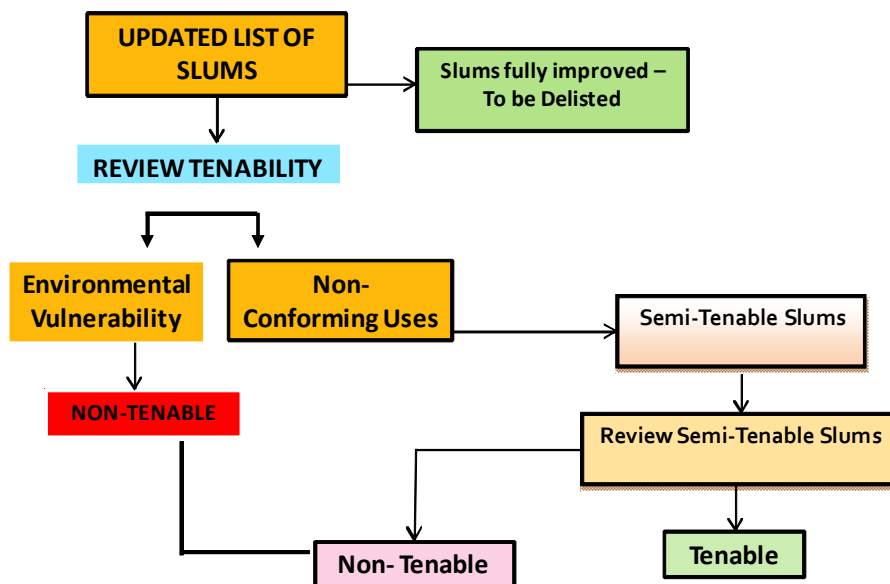
• Note: Land ownership of vacant land is not part of NBO format (Slum profile). It has to be collected separately from the secondary sources(revenue Department)

4.1.6 Identify and Categorize Slums Based on their Tenability in Each Ward/Zone

Based on the list of slums classified to be Non-Tenable, Semi Tenable and Tenable as in Section 4.1.4 a detailed analysis of semi tenable slums needs to be undertaken. Both risk and public interest parameters have to be approximated using normal planning standards. These parameters need to be developed through a process of consultation with the key stakeholders. This categorization would help in formulating separate strategies for different slum categories. Following approach may be adopted to categorize slums based on their tenability and non-tenability.

Please see **Annexure E** for an indicative schedule for tenability analysis. Based on the conditions of the slums as collected above, slums need to be categorized into tenable, untenable and semi-tenable (initially untenable slums). A final list of the untenable slums which needed relocation have to be finalized at this stage of the SFCPoA.

Figure 2: Classification of slums based on tenability



Semi-Tenable Slums are those slums which are located on land zoned for non-residential uses, land proposed for public and semi-public uses, industrial land, etc., as prescribed by the Master Plan. Often land proposed under the Master Plan for specific purposes do not get developed for many years and in these cases there may be a review of the land use with the following possibilities:-.

- Change of present use to residential use⁸

⁸ The ULB may pass a Standing Committee order to change land use reservation.

- b) Swapping of land uses for the same area of land in the same zone of the city

The issue of whether a slum settlement's which exist on areas reserved for public purposes may be redeveloped in same site shall be decided by the competent authority in consultation with the ULB personnel and technical experts, after giving full opportunity to the resident community to express their views, in a public hearing. The process of consultation and public hearing shall be completed within - three calendar months from the date of their initiation.

Note: Relocation within the same ward or zone will depend upon the capacity of the other redevelopment sites /usable vacant lands to absorb these households. Thus slum densities of the other redevelopment sites within the ward/zone will have to be assessed.

4.2 Slum Socio – Economic Surveys of Slum Pockets

As per the guidelines circulated by NBO, Mo/HUPA, data with respect to slum profile, urban poverty profile, livelihood including socio-economic profile, will be gathered for all slums. The Part A of the NBO format consists of –General information of the Slum Area, Part-B-Slum Profile of the Urban Local Body and Part C-Particulars of Survey Operations.

4.2.1 Identification of Slum Based CBO's & Community Volunteers

- **Awareness building through city level workshop:** The environment for the survey should be created by organising an introductory workshop with all concerned stakeholders like ward councillors, municipal officials, community organisers, representatives of neighbourhood level structures etc. to explain the objective of the slum survey. This should be done before activities under 4.1.2 is undertaken. The awareness building workshop should also lay out the full process involved in developing the Slum Free City Plan.
- **CBO led slum level awareness advocacy, consultation with slum dwellers:** The socio-economic survey can be carried out through a transparent procedure with the active involvement of slum based NGOs and/or CBOs. This survey must involve the communities. Before survey work begins the slum residents should be informed. An ideal procedure would be to have a well planned "Entry Point Activity" under the project, wherein the implementing authority will have a focused group discussions with the slum groups, sensitize them about the RAY using a participatory approach. This entry point activity should precede slum boundary delineation i.e. section 4.1.2 above.
- The major components of the socio economic survey are household and bio-metric survey and land ownership survey.
- During the implementation of the surveys formation of CBOs and saving groups should be encouraged to formalize the community structure

4.2.2 Capacity Building/Training of the Identified CBO's & Community Volunteers

Training and adequate guidance to the CBO's and the community volunteers can be organized by the concerned cells/agencies/lead NGO to build common understanding on their role and purpose of data collection for the SFCP. The capacity building activities can also be undertaken by the National Network Resource Centres (NNRCs), empanelled by the Mo/HUPA.

4.2.3 Rough Mapping

Rough mapping will include cross checking the demarcation of the slum boundary done, as placed above in section 4.1.3 bullet 2. Rough Mapping will identify the number and locations of tenements, and give house numbers and generate a list of the head of the occupant household⁹. Other community facilities like balwadis, primary schools, primary health care centers (PHC), community work spaces/ home based commercial activities, social and physical infrastructure facilities like community halls, night shelter, toilets, water supply, road connectivity, sewerage, provision of waste disposal, topography and catchment areas etc. will also be mapped. The data generated would contribute to Annexure I of the Part C of the formats circulated by NBO. In undertaking rough mapping of the settlement at the neighbourhood level, ULBs should ensure that the community is engaged; as this process will help the community to understand better what surveys represent, familiarize them with survey completion and developing slum profiles. This first rough survey will need to be validated through the community.

The ULB should ensure that CBO representatives assisted by the identified community leaders/volunteers mark the doors of the existing houses. Once rough mapping is done and the numbers are matched with rough Maps, the final house numbers are to be painted on the doors.

ULB should use the house numbers generated during rough mapping exercise in assigning the unique house no. during housed hold survey phase. This unique house Number will be used as common reference point for GIS & MIS integration at household level.

The maps which will be generated during rough mapping phase should be hyperlinked with each slum pockets along with detailed list of head of occupant household.

4.2.4 Validation on Integrated Slum MIS Data by ULB, Revenue Department, Town Planning Department & Others as Required

Once the GIS enabled slum MIS is ready for each slum, it has to be validated by the concerned ULB and the respective departments such as Revenue Department, Municipalities, Town Planning Departments dealing with the land parcel for the SFCP activity. The GIS enabled slum MIS should be presented to the community at public displays, where even untrained map-readers can find their land parcel and confirm the accuracy of the information. If any change is required it should be done in the consultation with the community.

4.2.5 Outputs

- Validated slum profile (NBO Annexure I of the Part C) of each slum and slum level MIS
- Rough map of slum settlements
- CBO identification
- Community awareness

Note: Cities may combine the spatial and socio-economic surveys together or take them up separately depending on availability of competent and trained GIS Mapping/socioeconomic survey teams. The information collected from slum survey will be of value in planning purposes and will be analyzed to classify slums according to their deficiency and potential based on the above parameters.

⁹ The stakeholders' workshop should decide on the definition of a household. This is important in case of joint families where post-project, there is a demand for individual dwelling unit for a nuclear family unit among the joint family. Modalities of meeting these requirements should also be discussed at the stakeholders' workshops.

Preparation of Slum Base Map using Total Station Survey (TSS) is not required at the slum free city planning stage. It is necessary to do the TSS at DPR stage only for the prioritised slums which are to be developed in situ, as needed.

4.3. Integration of Spatial Data, Socio-Economic and Bio-Metric Information at Slum /City Level to Create a GIS Enabled Slum MIS¹⁰

- This step will involve the integration of slum socio-economic survey information into slum, zone and city level base maps on GIS platform. The three digit unique slum code for each slum needs to be assigned by the ULB and that has to be disseminated and used by both socio economic survey and GIS mapping teams. The three digit unique slum code will be used as common interface for GIS & MIS integration at slum level.
- This stage doesn't need the household level survey data including livelihood survey and . hence the preparation of SFCPoA (prioritisation of slums and financing options) doesn't require the household level socio-economic profile data.
- Based on the information generated from GIS-enabled Slum MIS, slums can be categorized based on parameters such as land value, population & dwelling unit density of the slums, socio-economic characteristics, tenure security, housing condition etc. The data analysis must be done at different spatial scales to arrive at different typologies of slums and facilitate informed debate on the choice of development model/ option to be adopted. This will enable preparation of SFCPoA including the prioritisation of slums for implementation.

4.4 Formulation of Ward/ Zone Level Slum Development Options

4.4.1 Categorisation of Slums - Evaluating Options available to Slum Communities for development

The categorization of slums using GIS-enabled Slum MIS would help in formulating separate redevelopment models/mechanisms for different categories of slums. In this context, due consideration will have to be given to existing density of each slum pocket within a zone, additional density that can be accommodated, etc. Slums and vacant lands will first be categorised as tenable, or untenable. Untenable slums will be only those which are a 'safety' or 'health hazard' to the inhabitants or their neighbourhoods, even if redeveloped. Such untenable sites or portions will be earmarked for relocation to other redevelopment/vacant sites, preferably within the same zone.

The slums and vacant lands will need to be further classified into sub-categories based on the land ownership information and land value (market price) to decide the redevelopment model to be followed for each slum pocket within the zone. Thus, the options available for slum redevelopment would be formulated case by case basis by the Slum-free City Cell/ULB based on critical considerations taking into account the key aspects - tenability, density, ownership, level of services and land price

4.4.2 Preliminary Analysis of Tenable Slums

The preliminary analysis of the tenable slums will be done based on the data obtain on tenure, housing condition & infrastructure deficiency for all slum settlements. The collated data on slums is to be analyzed to classify slums according to their deficiency and potential as per the following

¹⁰ For Details refer –Guidelines for GIS Mapping, MIS development and Integration of GIS with MIS

suggested parameters. The following data parameters are suggested to be used for purpose of preparing the deficiency matrix and taking development decisions (refer **Annexure F**).

- Housing conditions & investments
- Infrastructure deficit
- Density of slum
- Land price
- Tenure
- Land ownership

4.4.3 Vulnerability/Deficiency Analysis

Infrastructure components

Preparation of housing condition & infrastructure deficiency and tenure insecurity matrix for all slum settlements based on scoring and ranking. The matrix is based on three important parameters: Housing, Infrastructure and Tenure. Within these, Housing and Infrastructure are the physical parameters that are directly related to the existing quality of the housing condition.

The following infrastructure components can be considered for calculating infrastructure deficiency (Refer **Annexure B** for details), cities/States could develop their own criteria based on this guidance.

- i. Percentage of households not covered with piped water supply
- ii. Percentage of households not covered with toilets
- iii. Percentage of length not covered with pucca drains
- iv. Percentage deficiency of pucca road, narrow access (<3m)
- v. Percentage of households without access to improved way of disposal of grey water
- vi. Percentage deficiency in street lights

Classify slums according to good or bad level of infrastructure

- i. High level of infrastructure –index 1
- ii. Low level of infrastructure-Index 2

Land tenure status

Classify slums according to security of tenure

- i. Secure legal tenure –Index 1
- ii. Insecure tenure- index 2

Housing condition

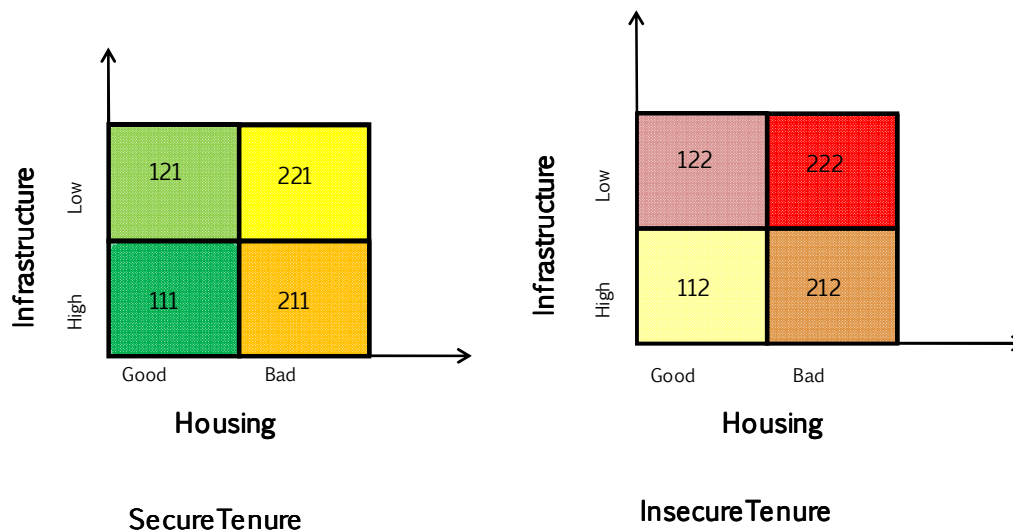
Housing condition is measured using following parameters (Refer Annexure B)

- i. Structural condition (Kaccha, Pucca)
- ii. Dilapidation
- iii. Minimum liveable space (Space per person)
- iv. Light & ventilation

Classify slums according to Housing Condition

- i. Good Housing condition- Index 1
- ii. Bad Housing condition- Index 2

All the above parameters are synthesized for each slum. All slums can then be graded according to the degree of deficiency. The Housing, Infrastructure and Tenure matrix is a 2X2X2 matrix depicted below:



The Deficiency matrix will further be used for arriving at the suitable development options. This is just an indicative matrix and could be modified so that it helps develop a systematic and transparent process for categorizing slums.

4.4.4 Slum Upgradation/Redevelopment Options

Based on the spatial analysis and situation assessment done as above, a participative process will need to be undertaken with slum communities with the assistance from NGOs/CBOs active in the area of slum housing/ development to identify the possible development options. The Table below provides an indicative list of alternative development options and implementation modalities. The dialogue for choice of the model will also explore the possibilities of relocating slum households from high density/untenable slums to low-density tenable slums within the same zone.

The following physical development options are possible:

- i) Slum Improvement: Extending infrastructure in the slums where residents have themselves constructed incremental housing.
- ii) Slum Upgradation: Extending infrastructure in the slums along with facilitation of housing unit upgradation, to support incremental housing.
- iii) Slum Redevelopment: In-situ redevelopment of the entire slum after demolition of the existing built structures
- iv) Slum Resettlement: In case of untenable slums to be rehabilitated on alternative site.

Table: 4 Identification of possible development options for each slum

Sr.No	Deficiency Code	Slum deficiency & vulnerability	Land Ownership	Land Value	Dwelling Unit's Density	Development Option
1	111	Secure tenure with good Housing and good Infrastructure				Delisting
2	121	Secure tenure with good Housing and poor Infrastructure	Public - Municipal or state	High	High/Medium	In-situ improvement/upgradation of infrastructure
					Low	In-situ Redevelopment with densification and surplus land could be used for accommodating households from other slums
				Low	High/Medium	In-situ improvement/upgradation
					Low	In-situ improvement/upgradation with densification
			Private	High	High/Medium	In-situ improvement/upgradation with but with consent of the owner and purchase of property rights by the occupants TDR to owner
					Low	In-situ Redevelopment Land sharing
				Low	High/Medium	In-situ up gradation TDR
					Low	In-situ Redevelopment
3	211	Secure tenure with poor Housing and good Infrastructure	Public - Municipal or state	High	High/Medium	In-situ Redevelopment (group housing) through PPP
					Low	In-situ Redevelopment through land sharing and PPP with sale component
				Low	High/Medium	In-situ redevelopment by public agency and credit support
					Low	In-situ Redevelopment and credit support with densification
			Private	High	High/Medium	In-situ Redevelopment and Incentive FSI or TDR
					Low	In-situ Redevelopment with land shared with the land owner
				Low	High/Medium	In-situ Redevelopment, TDR
					Low	In-situ redevelopment by public agency, land sharing with owner
4	221	Secure tenure with poor Housing and poor Infrastructure	Public Municipal or state	High	High/Medium	Redevelopment (group housing)
					Low	In-situ redevelopment
				Low	High/Medium	In-situ redevelopment by public agency and credit support /TDR
			Low		In-situ redevelopment with densification and credit support to households	
			Private	High	High/Medium	In-situ redevelopment with Incentive FSI or TDR
					Low	In-situ redevelopment with land sharing

Sr.No	Deficiency Code	Slum deficiency & vulnerability	Land Ownership	Land Value	Dwelling Unit's Density	Development Option
				Low	High/Medium	Insitu redevelopment with Incentive FSI or TDR
					Low	Insitu redevelopment with land sharing and with Incentive FSI or TDR
5	112	Insecure tenure with good Housing and good Infrastructure	Public - Municipal or state	High	High/Medium	Tenure regularisation and layout rationalisation
					Low	Insitu redevelopment with densification including remunerative use of land and tenure regularisation
				Low	High/Medium	Tenure regularisation
					Low	Insitu redevelopment with densification including remunerative use of land and tenure regularisation
			Private	High	High/Medium	Insitu redevelopment with Incentive FSI or TDR
					Low	Insitu redevelopment with Incentive FIS and land sharing with owner
				Low	High/Medium	Tenure regularisation and occupants to purchase the property rights/TDR/acquisition by public agency
					Low	Tenure regularisation and occupants to purchase the property rights/land sharing
6	122	Insecure tenure with good Housing and poor Infrastructure	Public - Municipal or state	High	High/Medium	In-situ improvement/upgradation with tenure regularisation
					Low	Redevelopment by group housing with densification including remunerative use of land
				Low	High/Medium	Tenure regularisation with partial upgradation
					Low	Redevelopment with densification /group housing
			Private	High	High/Medium	Insitu redevelopment with Incentive FSI or TDR
					Low	Insitu redevelopment and land sharing with the owner
				Low	High/Medium	Tenure regularisation and occupants to purchase the property rights
7	212	Insecure tenure with poor Housing and good Infrastructure	Public - Municipal or state	High	High/Medium	Insitu redevelopment by public agency with incentive FSI/ PPP
					Low	Insitu redevelopment with densification including possibility of remunerative use
				Low	High/Medium	tenure regularisation and credit support/redevelopment by public agency
					Low	Insitu redevelopment with densification
			Private	High	High/Medium	Insitu redevelopment with Incentive FSI or TDR
					Low	Insitu redevelopment with land

Sr.No	Deficiency Code	Slum deficiency & vulnerability	Land Ownership	Land Value	Dwelling Unit's Density	Development Option
						sharing
				Low	High/Medium	Insitu redevelopment, land purchase/acquisition
					Low	Insitu redevelopment land sharing
8	222	Insecure tenure with Poor Housing and poor Infrastructure	Public - Municipal or state	High	High/Medium	Insitu redevelopment by public agency/PPP
					Low	Insitu redevelopment densification with remunerative component
				Low	High/Medium	Insitu redevelopment
					Low	Insitu redevelopment with densification ,
			Private	High	High/Medium	insitured redevelopment+Incentive FSI or TDR
					Low	insitured redevelopment+Incentive FSI or TDR
				Low	High/Medium	insitu redevelopment with land sharing
					Low	insitu redevelopment

4.4.5 Development Type for Redevelopment of Slums According to Density

4.4.5.1 Density Options

Undertake analysis of all the tenable slums or tenable portions of semi-tenable slums in a ward/zone may be categorized with regards to existing housing area, residential density and FSI to analyse whether the slum would be able to take additional population that may be shifted in case of necessary resettlement of nearby untenable slums/ high density slums¹¹. Densification of low density slums will also help in creation of land vacated by resettled slums¹².

Possible Density options for insitu upgradation in smaller cities (population less than one million) through Incremental housing.

Plot Size (Sq.mt.)	Carpet area (Sq.mt.)	Ground Coverage	No. Of Floors	FSI	No. Of DUs	Possible Density (DU/Ha)
15*	11	100%	2	2	1	450
20	15	100%	2	2	1	350
25	20	100%	2	2	2	275
30	25	100%	2	2	2	460

¹¹Except large metros, slum and informal settlements' densities are very low, and have the potential for densification

¹²22 slums got relocated on 7 sites where communities already exist. 45% of Sangli's poor in Maharashtra got rehabilitated under IHSDP. More than 60% slums in Indore have density of less than 150 dwellings /ha

30	25	100%	3**	3	3	600
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* Minimum plot size i.e. 15sq.mt. - Indian Standard Requirements of Cluster Planning for Housing – Guide IS 13727: 1993

** The minimum width of the access road 3mt for double storied and 6m for triple storied

Possible Density options for In situ redevelopment through group housing in larger cities (population more than 1million)

No. Of stories	DU Size (sq.mt.)	Carpet area (sq.mt.)	Ground Coverage	Density (DUs/ha)
4 storied*	30	25	40%	500
			50%	650
8 storied	30	25	25%	650

*6mt setback to be provided in the plot

4.4.6 Potential for Private Sector Participation

Private sector participation can be envisaged in redevelopment of slums where reasonable returns are expected for the investor. In order to assess the potential for PPP, ULB will need to map and tabulate land values in immediate environs of all slum pockets.

Sl.No.	Prevailing land values	Slum Pockets on Government land (no. of slums & Area)	Slum Pockets on private land (no. of slums & Area)	Slum Pockets on other lands (no. of slums & Area)
1.	Low land values			
2.	Medium land values (neither Low or High Land values)			
3.	High land values			
4.	Commercial potential			

4.4.7 Planning at Zonal/Ward Level¹³

This step involves the mapping and analysis of the spatial disposition (dispersal) of slums in relation to each other, in relation to transport corridors, adjoining uses and trunk infrastructure will needs to be examined in greater detail at Zonal/Ward level. The steps involved are as follows:

- Plot slum pockets/clusters of slum pockets on a Zonal/Ward map
- Identify contiguous slum clusters to facilitate integrated circulation and infrastructure planning. Provision of commercial uses and community facilities.
- Mapping of land prices in the zone to assess options of incentive FAR and private sector participation. Identification of traffic nodes and corridors (where incentive TDR can be loaded for private sector in lieu of slum redevelopment).
- Identification of trunk infrastructure alignments and capacities (existing & proposed) in relation to slum pockets.

¹³ For large cities, ward can be the unit whereas for small cities zone can be the unit of planning.

- Analysis of slums with low densities to assess slum pockets with possibility of densification to rehabilitate households from other slum pockets and creating vacant land pockets.
- Exploring relocating possibility of untenable slums in nearby (within the zone) vacant pockets/ existing low density slums keeping their relation to employment centres intact.
- Putting up each slum option on the map along with sites for relocation for the ward/ zone level maps

4.4.8 Outputs of the Slum Redevelopment Plans

- Development options and cost of each option for different categories of slums, which are to be proposed and vetted by community.
- Identification of options for development model proposed for each slum.
- Selection of development model for the slums to be followed by project development in consultation with the communities
- Identification of resettlement pockets
- Identification of slums to be densified
- Creation of vacant land,
- Identification of TDR loading corridors
- Integrated infrastructure planning including the identification of trunk infrastructure alignments and capacities(existing & proposed)

In relation to slum pockets

- Analysis of slums with low densities to assess slum pockets with possibility of densification to rehabilitate households from other slum pockets and creating vacant land pockets
- Exploring relocating possibility of untenable slums in nearby (within the zone) vacant pockets/ existing low density slum keeping their relation to employment centres

Outputs

- Development Options for different categories of slums
- Implementation Structure.

4.5 Investment Requirements and Projections

Accurate assessment of investment requirements and devising a suitable financing strategy are the key components of any sustainable slum rehabilitation program. It is paramount that implementing bodies recognize and measure the various costs of developing infrastructure and housing, including the costs for subsequent maintenance of the same. The success of the slum rehabilitation program would depend on matching the investment needs with the vibrancy/buoyancy of the various

elements of the proposed finances. This section sets out the various sub-components of the assessment of investment needs and suggests means of financing the same.

4.5.1 Objective & Underlying Principle

Given the current context of the adequacy and quality of infrastructure and housing stock, and continuous strain on fiscal resources, it must be recognised that there is no unique strategy that would match the investment needs and sources of finances. The need for quality infrastructure and housing is quite substantial and it would need massive long-term investments to bridge the gaps between demand and supply. The Central, State and local body finances, generally, are not in a very robust state so as to provide unlimited timely injections. Hence, the strategy for developing a sustainable operating framework must be towards an iterative solution that would commence with an assessment of investment needs, at various “levels” of infrastructure and housing standards, and an independent projection of various sources available for financing the same. Subsequent comparisons of both these need to be carried out to check if the sources are adequate to finance the investment needs. In case the same are found to be inadequate, the investment estimations would need to be revised by the implementing agency (scaled down to a lower standard, however not below the minimum prescribed or phased over a longer time frame). Simultaneously, the implementing agency would need to assess if there is scope for altering/differently structuring the financial resources. The investment needs and finances would then need to be compared to see if a balance can be achieved. The process needs to be repeated till a pragmatic option is reached.

The primary objective for this exercise would be to derive maximum benefit for the resources available and which could be committed for the SFCPoA.

It is expected that the above process be undertaken in a manner that integrates into the city’s financial projections and in consultation with the stakeholders concerned. While it is recognized that the solution for each city could be different, it is expected that the process would enable the city managers and other stakeholders conduct the exercise using realistic assumptions and arrive at an implementable solution.

It is also expected that the solution be stress-tested for adverse conditions (such as unforeseen spikes in costs of raw materials, and sudden downturns in the financial resources) and a fall-back option be developed for continuation of the scheme.

4.5.2 Assessment of Investment Requirements

As it is intended that the scheme be a collaborative effort of multiple stakeholders, with a few of them contributing financially as well, it is important to estimate the required capital expenditure for developing the infrastructure and improving the housing stock as accurately as possible. In addition, the cost of maintenance (for its desired service offering) would need to be estimated, along with the administrative/governance costs for undertaking these schemes so as to give a comprehensive picture of the fiscal resources needed. This would help in suitably allocating the financial and operational responsibilities for managing the developed assets.

While the cost estimates need to be based not only on the quantity and quality of input required (eg. material and labour) and the price of these inputs, at the same time, care should be taken to ensure that the quantity assessment is based on design requirements to meet the required capacity as estimated (over time) in the previous steps. The assessment would also need to take cognizance of the (i) user needs (could be localized) (ii) architectural considerations (iii) environmental considerations (iv)safety considerations and (v) engineering optimization.

Most projects that are implemented through conventional procurement are characterized by cost & time over-runs. Procurement under a PPP could be structured with such risks being passed on to the private developer. While there are numerous reasons for such delays, the implementing agencies should strive to identify and address the prime reasons such as delays in temporary resettlement, obtaining clearances, shifting of utilities, access to the site etc. The same would need to be quantified and budgeted.

The implementing agency would need to define principles of an optimum maintenance strategy (the details of the maintenance schedule would not be a part of this, as the same would be project specific and needs to be addressed in respective DPRs). This could include directions on how preventive and other maintenance activities would function and an estimation of the costs for the same. It is expected that implementing agencies would consider more robust capital/construction designs in order to reduce maintenance and life cycle costs. The assumption for investment estimates would need to clearly bring out such benefits.

There would be additional set of overhead and financing costs¹⁴ that are applicable based on the mode of implementation chosen. Such administration and financing costs would need to be assessed and the indicative timeframe of incurring the same would need to be set out. For instance, if a PPP mode of procurement is opted for, the amount payable towards transaction advisory services fee and the independent engineer/independent auditor may need to be considered.

The indicative template of the investment requirements could be as under:

S. No.	Parameter	Year											
		1	2	3	4	5	6	7	8	9	10	11	12
A	Land Cost												
B	Costs During Construction												
1	Civil Construction Costs for												
a.	Housing												
b.	Physical Infrastructure												
c.	Social Infrastructure												
C	Other Costs												
1	Overheads/Administrative costs												
2	Engineering/Design costs												
3	Financing costs												
4	Estimated escalations												
5	Other contingencies												
	Total												
D.	Maintenance Expenditure												
1	Fixed costs												
2	Variable costs Per user												
3	Overheads/Administrative costs												
	Total												

The civil construction cost components would be as follows;

1. Physical Infrastructure
 - a. Water supply
 - b. Drainage

¹⁴ All costs incidental to raising finances such as interest during construction, any upfront payment etc.

- c. Sewerage and Sanitation
 - d. Solid Waste Management
 - e. Access road
 - f. Electricity
2. Social Infrastructure
- a. Community hall
 - b. Balwadi/ School
 - c. Market/ Shopping
 - d. Play area/ park

3. Housing

Construction Costs would need to be arrived from the various components that are proposed to be implemented and would vary depending on the development option identified. An indicative template for the same is as under:

Tenure Status: Secure

S No.	Development Option	Element	No of slums	Estimated cost (Rs. Lakhs)
1	Delisting			
2	Insitu Infrastructure (good housing, infrastructure) poor	Physical Infrastructure Social Infrastructure		
3	Redevelopment (poor housing, infrastructure) good	Housing Minimal Physical & Social Infrastructure		
4	Redevelopment (poor housing and infrastructure) poor	Housing Physical Infrastructure Social Infrastructure		

Tenure Status: Insecure

S No.	Development Option	Element	No of slums	Estimated cost (Rs Lakhs)
1	Tenure Regularisation (Good Housing, Infrastructure) Good	Land		
2	Tenure Regularisation, Redevelopment (Good housing infrastructure) poor	Land Physical Infrastructure Social Infrastructure		
3	Tenure Regularisation, Redevelopment (poor housing and infrastructure) poor	Land Housing Physical Infrastructure Social Infrastructure		
4	Resettlement	Land Housing Physical Infrastructure Social Infrastructure		

The above assessment is expected to be undertaken as a combination of top-down (city level) and a bottom-up (slum/group of slums) basis. The probable escalations would need to be assessed through a scenario analysis/stress testing basis (as is typically done for any infrastructure project). The implementing agency would need to identify the key variables that would impact the costs and project adverse values and arrive at a probabilistic escalation. For instance the parameters could include the following (the variations are indicative – ULB would need to determine the probable escalations):

Sl.No.	Parameter	Base assumed in the direct cost estimate	Stress values Options		
1.	Raw material	X	X+10%	X+20%	X+30%
2.	Labour	Y	Y+5%	Y+15%	Y+20%
3.	Quantity	Z	Z+10%	Z+20%	Z+30%

Different scenarios would need to be prepared taking different values and the escalation would need to be arrived.

Scenario	Raw Material	Labour	Quantity		Total cost
Base	X	Y	Z		
Scenario 1	X+10	Y+15	Z+20		
Scenario 2	X+20	Y+15	Z+20		

The implementing agency would need to iterate this process, for varying standards/levels of infrastructure provision, (without however going below the minimum prescribed) in order to be compatible with the financing sources available.

4.6 Implementation Modalities

Under preparatory phase of RAY, in order to develop models and strategies innovative Pilot Projects in the areas of group housing, multiple models in slum, PPP projects in affordable housing, city cross subsidization strategies etc, are encouraged which will have State wide or regional replicability for inclusive urban growth.

Selection of 'Whole Slum' In-Situ Pilot Projects

Urban Local Bodies (ULBs) need to identify tenable slums located on state government lands and municipal lands for pilot projects. A detailed project formulation at slum level needs to be prepared based on the three criteria described below:

- Social feasibility: Majority of the slum community involved must ratify the need for slum improvement in a general meeting¹⁵.
- Financial feasibility: Before authorizing the execution of the work and receiving its initial payment from the government.
- Technical feasibility: Any work should have a design that meets norms and specifications underlined by municipal government/sub-division rules or their agreed variation.

Note: Selection of whole slum 'in-situ pilot project(s)' can be under taken concurrently or could be undertaken after finalisation of SFCPoA.

Role of Community and ULB

Once a development option is chosen for a particular slum habitation, the implementation structures are to be decided based on the extent of public, community and private involvement. It is envisaged that for any of the implementation structures chosen, the community and the implementing ULB will have overarching roles as set out below. The same would need to be taken into account while formulating the implementation options.

Community

It is expected that the SFCPoA is prepared with active participation of community during the planning process. To enable the same suitable structures (cooperatives/ societies) might need to be formed, where necessary. The communities would need to demonstrate willingness to adopt the implementation option, plan for livelihood/ economic activities within the slum. Communities are also expected to assist in generating the beneficiary contribution.

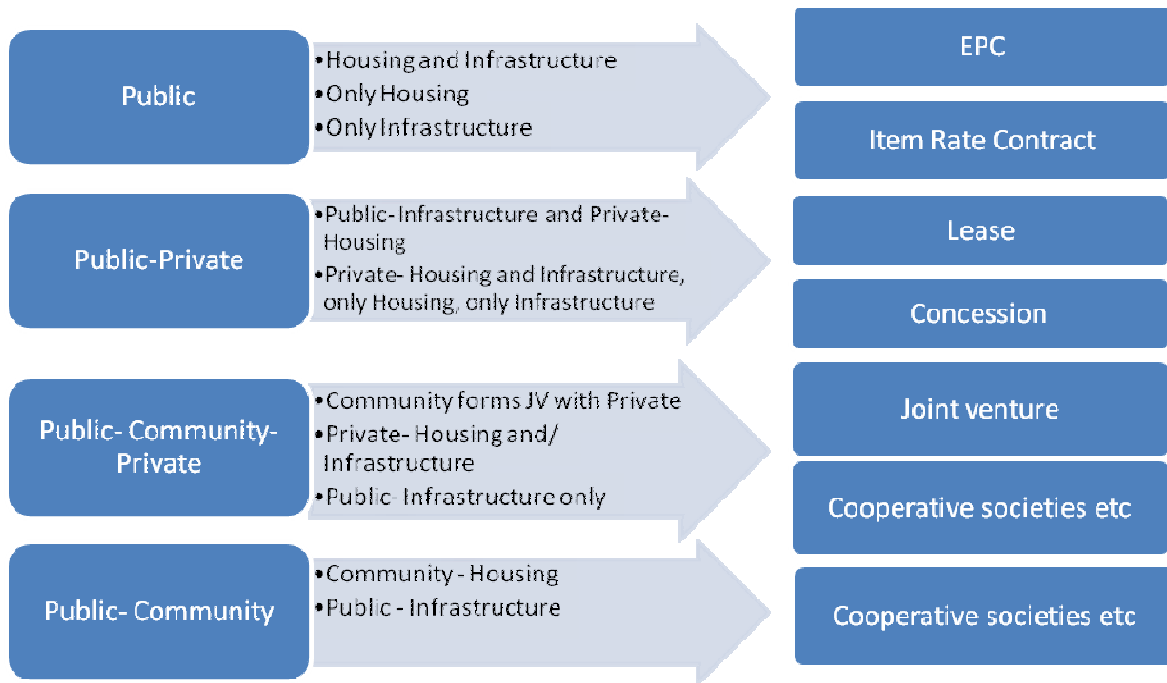
Role of the implementing Urban Local Body

Being the main sponsor of the RAY scheme, ULB would prepare the SFCPoA as a first step to clearly articulate the action plan for making the city "slum free". During the preparation of SFCPoA, ULB would continuously consult with the community in the planning process. During the process, ULB would categorize and prioritize for rehabilitation/ redevelopment, and would provide/ facilitate provision of infrastructure. ULB, in consultation with the community, will also allot dwelling units and enable provision of the legal titles to the beneficiaries.

¹⁵ State government may specify the percentage of households to define majority.

Implementation Modes

The indicative implementation modes are illustrated in the figure below:



The ULB would need to adopt an appropriate implementation mode after studying the relative benefits of the different modes.

Implementation Mode 1: Public through EPC/Item Rate

The implementing government agency can carry out the implementation of the development option identified on its own through conventional contracting, i.e. EPC or item rate contract.

In the case of an EPC/ item-rate contract, it would be a completely ULB-led operation, the implementation may therefore be smoother in terms of obtaining clearances. There may be less opposition (including political), to the implementation as the general perception would be that a government led project would have social upgradation as the objective.

However, this option may not prove to be the most efficient in terms of implementation because it may result in poor quality of end products, potential time and cost overruns, and O&M issues and therefore defeat the purpose of rehabilitation of slum dwellers.

Financing the project would depend on the budgetary provisions for slum rehabilitation. This could pose problems of stalling projects mid way due to deficiency in the budget.

Implementation Mode 2: PPP (Public Private Partnership)

The implementation could be shared between the public entity and the private partner in two ways:

1. The public entity develops the infrastructure and the private entity develops the housing
2. Private entity develops both infrastructure and the housing

Either of the above project structures can be adopted depending on the nature of the slum, land available and other parameters that decide viability of the project. The private partner in some cases could also be an NGO along with business organizations/ developers.

It may be perceived that the involvement of a private entity may compromise the inclusion of community requirements and needs in the implementation of the project. Hence, the requirements of the community must be specified right at the start of the project and must be made binding on the private partner.

Due to private participation, higher efficiency in implementing the project is expected. This would result comparatively lesser time and lower cost overruns.

Typically, in a PPP structure, the project must be viable in order to obtain any private investment. The valuation of the land must be carried out and its viability ensured in order to attract the participation of a private entity.

The revenues would be expected from the value of freed up real estate in the land parcel and the expected lease rentals from the housing infrastructure. The developer's revenue model will be based on the best use of the land made available to him for commercial or high end housing purposes. Minimum specifications for construction of housing for slum rehabilitation must be determined and stipulated at the beginning of the project. The contractual frameworks must be strong in order to protect the interests of the community.

In the case the project is not viable, it could be structured on an annuity model. This can happen in cases where no land can be freed up. In such a situation, the ability of the ULB to make the annuity payments must be established.

Implementation Mode 3: Public-Community-Private

This option would encompass a structure between the private partner and the representative of the community such as a cooperative society. The joint entity as a whole would partner with the public agency for the implementation of the project. In this option, the project structure can be that the private entity could take up both the housing and the infrastructure, or only the housing with the public entity constructing the infrastructure.

The public entity partnering in the project must have the capacity to oversee the entire project and serve as an interface between the community and the private partner. It must balance the requirements of all the stakeholders involved and help in structuring the project so as to achieve a win-win achievement. Models for community contracting could be explored.

Implementation Mode 4: Public-Community

This option would encompass a structure between the public entity and the community, which is the beneficiary/ the representative of the community such as a cooperative society. In this option, the entire infrastructure provision is made by the public entity and the community takes up the housing component. The public entity partnering in the project must have the capacity to oversee the entire project.

Order of Priority for Implementation Options

Each of the options would need to be evaluated by the ULB for its suitability and preference prior to implementation. The ULB must satisfy itself that the option it chooses would maximize community involvement in aspects relating to planning, financing, construction and/or maintenance.

5. Strategy for Prevention of Slums

Strategy for prevention of slums in future will include, on one hand, prevention of encroachments and Illegal Structures and supply of affordable housing on the other. The plan of action should encompass proposed action to be undertaken by the city to commensurate the lands and promote the construction of affordable housing in consonance with the housing demand. This plan of action would need also to outline the necessary legislative and administrative changes to enable urban land expansion, and in town planning regulations to stipulate reservations for EWS/LIG housing in all new developments and changes in building bye laws and procedures to facilitate and incentivise affordable housing.

5.1 Inventory of Vacant and Underutilised Lands¹⁶

- Prepare an updated list of vacant lands (including government and private land, land notified for acquisition, Land surrendered under ULCRA)¹⁷
- Mark vacant land pockets on the map and assess the area available. Examine the land use assigned to vacant pockets in the Master Plan.
- Identify underutilized Govt. lands and lands proposed for redevelopment
- Identify lands proposed for future residential development. Assess land that would become available after enforcement of the pro-poor reform of reservation of 20-25% of developed land for EWS/LIG housing in every new public/private residential development.
- Assess land acquisition costs, land development costs and construction costs and market price of land.
- Examine the current land assembly mechanisms and policy obstacles to land supply
- Establish a system of continued alienation of land by the State government to the ULBs to ensure continuous supply of developed land for EWS/LIG housing

5.2 Assessment of Housing Needs & Demand

5.2.1 For Present Population

- Assess the trend in housing shortages over last two decades and rate of formal housing supply especially for urban poor.
- Assess the current household income distribution in the city and proportion of low income households to total number of households¹⁸.

¹⁶ For Details refer –Guidelines for GIS Mapping, MIS development and Integration of GIS with MIS

¹⁷ Dynamic GIS mapping can be taken up further monitoring future situation

¹⁸ Proportion of BPL /APL population, proportion of population living in slum areas indicates the extent of ‘Housing Poverty’

- Understand the current housing options in various housing typologies and market players, available to low income households in the formal and informal sector including rental options and practices to understand the nature of demand.
- Estimate the proportion of households in slums who do not belong to BPL
- Find the proportion of low income households that cannot afford the basic minimum house without subsidy.

Income Bracket for big cities (Household income Rs/month)	Income Bracket for small cities/towns (Household income Rs/month)	Size of the income bracket (no of households)	% of Households underserved by the housing market	% households needing assistance
<7500	<5000			
7500-10000	5000-7500			
10000-12500	7500-10000			
12500-15000	10000-12500			
15000+	12500+			

- Evaluate the prescribed standards of minimum dwelling size, residential densities and FAR in terms of their appropriateness for providing affordable housing to urban poor and for construction labour¹⁹.
- Evaluate the contribution of various agencies in supply of housing for urban poor.

5.2.2 For Future Population

- Estimate future population of city as per Master Plan projections and assumed yearly growth rates. Estimate the proportion of low income households
- Estimate future housing needs and assess demand for low income housing in the city for next 10 years (projections for next 10 years-workout cumulative and yearly demand).
- Estimate the future infrastructure requirements of the low income housing (including urban transport infrastructure).
- Estimate annual supply of affordable dwellings required for different segments of low income households.
- Decide on the minimum and desirable dwelling sizes, densities, FAR for low income residential development. Estimate the cost of minimum dwelling size and estimate the number of households that can afford to own the minimum dwelling.
- Estimate the number of households requiring subsidies to afford minimum formal dwelling. Estimate the amount of subsidy required.

¹⁹ The ad hoc shelter provisions for construction labors gradually developing into slums over the time is one of the major concerns in Indian cities.

Income Bracket for big cities (Household income Rs/month)	Income Bracket for small cities/towns (Household income Rs/month)	Size of the income bracket (no of households)	% of Households unable to afford minimum size of dwelling in the formal housing market	% households needing assistance	Indicative assistance required per household?
<7500	<5000				
7500-10000	5000-7500				
10000-12500	7500-10000				
12500-15000	10000-12500				
15000+	12500+				

Income Bracket for big cities (Household income Rs/month)	Income Bracket for small cities/towns (Household income Rs/month)	Size of the income bracket (no of households)	Affordable EMI/Rent per month (in Rs.)	Affordable cost of the house (in Rs.)	Assistance required per household for minimum acceptable house	% of households needing assistance
<7500	<5000					
7500-10000	5000-7500					
10000-12500	7500-10000					
12500-15000	10000-12500					
15000+	12500+					

- Identify the blighted areas in the city – tenable/untenable, over the years and provide for their redevelopment in a phased manner as per the provision in Master Plan.
- Calculate the number dwellings that can be accommodated in existing residential areas through densification of underutilized lands.
- Assess total land required for supply of remaining low income housing in next 10 years as per the residential density. Estimate the land that could become available from Land/FAR Reservations for EWS in all public, private housing and cooperative housing projects, land already available with Housing agencies and land proposed for acquisition for housing by various agencies.
- Identify land for first phase of future development at suitable locations with good accessibility for projects

5.3 Formulate Future Housing Supply Strategy

5.3.1 Demand Side Strategies

- Explore alternative options of supply through public private and cooperative mode for ownership and rental housing- Integrated public housing projects with possibility of cross subsidy.
- Ensure availability of housing finance for low income housing to public agencies and access to retail finance for low income households.
- Examine sources of housing finance and its access to urban poor.

5.3.2 Supply Side Strategies

- Suggest modifications to regulatory framework and housing standards to facilitate supply of affordable housing.
- Streamline the procedures for approvals.
- Design strategy for various supply modes of efficient land assembly conversion/development.
- Design strategies to minimize direct subsidies- cross subsidy in public projects, development incentives (FAR), improving beneficiary contribution
- Set minimum standards for the construction, management and maintenance of rental properties. These standards need to take into account future demand patterns, rental practices and rental rates
- Encourage public sector undertakings and private corporate offices/industries to support housing for their employees.
- Offer tax concessions (e.g. rates on income from rental housing, tax deductions to housing agents who produce or renew rental housing which specifically targets low income groups.
- Incentives provided to private sector/cooperative for developing housing for EWS i.e. TDR and Incentive FSI etc.
- Allocate targets to public sector/ private sector for yearly supply. Identify project locations for first phase (five years).

Rental Housing to be part of overall housing strategy of the city²⁰

- Assessing the composition of the migrating population
- Decide eligibility of tenants for rental housing both, public and private housing projects.
- Assess and identify the zones which need majority of rental housing

²⁰ Dwelling unit of 160 sq.ft. carpet area on lease and license basis is being proposed by Mumbai Metropolitan Region Development Authority in the Mumbai Metropolitan Region for Economically Weaker Section (EWS) and Low Income Group (LIG) i.e. at an affordable rent of Rs. 800 to 1500 per month.

- Standards for rental housing (will vary from city to city)
- Decide for rental housing policy for rents, modalities for allotment, evictions, recovery from defaulters
- Mechanisms for maintenance and management of rental housing estates
- Incentives for rental housing
- Night Shelters has to be provided in appropriate locations for pavement dwellers, destitute (women as well as men) in metro cities.
- Mechanism for maintenance and management of night shelters

For different probable development options refer to the Table below (Identification of development options for New Housing).

Identification of development options for New Housing

Sl. No	Housing typology	Govt. sector	Private sector	Cooperative sector	Individual beneficiary
1	Public housing Incremental housing on plots in small and medium towns	Land & infrastructure			Beneficiary contribution
2	Group housing By public agency	Land, infrastructure, Housing, cross subsidy by high income housing /commercial use.		Maintenance by resident welfare society	Beneficiary contribution
3	Group housing by private sector	land policy Regulation for land reservation/ floor space reservation	Surrendering built up floor space, In lieu of planning permission/incentive FAR		
4	Group housing by cooperative				Beneficiary contribution
Rental Housing					
1	Rental housing by employers/ service population- Industries/SEZ	i)Employees housing for high paid employees ii) housing for low income employees			Rentals
2	Rental housing by Public agency i)Dormitory accommodation ii) working womens hostel	Subsidy, Land housing	Estate management		Rentals

	ii) Dwelling units				
3	Rental housing by Private sector agency i)Dormitory /dwellings	FAR Incentive	Land ,housing		Rentals

5.3.3 Strategies Related to Regulations

Based on the slum-free plan of action the Development Plan/Master Plan/CDP of the city will be reviewed /modified wherever necessary to accommodate the slum redevelopment/rehabilitation plans. Policy changes required in the Master Plan, standards/regulations for low income housing and integrating slum free city plans:

- City-wide policies for slum prevention including reservation of land for housing the poor in private and public housing colonies and affordable housing.
- Review town planning framework/development control regulations
 - a. Sub-division regulations: Prescribed norms for plot/dwelling unit sizes, density, highest, setbacks, FAR/FSI and coverage, facility standards and open spaces.
 - b. Zoning Regulations: – Use permissibility, reservations , density and FAR norms
 - c. Review of existing building bye-laws for low income housing
 - d. Review of the existing labour housing laws/norms

5.4 Investment Projections

The investment requirements for implementing the preventive strategy and the projections for the same would need to be done based on similar approach as provided in **Section 4.5**.

6. Financing Strategy

6.1 GOI Contribution

The Central share would be made available as per milestones set out in MoA. Government of India (GoI) undertakes to provide such support upon satisfactory demonstration of the milestones indicated. In addition, GoI would extend overall support to the RAY scheme in the following manner:

- a. By means of rendering technical assistance to the States
- b. Identification and supporting community education/mobilization through engagement of non-governmental organizations .

Note: GoI would also extend support as committed in the RAY guidelines as referred in the RAY Guideline

6.2 Beneficiary Contribution

In order to ensure their interest, financial contribution by the beneficiaries would be critical so as to ensure their active participation. The share of beneficiary contribution in housing is proposed to be maintained on the lines of JNNURM scheme i.e., a minimum of 12% of total cost (10% in case of SC/ST/BC/OBC/PH/BPL and other weaker sections).

The ability of these beneficiaries to access formal affordable credit is envisaged to be difficult, and therefore enabling structures/frameworks need to be evolved for the same. The beneficiaries would need to actively participate in the process of accessing formal credit. Options such as aggregation of loans to a community of beneficiaries wherever feasible, would need to be examined and encouraged. Adequate security and credit enabling structures for such participation including mortgage insurance would need to be structured and made available to the beneficiaries. The option of linking to the Mortgage Risk Guarantee Fund (MRGF) to which the State has to contribute could be explored.

There are various initiatives that could be undertaken by the States/ ULBs for facilitating beneficiary contribution and to make finances available over the life of the RAY scheme. These include the following:

- a. Facilitating long-term concessional interest rate/differential interest rates to the beneficiaries
- b. Access to microfinance and alternate funding options
- c. Rajiv Awas Shelter Fund, to be used inter alia (i) to keep the slum/urban poor beneficiary from turning defaulter due to unemployment, death or other genuine distress and thereby risk forfeiture of dwelling unit and foreclosure on loan; and (ii) to share the lender's costs of servicing the loan.

6.3 ULB Contribution

Going forward, efficient delivery of municipal services would largely be contingent upon the buoyancy of finances and fiscal discipline/prudence. The implementing agency/ULB would need to continue fiscal reforms that have already been initiated under the JNNURM and other relevant schemes. Approach to financing of the ULB contribution would need to be a combination of initiatives that ring-fence and maximize internal accruals, and developing a framework for sustainable community participation/unlocking other sources of revenues.

ULBs could undertake financing of its share of RAY scheme with one or more of the following. It is to be noted that the following are indicative in nature and that the ULB can adopt a different approach or strategy for financing.

- a. Internal earmarking of funds for RAY in the municipal budgets., allocation of available surplus for slum rehabilitation under RAY
- b. Earmarking of property taxes, trade license fee, hawker-license fees, SWM cess etc.,
- c. Share of other devolutions, whenever applicable.
- d. Unlocking alternate revenues, using land based instruments such as FSI, TDR, land banking etc.

The reforms/other initiatives that ULBs would need to evaluate include the following:

- a. Setting up of a revolving fund for continued O & M of the infrastructure & housing

- b. Evaluate and converge with other existing schemes, as applicable.

The ULB would also need to explore options for raising finance through other avenues such as PPP, shared mortgage and pooled financing mechanisms (tying up with other ULBs), wherever feasible, external borrowing, urban infrastructure bonds etc. ULB could make a projection of the monies that could be allocated for RAY scheme.

Item	Year —————▶											
	1	2	3	4	5	6	7	8	9	10	11	12
A. Allocation from the budget												
B. Earmarking of property taxes/trade-license fees etc												
C. Other revenues												
D. -												
E. -												

The assumptions behind the same would need to be set out, and scenarios for realizing the same would need to be assessed. The revenue streams would then need to be matched with investment requirements. A scenario of delays and partial collection of beneficiary contributions would also need to be developed and accordingly investments planned.

The financial projections would then be compared with the investments to assess the adequacy. In case the finances are deemed to be inadequate, the investments would need to be reassessed for phasing, prioritization or lowering of the standards (subject to minimum acceptable levels). The ULB would need to prioritize in such a manner that the maximum benefit is derived for the investments proposed to be made.

7. Institutional Arrangement

A number of agencies are responsible for various activities pertaining to housing for urban poor. Although it is primarily the responsibility of the ULB, other departments/ agencies such as the Urban Development Department, Town Planning Department Slum Clearance (or Redevelopment) Board, Housing Board and NGOs, all have a role to play in provision of housing and infrastructure services to the urban poor.

Establishment of local building technology promotion centre is also necessary to encourage the use of locally available building materials.

As various agencies are involved, coordination amongst them becomes critical. The ULB shall identify the stakeholders and establish their roles and responsibilities. The ULB shall prepare a list of various activities, functions involved and the roles of the respective agencies at the State level, city level, zone/ward level and at the slum level. The roles have to be defined at various stages in the project. The activities involved in the implementation of the SFCP would be;

1. Project development
 - a. Project Planning and Design
 - b. Obtaining approvals and clearances
2. Implementation
 - a. Procurement and contract management
 - b. Construction management
3. Management and Maintenance of housing infrastructure

4. Regulation
5. Reforms
6. Enforcement

The planning, development, construction and post implementation activities will require institutional reforms, which ensure organizational and functional clarity and coordination among various stakeholders. The underlying principle for deciding upon an appropriate institutional framework is to ensure the following:

1. Efficient planning and preparatory works
2. Efficient implementation of civil works
3. Minimal disruption to livelihood and employment of slum dwellers
4. Effective policing and protection in case of relocation
5. Future planning for prevention of slums.

Therefore, broadly, the institutional framework should address issues relating to:

1. Planning,
2. Community Involvement,
3. Reforms and
4. Effective Implementation

The roles have to be defined at various stages in the project. A template for the same has been provided below;

Stakeholder	Preparatory Phase		Community Participation	Planning	Implementation	Reforms	Post implementation
State Govt. UDD Town Planning	<ul style="list-style-type: none"> • Legal • Policy • Funding 						
ULB	✓	✓	✓	✓	✓	✓	✓
Slum Clearance/ Dev Board		✓	✓		✓		✓
Urban Development Authority				✓	✓		
Housing Board					✓		✓
NGOs		✓	✓		✓		
Slum Community/CBOs			✓	✓	✓		✓

8. Finalization of SFCPoA and Road Map

The ULB shall consolidate the outputs from the various steps, processes and the curative and preventive strategies into a unified document, the Slum Free City Plan of Action. The indicative contents of the SFCPoA have been provided as **Annexure C**. The ULB shall endeavour to follow the structure indicated to the maximum extent possible.

The SCPoA shall, apart from demonstrating compliance to the planning process as per the guidelines provided, also provide the implementation timelines, priority of implementation, roll-out/ phasing plan, stakeholders responsible and their roles, commitment to undertake reforms and timelines for the same. The ULB shall endeavour to follow the structure indicated in Annexure C to the maximum extent possible. However, it is free to add/modify as deemed appropriate.

The period of RAY- Phase 1 is two years. The timeframe for preparation of the SFCPoA shall be six months to one year from the signing of MoA with Government of India and the phasing of slum upgradation shall be planned accordingly based on the prioritisation carried out, such that those slums to be taken up on priority can be implemented within the first five years of RAY.

8.1 Prioritisation of Slums

Parameters for prioritization of slums for implementation of in-situ improvement/redevelopment for first phase of implementation for tenable slums are suggested below:

- **Insecure tenure of slum pockets:** Settlements without any security of tenure are most vulnerable and therefore should be given priority in selection for improvement.
- **Housing conditions and infrastructure deficiency:** Settlements with poor housing conditions and infrastructure deficiency should be given high priority for improvements.
- **Public land ownership:** Slum pockets on public sector owned land should be prioritized for improvement, as slums on private land would either require negotiations with owner or time-consuming acquisition. Slum improvement/redevelopment should first be taken up where land is owned by Government agencies.
- **Willingness of private land owners:** Where a squatter settlement is on private land and the land owner convey their willingness for slum development/improvement in infrastructure conditions, priority for improvement can be given.
- **Private developer/real estate firm ready to take-up slum redevelopment:** Selective pockets can be taken up based on public, private partnerships.
- **Strength of community organization:** Homogeneity of the community can facilitate mobilization and create consensus of the residents regarding priorities for improvement programmes. Community organizations with previous experience of initiating improvements should be given priority.
- **Existence of trunk infrastructure:** - Areas near existing trunk infrastructure with spare capacity should receive priority, since investments will be more cost effective.

- **Population Density:** - Priority should be given to small and medium size slums with low or moderate densities as it is difficult to improve very high density /large slums.
- **Extent of Minority Population:** - Priority should be given to the slums with predominance of minority population.

8.2 Post Project Activities

- Allotments of dwellings and execution of lease
- Allotment of community facilities
- Necessary entries/record of rights as per the sub division/amalgamation approved in the layouts is incorporated in property register card along with FSI used and TDR taken on the plots (both rehabilitation & free sale plot).
- Integrating Slum-free City Plan with City-wide Infrastructure Development Plan (CDP)
- Review implementation of first phase and make necessary changes in the subsequent phases.

Annexure A: Indicative list of stakeholders

Sl. No.	Level of Stakeholder participation	Possible Stakeholders
1	City level	<ul style="list-style-type: none"> ▪ City level Technical Advisory Group(CTAG Co-operatives in slum areas ▪ Municipal councillors ▪ Municipal administrative and technical staff ▪ NGOs/ NGO representative/ private non-profit organizations working on slum issues ▪ Intermediaries/subject experts on slum issues/academicians ▪ Various public authorities with jurisdiction over the area i.e. District Administration, TCPO, Urban Development Authorities, Slum Rehabilitation Authorities ▪ Private land owners, Private Developers/Real Estate Companies ▪ Owners and managers of area businesses ▪ Foundations, microfinance institutions, and other private financial entities ▪ Private firms providing services in slum area
2	Zone/Ward	<ul style="list-style-type: none"> ▪ Ward Committee/its representatives ▪ Area Welfare societies ▪ Community based slum development organizations ▪ Community based groups i.e. CDS, Neighborhood Societies etc ▪ Various public authorities with jurisdiction over the area i.e. District Administration, TCPO, Urban Development Authorities, Slum Rehabilitation Authorities ▪ Co-operatives in slum areas ▪ Municipal councillors ▪ Municipal administrative and technical staff ▪ NGOs/ NGO representative ▪ Private land owners on whose land is slum is located ▪ Private businesses whose employees live in the area ▪ Private firms providing services in slum area
3	Slum (settlement) level	<ul style="list-style-type: none"> ▪ The slum dwellers or groups of slum residents to be benefit from program ▪ Municipal councillors ▪ Municipal administrative and technical staff ▪ Community based slum development organizations ▪ Co-operatives in slum areas ▪ NGOs/ NGO representative
4	Neighbourhood level	<ul style="list-style-type: none"> ▪ The slum dwellers or groups of slum residents to be benefit from program, NGOs/ NGO representative, private land owners, CDS, neighbourhood societies, SHGs, Ward Committee members, slum co-operatives, ULB's technical staff, elected representatives etc.

Annexure B: Suggested Parameters for the Indicators of Housing, infrastructure and Tenure

The parameters/details of what constitutes good/bad Housing condition, High/Low infrastructure status and secure/insecure tenure is stated below:

1. Parameters for Infrastructure

1.1. Water Supply:

- Score 1- 60% or more of household have individual connection
- Score 2- Less than 60% of households having individual connections

1.2. Drainage

- Score 1- 60% or more of in-slum drains are covered and / or pucca drains
- Score 2- Less than 60% of in-slums drains are covered and/or pucca drains

1.3. Solid Waste Management (Removal of solid waste by the municipality)

- Score 1- Every day/alternate removal
- Score 2- Removal of waste in frequent/once in fifteen days

1.4. Sanitation

- Score 1- 60% or more having individual toilet unit (with toilet seats)
- Score 2- Less than 60% use individual toilets

1.5. Road

- Score 1: 60% or more of the in-slum roads have a min of 3 m width
- Score 2: Less than 60% of the in-slum roads are of 3 m width.

The consideration of high and low level of infrastructure status is based on a total Score as stipulated above. The total Score would be between min of 5 to a maximum of 10. The following total Score is considered:

- Total Score of less or equal to 7: High level of Infrastructure (Code 1)
- Total Score of greater than 7: Low level of Infrastructure (Code 2)

2. Parameters for Housing

2.1 Based on Structural condition:

- Score 1: 60 % or more having Pucca housing (combination of roof and wall). Census definition for kuccha/pucca to be applicable.
- Score 2: Less than 60 % having Pucca housing

2.2 Based on Dilapidation (due to age):

- Score 1: 25% or less houses are dilapidated
- Score 2: More than 25% houses are dilapidated

2.3 Based on Space Per Person:

(Assuming Average DU of 5 persons)

- Score 1: 60% or more houses having > or equal to 3 sq.m per person (15 sq.m/DU)
- Score 2: Less than 60% houses having > or equal to 3 sq.m per person

2.4 Based on Light and Ventilation:

- Score 1: 60% or more houses having light and ventilation
- Score 2: Less than 60% houses having light and ventilation

The consideration of good and bad Housing is based on a total Score as stipulated above. The total Score would be between min of 4 to a maximum of 8. The following total Score is considered:

- Total Score of less or equal to 6: Good Housing (Code of 1)
- Total Score of greater than 6: Bad Housing (Code of 2)

Parameters for Tenure

1. Secure Tenure: Code 1 This includes formal property rights as below:

- Registered (including ownership, leasehold and use/occupancy rights)
- Unregistered but documented (e.g. rental, rent to buy, unregistered leases, etc)
- Group/family/household rights (e.g. customary/tribal/clan family rights, Islamic tenure types, community land trusts, etc)
- Unregistered & undocumented (e.g. adverse possession, use or occupancy rights without certificate, customary rights)

2. Insecure Tenure : Code 2

- Documented (e.g. written agreements between irregular owners and tenants, de facto recognition, illegal subdivisions, customary rights, tenancy at will, etc)
- Undocumented (e.g. as above but without documents)

The above parameters of Housing, Infrastructure and Tenure are to be considered for the purpose of evaluating whether the slum areas have good/bad housing condition and infrastructure status is high/low.

Annexure C: Indicative Contents of “Slum Free City Plan of Action”

SFCP Indicative Contents

- Executive Summary
- Section I – Preamble & Overview
- Section II – Slum Rehabilitation Strategy
- Section III – Slum Prevention Strategy
- Section IV – Road Map

Section I – Overview

1. Introduction of the City
 - a. City Profile
 - b. Housing Scenario
2. Diagnostic Assessment of Slums
 - a. Listing of Slums – number, status, tenability, tenure etc.
 - b. Physical Profile
 - c. Social Profile – population, growth, migration, density
 - d. Economic Profile
 - e. Infrastructure

Section II – Slum Rehabilitation Strategy

1. Surveys, Investigations & Consultations
 - a. Introduction
 - Listing of Surveys and Timelines (annexure)
 - Agencies (including procurement process) & Stakeholders involved
 - b. GIS Mapping
 - Methodology
 - Process and Timelines (annexure)
 - Agencies (including procurement process) & Stakeholders involved
 - c. MIS
 - Methodology
 - Process and Timelines (annexure)
 - Agencies (including procurement process) & Stakeholders involved
 - d. Stakeholder Consultations
 - Process and Timelines (annexure)
 - Discussion Summaries
 - Outputs
2. Slum Categorization
 - Tenability – Tenable, semi-tenable, non-tenable
 - Land Use
 - Status of Tenure – Secure, semi-secure, non-secure
 - Ownership of Land/Legal Status
 - Discussion Summaries
 - Outputs
 - Density
 - Land Value
3. Slum Rehabilitation Framework

- Observations/Findings of Analysis of Existing Situation
- Physical Requirements (Housing/Infrastructure etc.)
- Implementation Plan
- Modalities/Approach
- 4. Investment Requirements
 - Housing
 - Infrastructure
 - Operation & Maintenance
- 5. Capacity Building
 - Slum Dwellers
 - Intermediaries
 - Government Stakeholders

Section III – Slum Prevention Strategy

1. Market Information
 - Broad Housing Stock Analysis by Category
 - Drivers for increase in Slum Dwellers population
 - Profile & Characteristics of the Slum Dwellers (Future)
 - Availability/Profile of Developers by category
2. Housing Stock Assessment
 - Population Projections (Scenarios & most probable assessment)
 - Household Requirements
 - Land Requirements
 - Infrastructure Requirements
3. Implementation Plan
 - Broad Contours
 - Options for Generating Stock
 - Self Financed
 - PPP
 - Rental Housing
 - Others
 - Modalities of Implementation (incl. Provision of transport infrastructure)
 - Targets & Timelines
4. Investment Requirements
 - Housing
 - Infrastructure
 - Operation & Maintenance
5. Reforms &
 - Slum Prevention Reforms
6. Capacity Building
 - Stakeholder Capacity Augmentation

Section IV – Road Map

1. Touchstone Principles
 - Integration with City's Plans
 - Institutional Framework
 - Existing Organizations
 - Community Stakeholders
 - Assessment of Implementation Options
 - Public vs. Private
2. Financing Plan

- Summary of Investments
 - Financing Structure
 - Strategy for Sustenance
 - ULB Finances
 - Earmarking for Slum Rehabilitation & Prevention Strategy
 - Community Participation
3. Monitoring & Review
- Mechanism of Self Declaration
 - Periodicity
 - Charter
 - Stakeholder Consultation
4. Reforms
- Mandatory
 - Committed
 - Timelines
5. Targets & Cash flow Assessment
- Physical Target
 - Progress Assessment & Development of “Progress Curve”
 - Progress Curve
 - Physical Progress
 - Fiscal Progress
 - Timelines
 - Contingency Plans
 - Cash flow Statement

Annexure D: List of maps to be prepared

1. Location map of the city showing regional setting (India-State-District-City)
2. City base map (geo-referenced)
3. Historical growth pattern of the city over the years e.g.-1800, 1900,2000, 2011
4. Map of metropolitan region
5. Existing land use land cover Map of Urban Agglomeration
6. Proposed land use land cover map of the Urban Agglomeration
7. Location map of slums (including slum boundary in the city base map)
8. Tenability Analysis map of slums
9. Tenure status map of slums
10. Land ownership map of slums
11. Dwelling unit density map of slums
12. Land value analysis map of slums
13. Thematic maps using cartograms to represent the results of matrix analysis of slums (housing, infrastructure, land tenure etc.)
14. Map showing all the slum pockets in the city base map demarcating the municipal boundary and ward boundaries
15. A view of the satellite image of the city showing the slum pockets

Annexure E: Tenability Status of Slums

Preparation of data fact sheets on tenability status of slums

Category	Tenability	Sub-category	Number of slums in each category (list along with name of slum has to be given separately)	Area covered (in sq mts)	Number of Households in the slum
Health & Environmental Safety Risk	Un-tenable slums	Slums located within high tide zones			
		Slums along Natural Drains/River within highest flood level			
		Slums Located in low lying areas with water logging			
		Located on land fill site			
		Within CRZ			
		Within polluted industrial areas			
		Slums below High-tension Power line			
		Prohibited and regulated Heritage sites			
		On steep slopes			
		Under the ROB/Flyover			
		Pavement dwellers			
		Near/on land fill sites			
		Located operational airport land, coming within air funnel			
Along the railway tracks					
	Partly un-tenable slums				
Public Interest Parameters	Semi-tenable slums	Slums on non-residential land use as per existing Master Plan-review by competent authority for change of present use to residential use, Swapping of land uses for the same area of land in the same zone of the city			
		Road right of way-review by competent authority for change of road alignment			
		Slums with high % of mix land use/noxious and nuisance or hazardous use-review of the relocation of non-residential use or the slum community			
		On forest land –subject to procedure and guidelines prescribed by MoEF			
	Tenable slums	Are located on lands earmarked for residential land use in the Master Plan and on environmentally safe area			

Annexure F: Choice of Slum Redevelopment Model

Option I: IN-SITU SLUM UPGRADATION

This approach may be suitable for low density squatter settlement on low priced public land especially in Small and medium sized towns & cities, where land values are low, pressure on land is low,. It would involve re-blocking to ensure optimum use of land and releasing surplus land. Provision of basic physical and social infrastructure services is the most preferred option.

The in-situ slum up-gradation strategy will include Spatial Surveys and Data Analysis

Analysis of existing layout of settlement (Scale 1: 500) – Locational attributes- Property prices in the surrounding areas, plot sizes, state of shelter, within the settlement no and sizes of plots, non residential uses, width and pattern of access roads, slopes, facilities, existing densities, onsite infrastructure and off site infrastructure capacities, open spaces.

Identification of problems and priorities. Identify plots smaller than the minimum acceptable size. Identify roads narrower than the acceptable width Based upon an analysis of the information and discussions in the community meetings, coherent pattern of problems and priorities emerges. Identify livelihood supports needed, health and education and other social support inputs required. Identify tenants, woman headed households and physically challenged heads of households.

4.5.1.3 Identification and discussion of alternatives. Alternatives for layouts re-blocking dwelling standards and dwelling design are prepared with preliminary cost estimates. Space for livelihood activities/training centre/community hall is to be provided. Alternatives are discussed with working models and cost implications in an interactive process in which the community, through established representation mechanisms, eventually reaches broad consensus.

The discussion of alternatives leads to the choice of the recommended options. The technicians involved ensure that the chosen alternatives are affordable and appropriate.

Detailed project report for in-situ slum up gradation will include the followings

- Detail project design with layout plans including livelihoods spaces and approvals from the competent authorities
- The valuation of the land must be carried out and its viability ensured in order to attract the participation of a private entity.
- Working drawings and detailed project report
- Financial operating plan
- Loans and finalizing repayments schedules for slum communities
- Models for private sector participation where appropriate
- Health and education inputs as required

OPTION II: IN SITU SLUM RE-DEVELOPMENT

In In-situ redevelopment projects people have the option of remaining where they are close to their current sources of employment and social networks but the whole settlement is cleared and rebuilt.

It is a process of redeveloping areas with current slum settlements where new mixed-use mixed-income communities can be created with a viable cross-subsidy model, which is a function of local land values, socio-economic needs and general context of the area. Therefore, a socio-economic study of local context is critical for decision making. In-situ Redevelopment may be applied to areas with Medium & high density (>250 du/ha)

Spatial Surveys and Data Analysis

- Analysis of existing site in terms of site potential and limitations(Scale 1: 500) – Locational attributes- Property prices in the surrounding areas, number of households , estimation of floor space required to house the existing population, ,floor space required to house existing non residential uses, estimation of facilities and open spaces required.
- Amount of surplus floor space for sale component that will become available with incentive FAR
- Possibilities of partnering with private developer
- Onsite infrastructure and off site infrastructure capacities, Financial feasibility and assessing viability gap funding.
- The valuation of the land must be carried out and its viability ensured in order to attract the participation of a private entity. Assessment of cost sharing between communities, ULB/state Govt. And private developer.

Identification and discussion of alternatives: Alternatives for layouts dwelling standards and dwelling design are prepared with preliminary cost estimates. Space for livelihood activities/training centre/community hall is to be provided. Alternatives are discussed with working models and cost implications in an interactive process in which the community, through established representation mechanisms, eventually reaches broad consensus.

The discussion of alternatives designs with cost options with community and finalization of accepted dwelling design and layout plan.

Transit camps

- Identification of alternatives sites for transit camp and acceptance by the community for a specific site for transit camp.
- Assessment of time and cost of transit camp construction
- Informing the community about the schedule of shifting and compensation package if any
- Explaining role of community in maintaining and managing the project

Detailed project report for in-situ slum redevelopment will include the followings

Prepare detailed engineering and architectural designs including:

- Detail project design with layout plans including livelihoods spaces and approvals from the competent authorities
- Details of the ground coverage and height
- Working drawings and detailed project report
- Financial operating plan and cost sharing
- Loans and finalizing repayments schedules for slum communities
- Schedule for transit camp construction and for shifting families
- Models for private sector participation where appropriate
- Health and education inputs as required

OPTION III: SLUM RESETTLEMENT

Resettlement of communities requires special efforts and supports by NGOs/CBOs to prepare them for resettlement. The resettlement also involves rehabilitation of their livelihood opportunities. Resettlement should also ensure that prevalent social network of communities is not disrupted

Surveys and Data Analysis: identify the number of households and number of economic enterprises to be resettled. Identify the existing occupational pattern and existing economic linkages of households to work centres. Assessment of area required for resettlement. Identify alternative sites

for relocation preferably within the same zone/ ward and discuss with communities. Finalise the site selection with community consent. Consider land prices in the context of land market.

Prepare site analysis - Land ownership and availability, Location in relation to existing employment and services, access to transport nodes and routes, Analyse site for site potential and limitations

Identification and discussion of alternatives. Consider appropriate development options-site & services/group housing for resettlement. Alternatives for layouts dwelling standards and dwelling design are prepared with preliminary cost estimates considering community priorities. Space for livelihood activities/training centre/community hall is to be provided. Alternatives are discussed with working models and cost implications in an interactive process in which the community, through established representation mechanisms, eventually reaches broad consensus.

The discussion of alternatives designs with cost options with community and finalization of accepted dwelling design and layout plan.

Carry out Economic and financial analysis for site on which slum is to be relocated/Resettled.

- Establish social and economic development programmes and costs.
- Determine total project costs, including design and construction administrative costs and operation and maintenance.
- Projections of cash flow based on alternative assumptions of costs, phasing of development
- Identify sources and extent of public and private funds available for investment
- Develop/recommend financial programme/model.

Support services to the community

Arrangements to be provided for support services to the communities to be resettled to cope up with hardship of resettlement i.e. school admissions, PDS shops, employment, transport costs leading to increased expenditure etc.

Preparation of Detailed Project Report

Prepare a phased programme based on level of development at resettlement site. Detailed project report for slum resettlement will include the followings:

- Prepare detailed engineering and architectural designs.
- Detail project design with layout plans including livelihoods spaces and approvals from the competent authorities
- Working drawings and detailed project report
- Financial operating plan and cost sharing.
- Loans and finalizing repayments schedules for slum communities
- Schedule for shifting families and enterprises
- Models for private sector participation where appropriate
- Health and education inputs as required

Annexure G: Decisions to be taken at State Level

1. Institutional Aspects:

- Definition of slums
- Definition of a household i.e. whether existing household will be considered or whether all adult males will be treated as a separate household.
- Eligibility Criteria of slum dwellers including treatment of existing renters.
- Eligibility and entitlements of Non-Residential establishments within slums
- Criteria for Prioritization of slums (Infrastructure and Poverty Matrix).
- Tenure options – Freehold, Leasehold (10years, 30 years, 90years), License and Cooperative tenure
- Residential lease conditions
- Size of slum Tenements
- Development Control Regulations

2. Financial Aspects:

- Subsidy Patterns (for In-situ upgradation, in-situ redevelopment and resettlement)
- Stamp Duty and Property Tax i.e. whether exemptions as reductions can be given.
- External Development Charges i.e. level of EDCs which may be changed
- Consent to participation in the scheme (i.e. what % of H/H should be made mandatory to be eligible for avail the scheme, it is advised that this should be 70%)
- Actions for non-participating households

3. Planning and Implementation Aspects:

- De-notification of regularized/improved/ redeveloped slums
- Post occupancy maintenance and management
- Decision on Free Sale and Commercial Floor Space
- Allotment, Maintenance and Management of Facility Areas
- Mechanism for levy and collection of Maintenance charges

Annexure H: Templates for Reports for City Level Slum Profile

This section provides some basic templates to be prepared for as part of the SFCPoA. **Volume III** of the Guidelines provides detailed templates to be prepared by the cities.

Overview of <City Name> City

Salient features of the ULB

This section deals with overall features of the city. It will also contain details about how and when the survey was conducted. The chapter will constitute of the following sections:

1. Location of City with City boundaries and sketch map of city
2. Overall growth of City
3. City Profile

Table E.1: City Profile

Sl.no	Indicator	ULB (A)	Slum (B)
1	Area (sq m)		
1.1	Area of slums as % of the total area of city (B1*100)/A1		
2	Number of Municipal Wards		N/A
3	Population and Households		
3.1	Total Population (2001 census) (nos in millions)		
3.2	Number of Households (2001 census)		
3.3	Current Population (2010) (nos in millions)		
3.4	Current Number of Households (2010)		
3.5	Slum population in % terms of total population in city (2001 census)		
3.6	Slum households in % terms of total Households in city (2001 census)		
3.7	Current slum population in % terms of current population in city (2010)		
3.8	Current slum households in % terms of total current Households in city (2010)		

The table E.1 indicates the overall slum area, population and households as % of the respective total area, population and households in the city.

Slum Profile in <City Name> City

General Information

Table E.2 shows overall slum profile of the city at a glance. The table 1-1 indicates population and households of the slum areas in the city. However, the table 2-1 indicates the distribution of population and households within notified and non-notified slums in the city. For eg; if table E.1 indicates that x% of city area is covered with slums, then of this x% of area, y% is notified and z% is not notified. Similarly for population as well as household similar analysis can be made from table E.2

Table E.2: Slum Profile

Sl. No	Legal Status of Slums	Number of slums	Population in Slums		Area of slums (sq m)		Number of Households in Slums	
			Number of person	Slum population in % terms of total population of slums	Area covered by slums in the city (sq m)	Slum area in % terms of Total area of slums in the city	Number of Households in slums	Slum households in % terms of Total number of households in slums
1	Notified Slums							
2	Non Notified Slums							
3	Total							

If detailed household survey has been done, the details of Male and Female population may be shown.

Table E.3 indicates ward wise distribution of slums. The population density of each ward can be derived from this table. This will help in formulating strategy for planning at the ward level.

Table E.3: Ward-wise distribution of slums

Ward Number	Notified Slums		Non Notified Slums		Total Slums	
	Number of notified slums	Population Density of ward=Total population of all notified slums in ward/total area (sqm) of all notified slums in ward	Number of non-notified slums	Population Density of ward=Total population of all non-notified slums in ward/total area (sqm) of all non-notified slums in ward	Number of Slums	Population Density of ward=Total population of all slums in ward/total area (sqm) of all slums in ward

Physical Location of Slums

Table E.4 shows the proportion of population living in slums located in the core area and fringe area of the city. This table will help in identifying the densely populated slums located in core and fringe areas.

Table E.4: Distribution of slums with reference to Population and Location

Legal Status of Slums	Number of Notified Slums			Number of Non-Notified Slums			Total Number of Slums			Population Category of Slums in % terms of total number of Slums
	In Core City (A)	In Fringe Area (B)	Total (C)	In Core City (D)	In Fringe Area (E)	Total (F)	In Core City (G)	In Fringe Area (H)	Total (I)	
Location of Slum										
Category of Slums as per population										
0 ≤100 persons (1)										(I1*100)/I6
100 ≤250 persons (2)										(I2*100)/I6
250 ≤500 persons (3)										(I3*100)/I6
500 ≤1000 persons (4)										(I4*100)/I6
>1000 persons (5)										(I5*100)/I6
Total Number of Slums (6)										
Location-wise Slum in % terms of total number of Slums	(A6*100)/C6	(B6*100)/C6		(D6*100)/F6	(E6*100)/F6		(G6*100)/I6	(H6*100)/I6		

Table E.5 Distribution of slums with reference to Area and Location

Legal Status of Slums	Number of Notified Slums			Number of Non-Notified Slums			Total Number of Slums			Area category of slums in % terms of total number of Slums
	In Core City (A)	In Fringe Area (B)	Total (C)	In Core City (D)	In Fringe Area (E)	Total (F)	In Core City (G)	In Fringe Area (H)	Total (I)	
Location of Slum										
Category of Slums as per area										
0 ≤1000 sqm (1)										(I1*100)/I7
1000 ≤3000 sqm (2)										(I2*100)/I7
3000 ≤6000 sqm (3)										(I3*100)/I7
6000 ≤9000 sqm (4)										(I4*100)/I7
9000 ≤12000 sqm (5)										(I5*100)/I7
>12000 sqm (6)										(I6*100)/I7
Total Number of Slums (7)										
Location-wise Slum in % terms of total number of Slums	(A7*100)/C7	(B7*100)/C7		(D7*100)/F7	(E7*100)/F7		(G7*100)/I7	(H7*100)/I7		

Status of Slums

The criteria that can be considered for tenability analysis can be the following:

- i. Hazards/Risk Zones: Table E.6 and E.7
- ii. Land Use Constraints: Table E.8
- iii. Land Ownership: Table E.9

Table E.6 and E.7 helps in identifying the slums and the number of households living in slums with reference to location of slums the tenability of slums can be categorized based on their physical location such as hazard/risk zones can be based on areas prone to floods and buffer area of natural streams.

Table E.6: Distribution of Slums with reference to Physical Location of Slums

Legal Status of Slums Physical Location of Slums	Notified		Non-Notified		Total		Physical locationwise slum in % terms of Total Number of Slums	Physical locationwise slum household in % terms of Total Number of Slum Households
	Number of Slums	Number of Households	Number of Slums	Number of Households	Number of Slums	Number of HH		
Along Nallah								
Along Other Drains								
Along Railway Lines								
Along Major Transport Alignment								
Along River/Water Body								
On River Bed/Water Body Bed								
Others (Hazardous or Objectionable)								
Others (Non Hazardous / Non Objectionable)								
Total								

Table E.7: Slums in location prone to floods

Legal Status of Slums Prone to Floods	Notified		Non-Notified		Total		Slums in category as % of Total Number of Slums	Households in category in % terms of Total Number of slum Households
	Number of Slums	Number of Households	Number of Slums	Number of Households	Number of Slums	Number of HH		
Not Prone								
Upto 15 days								
15-30 days								
More than a month								
Total								

Table E.8 illustrates the distribution of slums according to the land use of surrounding area and the number of households that are occupying those areas. This can further be analysed during detailed household survey about whether the social indicators/conditions are related to physical location or not. The slums can accordingly be categorized as semi-tenable when they are located on existing or proposed non-residential use. The categorization based on tenure status can be used in assigning strategies for development in addition to other analysis.

Table E.8: Distribution of Slums with reference to Land Use of Surrounding Area

Legal Status of Slums Land use of surrounding area	Notified		Non-Notified		Total		Slums in category as % of Total Number of Slums	Households in category in % terms of Total Number of slum Households
	Number of Slums	Number of Households	Number of Slums	Number of Households	Number of Slums	Number of HH		
Residential								
Industrial								
Commercial								
Institutional								
Others								
Total								

Land Status

Land Ownership

Table E.9 illustrates the number of slums with reference to the ownership of land on which they are located and since how long they have been in existence. The categorization based on land ownership of slums can be used in assigning strategies for development and priorities for implementation under various strategies for development in addition to other analysis.

Table E.9 Distribution of Slums based on land ownership, age and legal status

Land Ownership Age of Slums	Public : Local Body	Public State Government	Public Railways	Public Defense	Public Airport	Govt other than Railways, Defense or Airport	Others	Not Known	Total number of slums
Number of Notified Slums	0 ≤ 1yr								
	1 ≤ 3yrs								
	3 ≤ 5yrs								
	5 ≤ 10yrs								
	> 10yrs								
	Total number of notified slums								
Number of non-Notified Slums	0 ≤ 1yr								
	1 ≤ 3yrs								
	3 ≤ 5yrs								
	5 ≤ 10yrs								
	> 10yrs								
	Total number of non-								

	notified slums									
Total number of slums	0≤1yr									
	1≤3yrs									
	3≤5yrs									
	5≤10yrs									
	>10yrs									
	Total number of slums									
Slums in category in % terms of the total number of slums										

Table E.10 shows the area under the slums on the aforesaid land ownership categories.

Table E.10 Area Distribution of slums based on land ownership

Land Ownership	Public Local Body	Public State Government	Public Railways	Public Defense	Public Airport	Govt other than Railways, Defense or Airport	Others	Not Known	Total Area of Slums
Area of Slums in sqm									
Area under the slums in % terms of total area of slums									

Table E.11 would help in finding out the clusters where, the population is less but the area covered is large and accordingly identify the possibility of slum relocation.

Table E.11: Distribution of Slums based on Land Ownership, Population and Area

Number of Slums on	Population	Area	0 ≤ 1 000 sqm	1000 ≤ 3000sqm	3000≤6000 sqm	6000 ≤9000 sqm	9000 ≤ 12000 sqm	>12000 sqm	Total
Public: Local Body	0≤100 persons								
	100≤250 persons								
	250≤500 persons								
	500≤1000 persons								
	>1000 persons								
	Total number of slums								
Public State Government	0≤100 persons								
	100≤250 persons								
	250≤500 persons								
	500≤1000 persons								
	>1000 persons								
	Total number of slums								
Public Railways	0≤100 persons								
	100≤250 persons								
	250≤500 persons								
	500≤1000 persons								
	>1000 persons								
	Total number of slums								
Public Defense	0≤100 persons								
	100≤250 persons								
	250≤500 persons								
	500≤1000 persons								
	>1000 persons								
	Total number of slums								

	Total number of slums							
Public Airport	0 ≤ 100 persons							
	100 ≤ 250 persons							
	250 ≤ 500 persons							
	500 ≤ 1000 persons							
	> 1000 persons							
	Total number of Slums							
Public Gov other than Railways, Defence or Airport	0 ≤ 100 persons							
	100 ≤ 250 persons							
	250 ≤ 500 persons							
	500 ≤ 1000 persons							
	> 1000 persons							
	Total number of slums							
Private	0 ≤ 100 persons							
	100 ≤ 250 persons							
	250 ≤ 500 persons							
	500 ≤ 1000 persons							
	> 1000 persons							
	Total number of Slums							
Others	0 ≤ 100 persons							
	100 ≤ 250 persons							
	250 ≤ 500 persons							
	500 ≤ 1000 persons							
	> 1000 persons							
	Total number of slums							
Non Known	0 ≤ 100 persons							
	100 ≤ 250 persons							
	250 ≤ 500 persons							
	500 ≤ 1000 persons							
	> 1000 persons							
	Total number of slums							
Total number of Slums	0 ≤ 100 persons							
	100 ≤ 250 persons							
	250 ≤ 500 persons							
	500 ≤ 1000 persons							
	> 1000 persons							
	Total number of slums							

Housing Situation

Housing Condition

Table E.12: Housing conditions in slums according to the area of slums

Housing condition Area of Slum (sqm)		Pucca DU			Semi Pucca DU			Katcha DU			Total		
		Nus of DU	Nus of DU with electricity	Nus of HH*	Nus of DU	Nus of DU with electricity	Nus of HH*	Nus of DU	Nus of DU with electricity	Nus of HH*	Nus of DU	Nus of DU with electricity	Nus of HH*
Total	0 ≤ 1000 sqm												
	1000 ≤ 3000 sqm												
	3000 ≤ 6000 sqm												
	6000 ≤ 9000 sqm												
	9000 ≤ 12000 sqm												
	>12000 sqm												
	Total												

* To be filled after household survey

Table E.13: Distribution of Dwelling Units in Slums based on their land tenure status

Legal Status of Slums Land Tenure Status	Number of DU In Notified Slums	Number of DU In Non-Notified Slums	Total No. of DU in all Slums in City	No. of DU based on their tenure status in % terms of total no. of DU in slum
With Patta				
With Possession Certificate/ Occupancy Right				
In Encroached Public Land				
In Encroached Private Land				
On Rent				
Others/Mixture				
Total no. of DUs				

If the detailed household survey has been done, the analysis of number of DU with Patta and the households on rent DU may be done. Also, the analysis of number of pucca, semi pucca or katcha houses with reference to land tenure status can be analysed as per the table below:

Table E.14: Distribution of houses with reference to their land tenure status and the type of structure

Legal Status of Slums		Notified Slums			Non Notified Slums		
Type/Structure of House	Land Tenure Status	Pucca	Semi-Pucca	Katcha	Pucca	Semi-Pucca	Katcha
	With Patta						
	With Possession Certificate/ Occupancy Right						
	In Encroached Public Land						
	In Encroached Private Land						
	On Rent						
	Others/ Mixture						
	Total no. of DUs						

Classification of Slums can be further done on the following basis hazardous/non-hazardous, land tenure status and the type of structure of houses in slums

Table E.15: Number of slums with reference to physical location, land tenure status and the housing requirement

Housing condition		Katcha Houses=0	Semi Pucca+Katcha Houses≥ 60%	Semi Pucca+Katcha Houses < 60%	Total
Land Tenure Status					
Hazardous Slums (01,01,03,04,05,06,07,09)	Legal (Slums with DU having Patta, Occupancy Rights or On Rent)				
	Illegal (Slums with DU encroachments on Public Land or Private Land)				
	Total				
Non Hazardous Slums (08)	Legal (Slums with DU having Patta, Occupancy Rights or On Rent) Legal				
	Illegal (Slums with DU encroachments on Public Land or Private Land)				
	Total				

01-Along Nallah (Major storm water drain), 02-Along other drains, 03- Along Railway line, 04-Along major transport alignment, 05-Along river/water body bank, 06- On river/water body bed, 07-Others(Hazardous or objectionable), 08- Others (Non Hazaordous/Non-objectionable), 09-Prone to Floods

Demographic profile

Population Density

The categorization based on density of slums could be used in assigning strategies for development in addition to other analysis. The strategies and options for PPP may be significantly influenced by slum density. There is also a possibility of densification of low and medium density re-development sites through relocation of untenable slums within the zone.

Table E.16 analyses the clusters that have high population density owing to very small area or very high population in notified and non notified slums separately. The slums that need a focus can accordingly be brought out from this analysis.

Table E.16: Distribution of Slums based on legal status, population and area of slums

Legal Status of Slums	Area	0 ≤ 1000 sqm	1000 ≤ 3000 sqm	3000 ≤ 6000 sqm	6000 ≤ 9000 sqm	9000 ≤ 12000 sqm	> 12000 sqm	Total
	Population							
Number of Notified slums	0 ≤ 100 persons							
	100 ≤ 250 persons							
	250 ≤ 500 persons							
	500 ≤ 1000 persons							
	> 1000 persons							
	Total number of slums							
Number of Non-Notified slums	0 ≤ 100 persons							
	100 ≤ 250 persons							
	250 ≤ 500 persons							
	500 ≤ 1000 persons							
	> 1000 persons							
	Total number of slums							
Total number of Slums	0 ≤ 100 persons							
	100 ≤ 250 persons							
	250 ≤ 500 persons							
	500 ≤ 1000 persons							
	> 1000 persons							
	Total number of slums							

Physical Infrastructure

Water Supply

Table E.27: Distribution of Households based on the connectivity and duration of water supply along with the source of drinking water

	Notified Slums		NonNotified Slums		Total		% HH of Total No of HH
	Number of Slums	Number of HH	Number of Slums	Number of HH	Number of Slums	Number of HH	
Connectivity to Water Supply							
Fully							
Partially							
Not Connected							
Total							
Duration of Water Supply							
daily Less than 1 hr							
daily 1-2 hrs							
Daily more than 2 hrs							
Once a week							
Twice a week							
Not regular							
No Supply							
Total							
Source of Drinking Water							
Individual tap							
Public tap							
Tube wells/Bore well/hand pump							
Open well							
Tank/pond							
River/canal/lake/spring							
Others							
Water tanker							
Total							

Sanitation

Table E.28: Access of slums & Slum households to sanitation facilities

	Notified Slums		NonNotified Slums		Total		% HH of Total No of HH
	Number of Slums	Number of HH	Number of Slums	Number of HH	Number of Slums	Number of HH	
Connectivity to wide Sewerage system							
Fully							
Partially							
Not Connected							
Total							
Connectivity to Storm water drainage							
Fully							
Partially							
Not Connected							
Total							
Drainage and Sewerage Facility							
Access to storm water drainage							
Access to underground drainage/sewer line							
Access to digester							

Not connected to sewer or digester							
Total							
Latrine Facilities							
Public/Community latrine-Septic tank/flush							
Public/Community latrine-Service latrine							
Public/Community latrine-Pit							
Shared latrine -Septic tank/flush/							
Shared latrine-Service latrine							
Shared latrine-Pit							
Own latrine-Septic tank/flush/							
Own latrine-Service latrine							
Own Latrine-Pit							
Open Defecation							
Total							

Solid Waste Management

Table E.29: Access of slums & Slum households to solid waste management

	Notified Slums		Non Notified Slums		Total		% HH of Total No of HH
	Number of Slums	Number of HH	Number of Slums	Number of HH	Number of Slums	Number of HH	
Arrangement of Garbage Disposal							
Municipal Staff							
Municipal Contractor							
Residents themselves							
Others							
No Arrangements							
Total							
Frequency of Garbage Disposal							
Daily							
Once in 2 days							
Once in a week							
Once in 15 days							
Not Collected							
Total							
Frequency of clearance of open drains							
Daily							
Once in 2 days							
Once in a week							
Once in 15 days							
Not Collected							
Total							

Road & Street Lights

Table E.30: Access of slums and Slum Households to roads and street lighting

	Notified Slums		NonNotified Slums		Total		% HH of Total No of HH
	Number of Slums	Number of HH	Number of Slums	Number of HH	Number of Slums	Number of HH	
Approach Road/Lane/Constructed Path to the slum							
Motorable Pucca							
Motorable Katcha							
Non Motorable Pucca							
Non Motorable Katcha							
Total							
Internal Road							
Motorable Pucca							
Motorable Katcha							
Non Motorable Pucca							
Non Motorable Katcha							
Total							
Distance from Nearest Motorable Road							
Less than 0.5 Km							
0.5-1 Km							
1-2 Km							
2-5 Km							
>5 Km							
Total							
Availability of Street Light							
Yes							
No							
Total							