



# Technical Assistance Consultant's Report

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## India: Promoting Inclusive Urban Development in Indian Cities

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India

For Ministry of Housing and Urban Poverty Alleviation (MoHUPA)

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**Asian Development Bank**

# Market-based Mass Housing Development Strategy for Sustainable Inclusiveness of Cities in India: Challenges and Opportunities<sup>1</sup>

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## Abstract

The paper reviews a few international historical precedents of affordable housing and examines the sustainability of current Indian affordable housing policy. The historical experiences examined suggest that heavily-subsidized public housing, pro-poor housing finance subsidies, site-and-service programs, and slum rehabilitation schemes would be hardly sufficient to bridge the increasing supply-and-demand gaps in low-income housing segments, and it is inevitable that sustainable solutions have to come from the market for creating mass housing stocks which comprises both owned and rental housing. An assessment of the Rajasthan Affordable Housing Policy suggests that an integrated approach of urban development and housing is essential for achieving the sustainable housing development solutions. An important shortcoming of the approach is that it is mainly supply driven, ignoring the importance of providing housing options for people based on their demand, particularly in rental housing. A viable housing development framework would necessarily entail a two-pronged strategy, which comprises (existing) in-situ slum rehabilitation, wherever they are viable, and (yet-to-be-properly-established) demand-responsive, market-based mass housing development promotion and management. Although these perspectives are reflected in the national affordable housing guidelines, this paper primarily focuses on articulating the latter part of the two-pronged strategy and examines the enabling conditions required for attracting private sector investments in mass housing provision through an integrated strategy of (mass) transit-oriented development and private sector housing development. The paper examines in detail the land value capture mechanism for enabling the public-sector entities responsible (e.g., urban local bodies) to invest in mass transit infrastructure and providing serviced urban lands for affordable housing development. The paper proposes establishment of affordable housing development facility for sustainable and inclusive urban development, and pro-poor mass housing provision by managing the funds generated through the land value capture mechanism.

## 1. Background and Introduction

There is a growing recognition that establishing strategies for integrating local economic development and spatial development is critical to enable the cities and towns in India to play their roles in promoting inclusive development, particularly meeting the housing

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<sup>1</sup> The paper presents some of the urban development perspectives being discussed under ongoing ADB TA 7148-IND: Promoting Inclusive Development in Indian Cities with technical inputs from TA National Team (Arup Khan-Team Leader, Archana Karvande Aleti-Urban Planning Specialist, Madhusudan Sharma-Finance Specialist, Krishna Chaithanya-Municipal Engineer, Vishnu Venugopalan-Planner, and Ruchi Khurana-Knowledge Management Specialist). The paper does not represent the view of ADB Management, or ADB Board and the governments the Board represents, and the authors are responsible for all observations and recommendations made in the paper.

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demand in particular for the poor and low-income households. This warrants a paradigm shift in the way urban administrators and planners approach urban development. Willingness to grow out of the models of infrastructure retrofitting and livelihood perspectives of inclusiveness to a more demand-responsive, market-based development strategy and resource management perspectives would be essential for realizing sustainable inclusiveness of Indian Cities.

The exponential growth of urban areas, both in terms of space and population, experienced during the past two decades has resulted in the deterioration of quality of life for a large number of urban population, and they are excluded from the economic prosperity registered in the urban areas. Despite the best intentions, there are some serious challenges that current Indian inclusive urban development processes would face. These are widely being discussed. However, it is desirable to summarize them even at the cost of repetition. Infrastructure and urban service inadequacies in urban areas are major constraints for India's sustainable urban economic growth, and urban local bodies continue to face the infrastructure deficiency due to the lack of long-term urban development policy framework and urban economic development strategy, paucity of resources, weak institutional capacity, and a lack of political will to introduce urban reforms required for sustainable inclusive growth of cities. Rationalization of urban planning and land development processes coupled with a combination of pro-poor land management, housing and human development approaches are vital for addressing housing poverty among the urban poor and low-income communities in the country.

Although, under the current institutional dispensations, both central and state governments have significant roles to play in providing infrastructure, services and housing in urban areas, the limited success of public housing and slum upgrading programs have shown that market-oriented strategies and processes of creating housing and improving its affordability for poor households should be added to formulate the latter part of the two-pronged approach for successfully addressing the housing problems in India. Given the growing housing demand-and-supply gaps in the economically weaker sections (EWS) and low-income groups (LIG) and unviability of the current public housing and subsidized affordable housing programs to meet these gaps, India does not have any option but to engage the market to create mass housing provision options to bridge the gaps.

**Objective and Scope of the Paper:** The main objective of the paper is to examine the relevance of the demand-driven, market-based affordable housing provision framework for India. Review of Indian and international experiences suggest that subsidized public housing, pro-poor housing finance subsidies and site-and-service programs such as slum rehabilitation schemes would be hardly sufficient to bridge the increasing supply-and-demand gaps in low-income housing segments, and it is inevitable that sustainable solutions have to come from the market for creating mass housing stocks which comprises both owned and rental housing. An appropriate housing development framework would necessarily entail a two-pronged strategy which comprises in-situ slum rehabilitation, wherever they are viable, and demand-driven, market-based mass housing development

management strategies. Although these perspectives are reflected in the national affordable housing guidelines, this paper primarily focuses on articulating the latter part of the two-pronged strategy and examines the enabling conditions required for attracting private sector investments in mass housing provision through an integrated strategy of (mass) transit-oriented development and private sector housing development. The paper examines the land management mechanism required to capture land values to be created through urban infrastructure development for enabling the urban local bodies to further investment in urban infrastructure, particularly housing development to be made possible by means of development of mass transit systems, and it also looks into the enabling conditions for promoting rental housing in the country. The paper also explores the opportunity to establish affordable housing development facility to plow the funds to be generated through the land value capture mechanism back into infrastructure development and mass provision of affordable housing, in particular for low-income households.

**Organization of the Paper:** The paper is organized in four sections. Section 1 provides the context of urban development, and outlines the objective and scope of the paper. Section 2 attempts to review national and international strategies and practices in affordable housing development and lists up some of the challenges faced in promoting inclusive urban development, particularly for meeting the “housing for all” objective of the national government. Section 3 presents an additional policy framework for promoting market-based mass housing development policy in proper balance with the current policy framework, including direct provision of public housing and subsidized housing development. This section discusses key components of this strategy, such as (mass) transit-oriented development of cities, rational land development controls, and down-marketing of housing loans for creditworthy low-income households. Finally, Section 4 discusses the way forward for implementing the market-based mass housing development strategy and some policy recommendations for the consideration of the government.

## 2. Review of Current Affordable Housing Policy and Models

The Ministry of Housing and Urban Poverty Alleviation (MoHUPA)<sup>4</sup> has estimated the housing shortage at 24.7 million units in 2010, wherein 99 percent of this shortage is related to the households belonging to the EWS and LIG segments. This shortage is expected to touch 38 million units by 2030<sup>5</sup>. The concept of affordable housing is described as housing which costs less than 30 percent of the household income, in spite of the fact that this income measure of affordability is questionable in the context of the EWS segment, particularly in the context of growing divergence between the income growth of poor households and the increase in land and house costs<sup>6</sup>.

**Affordable Housing Guidelines:** Government of India formulated National Urban Housing and Habitat Policy (NUHHP) in 2007 that aims to ensure equitable distribution of

<sup>4</sup> Report presented by technical group on Estimation of Urban Housing Shortage, MoHUPA, 2006

<sup>5</sup> Monitor Group India Report (2010)

<sup>6</sup> The RESIDEX estimate developed by the National Housing Bank indicates that most cities in India have witnessed a growth of 1.5 in housing prices since 2009.

land, shelter and services by promoting “various types of public-private partnerships for realizing the goal of “affordable housing for all”. Considering scarcity of urban land and rising housing prices, NUHHP proposed regional and inclusive planning approaches and recommended mandatory land management initiatives<sup>7</sup> to ensure provision of adequate land for the urban poor. The policy defined government’s role more as a facilitator/regulator in earmarking land for the development of EWS/LIG social housing and relied on public-private partnerships for the actual provision of infrastructure and housing.

The Government subsequently formulated Guidelines for Affordable Housing in Partnership (GAHP) in 2009<sup>8</sup> so as to tackle problems of land for housing, the rising home prices and high rents. GAHP is a guiding document for all state governments to formulate their own state-specific affordable housing policies. The guidelines, which are dovetailed with the Rajiv Awas Yojana (RAY) program, outlines various types of public-private partnerships envisaged. The guidelines emphasize on adopting innovative approaches to land development and housing construction practices for ensuring affordability for the urban poor. These include provision of government lands at nominal prices, floor area ratio (FAR) topping-up as an incentive for private developers, concessional financing, reduced stamp duties and financial assistance for cost effective technologies and building materials, etc.

The guidelines also propose direct cash subsidy for EWS/LIG housing and provision of basic services, and focuses on developing mixed-income dwelling, with at least 25 percent of the total number of units reserved for the EWS/LIG categories. Similarly, rental housing projects and dormitories with an upper ceiling in rents are proposed as options for accommodating new migrants<sup>9</sup>. The guidelines encourage private sector participation wherein private developers are selected to implement affordable housing projects on government or privately-owned lands through a transparent bidding process. In return, the private developers are incentivized by zoning-related incentives that include FAR topping-up, transfer of developmental rights (TDR) and reduced stamp duty. Cost of construction is expected to be brought down by employing more cost-effective technologies, cross-subsidizing by using the premiums earned from the sale of medium-and-high-income dwelling units or commercial spaces, and by providing concessional institutional funds for construction. Since the current affordable housing policy is built around the ownership, as opposed to rental, model, beneficiaries are screened based on the eligibility criteria listed in the policy and houses are allotted to people through a lottery system.

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<sup>7</sup> Preparation/updating of Master Plans, Zonal Plans, Metropolitan Plans, District Plans and state-level Regional Plans, etc. To meet the urban land demand, the policy also stresses the requirement for new Integrated Townships and green-field development that can be established at a reasonable distance from medium and large existing towns with efficient connectivity that can be made possible by developing mass rapid transport corridors between them.

<sup>8</sup> GAHP was first come into effect in 2009 under Jawaharlal Nehru National Urban Renewal Mission (JNnum) program. This was later merged with RAY in 2011.

<sup>9</sup> The size of such rental units will be decided by respective states based on the requirements of the concerned target population. This idea is in its nascent stage and needs to be detailed considering necessary legal and financial requirements.

In the absence of a transparent beneficiary selection process, the risk of allotting units to ineligible households would be a serious concern. Furthermore, this direct provision arrangement of owned units is quite likely to end up with some beneficiaries cashing in their units informally (in the black market), which would further proliferate the already complicated informal housing ownership/leasing arrangements. Experiences from some countries suggest that employing low-income people targeted under such projects for the construction of the very housing units could improve affordability and ownership of the people. The high-density, high-rise housing complexes being constructed under the various models, however, would not provide such opportunities linked to livelihood activities.

**Lessons Learnt from Rajasthan Affordable Housing Policy:** Among all the state governments, the Rajasthan Government was one of the fastest in formulating its own state-specific affordable housing policy. The basic principle behind the various Affordable Housing Models formulated by the Rajasthan Government based on GAHP is the provision of additional FAR (double in most cases) and the permission either to develop other land granted to or owned by the private developer using the additional FAR, or to sell additional FAR to other developers through marketable TDR instrument, in exchange for developing a minimum of the 40% of the total number of units of the scheme for the EWS/LIG categories and handing them over to the government for free. Effectiveness of this approach to address the housing needs of the urban poor depends on a few necessary conditions discussed below.

Selection of sites in terms of infrastructure and service accessibility and land quality/suitability is an important issue. Except for the slum rehabilitation model<sup>10</sup> in which in-situ redevelopment of slum lands are predetermined, investment viability of all other models is determined by the availability of land, access to livelihood centers/workplaces for the poor, and access to basic infrastructure and services such as bus transport, water supply, electric supply, schools and health care facilities. Since large parcels of land are available mostly in urban fringes farmlands, these models could result in urban sprawl overburdening already financially-weak urban local bodies,<sup>11</sup> high commuting cost for the occupants, and high vacancy of the units built.

Efficient use of additional FAR would require proper land use zonal plans and clear guidelines for using the additional FAR transferred across various zones. In the absence of this, most developers would use the additional FAR in already congested urban areas, leading to inefficient vertical development, or other areas which they happen to own,

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<sup>10</sup>The Strategy entails five operational models; such as Model 1 (mandatory provision for EWS/LIG units in the housing projects constructed by Rajasthan Housing Board (50%), Jaipur Development Authority (25%) and private developer (15%), if the private sector proposed to avail FAR concession provided in model 2, Model 2 (private developer on private land if proposes to avail additional FAR and government subsidy, Model 3 (Private developer on acquired land), Model 4 (private developer on government land), Model 5 (slum rehabilitation scheme).

<sup>11</sup>In urban areas, current infrastructure-related taxation is inadequate and does not cover the actual cost of development and service provision. Additionally, under the affordable housing policy, a part of the taxes is waived to attract private developers to affordable housing development.



leading to further urban sprawl. Sustainability of these models requires a well-articulated land management practice, in particular decent subdivision code, integrated with city mobility plan and coordinated access improvements to urban infrastructures and services for the housing units to be developed for low-income households.

The financial viability of most of these models would depend on the risk profiling of beneficiaries and the implementation of efficient loan guarantee/credit enhancement mechanisms. A variant of the model that involves private Community Based Organization (CBO) partnership has an opportunity to promote rental housing, provided the investment plan of the developer is built around a viable revenue model. However, absence of professionally-run CBOs who have the intent and expertise to partner with developers and provide the social collaterals would be a serious constraint for scaling up this model.

In terms of scalability and meaningful contribution to achieving mass affordable housing stock creation, a restructured model of model 2 and 4 for enabling private sector financing for large residential complexes is more suitable, provided the state and local governments concerned can formulate enabling conditions through rational land management policy, in particular establishment and enforcement of proper subdivision code, and proper assessment and collection of external development charges, and zoning (i.e., FAR) regulations, and encourage private financing for large-scale housing with viable mix of housing options. In addition to regulated green-field projects, it is also desirable to incentivize the private sector to carry out so-called “infilling”. Care should be taken to avoid unsustainable conversion of agriculture land into urban land (i.e., urban sprawl) while guiding private sector investments toward orderly urban expansion.

The role of insurance as a risk-mitigation mechanism and the importance of stipulating building codes to ensure disaster risk reduction are not included as part of these policies. Since there is a serious risk of sub-standard construction for cost cutting for achieving the profit margins, it is important to ensure minimum structural specifications through proper regulations. Since most of these models would require large equity commitments from developers, either to purchase lands or to meet the building construction costs and external development charges, a large percentage of the developers would require mezzanine financing assistance. In this context, it is advisable to establish affordable housing development facility. The proposed facility could be funded with the funds to be generated through the land value capture mechanism augmented by the shelter fund being proposed by the government. Such an arrangement would also improve the co-financing opportunities from external development partners.

**International Experiences in Affordable Housing Development:** A review of international historical precedents in affordable housing development suggests that countries tackle the problem of affordable housing through a combination of slum rehabilitation and market-based mass housing provision solutions. Depending upon the market and housing affordability conditions of urban population, they fine-tune these strategies to meet the sociopolitical objectives. Broadly, the housing strategies could be divided into the following typologies; direct provision of subsidized public rental housing

(Singapore, Hong Kong); market-based affordable housing based on credit and other subsidies to the private sector (China); serviced land, cash and credit assistance to poor households for new housing and home improvements (Thailand, Cambodia, Philippines, India); market-based private housing with special assistance such as development of serviced land and investment subsidy for affordable housing (USA, Japan, Australia); in-situ slum rehabilitation through non government organizations or private sector through instruments such as additional FAR and TDR (Brazil, India and other countries in Latin America and Asia). Except in the case of countries such as Singapore, Hong Kong and China, most policies focused on private ownership housing rather than public rental housing.

Direct provision of subsidized public rental housing coupled with subsidized housing mortgage assistance to low-income households during the early phase of housing interventions, which later moved on to ownership public housing supplemented by private sector housing for higher-income households has been very successful to address the housing needs of low-income households (Singapore and Hong Kong). The transition from direct provision of subsidized public rental housing to credit-and-subsidy-supported, market-based provision of affordable public housing followed in China is a variant of this model. In China, before 1979, the rule of thumb was that a family should not spend more than 3% of its income for housing. The rents charged by the government for housing were, therefore, so low that they were not even enough to pay for housing maintenance. After economic and housing reforms were launched in 1979, market-based housing was introduced and various credits and other subsidies were extended to households to access housing. At present, about 80% of public housing in China has been sold to residents through the market and about 94% of urban residents own some form of private housing. For households who could not afford market housing, housing subsidies are provided by the government to avail of rental housing.

Availability of land for affordable housing in locations accessible to work places of low-income households is a challenge in many countries. Even though the policy incentivizes private developers to use private land for (affordable) housing projects, the role of government in guiding the development of land for residential developments through land consolidation/pooling and provision of trunk infrastructure and services toward orderly urban expansion needs to be stressed. Land (re)adjustments and planned development of trunk infrastructure, including public transit, and financial incentives for affordable housing are some of the common threads in the housing policies implemented in developed countries. While high-density vertical development of housing is common, in particular for central business districts (CBDs), some countries followed low-rise, high-density development models (Japan, Vietnam). A major advantage of the latter model is that it allows incremental housing improvements based on the economic constraints and housing needs of families.

Country	Strategic Guidelines for Affordable Land & Housing Development
Cambodia	<ul style="list-style-type: none"><li>• Provision of developed lands for low-income households for housing in</li></ul>



Country	Strategic Guidelines for Affordable Land & Housing Development
	suitable locations supported by improved transportation networks and disaster risk reduction initiatives
China	<ul style="list-style-type: none"> <li>• Municipalities lease agriculture lands and lease the converted and serviced plots to private sector for constructing affordable housing units.</li> <li>• Establishment of “Real Estate Management Bureau” for providing legal, financial and property management services to people</li> <li>• Partnership between real estate developers, private enterprises and municipalities in the ratio of 5:3:2</li> <li>• Tax and financial supports to real estate enterprises engaged in affordable housing to the extent of 15 to 30% of construction cost</li> </ul>
Philippines	<ul style="list-style-type: none"> <li>• Mandatory provision of developed lands and affordable housing units for the use of low-income households</li> <li>• Basic Services for Urban Poor program supplemented the public housing programs implemented by the Government.</li> </ul>
Hong Kong	<ul style="list-style-type: none"> <li>• Housing Authority is responsible for providing housing for all low-income households, who cannot afford private rental housing. In 2003, nearly 3% of the total population lived in public rental housing numbering about 676,900 flats. Public housing did not differentiate people based on income, the main objective was to provide “housing for all”.</li> <li>• The Government provides two types of subsidy to producers of housing as well as consumers of housing.</li> <li>• The producer subsidy includes free lands, capital subsidy for social housing.</li> <li>• Transition from public rental to owner housing is part of the current housing development strategy of the government. Since low-rise small flats constituted a large part of the public housing, with the sale of these units to low-income households, private sector housing is targeting medium and income households.</li> <li>• Establishment of Transport and Housing Department under which transit companies are enabled to build infrastructure and housing in a coordinated manner along transit corridors.</li> </ul>
Thailand	<ul style="list-style-type: none"> <li>• The <i>seng</i> rental system in which tenants pay a large part of the rent up front and a nominal monthly rent for long-term tenancy contract has addressed the housing problem of low-income households, particularly new immigrants to a great extent.</li> <li>• The social acceptance of the <i>seng</i> system assures the property right of house owners.</li> <li>• Down-marketing of housing finance through the CODI has addressed concessional housing finance to poor and low-income households.</li> </ul>
Brazil	<ul style="list-style-type: none"> <li>• Infrastructure development is an integral part of housing development programs. Provisions to use ground floor for economic activities and ownership of houses in the name of women are important elements of</li> </ul>

Country	Strategic Guidelines for Affordable Land & Housing Development
	the program.
USA	<ul style="list-style-type: none"> <li>• Inclusive zoning wherein 5% of the extra FAR is provided as an incentive for affordable housing. The land value capture mechanism, betterment charges, levied on special assessment areas is used for infrastructure development and accessing community funds through municipal bonds. Private developers are given density bonus, tax incentives when they incorporate affordable housing units, and the relevant public agency absorbs part of the land cost.</li> <li>• Developers are given the TDR incentive for developing downtowns.</li> </ul>
South Australia	<ul style="list-style-type: none"> <li>• The strategy stresses on the transit-led development, infrastructure in both residential and industrial zones, housing and employment land supply through the participation of local government and private sector. The Land Management Corporation releases green-field land to private developers through rezoning and transit development.</li> <li>• To meet housing and employment targets, the state launched the Housing and Employment Lands Supply Program that allows supply of zoned land for residential and employment development for 25 years.</li> </ul>
Singapore	<ul style="list-style-type: none"> <li>• The strategy is direct provision of built public housing, constituting nearly 85% of the total housing stock. The eligibility conditions have been significantly relaxed over time as the housing conditions improved.</li> <li>• Currently extended families with S\$12,000 per month can avail of public housing, while it was pegged at S\$1,000 in 1960.</li> <li>• Highly-subsidized concessional mortgage financing, mortgage rate was fixed at 0.1% above the Central Pension Fund saving rate.</li> <li>• The Housing Development Board provided various housing options for rental and owned housing, encouraging the housing filtering process.</li> </ul>
Japan	<ul style="list-style-type: none"> <li>• The land readjustment schemes implemented by the government have been a powerful factor for incentivizing private sector investments in housing.</li> <li>• The transit-led development process has encouraged low-rise, high-density suburban expansions before WWII and high-rise, high-density suburban expansions after WWII of Japanese cities.</li> </ul>

### 3. Policy Framework

The most conventional housing policy followed by many countries in their early stage of urban development phase was mass provision of developable (serviced) land through the provision of trunk infrastructure, in particular access road/ public transport, water supply and sanitation, and electric supply. Mass provision of housing, either by public agencies or private real estate developers, or both, was thus made possible. For various reasons, such mass provision of developable land has not happened in India yet. To cope with this policy failure, slum rehabilitation scheme (SRS) emerged as a pro-poor housing policy in India.

While SRS could supplement mass provision of housing, it would hardly contribute to the mass provision of developable housing.

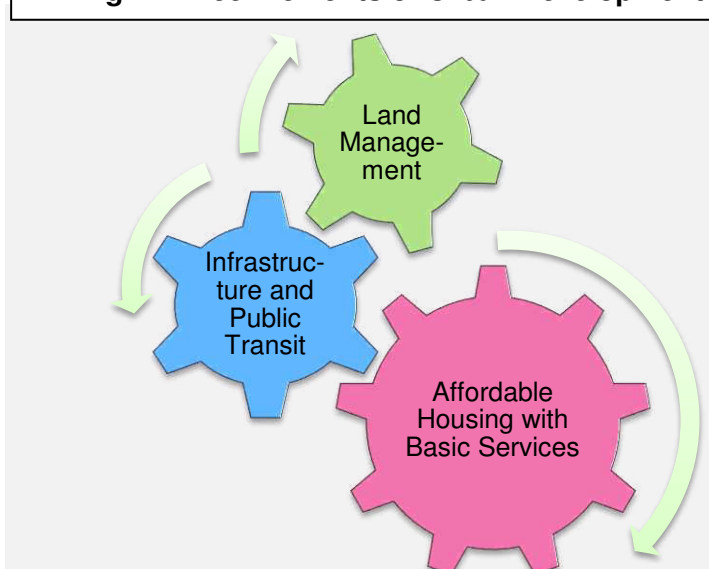
This would pose a large number of institutional and operational questions, such as:

- Why the proposed fiscal and financial incentives formulated by the government failed to attract private developers to enter the low-income housing segments in a big way?
- What are the institutional and economic constraints experienced by the private developers to invest significantly in affordable housing? and
- How can urban local bodies approach (mass) transit-oriented development, particularly with respect to the use of cost-effective bus transits and enabling affordable housing development?

Answers to these questions would feed into the development of a framework for addressing the housing needs in urban areas of the country. The framework would examine the current policy and land development issues, particularly access to land and housing of households, infrastructure and land development, zoning and FAR policy, and financing issues experienced by the housing sector players. Past experiences in housing development process suggest that incremental subsidized public housing program implemented by the government is not adequate to solve the growing housing shortage in urban areas. Even though slum population constitutes a large percentage of the urban low-income segment facing serious housing issues, the slum rehabilitation scheme, which is a reactive, remedial effort, can only be a supplementary means to a demand-driven, market-based supply-side strategy enabling private sector to create mass housing stocks, primarily meeting the housing demand of low-and-middle-income households.

A main challenge of many cities is their inability to manage the three elements of inclusive urban development, i.e., (a) managing the rigidities of land uses; (b) infrastructure and transportation linkages between suburbs and urban cores, and within cities; and (c) provision of affordable housing with basic services.

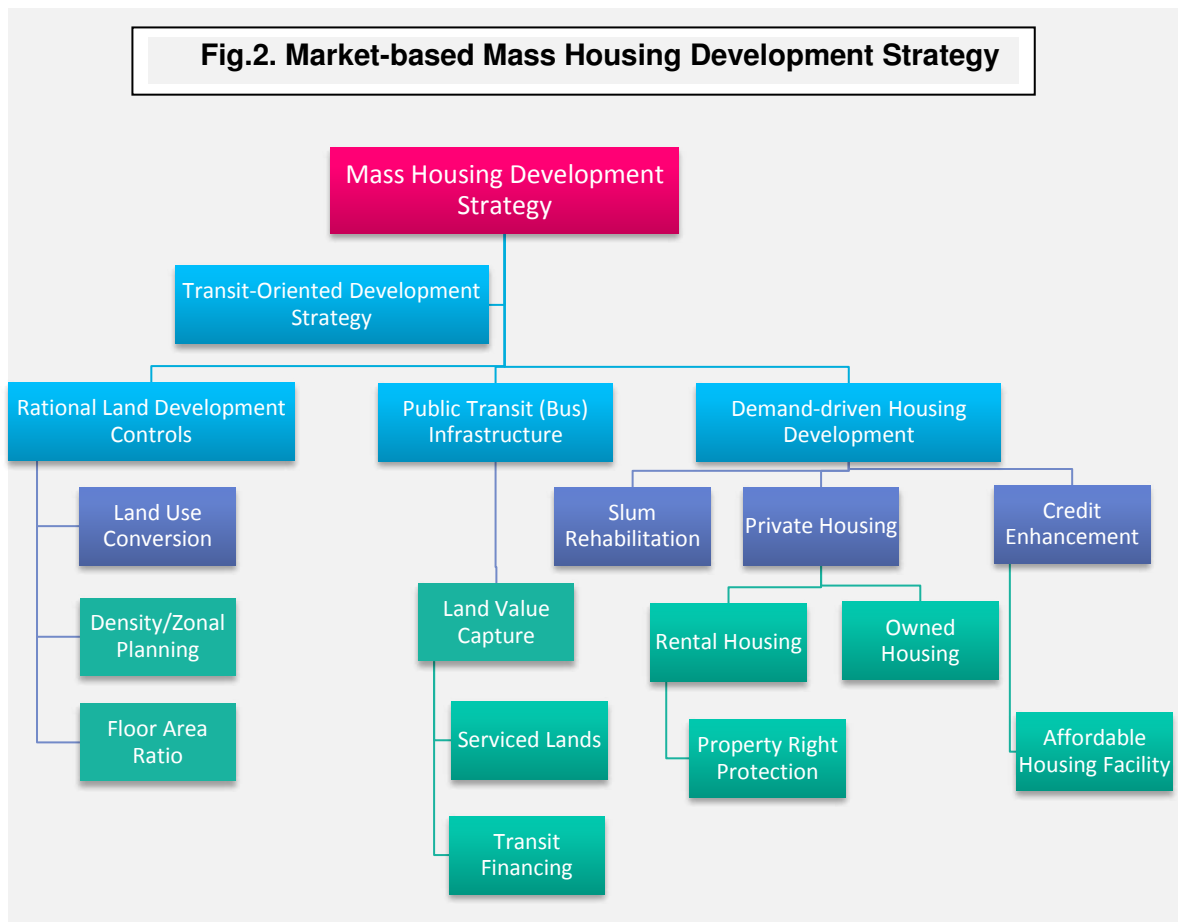
**Fig.1. Three Elements of Urban Development**



The ever-increasing migration and a lack of robust institutional support for various providers of housing often leave the housing needs of low-income segments under-served/neglected. The primary concern is that housing development is approached in isolation from the provision of urban infrastructure, particularly to access to public transportation and basic services, and affordable

housing is treated as part of welfare agenda of the state even though, in most developed countries, owned and rental housing stock creation is addressed through the demand-driven, market-based mechanism for providing various housing options to households. While NUHHP and GAHP formulated by the government are a welcome departure from the public housing approach followed in the past, its main limitation is that it is still a supply-driven approach, rather than a market-driven mass housing development approach, based on the demands.

Given the scale of housing shortage in the urban India, particularly among the urban poor and lower-income households, it is evident that the subsidy-based housing financing approaches will never be able to address the growing supply-and-demand gaps in low-income housing and it is pertinent that the government looks for market-based solutions. Since the current affordable housing policies formulated by the central and state governments rightly discourage unsustainable urbanization and uncoordinated development of urban infrastructure and housing, there is an urgent need to link urban infrastructure with housing and encourage (mass) transit-oriented development of new residential neighborhoods both within the development planning (DP) area and urban fringes. This strategy should go parallel with efficient land management, strengthening of the institutional and financial capabilities of public and private agencies involved in infrastructure and housing development, promotion of rental housing options and down-marketing of housing credit through credit enhancements and other financing mechanisms for enabling low-income households to purchase/ rent housing units.



Government of India's GAHP encourages extensive cross-subsidization within each housing development scheme to provide affordable housing. However, most of the large schemes initiated by private developers through PPP took place in undeveloped areas outside the DP area, far from public transport, basic urban infrastructure trunk lines, and basic urban services including schools. This means the policy in its present form would simply legitimize urban sprawl and building up contingent liabilities for the government to carry out inefficient and expensive retrofitting of basic urban infrastructure later on in an opaque manner. Also, affordable housing units being developed under these schemes are very small, owned walk-up flats with no possibility of self-help incremental expansion. Low-rise, high-density housing development model, under which incremental expansion is possible, has been successfully implemented in Japan<sup>12</sup> to create mass housing stock and it could be a desirable model for India, where incremental expansion could be carried out through self-help. However, availability of efficient public transportation services such as bus rapid transit (BRT) systems is the most fundamental prerequisite for the viability of low-rise, high-density housing development.

**Fig.3. Urban Density of Tokyo**

<sup>12</sup>The overall FAR of metropolitan Tokyo is less than 2.

<b>Average Number of Stories of Tokyo</b>		
Tokyo Fire Department (2012)		
	Central Wards	Suburbs
Wooden	1.62	1.39
Fire-Resistant Wooden	1.99	1.93
Semi-Fireproof	2.18	1.83
Fireproof	3.99	3.24
Average Number of Stories = Total Floor Area/Total Building Footprint		
Floor Area Ratio (FAR) = Total Floor Area/Total Plot Area		
Therefore, FAR cannot be larger than Average Number of Stories for any given particular case.		

**(Mass) Transit-Oriented Development:** (Mass) transit-oriented development (TOD) is a concept of urban development aiming at efficient, sustainable, livable and inclusive “compact city” that relies on extensive use of public transportation systems rather than private vehicles. Neighborhoods developed under the TOD concept usually consists of a center with a public transit node (bus stop or train station) surrounded by high-density development with gradually lower-density development spreading outward from the center. For example, Tokyo's average estimated actual FAR<sup>13</sup> generally tapers off as it gets farther away from the (hypothetical) center of the metropolis (i.e., vicinity of the Japan Railways, or JR, Tokyo Central station) – steeply from about 700% (center) to about 150% (10km from center) for commercial land use, and gradually from about 200-250% (center) to about 120% (10km from center) for residential land use, respectively. As Tokyo Metropolis has a polycentric urban form, there are sub-centers around some of the JR Yamanote (Loop) Line stations, including Shinjuku, Shibuya and Ikebukuro which are about 5-8km from the center, where FARs are about 250% for commercial land use, and about 160% for residential land use, respectively.<sup>14</sup> TOD concept has been applied in many countries in a variety of forms such as planned development of suburban expansions, development of new towns, and high-density, mixed-land-use development in downtown areas that are vibrant, pedestrian-friendly, and genuinely integrated with transit.

Demographic shifts, such as increased immigration, higher percentage of the urban poor and older populations, would also contribute to increased demand for higher-density urban forms with decent access to public transit. To meet the growing demands for public transit, many cities are embarking upon significant expansions of existing transit facilities while

<sup>13</sup> The average estimated actual FAR figures are net of public land such as roads, parks, etc., and the distinction between commercial and residential is based on current land use, which may not necessarily be the same as land use zoning.

<sup>14</sup> Para 3.2.3 of the Annual Economic Report dated 15 August 1986 published by the then Economic Planning Agency (now Cabinet Office), Government of Japan, which used data from the Current Land Use Survey (1981) by Tokyo Metropolitan Government.



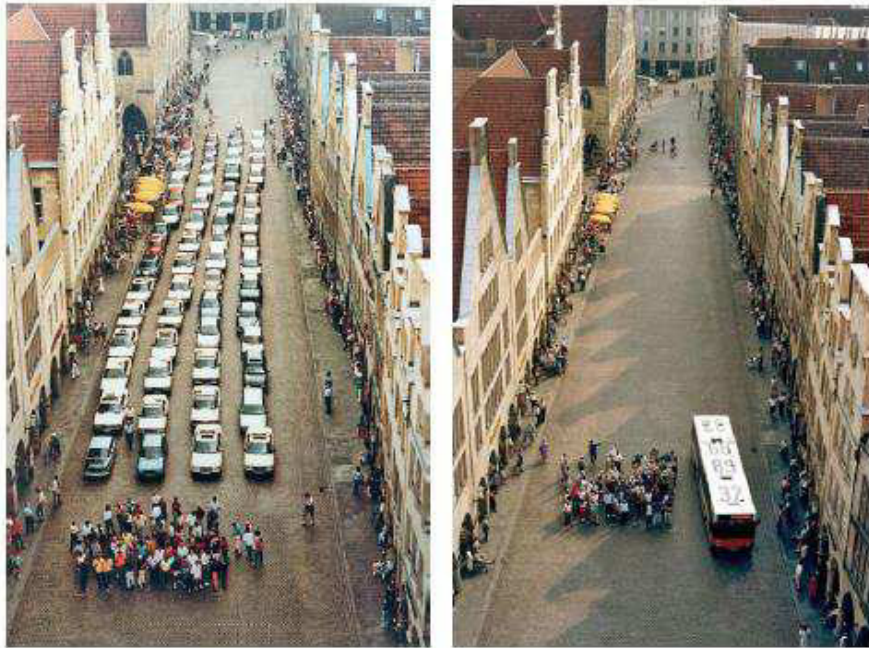
others are beginning to plan for brand-new public transit development. Because of these changing demands, some areas close to transit nodes have become increasingly expensive, shutting out low-income households in search of convenient and affordable transit access, at times pushing them to urban fringes. Therefore, it is advisable to ensure various housing options for diverse economic demands, including an ample supply of affordable rental units, for successful implementation of TOD concept. Variety of housing options should help promote vibrant, diverse neighborhoods that provide more community character than traditionally more homogenous housing complexes.

The urban mobility planning initiatives taken by the Ministry of Urban Development (MoUD) under the Jawaharlal Nehru National Urban Renewal Mission (JNnurm) is very encouraging in this context. JNnurm cities planning to invest in urban transportation are expected to implement key reforms including preparation of a Comprehensive Mobility Plan, establishment of a unified mass transit authority, parking policy and adoption of a transit development strategy. Under this provision, India has launched its Bus Rapid Transit (BRT) system projects in 14 cities covering nearly 465km. Successful implementation of the BRT by Ahmedabad Municipal Corporation has triggered an interest in bus-based public transit systems in Pune, Pimpri-Chinchwad, Surat, Indore, Rajkot, Kolkata, and Hubli-Dharwad to name a few.

The most fundamental prerequisite for implementing TOD is, of course, establishment of decent public mass transit system in the first place. The most fundamental prerequisite for establishing decent public mass transit system, in turn, would be consensus among general public and unshakable political will to give priority to the (bus) transit corridors because metro rail (subway or elevated rail) option would be too expensive for developing countries like India to be a viable option. Experiences of BRT adoption indicate strong resistance from motorists (users of private vehicles). However, there is no option other than persevering until consensus among general public sinks in and fundamental behavioral change of ordinary middle-income people takes root such that use of public transport (and some walking) becomes a fact of urban life.

**Fig.4. Private Vehicles vs. Bus (to move the same number of people)**

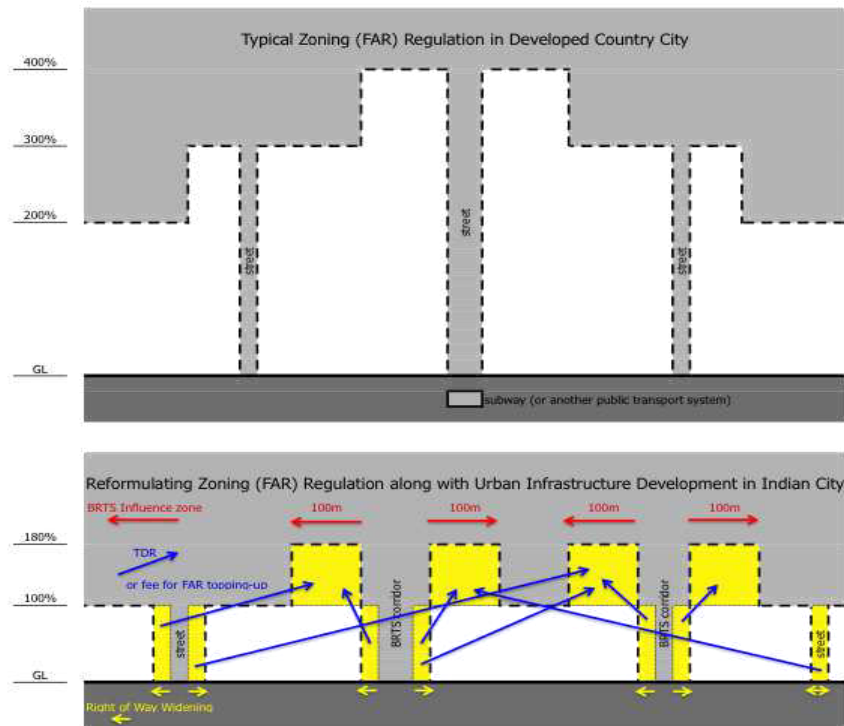
**Fig. 2.57 and 2.58**  
*These images compare  
the amount of space  
required to move the  
same number of persons  
by private vehicles (left  
photo) and by public  
transport (right photo).*  
Photos courtesy of the City of  
Muenster Planning Office



**Fig. 2.59**

Courtesy: ITDP (Bus Rapid Transit Planning Guide)

**Fig.5. Corridor Densification under TOD Concept**



International experience of TOD also suggests a few policy and management issues. Those who can afford tend to prefer the convenience and comfort of private vehicles until traffic congestion becomes intolerable level, which, indeed, would help commuters opt to use public mass transit system. Efficient implementation of TOD in existing urban areas would, however, require implementation of layers of plans such as regional plans, comprehensive city development plans, special area plans and zoning ordinances. Because regional institutions and local governments often lack coordination and individual towns and cities rarely work together, retrofitting transit corridors is challenging. On the other hand, green-field TOD (e.g., historical private rail-led suburban expansions in Japan, new towns in many countries, etc.) could be more straightforward and simple. It would be worthwhile to explore such green-field TOD opportunities, possibly under some public-private partnership arrangement.

Finally, TOD is a new enough concept for developing countries like India in that there is no clear path or “definitions, standards, or road maps for developers to follow” (Dittmar & Ohland, 2004)<sup>15</sup>. Investors or builders are risk-averse. Some have also argued that because there is no market and no incentives “for more compact, mixed-use development near transit,” there is not much TOD supply. These problems all need to be addressed for efficient TOD implementation.

<sup>15</sup>Dittmar, Hank and Gloria Ohland, eds. *The New Transit Town: Best Practices in Transit-Oriented Development*. Washington, DC: Island Press, 2004.

Having mentioned all these issues and precautions, however, densification will happen over time as long as the public mass transit maintains a healthy level of ridership because the role of the public mass transit to play as a “magnet” for various urban functions and activities is so powerful. What happened in many cities in Japan over about a century is now being re-played in Ahmedabad. Of course, not all Indian cities will succeed in the establishment of a decent public mass transit system and corresponding/subsequent TOD. Some would probably remain heavily reliant on private vehicles with chronic traffic congestion like Los Angeles. But, at least, India now has Ahmedabad as a reference point for alternative urban development model.

Some of the key development guidelines for integrated development of transit and housing would include the following (Homes & Hermet, 2008)<sup>16</sup>.

**Sustainability Factors:**

- Income variance in TOD neighborhoods (the greater, the better);
- Number of housing units per hectare at various distances from public transit node (bus stop or train station) (increasingly higher toward the node);
- High percentage of residents living along transit corridors using transit;
- Compatibility of mixed land uses; and
- Business enterprise development in transit corridor areas.

**Land Use Control Strategies:****Removing Obstacles**

- Remove restrictions requiring uniform housing development in certain areas so as to increase housing options for diverse needs and demands;
- Minimize planning and discretionary review time for standardized projects; and
- Remove or set more reasonable minimum parking requirements in zones along transit corridors.

**Incentives**

- Encourage affordable housing options by providing density and/or height bonuses for providing residential units at specified affordable prices; and
- Provide affordable mortgages.

**Regulations**

- Allow zoning to reflect increased housing choices in zones along transit corridors;
- Create customized zoning for projects integrating transit facilities;
- Strategically design locations of buildings and entrances to buildings to be more pedestrian, bicycle, and transit user friendly;
- When planning communities from the ground up, ensure small, pedestrian-friendly city blocks; and
- Specify minimum densities and/or height requirements in the immediate vicinities of transit nodes.

<sup>16</sup>Joe Homes and James Van Hermet, Transit Oriented Development, <http://www.law.du.edu/images/uploads/rmlui/rmlui-sustainable-transitOrientedDevelopment.pdf>

**Strategic Issues:**

- Conduct dialogues between city planners and city transit agencies to help plan transit node locations most likely to benefit from TOD;
- Work with transit agencies to ensure frequent, high-quality services integrated with housing development;
- Work closely with regional development agencies to ensure a coherent vision of high-capacity transit connections between regional centers; and
- Appropriate building design and street design guidelines.

**Land Use Controls:** One question often asked in the planning practice relates to the impact of land use controls such as zoning, in particular FAR regulations, on the land and housing prices. Cheshire & Sheppard (1989)<sup>17</sup> found if all the planning constraints are removed, the floor area of a planned city would increase by 50% and this would result in a reduction in land prices because, in the absence of zoning, density and other development controls would increase the average lot size and size of housing. Even though some would argue that development controls are not objectionable per se, the parameters used are often arbitrary and were set without taking into account the demand side of the market and efficiency of city structure and consequently, land use regulations such as minimum parcel size and low FAR would reduce developed land areas and increase prices (Bertaud A, 2002)<sup>18</sup>. It is also observed that regulated urban development through planning instruments such as low FAR has led to an increase in commuting cost of people and result in a reduction in the welfare gain (Brueckner & Sridhar, 2012)<sup>19</sup> to the society.

Lack of availability of land for affordable housing projects that are located close to the work place of low-income families is a serious problem faced by most cities in India. Conversion of acquired agriculture land for residential use by the urban local body is a common approach. In the absence of coordinated development of housing and infrastructure, particularly public transportation, these green-field projects lead to urban sprawl and unsustainable urbanization. Global experiences suggest that a policy of urban “infill” development, rather than green-field development outside the existing urban areas, is more sustainable and efficient. A recent study of real estate market in Bangalore suggests that development controls such as low-density zoning have prompted unregulated urban growth and illegal conversion of agriculture lands resulting in increase in urban sprawl and residential land market inefficiency (Edadan & Ravindra, 2013)<sup>20</sup>.

**Land Value Capture:** In practice, a large number of land value capture mechanisms are used to leverage concessional building regulations along public mass transit corridors,

<sup>17</sup>Cheshire P C and Sheppard S, British planning policy and access to housing: some empirical estimates Urban Studies, 26, 1989

<sup>18</sup>Alain Bertaud, The economic impacts of land and urban planning regulations in India, India-Urban land reform, Memo, The World Bank, 2002

<sup>19</sup>Jan K Brueckner, K S Sridhar, Measuring welfare gains from relaxation of land-use restrictions: The case of India's building-height limits, Regional Science and Urban Economics, 2012

<sup>20</sup>Narayanan Edadan, A Ravindra, A structural analysis of unregulated urban growth and residential land market efficiency: A case of Bangalore, draft paper for publication, 2013



nodes or hubs for investment in urban infrastructure improvements. At the macro level, even though building regulations may reduce the land price of individual plots, it could increase the price when the regulations affect all plots and, thus, restrict overall housing supply. As the city grows, the greater demand for buildable urban land generally results in added values if the infrastructure supports a high-density mixed-use development and the zoning regulations also permit higher-density. The approach to promote intense development along the public mass transit corridors, nodes and hubs by relaxing building regulations such as FAR is often treated an efficient mechanism to attract private investments and financing infrastructure.



**Fig.6. Saigon South, Ho Chi Minh City (<http://johnkriken.com>)**

There are many mechanisms being practiced to capture the incremental land value generated from the changes in land uses, zoning and development controls. The most common among them are tax increment financing, development impact fees, special assessments in some developed countries, and in India instruments such as betterment levy and external development charge are common. These are mostly used towards financing additional infrastructure costs and also providing social services. Experience from some of the cities in India attempting to initiate BRT suggest that the land value capture could be a powerful instrument to finance infrastructure improvements as well as developing housing along public mass transit corridors, nodes and hubs.



**Rental Housing:** In spite of the fact that rental housing is the most logical housing option for immigrant population including both poor and salaried families, and that nearly 30% of the households in India are living in rented houses<sup>21</sup>, there is an inherent bias for ownership housing both in public and private housing. Historically, rent control and “tenancy rights overriding private property rights” and social welfare agenda followed by the government are some of the reasons for formulating the public policy bias in favor of ownership-driven public housing provision programs. Housing was treated as one of essential human needs such as food and clothing in the election manifestos of political parties and the social value of equating economic status to owning a house, rather than living in rental house, has also shaped the housing ownership bias in the government policies. Housing being a state function under the Indian Constitution, the central policy could only be prospective, and the poor financial capacity of state governments to meet the growing housing needs further constrained the state’s capacity to provide houses directly to poor families. The high growth in property prices compared to other assets in India witnessed after the post-reform era further skewed the demand for owner housing.

All affordable housing models being implemented in India presuppose that EWS and LIG households cannot afford but want ownership of housing units even though a large percentage of households who have migrated to cities for livelihoods would be keen to rent houses rather than own them. During their early development, countries such as China, Singapore and Hong Kong have addressed the housing needs of poor families through direct provision of subsidized rental housing and these countries moved towards owned housing after meeting the critical mass of housing demand-and-supply gaps. An assessment of market-based rental affordable housing suggests that unless and until real estate developers involved in affordable housing for low-income households are assured of secure rental cash flows, protection of property rights and efficient property management, large-scale private investments in rental housing are rather unlikely to happen. Even though there are some promising cases of successful private and CBO partnerships, opportunities to scale up such models are constraint by scarcity of CBOs who have the capacity to leverage social capital and social networks to address the financing risks involved in private sector affordable housing projects. However, there is an opportunity that a large percentage of smaller apartments available through the housing filtering (i.e., lease renewal, etc.) process could be released into the rental markets, provided the government implements easy and efficient property management systems. Creation of special rental housing adjudication process and establishment of special property management institutions such as the real estate management bureaus in all cities, as done in China, is an opportunity worth considering.

**Private CBO Partnership in Housing Development:** Many Asian countries have adopted strategies to empower community-based organizations to provide housing and basic service supports to the urban poor. The “We Care Housing” program implemented by the National Housing Authority (NHA), Thailand, is a good example of proactive initiative by the government to create large housing stock for urban poor and low-income communities. A noted innovation is the application of a shared risk mechanism through the NHA that

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<sup>21</sup> 65<sup>th</sup> NSS Survey, Government of India

addresses lease default guarantee scheme, adjustable term mortgage, and stepped payback increments. The institutional initiative of Urban Community Development Fund (CODI) in Thailand is one of the best examples of mainstreaming urban poor and lower-income communities through community partnerships.

However, one of the main challenges experienced by real estate players while dealing with low-income housing is the credit risks of poor families and lack of predictability in such a revenue model. In the absence of viable credit enhancement mechanism, and shared credit risk mechanism, many developers find it difficult to operate demand-driven affordable housing development models, in spite of the fact that the fiscal and tax incentives provided under the prevailing affordable housing policies are encouraging. A review of some of the Private CBO partnership models<sup>22</sup> in India suggests that CBO intermediation reduces the project risk through efficient risk profiling of beneficiaries and obtaining a social collateral/security. The CBO partnership further helps beneficiaries access government housing assistance available for housing the urban poor, and the CBO acts as the intermediary between government, community and private development. Even though this model would work better with rental housing, a revenue and property management model that allows conversion of leased houses to owned houses and bridge financing from the CBO to mitigate the credit defaults would enhance the sustainability of the model. However, a shortage of graduated CBOs capable of entering the housing segment and partnering with private developers may negatively affect the scaling-up process.

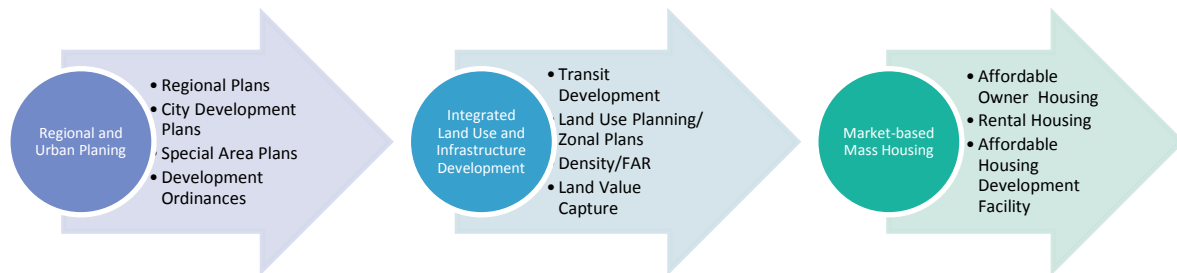
#### **4. Way Forward towards Mass Housing Development Strategy**

A basic enabling system based on land use control and trunk infrastructure development for dynamic incremental urban expansion, which would have incentivized private developers to deliver housing continuously and flexibly in response to the significant demand in the market, has not emerged in India yet. With such a system to enable orderly urban expansion in place, direct subsidies would not be necessary for the housing units themselves, which ensures large-scale, sustainable affordable housing development in the long run. To ensure availability and affordability of affordable housing for target beneficiary low-income households, however, the basic enabling system needs to have some controlling mechanism (e.g., minimum provision of affordable housing) and some support facilities (e.g., credit and subsidy for target beneficiaries). More conventional policy action of mass provision of developable (serviced) land must be put in place through large-scale (subsidized) public investments in trunk infrastructure, in particular public mass transit systems, in combination with various urban planning/land use control measures (i.e., incentives and regulations) towards orderly urban expansions.

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<sup>22</sup>One of the successful examples is the DBS affordable housing project implemented in Ahmedabad. <http://www.dbscommunities.com/>

Also, there is an interesting study finding (in Dhaka, Bangladesh) that typical housing unit price (per square meter) for low-income households is higher than that for middle-and-high-income households. If this is, indeed, the case, there is a natural incentive for private developers to develop housing more for low-income households.

**Fig.7. Proposed Mass Housing development Strategy**

Narrowly-defined slum improvement based on conventional-style in-situ slum improvements with the provision of basic urban infrastructure and services is still worth implementing. However, potentially viable sites for such schemes would be mainly in and around relatively stagnant medium-and-small-sized cities rather than in rapidly expanding urban areas. Also, such schemes will not address the issue of shortage of affordable housing at all because it will simply make one bad housing unit without basic urban infrastructure and services into one decently-serviced housing unit. In the absence of an effective and aggressive parallel mechanism to prevent the growth of existing slums and the formulation of new slums, most of these curative measures would not be sustainable. The need to establish a new preventive mechanism through the mass provision of affordable housing, including rental housing, are, therefore, obvious and should be part of the inclusive urban development strategies.

Although it is not a fundamental policy issue, long-standing coordination difficulties between MoHUPA and MoUD, and the institutional risks that are likely to emerge from inadequate coordination between these two ministries cannot be overlooked. There are critical complementary roles that MoHUPA and MoUD will have to play to “pursue slum-free cities” in a large-scale, and promote integrated infrastructure and housing development in a sustainable manner by setting appropriate policies and strategic guidelines. Each of the two ministries needs the other ministry in pursuit of its own mandate. Hence, it is important to build an effective coordination mechanism between the two ministries for improving the sustainability and impact of any program that both ministries are involved.

Although infrastructure such as power and water supply must follow promptly, development of urban public transport is the most fundamental means to initiate large-scale real estate development by connecting the neighborhoods, jobs centers, and central business districts. Bus Rapid Transit (BRT) system, an innovative urban public transport mode that is affordable even for developing countries like India, is emerging as a viable technical option as seen in Ahmedabad. Development of urban transport must be incorporated as the single most important element of comprehensive urban development initiative with created land values captured from beneficiaries (or, more practically, real estate developers) along urban transport corridors, nodes and hubs for promoting sustainable affordable housing development. In this context, the primary role of the government and development partners should be large-scale public investments in trunk infrastructure in particular public mass

transit systems, and mass provision of serviced land for affordable housing by using various urban land use planning, development controls and private investment incentives as discussed in Section 3.

Ultimate property buyers need to access mortgage loans through credit enhancement and shared credit risk mechanisms. The government and development partners should play the role of credit enhancers and partial credit guarantors rather than primary mortgage financiers. To ensure market viability of such a credit enhancement mechanism, target beneficiaries for housing finance assistance must be borderline households between legitimate housing with formal tenure (or leasehold in the case of rental units) and less-than-legitimate housing who have sufficient creditworthiness.

It is important to note that none of the existing policies have provisioned financial assistance for poor and low-income households to access rental housing options. Experience from China, Singapore and Hong Kong indicates that rental housing assistance was an important part of their public housing strategy during early phase of their economic development. The policy to create large stock of rental housing would necessarily warrant changes in the existing tenancy regulations and establishment of robust private property right protection measures to encourage private sector to enter in the low-income rental housing market in a large scale. Establishment of affordable housing development facility by pooling government funds and co-financing from external development partners supplementing the funds to be generated through the land value capture mechanism could be a viable financing mechanism for funding infrastructure development and mass provision of housing, in particular affordable housing for low-income households in India.