

# Rajiv Awas Yojana

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## Guidelines for Slum-free City Planning



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Government of India  
Ministry of Housing & Urban Poverty Alleviation





## 1. Rajiv Awas Yojana: Objectives

Rajiv Awas Yojana (RAY) for the slum dwellers and the urban poor envisages a 'Slum-free India' through 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 the same level of basic amenities as the rest of the town;
- Redressing the failures of the formal system that lie behind the creation of slums; and
- Tackling the shortages of urban land and housing that keep shelter out of reach of the urban poor and force them to resort to extra-legal solutions in a bid to retain their sources of livelihood and employment.

An outline of the broad policy issues that need to be addressed by States/UTs under RAY is provided in Annexure I.

## 2. Central Support: Pre-Conditions

- 2.1 As in JNNURM, the goals of RAY will be driven and incentivised by the provision of central support for slum redevelopment and construction of affordable housing conditional to a set of reforms necessary for urban development to become inclusive. Annexure II describes the admissible and inadmissible components currently envisaged under RAY.
- 2.2. As regards reforms under RAY, security of tenure through entitlement will be critical for the overarching aim of promoting inclusive cities. Accordingly, Central Assistance under RAY will be predicated on the condition that States/UTs assign legal title to slum-dwellers over their dwelling space. The other reforms include the continuation of the three pro-poor reforms of JNNURM till they are legislated and internalised as part of the system; legislation for property rights to all slum dwellers; reform to the rental and rent control laws regarding urban housing; and review and amendment to the legislations, rules and regulations governing urban planning and development structures and systems towards an adequate response to the demands, process and pace of urbanisation. The three pro-poor reforms under JNNURM are reiterated as follows:
  - i) Internal earmarking within local body budgets for basic services to the urban poor;
  - ii) Provision of basic services to urban poor including security of tenure at affordable prices, improved housing, water supply, sanitation and ensuring delivery of other already existing universal services of the government for education, health and social security; and
  - iii) Earmarking at least 20-25% of developed land in all housing projects (both public and private agencies) for EWS/LIG category with a system of cross-subsidization.



### 3. State Slum-free Plan of Action (POA)

- 3.1 Rajiv Awas Yojana envisages that each State would prepare a State Slum-free Plan of Action (POA). The preparation of legislation for assignment of property rights to slum-dwellers would be the first step for State POA. The POA would need to be in two parts, Part-1 regarding the upgradation of existing slums and Part-2 regarding the action to prevent new slums. In Part-1 the State would need to survey and map all existing slums in selected cities proposed by the State for coverage under RAY. In Part-2 the Plan would need to assess the rate of growth of the city with a 20 year perspective, and based on the numbers specify the actions proposed to be taken to obtain commensurate lands or virtual lands and promote the construction of affordable EWS houses so as to stay abreast of the demand. This part would need also to make necessary legislative and administrative changes to enable urban land expansion, and in town planning regulations to legislate reservations for EWS/LIG housing in all new developments. Annexure III indicates the broad outline of a State Slum-free Plan of Action (POA).
- 3.2 The State POA would include the cities identified by the State and intended to be covered under RAY in five years, and their phasing. It will commit to a 'whole city' approach, so that an integrated and holistic plan is prepared for the upgradation of all existing slums, notified or non-notified, in each identified city. Within a city, in each slum taken up for redevelopment, a holistic coverage would be required, with provision of all basic civic infrastructure and services as well as decent housing, with emphasis on planned layouts (after reconfiguration of plots based on existing / modified building bye-laws wherever necessary) and on total sanitation (by provision of individual toilets and water supply to each household). With regard to housing, the State may adopt a flexible approach as to the manner of construction and arrangement of funds for construction, to follow a beneficiary-built housing model with design and technical support from the Municipality/State, or to construct housing through state parastatal or private partners or by delineating a mix of methods. The POA would be expected to give primacy to a Public-Private-Partnership model that would enable it to cross-subsidise through FSI and land use concessions as much of the slum redevelopment as possible. The POA would be required to describe the model proposed to be followed in each slum, the efforts for obtaining the community's participation and the financial strategy for holistic development along with timelines.
- 3.3 The State POA will include Slum-free City Plans of Action for the cities identified for inclusion under RAY. While the City POA has to be developed for each city included under RAY as a whole, the pace of slum upgradation within the city can be phased out. For the purpose of phasing, each city may be divided into zones and each zone be taken up as a whole to ensure the universal provision of basic infrastructure and services and decent housing in all slums in the zone, and to attain slum-freeness. A city-wide/zone-based approach would enable shifting untenable slums to the nearest possible available vacant land or notified slum which has the space to receive them.
- 3.4 States would be required to forward the Slum-free City Plans of Action (POA) to the Centre for clearance along with the bill for assignment of property rights cleared by the



State Cabinet and the commitment of the Government as to the session of the State Assembly before which it will be placed. In considering the POA, the Centre would particularly assess that the cities have been chosen to maximise cross-subsidisation, that the extent of commitment for cross-subsidisation through PPP has been fully explored; and that the mechanisms for community participation have been clearly delineated and activated.

## **4. Slum-free City Planning: Methodology**

### **4.1 Conceptual Framework**

Slum-free City Cell in Urban Local Body headed by the Municipal Commissioner/Executive Officer will be primarily responsible for the preparation of Slum-free City Plans based on guidelines provided by the concerned State Government and support extended by the Nodal Agency for Rajiv Awas Yojana at the State level. The diagram in the next page provides a conceptual framework for the preparation of Slum-free City Plan.

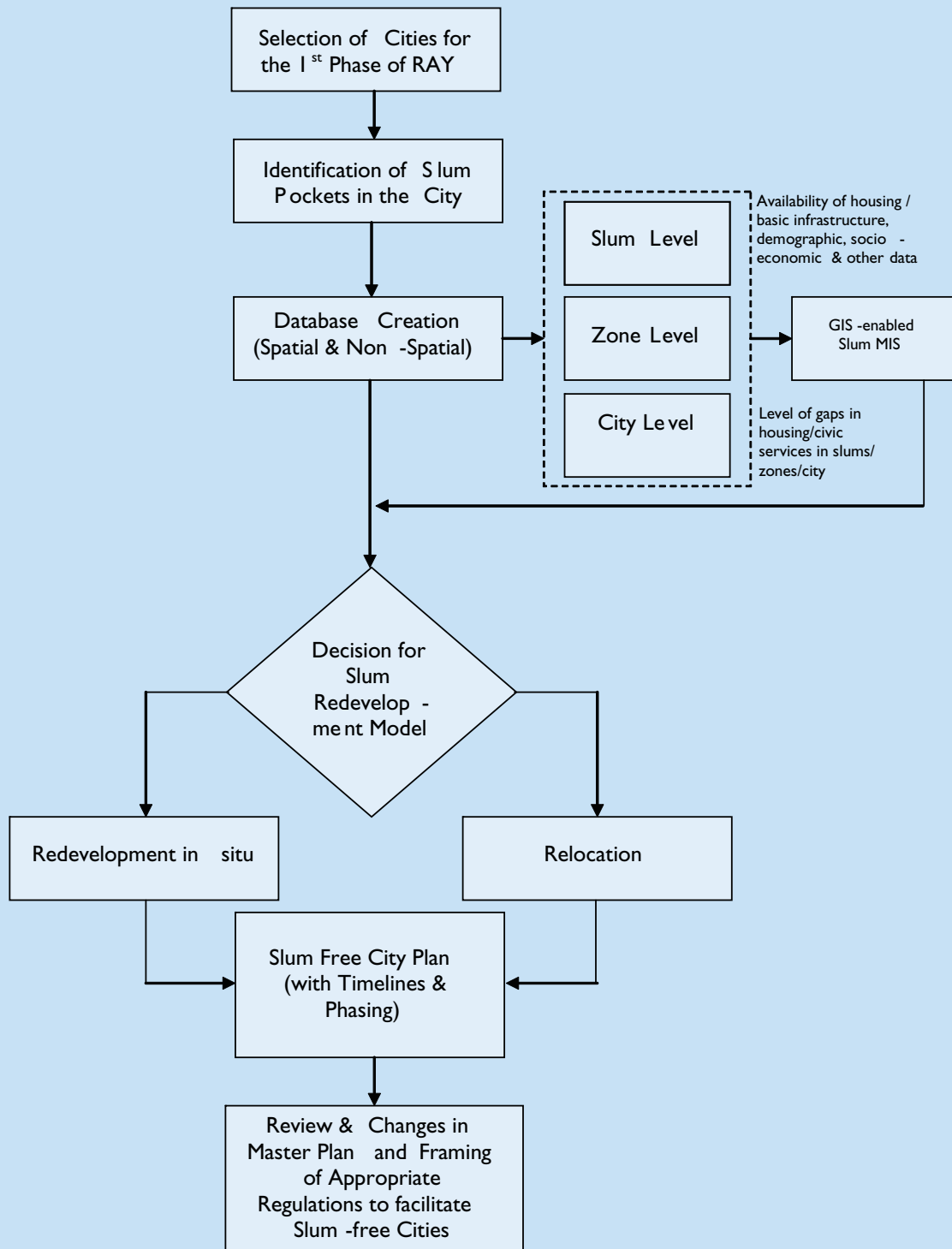
### **4.2 Planning Methodology**

The preparation of Slum-free City Plan will broadly involve Slum Redevelopment/Rehabilitation Plans based on (a) survey of all slums – notified and non-notified; (b) mapping of slums using the state-of-art technology; (c) integration of geo-spatial and socio-economic data; and (d) identification of development model proposed for each slum. Base maps to an appropriate scale would be a pre-requisite for the preparation of Slum Redevelopment Plan/Slum-free City Plan. States/UTs may need to proceed in the following steps for the preparation of Slum-free City Plans.

- (i) Securing CARTOSAT II/latest satellite images from NRSC/ISRO and preparation of base maps for the whole city and its fringes using the images;
- (ii) Identification and inventory of all slum clusters of all descriptions in the urban agglomeration with the help of satellite image and other available data;
- (iii) Inventory of all possible vacant lands in each zone of the urban agglomeration that could be used for slum redevelopment/ rehabilitation development purposes;
- (iii) Development of Slum Map of every slum within the city and its fringes using GIS with CARTOSAT II images, ground level spatial data collected through total station survey, collating spatial information with respect to plot boundaries, network of basic infrastructure like roads, sewerage, storm drainage and water lines, etc and superimposing this on the satellite image and importing them into GIS platform as the first step towards the preparation of Slum Development Plans and Slum Free City Plan. This may be undertaken with the help of technical partners of NRSC/ISRO/other technical institutions/agencies;
- (v) Identification and engagement of Lead NGO/CBO to guide and anchor community mobilization for the purpose of slum survey, (May be more than one NGO/CBO in different slum zones) of the city. These Lead NGOs/CBOs should also be associated in slum survey operations and dialogues for preparation of slum level redevelopment plans;
- (vi) Conduct of Slum Survey based on the detailed formats (with or without changes) prepared by the Ministry of Housing & Urban Poverty Alleviation with the help of National Buildings Organisation (NBO) - after due training of trainers, training of



### Diagram Methodology for Preparation of Slum-free City Plan: Conceptual Framework





- survey personnel /canvassers and canvassing. It would be helpful for community mobilisation to pick as many canvassers from the sourced slum or nearby slum pockets;
- (vii) Collection of bio-metric identification data of slum dwellers based on the above survey (subject to guidelines issued by Unique Identity Authority of India (UIDAI));
  - (viii) Entry of data from Slum Surveys in the web-enabled MIS application (to be provided by Ministry of HUPA), compilation and collation of data, preparation of Slum-wise, City and State Slum Survey Database and Baseline Reports. The MIS will assist in developing a robust Slum and Slum Households Information System. (Guidelines and software for development of the MIS will be issued by the Ministry of HUPA);
  - (ix) Integration of Slum MIS with GIS Maps to enable the preparation of GIS-enabled Slum Information System that is to be used for the preparation of meaningful Slum Development Plans and Slum-free City Plan using a city-wide/zone-based approach. (Guidelines and software for development of GIS platform and its integration with the MIS will be issued by the Ministry of HUPA);
  - (x) For each slum identified, Slum Redevelopment Plan to be decided based on models like PPP development, infrastructure provision only, community-based development through Rajiv Awas Housing Societies, etc. This decision-making should necessarily be done with the involvement of the community after community mobilisation and dialogue for deciding the model to be adopted. Each slum redevelopment plan should have the timeline against each of the activities; and
  - (xi) Preparation of Slum-free City Plan should be based on the development plans for all slums and strategies for the prevention of future slums, including reservation of land and housing for the urban poor. The Plan should contain timeline of activities for achieving slum-free city, phasing information and financial estimates against each of the activities.

The steps that will need to be adopted for guiding the State and City Governments in the above exercise have been described in greater detail in Annexure IV.

#### **4.3 Slum-free City Planning Team (State Government/ULB)**

It is suggested that the State needs to first establish a Slum-free City/Technical Cell at the State Nodal Agency level and in each city identified for the preparation of Slum-free City Plan. At the State level, the Secretary dealing with JNNURM/RAY will head the Slum-free City/Technical Cell, coordinated by the State Nodal Officer for RAY. The composition of the Cell will be decided by the State Government. At the city level, the Municipal Commissioner or Executive Officer of the Urban Local Body, assisted by the Additional/Deputy Commissioner/Officer in charge of Slums/Urban Community Development/Planning, will head the Slum-free City Cell, which will include the chiefs of all municipal departments. Each city included under RAY must be enabled to have a competent Slum-free City Planning/Technical Team which can undertake procurement and coordinate with various agencies such as: National Remote Sensing Centre (NRSC)/Indian Space Research Organisation (ISRO) and other Technical Agencies

The Technical Cell at the State Nodal Agency for RAY/Urban Local Body (identified for the preparation of Slum-free City Plan) may have the following experts on contract basis



selected on a transparent process (monthly remuneration will be commensurate with qualification and experience - not exceeding Rs.75,000 per month):

- MIS Specialist – I
- GIS Specialist – I
- Town Planning Specialist – I
- Social Development Specialist – I
- Project/Engineering Specialist – I and
- Capacity Building/Training Coordinator -I.

## 5. Government of India's Support

The activities for which the Centre intends to lend support towards the preparation of Slum-free City Plans to States/UTs would include:

### 5.1 Financial Support

- Conducting Slum Surveys in cities based on the detailed formats worked out by the Ministry of Housing & Urban Poverty Alleviation with the help of National Buildings Organisation (NBO), including training of trainers, undertaking training, canvassing and surveying for City/State MIS;
- Entry of data from Slum Surveys into MIS database, compilation and collation of data in MIS to aid preparation of City Slum-free Plans of Action;
- Development of City and Slum Base Maps using GIS - including cost of CARTOSAT II/latest images, spatial total station slum surveys, integration of Slum MIS with GIS Maps (to enable preparation of GIS-enabled Slum Information System that is to be used to prepare meaningful Slum Development Plans and Slum-free City Plans), procurement of hardware and software at State and ULB levels based on recommendation by the Technical Committee;
- Engagement of consultants/technical agencies/institutions for the preparation of detailed Slum-free City Plans for each selected City/Urban Agglomeration;
- Engagement of Lead NGOs/CBOs to guide and anchor community mobilization for Slum-free City in the selected Cities/Urban Agglomerations;
- Carrying out biometric identification survey of slum-dwellers and hardware for the storage of bio-metric information (excluding issue of biometric identity cards to the slum dwellers) - duly taking into account the imperatives of the Unique Identity Card initiative; and
- Training programmes in Slum MIS/GIS, Slum Mapping, Slum Development/Slum-free City and Slum-free State Planning, Project Management, Pro-poor Reforms etc. with the involvement of National Technical Institutions and National Network of Resource Centres.

### 5.2 Handholding/capacity development support

The Ministry of HUPA will be involved in developing Slum-free City/State Plan e-Tools and Manuals covering the following to aid the State/City Governments:

- a. Slum Survey MIS – e-Tool (including storage of bio-metric information) and Manual for the use of the same;
- b. Tool for Slum Mapping using GIS - drawing up guidelines for Slum Mapping exer-





- c. GIS-MIS integration and development of a dynamic tool “GIS-enabled Slum MIS” for being operated as a tool for Slum-free City planning and monitoring the implementation of Slum-free City Plans and projects. Software and Guidelines are to be developed for integration of MIS-based on Slum Surveys covering spatial and socio-economic data with GIS-based Slum Maps based geo-spatial data from sources of remote sensing/aerial surveys and ground level corrections;
- d. Manual for use of latest gadgets, tools and techniques required for GIS mapping of slums within the framework of Spatial Planning for cities. The Slum Mapping exercises have to keep in view the Master Plan framework;
- e. Step-by-Step Guidelines for drawing up Slum Development Plans, Slum-free City and Slum-free State Plans; and
- f. Guidelines for Reforms required to usher in Slum-free Cities and States.

In connection with the above activities and providing assistance to States/UTs as and when required, the Ministry of Housing & Urban Poverty Alleviation will establish a Technical Cell with composition and remuneration as indicated in para 4.3 and engage appropriate personnel on outsourcing basis. For the purpose of capacity building and training to State/City level officials and non-officials in various guidelines, manuals, tools and techniques for Slum-free City Planning, the Ministry will support select nodal institutions with specialised Capacity Building & Training Cells. These institutions would undertake capacity building/training programmes and provide handholding support to States/UTs in the following areas: (a) GIS Mapping, (b) Slum Survey & MIS, (c) Slum-free City Planning and (d) Legislative Framework for Inclusive City Planning.

## 6. Other Modalities of Scheme

- 6.1 The Slum-free City Planning scheme will be implemented under the guidance of a National Steering Committee under the chairpersonship of Secretary (HUPA) - composition at Annexure V. This Committee will steer and monitor the entire process of preparation of Slum-free City Plans by States/UTs in a time-bound manner. A Technical Committee (composition at Annexure VI) will guide the States/UTs through the formulation of operational guidelines in technical, costing, procurement of hardware/software, planning and other aspects and will assist the National Steering Committee.
- 6.2 States/UTs will be required to send Detailed Proposals seeking support under the Slum-free City Planning – Rajiv Awas Yojana scheme which will be considered by the Central Sanctioning & Monitoring Committee for JNNURM/RAY. Following the sanctions, funds will be released by the Ministry of Finance/Housing & Urban Poverty Alleviation.
- 6.3 The National Steering Committee for Slum-free City Planning – Rajiv Awas Yojana will monitor the financial and physical progress under the scheme.

**Annexure I****Slum-free India Vision:  
Some Key Policy Issues to be Addressed on Priority****Urban Planning:**

City master plans follow an exclusionary model that reserves land for housing for high and middle income groups, commercial, institutional, recreational and other uses, with no earmarking for Economically Weaker Sections and Low Income Groups. These plans are not in consonance with the income distribution structure of cities and towns. The norms of planning including density and development controls favour the comparatively better off sections. These factors, coupled with sky-rocketing urban land prices, have squeezed the urban poor out of formal urban land markets. Slums are an inevitable outcome of this deficiency in urban policy and planning. It is necessary that the master plans make provision for EWS/LIG categories by treating them as distinct segments for the purpose of land use and urban planning. There is also a need for 'small lot zoning' in layouts for housing approved by city authorities, creating EWS and LIG plots along with MIG and HIG. The population density norms also require a re-look, not only to rationalise them across cities, but, in understanding of the basic tenet that the poor are deprived of housing where land values are high, to enable better utilisation of valuable land by building vertically on it. It is necessary to catalyse and assist the review of these issues with capacity building and expertise.

**Land:**

Cost of land is a very significant component of the cost of housing. Not only the master plans but also state, development authority and urban local body policies in the past have made no provision for ensuring adequate supply of serviced land towards housing the EWS and LIG segments. In fact, some states and urban development authorities have resorted to auction of the limited land available with them in cities, setting exorbitant benchmarks for the market price of land. There is need for a well-defined policy for allocation of land to EWS and LIG segments to compensate for the 'historic lack of earmarked space' for them in the formal master plans. There is also need to continue, till completion and internalisation into practice, the reform of JNNURM for reservation of 20%-25% of developed land in all new housing colonies for EWS/LIG housing. In respect of slum areas, and in line with the practice followed globally in upgrading slums, the occupied land or a part thereof should be allocated to the slum-dwellers to enable them to have access to housing and basic amenities. Both reforms need to be pursued.

**Housing & Infrastructure:**

Affordable housing and provision of basic infrastructure in urban areas, especially slums, would generally require the intermediation of civil society, government and private entities that can engage the community, undertake planning, reconfigure slums to enable cost-effective provision of infrastructure facilities and construct group housing colonies.



Given the massive needs for affordable housing and the capacity constraints faced by public agencies like housing boards, urban development authorities and municipalities to take up group housing on a large scale, it is necessary to involve private sector entities in the creation of affordable housing stock on ownership, rental or rental-cum-ownership basis and in scaling up the programme to the desired scale. There is also a need for resource mobilisation and earmarking of resources by public agencies to meet the cost of affordable housing, civic infrastructure and services for the urban poor where the private sector participation is not possible.

### **Financing:**

Banks and other financial institutions are reluctant to lend to the EWS/LIG segments for affordable housing in view of perceived credit risks, these categories having no credit history and due to difficulties of foreclosure of loans. There is need for credit enhancement through appropriate fiscal, legal and institutional mechanisms, including intermediation of public and private housing agencies to ensure the flow of capital for this priority programme.



## Annexure-II

### **Rajiv Awas Yojana: Admissible & Inadmissible Components**

#### **Admissible Components**

The scope of RAY envisaged is as follows

- i. Projects involving -
  - a. Integrated development of all existing slums, notified or non-notified, i.e., development of infrastructure and housing in the slums/rehabilitation colonies for the slum dwellers/urban poor, including rental housing;
  - b. Development/improvement/maintenance of basic services to the urban poor, including water supply, sewerage, drainage, solid waste management, approach and internal road, street lighting, community facilities such as community toilets/baths, informal sector markets, livelihoods centres, etc. and other community facilities like pre-schools, child care centres, schools, health centres to be undertaken in convergence with programmes of respective Ministries;
  - c. Convergence with health, education and social security schemes for the urban poor and connectivity infrastructure for duly connecting slums with city-wide infrastructure facilities/projects; and
  - d. Creation of affordable housing stock, including rental housing with the provision of civic infrastructure and services, on ownership, rental or rental-purchase basis.
- ii. Capacity Building, Community Mobilisation, Planning & Other Support.  
Note: Land cost will not be financed except for acquisition of private land for schemes/projects in the North Eastern and hilly States, viz., Himachal Pradesh, Uttarakhand and Jammu & Kashmir.

#### **Inadmissible Components**

Projects pertaining to the following will not be considered for support under RAY:

- i) Power generation
- ii) Telecom
- iii) Employment generation programmes and
- iv) Staffing

### **Rajiv Awas Yojana: State Plan of Action**

1. The State Slum Free Plan of Action would need the State to prepare legislation for the assignment of property rights to slum dwellers/urban poor as the first step. The State Nodal Agency for RAY will coordinate all legislative and policy formulation/ implementation aspects of RAY. The legislative framework would cover all legislative issues necessary for redevelopment / rehabilitation of slums, including spatial planning norms covering density, development controls and other parameters.
2. The State plan of Action would require to identify the cities intended to be covered in five years, and their phasing, and commit to a 'whole city' approach, so that an integrated and holistic plan is prepared for upgradation of all existing slums, notified or non-notified, in each identified city. Within each city, in each slum taken up for redevelopment, a holistic coverage would be required, with provision of all basic civic infrastructure and services as well as decent housing, with emphasis on planned layouts (after reconfiguration of plots as per existing / modified building byelaws wherever necessary) and on total sanitation (by provision of individual toilets and water supply to each household). With regard to housing, flexibility of approach would be available with the state as to the manner of construction and arrangement of funds for construction, viz. to follow a beneficiary-built housing model with design and technical support from the Municipality/State, or to construct housing through state parastatal or private partners or by delineating a mix of methods. The POA would be required to describe the model proposed to be followed in each slum, the efforts for obtaining the community's participation and the financial strategy for holistic development. Annexure VII provides a list of possible models that States may consider.
3. The State POA would need to be in two parts, Part-I regarding the upgradation of existing slums and Part-2 regarding the action to prevent new slums with a 20 year perspective. In Part-2 the Plan would need to assess the rate of growth of the city, and based on the numbers specify the action proposed to be taken to obtain commensurate lands or virtual lands and promote the construction of affordable EWS houses as to stay abreast of the demand. This part would need also to make necessary legislative and administrative changes to enable urban land expansion, and in town planning regulations to legislate reservations for EWS/LIG housing in all new developments.
4. The Slum-free State Plan would include the following suggestive steps/actions:
  - (a) Preparation of State-wide Legislation –
    - For Assignment of Property Rights to slum households: The legislation should provide that the legal title is conferred either on the woman or jointly with the main male householder. Provision may be made for the legal entitlement to property to be on the house or on the land, as suits the cityscape. The title must be mortgagable and heritable, so as to enable access to formal credit mechanisms. It must be



alienable, after a certain number of years as decided by the State, during which period of time transfer back to the State should be permissible.

- (b) Other Legislations necessary would be for -
- Legislative changes for commitment to reservation of 10-15% of land in every new public/private housing projects or 20-25% FAR, whichever is greater, earmarking of 25% of municipal budget for the urban poor and provision of 7-Point basic services and entitlements to the poor as enlisted under the 7-Point Charter of JNNURM in order to make serviced land available for the poor for the future, and to prevent slums. Several states have issued executive orders as part of JNNURM reforms for this purpose – action would be required to give them the force of law;
  - Amendment to enactments governing town planning, urban development and municipalities to enable revision of population density norms, FAR, land use, etc. and permit local zoning and other relaxations required, for accommodation of *in situ* regularization to incentivise private sector participation wherever reasonably feasible and, for future requirements;
  - Amendment to legislations under which land is obtained for expansion of urban areas, to enable expansion of urban land at the expected rate of growth of the city. One of the main reasons for the haphazard growth of towns is the housing shortages and the slow pace of planned expansion, resulting in the mushrooming of unauthorized colonies that live outside the ambit of municipal services or taxation; and
  - Amendment to Rent Control Legislation, at least to the extent that will enable new rental housing stock to be created, and on terms governed by the market.
- (c) Identification and phasing of towns and cities to be covered: The States may decide if they want to cover all the towns and urban areas, or decide to choose on the basis of size or other criterion, taking PPP potential as one clear reason for the particular decision. This would require that Slum-free City Plans are prepared for the Mission cities and cities with the higher population and growth rates in the first instance. In the phasing within a city, priority in redevelopment would be required to be given to slums where the conditions are the most inadequate. The eligibility for central assistance of unauthorised colonies or regularised unauthorised colonies that are unserved by municipal services will, however, be predicated on the implementation of Part 2 of the State POA.
- (d) For each city identified, a whole city approach would be taken, to map all the slums, notified as well as non-notified, and all unauthorised colonies and regularised unauthorised colonies unserved by municipal services. In each city, a total slum survey would be carried out, with biometric identification, to identify each slum dweller (resident, rather than owner of the shanty) for purposes of conferment of rights. Identification would be made of slums that can be upgraded holistically on site, with or without enabling changes in land use and FAR; and those which are untenable and have to be relocated. With a whole city approach, vacant land inventory would be made. A citywide plan would be made to shift untenable slums to the nearest possible available vacant land or notified slum which has the space to receive them. Such slum mapping would also include mapping of the ownership categories of the encroached land viz. municipal, state, central government, public



sector undertaking and private in order to find or work out solutions for regularization and reconstruction suitable to each ownership category, ensuring land use modification, additional FAR wherever infrastructure permits etc., to create virtual space and provide incentives. The whole city approach would ensure that no slum is left out of the process of reconstruction and rehabilitation, either in situ or by relocation to another appropriate site.

- (e) In each slum, taking a whole slum approach, primacy would be given to the provision of infrastructure within a declared time frame. Every effort would be made to provide infrastructure, civic services on par with the rest of the town, and to create sufficient green spaces and civic amenities of community centre, livelihood centre, school, medical centre, etc wherever these are lacking; reconfiguring the arrangement of houses and plots to enable this. Special emphasis must be placed on the provision of total sanitation with individual water sealed toilets and water connections to each household. External connectivity for sewerage and water mains, wherever available in the vicinity, would be provided for, either under the JNNURM Sub-mission of UIG or UIDSSMT or directly.
- (f) In addition to existing slum upgradation, the commitment to a Slum-free Status would need to be spelt out by delineating the steps proposed to be taken, the projects to promote construction of affordable houses and the time lines. Such steps would include –
- assessment of the rate of growth of urban population in different cities and agglomerations;
  - assessment of the requirement of land and housing over the next two decades to meet this requirement taking into consideration the current population densities and available infrastructure;
  - review of the current urban land expansion approaches, models and mechanisms, and the delineation of the proposal for revision to enable expansion at the envisaged rate;
  - proposal to tackle the existing housing shortages and to meet the future requirements, especially for the EWS/LIG who are otherwise forced into extralegal spaces, and preferably through private sector and state parastatal involvement;
  - review of and proposal for revision of the town planning model (largely of differentiated land use and sprawl with thought to the location of EWS living spaces along transport nodes and corridors) and the population density norms; and
  - a timetable to introduce legislation to enable orderly town planning and growth.
- (g) Capacity building for town planning, and for review and revision of the urban land planning and development approaches must necessarily be a part of the Action Plan.

**Annexure IV****Guidelines for Preparation of City Slum-Free Plan of Action**

City Slum-free Plans of Action will require Slum Redevelopment/Rehabilitation Plans based on (a) survey of all slums - notified and non-notified; (b) database creation of slums using the geo-spatial technologies; (c) integration of spatial and socio-economic data; and (d) identification of redevelopment model proposed for each slum. It will also require policies and measure for the non-proliferation of growth of slums in the future.

States/UTs may consider the following steps for preparation of Slum-free City /Slum Redevelopment/Rehabilitation Plans subject to the stipulation that the entire process of slum-free city planning will have to be professionally managed and also be participatory, duly involving the slum communities, NGOs, CBOs, municipal elected representatives, including Mayors and Municipal Chairpersons, experts etc.

**Step 1: Preparation of Geo-referenced City Base Map****1.1 Inventory of existing Spatial Data**

The Slum-free City Cell at the Urban Local Body shall build an inventory of existing spatial data available with various agencies in partnership with the Technical Agency (ies) engaged for GIS Mapping. The Cell shall collect the existing digital/hard copy maps/data from State Governments, Urban Local Bodies, National Remote Sensing Centre (NRSC), Survey of India (SOI), National Informatics Centre (NIC), etc. In case such maps/spatial data (which meet the technical requirements specified by the Technical Committee at the National level) already exist for portions of urban agglomeration with different urban authorities or specialized agencies (e.g. DMRC in the case of Delhi), then these will need to be brought onto a common platform and integrated. The usability and accuracy/reliability of existing maps/spatial data would need to be checked through ground truthing exercises while integrating them.

Based on the availability of existing data - including those available from National Urban Information System (NUIS) scheme of Ministry of Urban Development (MoUD) being implemented by Town & Country Planning Organisation (TCPO) - and their usability, fresh data acquisition and the modalities for collection of the same will be determined by the Slum-free City Cell in consultation with the State Level Nodal Agency. The methodology, scale of mapping and standards for the above will be as prescribed by the National Technical Committee.

**1.2 Obtaining Satellite Image of the City and its Fringes**

1.2.1 CARTOSAT images (CARTOSAT I / CARTOSAT II images of 2.5 meter/1 meter resolution respectively) from NRSC/ISRO may be procured for city and its urbanising fringes, i.e. planning area boundary in order to prepare base maps. The likely urban extensions beyond the existing municipal limits in the next two decades may need to be included while procuring satellite images. This will be necessary in order to address the issues of slums in fringes (peri-urban) areas that are most likely to develop as the city expands. The





demarcation of planning area (for which images need to be procured for mapping purpose) 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.

- 1.2.2 The Slum-free City Cell in the Urban Local Body/State Nodal Agency will procure the required imagery from NRSC/ISRO and engage one or more Technical Agencies - partners of NRSC/ISRO such as State Remote Sensing Centre, other technically competent agencies in the public and private sectors and reputed institutions - for preparing base maps using the images.

### 1.3 **Geo-referencing of Satellite Images and preparing Base Map for entire Urban Agglomeration area**

Base Map for the demarcated area of the urban agglomeration (planning area) needs to be prepared at 1:5000 scale or other appropriate scale in GIS format using a standardised reference frame (which defines datum, projection) as decided by the National Technical Committee. This will be done by the Slum-free City Cell with assistance from the Technical Agency/State Town Planning Department/Urban Development Authority/State Remote Sensing Centre and others.

### 1.4 **Identification & Demarcation of Slum areas & Vacant Lands on Base Map**

- 1.4.1 Criteria for identification of slums as provided by the State Government under the relevant Slum Act or policy/executive instructions will be followed by cities. Slum-free City Cells in the Urban Local Bodies, with support from revenue and other authorities, including Urban Development Authority will prepare the list of slums in their respective areas (Ward/Zone-wise) which meet the above criteria. Cross-examination of the list in each zone needs to be undertaken based on the following exercises:

- (i) ULB list will be cross-checked with satellite image to check for any missing slum pockets, which will be added to the list.
- (ii) Simultaneously, satellite images will also be updated by identifying those slums which are not identifiable by their physical characteristics in the images - with the help of municipal officers and NGO/CBO representatives who will undertake ground truthing exercise.

Note: Ward and zone boundaries will be added to the map and slums will be categorized zone-wise. Where administrative/planning zones do not exist, the same will be prepared taking some contiguous wards into one zone of appropriate size.

- 1.4.2 Reputed NGOs/CBOs (with experience of working in urban slums) may be involved in both the above exercise for the identification of slums in each zone in the city and lead the community mobilisation process. Ideally, these Lead NGOs/CBOs should be identified and engaged through a transparent process during this stage, as the community rapport-building and mobilization process have to begin before the total station and socio-economic surveys start.



I.4.3 Vacant lands, which offer possibilities for accommodating slum population in a zone/within the same area, will need to be identified during this stage. Thus, an inventory of all possible lands that could be used for slum redevelopment 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 as to their appropriateness and adequacy to house the existing slum population, after exact data on slum densities are available from slum level spatial and socio-economic surveys. Other emerging city needs which are likely to arise in the future and which are crucial to city planning (example: transport nodes, BRTS, MRTS etc) also need to be kept in mind while making an inventory of vacant lands for the purpose of housing the slum-dwellers.

### **I.5 Delineation of Slum Areas and Mapping Slum Infrastructure with Total Station Survey**

I.5.1 After slum pockets are identified, detailed footprint of each listed slum settlement and parcel of vacant land available in the city will need to be mapped using total station survey, on a scale of 1:500 or larger scale as decided by the National Technical Committee. This will be geo-referenced with the base map and the exact area dimensions and contours of the slum pockets would have to be delineated on the base map and satellite images.

I.5.2 To determine the vulnerability of the slums to floods, it is necessary to create a digital elevation model of the slum and also the adjoining areas. The same is also to be done for inventoried vacant lands available in the city to identify their usability for relocation purposes. For this it is essential to carry out a contour survey, of appropriate intervals as decided by National Technical Committee. This would be particularly relevant to settlements in hilly / uneven terrains or settlements in flood plains. Those slum area lands (or portions thereof) found vulnerable should be declared as untenable. Similarly all the vacant lands which are prone to natural hazards like flooding, land slides etc. shall not be used for slum relocation purposes.

Note: It is important that Lead NGOs/CBOs start community mobilization exercise in each slum pocket simultaneously with or prior to the total station/socio-economic survey in order to avoid conflicts arising from mis-communication with the slum communities during the survey process.

I.5.3 During the total station survey various infrastructural facilities like water supply, drainage, roads, street lighting, schools, hospitals, community halls, etc. and other features, including underground utilities will also need to be mapped covering the slum pockets and their vicinities, to plan for the provision of basic services for slum dwellers in later stages. The underground utilities like water supply, sewerage/drainage, gas and cables can be mapped using ground penetrating radar. All the spatial and non-spatial infrastructure data may be captured using a combination of GPS technology, ground penetrating radar (GPR) and field survey. The utilities data thus captured will need to be integrated with the base map database. The same exercise will need to be done for vacant lands identified in case the lands are to be used for development and relocation of slum households.

Note: If the slums are very dense, total station surveying cannot be adopted due to inter-visibility problem. In such a case, a combination of plane table survey, total station survey



and/or satellite data may be considered.

- 1.5.4 Total station survey and other surveys could be a joint effort of the survey team of the GIS technicians of the Technical Agency/bidder/vendor and the Slum-free City Cell/Town Planning Wing of the Urban Local Body (ULB). The ULB personnel and representatives from Lead NGOs/CBOs may accompany the survey team to guide them in identifying various infrastructure networks and render help in the collection of required data.
- 1.5.5 The Technical Committee at the national level will provide guidelines for total station survey and mapping of various infrastructure and other features.

## Step 2: Slum Socio-economic Survey & Preparation of Slum MIS

### 2.1 Household Socio-economic & Bio-metric Surveys

- 2.1.1 Socio-economic survey will capture the details of slums and slum households in various slum pockets – land status, demographic profile, housing status, economic status, occupational status, access to infrastructure, household level information etc. The National Buildings Organisation (NBO) has circulated model formats for the conduct of slum, slum households and livelihoods surveys in cities and also a manual for the training of functionaries in slum survey operations and compilation of database. The survey formats may be adopted, with or without suitable modification as considered appropriate, by the State/UT concerned.
- 2.1.2 The bio-metric survey will capture the unique bio-identification marks for the head of the household and other members. This will be subject to the guidelines issued by Unique Identity Authority of India (UIDAI).
- 2.1.3 Data entry, data compilation, collation and analysis processes will take place simultaneously at the ward/zone level for all the information generated in the slum surveys. Data will be entered into a MIS format based on national guidelines/software developed by the Ministry of Housing & Urban Poverty Alleviation.

### 2.2 Mapping Land-ownership/Tenure Status

Land ownership/legal title may not belong to a single entity for the entire slum pocket or parcel of vacant lands. Therefore, mapping the land ownership titles/land tenure status for parcels of land within the demarcated slum area and vacant lands identified is necessary. This involves collecting information on land ownership details and plot boundaries from land revenue/municipal records for the entire slum pocket and vacant lands (being identified for relocation). While doing the exercise, land parcels with unclear/disputed titles will need to be identified to initiate dispute resolution process for getting clear land titles. All plot boundaries showing ownership/tenure status will be digitized and geo-referenced.

**Note:** Cities may combine the spatial and socio-economic surveys together or take them up separately depending on availability of competent and trained total station survey/slum survey teams.



### **Step 3: Integration of Spatial Data and Socio-economic (including Bio-metric) Information at Slum/City level to create GIS-enabled Slum MIS**

Digitized maps from total station survey, slum contour survey, land title information, socio-economic survey etc will all be put into different layers in GIS platform and integrated to enable data analysis using different parameters for the preparation of Slum-free City Plans. This step will involve the integration of slum socio-economic and biometric survey information into slum, zone and city level base maps on GIS platform. Based on the information generated from GIS-enabled Slum MIS, slums can be categorized based on parameters such as land value, slum density, socio-economic characteristics of slum dwellers, etc. This will enable data analysis to 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.

### **Step 4: Formulation of Slum Redevelopment Plans**

#### **4.1 Categorisation of Slums - Evaluating Options available to Slum Communities for Redevelopment**

4.1.1 The categorization of slums on a zonal basis 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 tenability /un-tenability, 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, semi-tenable or untenable. Untenable slums/vacant lands 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.

4.1.2 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 by the Slum-free City Cell/ULB based on critical considerations taking into account the key aspects - tenability, density, ownership and land price.

4.1.3 Guidelines will be issued by the National Technical Committee to identify untenable sites and for categorising slums.

#### **4.2 Reconfiguration of Slums - Choice Slum Redevelopment Model**

4.2.1 Based on the spatial analysis and situation assessment done, a participative process will need to be undertaken with slum communities with the assistance from Lead NGOs/CBOs to decide on the choice of the redevelopment/rehabilitation model – PPP, Viability Gap Funding, by Community, by Governmental Agency, etc. Annexure VII provides an indicative list of alternative slum redevelopment/rehabilitation/affordable housing models. 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 with incentives provided for relocation. While undertaking dialogue and deciding the slum redevelopment model due consideration must be given to exploring PPP and Viability Gap Funding options. Slums that can be developed on PPP model will be given preference.

- 4.2.2 Once slum communities decide the option best suited to them, the reconfiguration of slums and marking of internal plot boundaries will be done based on land pooling/amalgamation mechanism, taking into account the plan for internal infrastructure: water supply; sewerage; storm drainage; solid waste management; roads; power transmission lines and substations; parks and playgrounds; education and health infrastructure; livelihoods centres/ workplaces; informal sector markets etc. External infrastructure connectivities should also be planned simultaneously with internal infrastructure.
- 4.2.3 Each slum redevelopment/relocation plan will make arrangements for transit /temporary shelter as a part of the redevelopment/relocation exercise with definite timelines before the redevelopment/relocation process is initiated.

## **Step 5: Formulating Slum-free City Plan & Review/Modification of Master/Development Plan**

### **5.1 Formulation of Slum-free City Plan**

- 5.1.1 Slum-free City Plan (including the phasing of the Plan) would emerge after amalgamating all the different slum redevelopment plans and mechanisms proposed for redevelopment/rehabilitation of various categories of slums in the city.
- 5.1.2 The Slum-free City Plan is a short-term development plan for a period of 5 years and shall indicate the manner in which the city shall be made slum-free by carrying out redevelopment/rehabilitation of slums and undertaking preventive measures. The Plan shall include the existing status and proposals for Land Use and Infrastructure (external and internal). It will also include the Redevelopment/Rehabilitation models proposed for adoption.
- 5.1.3 The contents of Slum-free City Plan may cover the following aspects:
- Delineation of areas under slums and proposed relocation areas including vacant lands identified and their suitability for housing the slum-dwellers;
  - Spatial, demographic and socio-economic profiles of slums;
  - Land ownership (existing and post-redevelopment) of the slum areas and the proposed relocation areas/vacant lands;
  - Land values of slum area (based on land values in the vicinity obtained from Registration/Revenue Department) and proposed relocation areas;
  - Land use, FSI and other details of the slum areas and the proposed relocation areas (including any changes proposed in development control regulations to facilitate slum redevelopment or relocation);
  - Physical infrastructure within and in the vicinity of slums and proposed relocation areas including connectivity infrastructure: road network (within and in the vicinity of slums), other transport network (in the vicinity of existing slum pockets and proposed relocation pockets), water supply, sewerage, drainage, electricity and com-



- communication networks, and other physical infrastructure facilities;
- Social infrastructure facilities (education, health, banking, community hall, livelihoods centre, informal sector market etc.) in or near the slum pockets and proposed relocation sites;
- Shelter – existing status with respect to age, condition and height of structure and proposed changes including redefined plot boundaries;
- Tenurial Status - analysis of the existing tenurial arrangements between the owners and occupiers or any other parties involved; proposed tenurial arrangements, including assignment of property rights etc.;
- Choice of development model for housing and/or infrastructure – PPP, Beneficiary-built, Community-based, Public agency-led, etc.;
- Resource mobilization strategy;
- Implementation strategy, including phasing and monitoring and community mobilisation;
- Measures for preventing future growth of slums – reservation of land for EWS/LIG in all future housing colonies, undertaking affordable housing in partnership, adopting slum-free city policy, addressing regional and urban planning issues to make the same inclusive, etc.
- Public participation and stakeholders consultation undertaken and mechanisms put in place for resolving conflicts; and
- Institutional framework for the implementation of Slum-free City Plans – development of key institutions and building essential capacity.

## 5.2 Review/Modification to Master Plan/CDP

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.

## 5.3 Capacity Building Plan

Capacity building and training will be critical for the preparation and implementation of slum-free city action plan. This will need to cover both institutional and HR capacity needs. The Slum-free City Plan will specifically include the Plan for Capacity Building which will be supported by the Centre under the scheme following the guidelines and scales approved under the Toolkit for Financial Support for Comprehensive Capacity Building for Improved Urban Governance and Poverty Alleviation.

Note: Detailed technical guidelines and manuals will be prepared by the National Technical Committee and circulated to States/UTs to facilitate the preparation of Slum-free City Plans.



**Slum-free City Planning  
Composition of National Steering Committee**

1.	Secretary, M/o, HUPA	Chairperson
2.	Chairman, ISRO & Secretary, Dept. of Space	Co-Chair
3.	Principal Secretary, MA, Govt of Andhra Pradesh	Member
4.	Principal Secretary, UD, Govt of Gujarat	Member
5.	Secretary, Housing, Govt of Maharashtra	Member
6.	Secretary in charge of Guwahati Development, Assam	Member
7.	Joint Secretary & Financial Adviser, MoHUPA	Member
8.	Representative from CEPT, Ahmedabad	Member
9.	Representative of SPA, New Delhi	Member
10.	Director, NRSC/ISRO, Hyderabad	Member
11.	Administrator, Haryana Urban Development Authority	Member
12.	Principal Commissioner, Planning, Delhi Dev. Authority, New Delhi	Member
13.	Director, Town Planning & Valuation Deptt, Govt of Maharashtra	Member
14.	Director, Town & Country Planning, Govt of Gujarat	Member
15.	Director General, Centre for Good Governance, Hyderabad	Member
16.	Chief Planner, TCPO, New Delhi	Member
17.	Mission Director & Additional Secretary (JNNURM/RAY), MoHUPA	Member Convener



## Annexure VI

**Composition of Technical Committee for  
Preparation of Slum Free City Plan**

Sl.No	Name/Designation	
1.	Mission Director & Additional Secretary (JNNURM/ RAY), MoHUPA, Government of India	Chairman
2.	Shri M. N. Vidyashanker, Principal Secretary, Personnel & AR Deptt, Government of Karnataka, Bangalore	Member
3.	Dr. Rajiv Sharma, Director General, Centre for Good Governance, Hyderabad	Member
4.	Dr. V. Jayaraman, Director, NRSC Hyderabad	Member
5.	Dr. V. S. Hegde, Director, EOS, ISRO, Bangalore	Member
6.	Dr. P. G. Diwakar, Associate Director, EOS, ISRO, Bangalore	Member
7.	Dr. P. S. Roy, Deputy Director, RS & GIS- AA, NRSC/ISRO, Hyderabad	Member
8.	Dr. V. Raghavaswamy, Group Director, NRSC/ ISRO, Hyderabad	Member
9.	Dr. Y. V. N. Krishnamurthy, Deputy Director, RRSC, NRSC/ISRO, Hyderabad	Member
10.	Dr. S.K Pathan, Head, GIDD, SAC/ISRO, Ahmedabad	Member
11.	Dr. T.P.Singh, Director, Director, BISAG, Ahmedabad	Member
12.	Director, Town Planning, Town & Country Planning Department, Govt. of Andhra Pradesh	Member
13.	Chief Town Planner, Town Planning & Valuation Deptt., Govt. of Gujarat	Member
14.	Director, Town Planning & Valuation Deptt, Govt. of Maharashtra	Member
15.	Dr. K. Mruthyunjaya Reddy, Director, APSRSC, Hyderabad	Member
16.	Dr.Vinod Bothle, Director, MRSAC, Nagpur	Member
17.	Chief Planner, TCPO, New Delhil	Member
18.	Director (JNNURM), MoHUPA	Member
19.	Director (NBO) & OSD (JNNURM/RAY), MoHUPA	Member- Convenor

Note: On the advice of the above committee any other members (based on their expertise) if required may be co-opted or invited to the technical committee.



### Models of Slum Redevelopment/Rehabilitation including Affordable Housing in Partnership

The models below are illustrative and not exhaustive.

Model	Model Description	Central Government Support	State/ULB Support	Role of Private Developer	Contribution/ Loan by Individual Beneficiaries
<b>Slums – In Situ Redevelopment</b>					
I	High Value Land – PPP Model for both Housing & Infrastructure		Land Availability; Zoning/FSI Incentives including TDR	Bid based on No. of Free Houses (Ownership/ Rental) offered	Contribution towards cost of Housing only
II	Medium Value Land – PPP Model for housing and infrastructure	Share of Viability Gap Funding	Land Availability; Zoning/FSI Incentives including TDR; Share of Viability Gap Funding.	Bid based on Extent of VGF support sought	Contribution towards cost of Housing
III	Low Value Land – Slum Dwellers' Cooperatives	Share in Infrastructure and housing Subsidy & 5% Interest Subsidy on Housing Loan	Land Availability, Zoning/FSI Incentives including TDR, Share in Infrastructure and/or housing capital subsidy	Construction with state govt/ULB supervision and involvement of beneficiaries	Equity Contribution + subsidised Housing Loan
IV	Low Value Land – Public Agencies	Share in Infrastructure and housing Capital Subsidy & 5% Interest Subsidy on Housing Loan	Land Availability, Zoning/FSI Incentives including TDR, Share in Infrastructure and/or housing subsidy		Equity Contribution + subsidised Housing Loan
V	Infrastructure Provision only – Beneficiary-led Housing	Share in Infrastructure Cost; 5% interest subsidy for housing loan	Land Availability, Share of Infrastructure and housing subsidy	Personalised construction under technical supervision of the state/ULB	Subsidised loan for Incremental Housing/New Housing



Model	Model Description	Central Government Support	State/ULB Support	Role of Private Developer	Contribution/ Loan by Individual Beneficiaries
<b>Slums – Relocation</b>					
VI	High Premium area – PPP Model for both Housing & Infrastructure on public land		Land Availability; Zoning/FSI Incentives including TDR/ free sale component	Bid based on No. of Free Houses offered	Contribution for Housing only
VII	Medium premium area – PPP Model with VGF on public land	Share in Viability Gap Funding, Capital Subsidy and/or 5% Interest Subsidy	Land Availability; Zoning/FSI Incentives including TDR, Share in Viability Gap Funding	Bid based on extent of VGF sought	Equity Contribution and/or subsidised Housing Loan
VIII	Relocation on Private Land	Share in Viability Gap Funding, & 5% Interest Subsidy on Housing Loan	Zoning/FSI Incentives including TDR, Share in Viability Gap Funding		Equity Contribution and subsidised Housing Loan with Capital & Interest Subsidy
IX	Relocation on Public Land – Conventional model Through Public Agencies	Share in Infrastructure Costs, Capital Subsidy & 5% Interest Subsidy on Housing Loan	Land Availability, Zoning/FSI Incentives, Share in Infrastructure Costs	-	Equity Contribution, subsidised Housing Loan
<b>Affordable Housing for the Urban Poor</b>					
X	Affordable Housing in Partnership – Public-Public, Public-Private, etc.	Share in Infrastructure Costs @ Rs.50,000 per unit of Affordable House, 5% Interest Subsidy on Housing Loan	Land Availability, Zoning/FSI Incentives including TDR, external development where required		Equity Contribution subsidised Housing Loan with 5% Interest Subsidy



**Rajiv Awas Yojana:**  
**Template for Financial Requirements/Assistance for Activities at**  
**City level under Slum Free City Planning**

Name of State:

Name of City/Urban Agglomeration:

Sl. No.	Item of Preparatory Activity (Indicative only, subject to modification by CSMC/Ministry of Housing )	Parameter for Estimation of cost	Estimated amount required (Rs. in lakhs)	Timeline (Month by which the activity will begin & end)
<b>1. Slum Surveys (and related capacity building activities) in City for Slum MIS</b>				
1.1	Estimated cost for socio-economic survey (including printing of forms, canvassing, etc)	Based on an estimate of slum population /Number of Households in all slum pockets in the city & its fringes		
1.2	Estimated cost for bio-metric identity capture of all households in slums (including cost of hardware and training for capture and storage of bio-metric information, but excluding cost of issuing bio-metric cards)	Based on an estimate of slum population /Number of Households in all slum pockets in the city & its fringes		
1.3	Cost of training of trainers, conducting training for slum volunteers, related community mobilization activities by NGOs during survey, etc	Based on number of trainers and slum level volunteers to be trained and proposed community awareness/ mobilization activities/ events		
<b>2 Development of web-enabled Slum MIS System</b>				
2.1	Entry of data from Slum Surveys, data verification and cleaning, compilation and collation at zone level (Including cost of data entry and data collation, training of personnel at zone level, cost of hardware for such entry and storage at zone level for Slum-wise and zone wise database). The collation should be able to generate web-enabled city level database and baseline reports for city level technical cell	Estimate cost based on total slum households in each zone		



Sl. No.	Item of Preparatory Activity (Indicative only, subject to modification by CSMC/Ministry of Housing )	Parameter for Estimation of cost	Estimated amount required (Rs. in lakhs)	Timeline (Month by which the activity will begin & end)
<b>3. Development of City Base Map &amp; Slum Maps using GIS with CARTOSAT I / CARTOSAT II / Latest images</b>				
3.1	Cost of Satellite (CARTOSAT I / CARTOSAT II) images - to be procured from ISRO/NRSC	Estimate based on urban agglomeration area to be mapped & associated, number of images to be procured		
3.2	Preparation of Geo-referenced base map (capable of being integrated into GIS platform) of entire urban agglomeration after digitization of different features (including cost of engaging technical partner agencies of NRSC/ISRO)	Estimate based on area to be mapped & associated features to be geo-referenced and digitized		
3.3	Conducting total station survey, contour survey, plane table survey & creation of geo-referenced digitized maps for all identified slum pockets and vacant lands in the city (including mapping of basic infrastructure network - in & around slum pockets & plot boundaries based on land titles). This will include cost of engaging technical agency(ies), training of ULB survey personnel engaged in directing of slum spatial survey, activities for community mobilization or involvement of NGOs for facilitating spatial surveys, etc	Estimate based on cumulative area of all slum pockets and vacant lands identified (considering slum densities for high density slums where multiple types of survey techniques might have to be employed)		
3.4	Cost of integrating the said geo-referenced maps/spatial data into GIS platform and integrating with socio-economic database /slum MIS to create GIS-enabled Slum MIS (This will include cost of engaging technical agency (ies), cost of training ULB officials, cost of hardware for storage of spatial data, large format printer/plotter for printing of maps, etc)	Based on the number of slum households and cumulative area of slum pockets & vacant lands surveyed / mapped.		



Sl. No.	Item of Preparatory Activity (Indicative only, subject to modification by CSMC/Ministry of Housing )	Parameter for Estimation of cost	Estimated amount required (Rs. in lakhs)	Timeline (Month by which the activity will begin & end)
4.	Preparation of Slum Redevelopment /Rehabilitation Plans, Zonal Plans and City level Slum-free Plans of Action.			
4.1	Analysis of spatial and socio-economic data to create city level spatial and socio-economic reports to facilitate slum level dialogues for developing slum redevelopment /rehabilitation plans. These works are to be undertaken by reputed consultants in partnership with lead NGOs – all to be selected through a transparent process.	Based on aggregate slum population and number of thematic layers to be created for each slum, zone or city		
4.2	Activities for dissemination of information and dialogues with different stakeholders (including slum communities by engagement of NGOs/CBOs to guide / anchor community mobilization for slum redevelopment/ rehabilitation plans in each slum/zone.	Estimate cost of number of activities and slum groups to be supported based on the Slum households and slum densities		
4.3	Detailed works for the preparation of Slum-free City Plans with slum level spatial reconfiguration, socio-economic plans, project level details, etc. These works are to be undertaken by reputed consultants in partnership with reputed NGOs- both to be selected through a transparent process	Based on aggregate slum population and number of slum plans and their aggregate area for each zone and/or city		
5.	Detailed Cost of any additional Training Programmes required in relation to Slum MIS/GIS, Slum Mapping, Slum Development/Slum-free City and Slum-free State Planning, Project Management, Pro-poor Reforms etc. with the involvement of National Technical Institutions and National Network of Resource Centres.	Estimate cost based on number of days of training and number of participants and Number of technical personnel / trainers involved		



Sl. No.	Item of Preparatory Activity (Indicative only, subject to modification by CSMC/Ministry of Housing )	Parameter for Estimation of cost	Estimated amount required (Rs. in lakhs)	Timeline (Month by which the activity will begin & end)
6.	Administrative & Office expenditure including establishment of Technical Cell with staff at city level for facilitating and guiding all the above activities (not exceeding cumulative of 5% of above costs)			
	Total			

Signature of Municipal Commissioner with Stamp:

Signature of State Secretary with Stamp:





**Additional Secretary & Mission Director (JNNURM)**

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