

Housing and basic infrastructure services for all: A conceptual framework for urban India

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This paper aims to develop a conceptual framework within which “housing and basic infrastructure services for all” can be delivered in urban India. Despite high and sustained GDP growth rates over the past two decades, the vast majority of Indians continue to live in substandard housing with few basic amenities or pay disproportionately high portions of their income for formal housing and services like water. The framework developed here stresses integration – an alignment of the economic, legal, planning, financial systems and a clear mapping of requirements – tenure mix, associated infrastructure in order to ensure targeted and productive investment. Above all it highlights that that housing cannot be thought of in isolation but must be provided along with infrastructure – physical and social. Against the elements highlighted in the framework, the paper evaluates the current issues and challenges in the Indian urban housing market and makes recommendations for tools and approaches that can guide movement towards a more holistic approach.

1. Introduction

Economic growth and urbanization have become inextricably linked. With more than 51 percent of the world population now living in cities, the debate in recent years has been on whether to deplore urban living for mushrooming of slums where housing conditions are appalling, sanitation is almost non-existent, epidemic diseases can thrive, exploitation and physical dangers are widespread or to welcome for opportunities city life offers – jobs, health care, schools and opportunities for women (UNFPA, 2011).

Adequate housing is necessary for social welfare as it provides protection from weather, place to bring up families and a place to work. While policy debates have more or less accepted that urbanization is an irreversible phenomenon with more positive than negative externalities, the biggest challenge associated with urbanization is that it has not kept pace with the housing needs of those living in cities and those migrating to the cities. More than thirty percent of world’s urban population are either living in poor housing conditions in slums or are homeless (UNHABITAT,

2010). The situation is precarious when we look at the regional distribution. The percentage share of urban people who live in poor housing conditions in Sub-Saharan Africa is about 61 percent in 2010 followed by South Asia (35 percent) and South Eastern Asia (31 percent). In Eastern Asia 28 percent of urban population lives in slums while in Latin America and Caribbean the percentage is about 24 percent (UNHABITAT, 2010). The most disadvantaged are the low income families, who due to lack of housing have been driven into informal shelter in the burgeoning slums in many cities of all sizes. In many of Africa's cities and towns, for example, less than ten percent of the population lives in formal sector housing (Struyk and Gidding, 2009).

While it is well understood that housing and basic infrastructure provide an enabling environment for the overall development and urbanization and all cities attempt to provide better housing and basic infrastructure for its residents through increased public spending, policy interventions and various other enabling conditions, it is unclear why the outcomes are still appalling. On one hand, it could be argued that the scale of urbanization is so large and fast-paced that any attempt to provide better housing and basic infrastructure would fall short of the requirements. On the other hand, it may well be that the framework within which these attempts are being made are inadequate and marred with imperfections that do not allow the situation to improve. The Global Human Settlement Report 2003 (UNHABITAT 2003) argues that despite "modern technology, improvements in social attitudes and organization, and the existence of a large pool of wealth in the developed countries should make it possible to weather the remainder of this global challenge (cities without slums) ...(but) that is, in fact, not happening". The report further argues that "slums and urban poverty are not just a manifestation of a population explosion and demographic change, or even of the vast impersonal forces of globalization" but a result of "a failure of housing policies, laws and delivery systems, as well as national and urban policies" (ibid).

India is fighting her own battle with regard to affordable housing with an estimated shortage of urban housing to the tune of 26.5 million in 2012, most of which is for the low income households. Our paper develops a conceptual framework necessary for delivering "housing and basic services for all" detailing various linkages between local housing markets, planning, legal and economic systems, national housing policy and the constitutional rights related to housing and basic services and applies it to urban India.

While the conceptual framework can be applied to any country, the specific details would depend on individual country's institutions. Using a case of India, the paper examines where the challenges lie in delivering housing and basic services for all. The objective is not to 'quantify' the shortages or investment requirements etc. but to present a 'qualitative' discussion on institutional linkages that are important for the 'delivering housing and basic services for all' and evaluate current practices against a fully functioning institutional arrangement. The paper also proposes key action items to enable delivery of housing and basic infrastructure services.

The paper is structured as follows: Section 2 briefly reviews the literature that motivates this paper. This is followed by a brief discussion on the status of urban housing and basic infrastructure in urban India in Section 3. Section 4 develops a conceptual framework for housing and basic infrastructure delivery. Section 5 evaluates the current situation within which housing and basic

infrastructure services are delivered in urban India. Section 6 proposes key interventions that may help in delivering housing and basic infrastructure services for all. Section 7 concludes.

2. Motivation for this paper

A substantial part of the policy literature has approached the question of “housing and basic infrastructure services for all” by focusing on “affordability”. Yates and Milligan (2007) point out that housing affordability is a widespread and structural problem caused by forces within and outside the housing system posing multiple problems particularly for low income households. The authors also point out that declining affordability has “implications for economic performance and labour market efficiency, social cohesion and polarization of cities, environmental consideration and the creation and distribution of wealth through homeownership” (ibid). Housing affordability problems have led to processes of gentrification by pushing affordable housing to urban fringes causing spatial polarization (Berry, 2006a) and have the capacity to make it difficult to manage the economy as a result of increased sensitiveness of those households who are vulnerable to policy changes (Berry, 2006b).

Bertaud (2007) argues that housing supply (such as availability of developed land, building regulations, productivity of construction industry, direct involvement of government in house building, current and new stock of housing, indirect involvement of government through subsidies) and demand issues (household income, availability and terms of housing finance, government subsidies) impact upon affordability. Addressing affordability problems requires addressing supply and demand side problems simultaneously with city-specific responses. National regulations and practices may also impact local housing markets albeit to a lesser extent (ibid).

Across the world, affordable housing is delivered through wide variety of programmes. Due to paucity of space it is not possible to review these programmes here but most of them rely on either demand side or supply side interventions (see Table 2). There is a stream of literature that evaluates the efficacy and efficiency of these programmes and instruments (see Schwartz, 2010, Scanlon, 2007 and Whitehead, 2004). However the reviews provided here limit themselves to program evaluation and do not evaluate the larger framework of markets and economic policy within which they operate. And often, typical government responses (such as minimum housing standards regulations or demolition of sub-standard housing or subsidies that allow consumption of housing than what market would allow) to correct affordability problems have negative impact as these measures affect the existing stock of housing as well as flow of new housing (Bertaud, 2007).

Though Bertaud (2007) emphasizes the need to identify existence of sub-markets in housing sector (informal housing, market served by formal housing finance) to address affordability issues, these sub-markets would need to be analysed within the larger framework comprising tenure, planning, regulation, economy within which they operate to facilitate better policy response to housing problems. Indicating the need for a larger framework within which to address affordable housing, the 2003 Global Report on Human Settlements recommends decentralized urbanization to be achieved in co-ordination with larger planning and economic development programs (UNCHS, 2003). The report also recommends some fundamental changes in approach e.g. discussing the

short-comings of land titling and arguing instead that ensuring security of tenure, rather than ownership, has proved to be more crucial to effective housing delivery.

Taking up on this need to look at larger, systemic issues our paper does not go into proposing or evaluating housing and basic infrastructure programmes. Rather the objective is to present a framework as a policy tool to identify where the impediments in delivery of housing and basic infrastructure services for all are. All the desired linkages within and between the housing and related markets are described to sketch out the parameters within which policies should be formulated. At the moment, housing and infrastructure are delivered through a series of ad hoc programs operating as so many levers to address specific problems. In keeping with a growing move towards program integration by the government in India we draw up this framework as a move towards generating more coherence, integration and complementarity in programs.

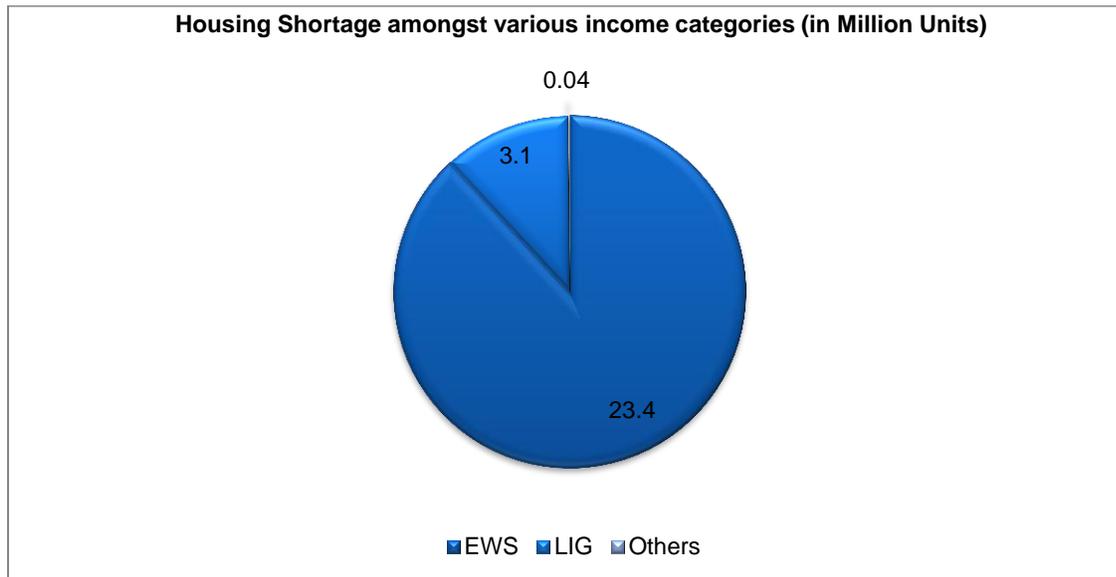
The framework does not go into details such as the minimum size of a housing unit for low income groups or the amount of subsidy required, as these are details that can be worked out once the framework is in place and according to local requirements. However, it does present the intricate linkages that exist between the housing market, financial markets, planning and legal systems, public policy, and constitutional rights and obligations and argues that these linkages need to be considered in order to construct coherent housing programs. At the same time, it requires making some normative decisions – such as that rental housing is more suited to low income households – in applying this framework to another country different decisions can be made as per local conditions.

3. Status of Urban Housing and Basic Infrastructure in India

3.1 Scale of the problem: Number of units

The urban housing shortage in the country by March 2012 would be about 26.5 million units (MoUD, 2007). Of this, approximately 23 million units, is for the Economically Weaker Sections (EWS) (see income categories definitions below) whereas 3.1 million is the shortage for the Lower Income Group (LIG). It is important to understand the nature of shortage. While about 9.3 million households in urban India do not have access to any kind of housing, the rest of the shortage (17.2 million) arises from households living in inadequate housing conditions in slums, congested housing or obsolete housing.

Figure 1: Urban housing shortage in India (2012)



There are also severe shortages amongst the Higher Income Group (HIG) and Middle Income Group (MIG) categories. However these are less acute. A Monitor Group study estimates a market of approximately 21 million un-served urban households who can afford to buy homes costing Rs. 0.3 million to Rs. 1 million with their monthly household income of Rs. 8,000 -11,000. This group is the 30 percent that fall just below the top 15 percent who can afford homes at the current market prices. These households currently occupy housing of poor quality which may be either formal or informal – in slums or dormitories. Basic amenities such as individual water and sanitation connections, street lighting or social infrastructure like gardens and common areas are often missing. This housing is typically rented and renters may be subject to sudden rent increases (*“Building Houses”*, 2010; Hingorani, 2011).

3.2 Scale of the problem: An insufficient mix of tenures

The current structure of tenure varies widely according to a number of factors - the households' income category, whether the housing is in rural or urban areas, or by tier of city. According to NSSO (2010), of the households who had access to housing in urban areas, 61 percent owned their homes while the rest lived in rental housing (largely private with some employer provided). Broadly speaking, HIGs tend to own their homes or are able to participate in the formal private rental market. While MIG and LIG households in rural areas might own their own homes, these groups would typically find it vastly unaffordable to buy homes in the larger metros (see Table 1). These groups would then choose the informal market where they could rent or 'own' in slums. The major cities - Mumbai, Chennai, Delhi, Bangalore, Kolkata and Hyderabad - alone accounted for 68% of the slum population in 2001 (Census, 2001). Almost across the board, there is a paucity of formal subsidized rental or ownership housing that caters to LIGs. The paradox is that there is a large rental market in the informal sector whether through slumlords who illegally own and rent out land and units or through unregistered 'dormitories' or 'paying guest' facilities.

Development of a formal rental market was stunted by the 1961 Rent Control Act. While this Act was designed to protect renters from eviction and rapid increases in market rent, by freezing rents at a certain level, it became a disincentive to landlords who found it unprofitable to rent and often lost their properties to tenants who they could not evict. More recently, with the repealment of the Act the private rental market is picking up amongst MIGs and HIGs, with shorter 11-month leases to guard against squatting. The notable absence from housing markets is the public rental housing in India, which is a major tenure of affordable housing in countries like UK, France, Netherlands, etc.

3.3 Scale of the problem: Affordability

While the recent programme of the national government aimed at affordable housing, Rajiv Awas Yojana (RAY), does not explicitly define affordable housing, we can assume that the Ministry of Housing and Urban Poverty Alleviation (MHUPA) definition is applicable to this scheme. A government-organized task force, "Affordable Housing for All", assembled to advise MHUPA on solutions for promoting equitable housing, revises the official definition by suggesting that the carpet area for EWS and LIG housing should be 300 sq. ft. and 600 sq. ft. respectively, and the price of housing for EWS and LIG should "not exceed 4 times the household gross annual income."¹ State government definitions of affordable housing differ marginally from the national definition. For example, the Development Control Regulations, largely implemented in the Mumbai Metropolitan Region (MMR), narrow the size criterion to 225 sq. ft. - 270 sq. ft. for affordable housing units.

Similarly, independent advisory organizations have established their own definitions for India. The McKinsey Global Institute states that affordable housing should be defined based on varying incomes and sizes, rather than the concept of "one size fits all;" they define the market for affordable housing as households earning less Rs 90,000 (EWS) and those earning between Rs 90,000 and Rs 200,000 (LIG), annually. Based on its lending practices, the largest private sector mortgage lender in India, HDFC, maintains that the maximum purchasing affordability is 5.1 times the annual income of a household. KPMG's report on affordable housing in India, stratifies housing size according to income levels and construction plans; for EWS and LIG households, with annual incomes of less than Rs 150,000, housing units should be less than or equal to 300 sq. ft., will have few amenities, be located on city peripheries (though rarely within the city) and be financed by micro-finance institutions (MFIs), while LIG households with annual incomes between Rs 150,000 and Rs 300,000, housing would have basic amenities, between 300-1200 sq. ft., located within the city and financed by the formal banking sector.

Internationally too, definitions vary. In the United States, the Department of Housing and Urban Development defines affordability as when a household "pay(s) no more than 30 percent of its annual income on housing."² When housing expenditure is above 30% of annual income, families are "cost-burdened" and must be provided financial support. A similar definition is used in Australia (Yates and Milligan, 2007).

¹Parekh, Deepak et al. "Presentation of the Report of the Task Force on Affordable Housing for All." January 2008.

²"Affordable Housing." U.S. Department of Housing and Urban Development. March 2011. <http://www.hud.gov/offices/cpd/affordablehousing/>

While international definitions of affordable housing are mainly dependent on income and cost criteria, in India, the size of the housing unit is also considered to ensure adequate living space for large families. While specifying unit size does serve a purpose, the primary concern should be to provide basic shelter not to complicate it with unfeasible restrictions.

Using data from the National Statistics Sample Survey (Round 64, Year 2007-2008) adjusted to 2010-2011 we estimate the segments of the urban population that at current market-rate housing prices, cannot afford to buy a house even in non-prime areas of the cities.

Table 1: Housing affordability across fractile classes

| City | Annual consumer expenditure, family of 5 (2010-2011) | | | | | Ratio: House price/Annual consumption expenditure | | | | |
|-----------|--|--------|---------|---------|---------|---|-------|-------|-------|--------|
| | 0-20 | 20-40 | 40-60 | 60-80 | 80-100 | 0-20 | 20-40 | 40-60 | 60-80 | 80-100 |
| Fractile | 0-20 | 20-40 | 40-60 | 60-80 | 80-100 | 0-20 | 20-40 | 40-60 | 60-80 | 80-100 |
| Mumbai | 47,082 | 73,754 | 98,584 | 134,908 | 275,416 | 41 | 26 | 20 | 14 | 7 |
| Delhi | 57,618 | 82,743 | 105,215 | 138,666 | 288,973 | 28 | 20 | 15 | 12 | 6 |
| Kolkata | 40,377 | 59,976 | 81,711 | 116,709 | 235,481 | 24 | 16 | 12 | 8 | 4 |
| Hyderabad | 42,366 | 63,365 | 84,585 | 120,835 | 259,427 | 23 | 15 | 11 | 8 | 4 |
| Chennai | 42,292 | 61,596 | 80,164 | 111,773 | 223,398 | 31 | 21 | 16 | 12 | 6 |
| Bengaluru | 42,734 | 66,901 | 92,174 | 134,834 | 277,626 | 24 | 16 | 11 | 8 | 4 |

Source: National Statistics Sample Survey (Round 64, Year 2007-2008)

Judging affordability as eligibility for a loan (the typical income criterion for a commercial loan is having an annual income that is at least one-fifth of the house price), only the highest fractile class can afford to borrow to buy houses and that too not in Mumbai and Delhi. However, since we are using consumer expenditure as a proxy for household income, one can expect that a few more households than shown above might be eligible.

3.4 Scale of the problem: Basic infrastructure services

The current state of basic infrastructure services in the urban India, especially water supply and sanitation (WSS), is inadequate by most standards. This is complicated further by the fact that only a handful of cities in the country would have an updated consumer database, asset register, record of water produced/consumed, or even revenue accounts to enable accurate estimation of cost recovery, which makes objective assessment impossible. Estimates of the proportion of households with access to an improved water source are relatively high at about 92 percent (NSSO, 2010). However, access to piped water supply is only to 75 per cent, while households with direct connections are approximately 55 per cent (Bhatnagar and Ramanujam, 2011). Moreover, recent data for 28 urban centres suggest that only eight meet the 135 litres per capita per day (lpcd) water

supply benchmark (nine reported less than 100 lpcd) and none have 24 hour supply (21 reported water supply of less than 5 hours a day) (ibid). The situation with regard to sanitation is far worse. Only 58 percent of households had access to exclusive toilet facilities (NSSO, 2010). Access to these services has an income dimension with most disadvantaged being the poor. Thus there is a huge gap between what is desired and what exists on the ground.

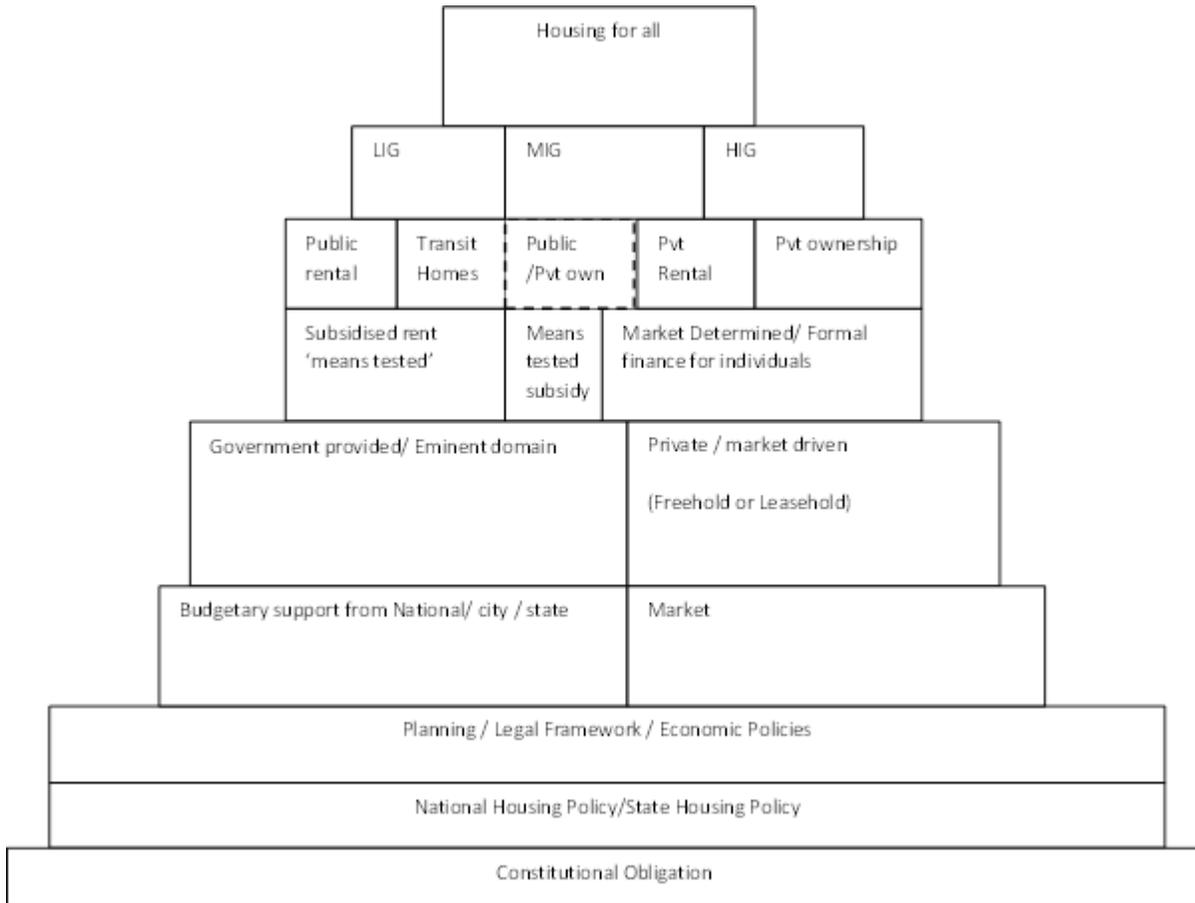
4. A Conceptual Framework

This section discusses two conceptual frameworks (i) for housing and (ii) for basic infrastructure services. These will be discussed separately at first but are essentially interconnected and create an overarching framework for planning and delivering housing and basic infrastructure services.

It is important to keep in mind that 'housing' is a complex bundle of characteristics encompassing location, size, legal rights, cost, access to infrastructure and so on. Moreover, since housing is largely a private good – privately financed and owned/rented – individual preferences and socio-economic circumstances play an important role. This makes housing more difficult to deliver as the trade-offs between each of these needs to be carefully evaluated for each type of beneficiary.

In Figure 2, which presents the conceptual framework for housing for all, at the top of the pyramid is "*Housing for all*" - a goal that can only be achieved if the rest of the linkages in the pyramid are well functioning. The next five layers of the pyramid relate to the *housing market* and the two after that to the *broader economic, legal, planning and policy framework* within which housing markets operate. The pyramid rests on the foundation of constitutional rights and obligations as defined by the state, from which all laws and policies emerge.

Figure 2: A conceptual framework for 'housing for all'



4.1 Housing markets

At a very broad level, households can be classified on an economic basis. As described earlier, in India the broad classifications are low income, middle income and high income groups (*LIG*, *MIG* and *HIG*). This economic categorisation is relevant as it allows us to map the affordability level of the household with the type of housing (defined by cost, size, amenities, tenure and location) that will be demanded. Naturally, there are other considerations that will determine demand – e.g. size of household, age demographics,, or which tier of city a household lives in. A middle income household, defined by income alone, will be able to afford ‘more’ housing in a smaller city than in one of the major metros. Typically as one moves up the income spectrum, markets will be largely responsible for housing delivery. It is particularly at the middle and lower ends of the income spectrum that policy interventions would be needed.

Recognizing varying levels of affordability and income, the next step is to identify a range of housing tenures that will meet the needs of different demographics. This is shown in the third row from the top. At the extreme left is the *public rental housing*, which by nature is subsidized, for households who cannot afford other tenures of housing. The large public subsidy component requires that this form of tenure is well targeted and at the same time minimizes chances getting

them into 'poverty trap' (Bertaud, 2007), which arises when households consume more housing facilitated by government subsidies than what their incomes would allow. The next level of tenure are *transit homes* for households moving from one tenure to another e.g. households moving from squatter settlements or public rental housing to next level of housing tenure. This housing might also be for new migrants to a city until they find suitable housing.

MIGs might be able to access the *private rental or private ownership* housing market. However, public agencies may need to support this group by supplying *public ownership houses*, which have some element of subsidy in the land or mortgage cost. For HIGs markets should be able to supply *private ownership and rental housing*.

The source of funds to pay for housing will also lie across a spectrum. At the higher ends of the spectrum, *financial markets* should work efficiently in supplying credit for purchase of dwelling units. However, since financial markets are likely to exclude LIGs and some MIGs, other options have to be made available for those households whose incomes are not sufficient to afford rent or credit to buy homes. Such households would require *public subsidy for rental or ownership housing*, which have to be '*means tested*'. Subsidies could be demand-side such as housing allowances and interest rate subsidies or supply-side such as grants and tax credits to affordable housing builders. Demand side subsidies would need to be complemented with supply side interventions so that more housing is available, otherwise the impact of these subsidies would be price inflation.

Particularly in the case of India or countries with large informal economies, there may be LIG and MIG households who can afford credit but are precluded from the formal finance market. A well-functioning microfinance market would be necessary for such households. An efficient housing finance market would on one hand offer a range of products that meets the need of its clients and on the other hand match its asset and liabilities so that financing is sustainable. Subsidies must be well-targeted and mechanism put in place to monitor delivery to prevent them from being an unproductive drain on the exchequer. This is of particular concern in India where misuse of subsidies is all too prevalent, and will undoubtedly be difficult to achieve.

The fifth layer in the pyramid deals with land. In a number of countries, skewed land holding patterns, legacy planning issues or even land mafias have created persistent structural distortions in the market for land. There will be a range of ways in which land for housing will have to be made available. One possible, although contentious, way is through the use of "*eminent domain*" by the government. Another is through 'inclusionary zoning' or reservation of land by local bodies or private developers to accommodate lower income households. For other households, land could be transacted in the *free market*. This framework does not preclude the use of other models of obtaining land, for example, the model adopted by the Baan Makong community in Thailand with regard to slum regularization, where communities were asked to themselves negotiate tenure to the land on which they were living. Communities often made outright purchase of land at prevailing market prices through a combination of their own savings and subsidized loan from the government.

Making subsidies, land and housing available to poorer households, will require *budgetary allocation* from governments at all levels – national, state and city. These must be planned and co-

ordinated across scales to ensure efficient use of resources. Given the scale of housing required there is equally space for the *market and private capital* in the housing market.

In sum, a well-functioning housing market requires policy coherence between its different constituent elements. Government has a big role to play through laws, policies and fiscal support in those areas where markets cannot function on their own.

4.2 Legal, planning, economic and policy framework

Housing markets operate within the broad planning, legal and economic framework. This framework must facilitate housing delivery.

Planning: The nature, flexibility and responsiveness of planning processes– at national, state, regional and local levels play a crucial role. At the local level, building codes, zoning regulations should be flexible enough to permit innovation and accommodate informality, at least in the shorter term. For example, in the case of slum upgrading schemes or other low-income housing projects, it is argued that applying standard building codes that mandate the minimum floor size, minimum road widths, parking space requirements, height of buildings as for high income developments unnecessarily increase the cost of such projects. Urban local bodies (ULBs) must be empowered and have the capacity to make such changes with transparency.

At a more macro level, it is crucial that the planning framework require some co-ordination across the regional, city and local scales. At the national level, regional and state level government needs to think through their ‘portfolio’ of cities and identify and create future growth centres and corridors. At the metropolitan and local level this may translate into thinking about needs of the economy they are catering to or the economic base of the city– e.g. a manufacturing or finance hub and what sorts of housing, land and subsidy policies this will require. Of course since there are few cities focused on one industry alone, this is an oversimplification but the nature of industry does determine who can be expected to provide the housing (e.g. employer provided), which tenures are likely to be demanded and what density will look like. This requires a more proactive planning approach rather than the typical reactionary planning response to organic growth.

From an institutional perspective, as urbanization increases, authorities must also prepare for reassignment and aligning of responsibilities in peri-urban areas where previously rural or small town municipal governments become integrated into metropolitan areas.

The rigidity and detail required by the Indian master planning system means that plans are time-consuming to prepare and can seldom keep pace with organic growth thus leading to inefficiencies in land use. There is a need for greater responsiveness, participation, transparency and flexibility in planning. Too much rigidity and control also generates avenues for rent-seeking resulting in exorbitant payments for artificially created scarcities.

Legal: The laws related to land titles, forms of land tenures and housing transactions, development, use, investment and financing of housing property are necessary for ensuring that housing markets function efficiently. Land titling systems are of particular relevance as land is a fundamental input into housing. In India, land titling systems based on common law have led to land being stuck in

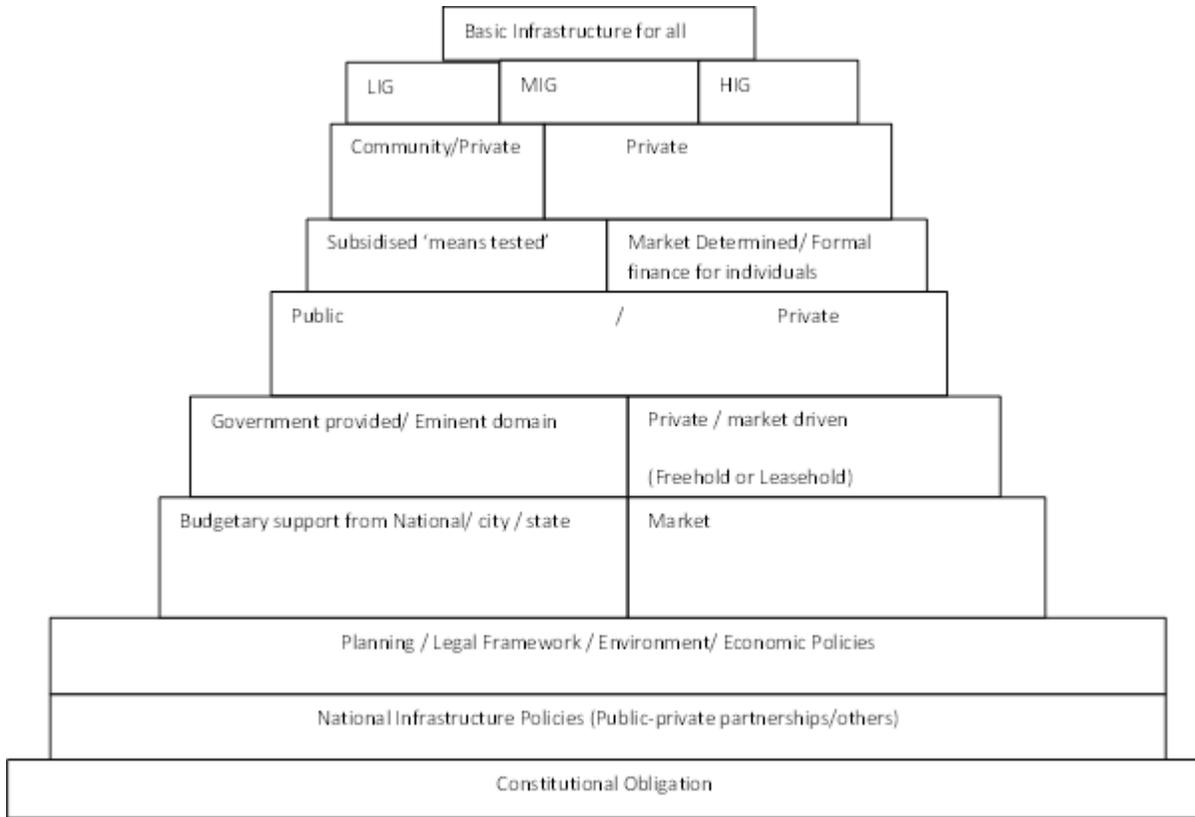
litigation for decades without resolution. This creates artificial land scarcity and pushes up the price of housing. Court systems must be efficient in dealing with and settling land and other property disputes.

Economic: Housing markets operate within the economic framework. On the demand side economic growth leads to increases in household income and consequently to more demand for housing. On the supply side, housing markets compete for finance and other resources with other sectors in the economy. There are other linkages too. Housing, being the largest asset on households' balance sheet, has profound impact on the economic cycles. Local and national economic policies play an important role in determining housing supply and demand. Economic policies on foreign direct investment, townships, special economic zones, infrastructure corridors must include housing components and tie into the planning system.

4.3 Constitutional basis for housing for all

The bottom two blocks are the foundation. A strong constitutional basis is necessary if housing for all has to be delivered. Strong policies will only emerge if housing is recognized as a right in the Constitution.

Figure 3: A conceptual framework for ‘basic infrastructure for all’



Though often ignored in the debate on housing, basic infrastructure particularly water supply, sanitation, electricity supply and access to transport are integral components of housing. Without them, the notion of housing is incomplete. Slums, which typically locate around points of access to infrastructure (particularly transit) are ample proof. Unlike with housing, government has dominated the supply of basic infrastructure due to its monopoly nature.

4.4 Basic infrastructure for all

As shown in Figure 3, at the top of the pyramid is the objective to provide ‘*basic infrastructure for all*’. This must be provided to families across the income spectrum. Although infrastructure is largely provided by government, MIGs and HIGs might enjoy some privately provided infrastructure, such as within gated communities. Provision of infrastructure for lower income groups is likely to fall almost entirely to government and must be budgeted for.

Like housing, depending on the target demographic, infrastructure should be provided across a spectrum from community to privately provided infrastructure. This is largely in the case of water and sanitation where public toilets or public standposts can be provided for LIGs, where due to affordability or lack of space reasons these amenities cannot be provided as private amenities.

Subsidies will be necessary to provide infrastructure to low income groups, whereas higher on the income ladder infrastructure can be afforded on a full cost recovery basis. However, given the public nature of most infrastructure goods, this distinction is tricky to make. A system of cross subsidy or cost recovery from HIGs could be implemented. The cost of maintaining infrastructure assets created should not be ignored.

Land is a crucial input for infrastructure delivery particularly in the case of transport or even community infrastructure. While markets can acquire land at market price for the development of basic infrastructure services and transfer this cost to beneficiaries, the price of infrastructure services with full transferred cost of land may become unaffordable to low income households. Sometimes it may also be the case that even markets are unable to acquire land if the landowners are unwilling to sell or if ‘hold-out problems’ arise. In such cases, ‘‘eminent domain’’ principle may be required to acquire land but in a very selective manner as a last resort and where beneficiaries are those who cannot afford to pay the fair market price for services. Fair land acquisition laws must be formulated particularly where land uses change (e.g. from rural to urban in the development of new transportation corridors or smaller cities). Like with housing, the freeing up of urbanizable land whether through resolution of land disputes, release of government land, or regularization of occupied land can help catalyse infrastructure delivery.

Subsidies in the provisioning of basic infrastructure would require sufficient budgetary allocations from city, state and national level governments. Systems need to be developed that ensure subsidies are well-targeted. There is a role for markets as well as private capital to supply some basic infrastructure services to MIGs and HIGs. Low income communities can also play an important role in financing – experience has shown that beneficiary contributions create a sense of ownership over the asset created.

4.5 Planning, legal and environmental system

The development and delivery of infrastructure services takes place within the national planning and legal system. Infrastructure projects are often large projects (such as water supply, electric power plants, roads etc.) and have profound impact on ecology. Environmental impact assessments must form an integral part of the appraisal process for infrastructure projects. The laws specifically related to infrastructure projects include the regulation of infrastructure services at the sectoral level, legal rights of citizens with regard to infrastructure services, obligations of government in provisioning of these services and remedies thereof for non-compliance, concession agreements that govern the relation between public and private sector in delivery of infrastructure services at the firm level, laws related to pricing of infrastructure services and the contractual agreements between suppliers of infrastructure services and consumers. Laws related to infrastructure services operate within the national legal system. Planning systems for infrastructure, much like those for housing, need to be coordinated across scales – from the regional to the local. Infrastructure planning is crucial in that it has the potential to proactively guide the spatial organization of urbanization, and open up and ‘create’ new areas and regions for development.

4.6 Constitutional basis for infrastructure for all

The foundation for the delivery of 'basic infrastructure for all' is the 'rights' framework within the constitution. Under the constitution of India, some of the infrastructure services such as water have been interpreted by courts as a 'right' under 'right to life'. Constitution provides the basis for national infrastructure policies and programmes.

The delivery of 'housing and basic infrastructure services for all' requires that the linkages across various components of the two frameworks are well established. For the upper level of the framework to work efficiently, it is necessary that the lower levels of the framework are in place. While there is a vertical relationship for 'housing for all' framework in Figure 2 and 'basic infrastructure for all' framework in Figure 3, there are also horizontal linkages between these two frameworks. Planning system, for example, determines housing and infrastructure services in an integrated manner. Similarly legal system within which housing markets operate or infrastructure services are provided is the same. Economic policies that affect household income also affect their demand for housing and infrastructure services. So, a conceptual framework for the delivery of housing and basic infrastructure for all is the one which operates seamlessly from bottom to top in Figures 2 and 3 and also sideways across Figure 2 and 3.

With this framework as the basis, the next section identifies the lacunae in the current system of delivering housing and basic infrastructure services in India, particularly for poor and middle class urban households. While infrastructure is undoubtedly critical, more emphasis is placed on housing.

5. Evaluating current systems of delivery

5.1 Scale of interventions to date

Government has played a very limited role in housing provision in India. To date therefore the private sector, as the main housing provider, has catered mainly to MIGs and HIGs. The little housing provided by government for LIGs over the years has typically been ownership based with practically no beneficiary contribution. As a result, much of what was provided has been usurped by higher income families. (See Box 1 for a brief history of government housing policy). Infrastructure provision too has proved deeply inadequate, and is particularly lacking in informal settlements.

Tenure: In terms of tenure, the focus has overwhelmingly been on public or private ownership housing. Public rental housing is conspicuous by its absence. While private rental housing did play an important role in meeting the housing needs of new migrants and LIGs in urban areas in the decade or two post-Independence, growth of this tenure was stifled by the 1961 Rent Control Act. Today the private rental market is developing but caters mainly to HIGs. While 'private rental' housing does continue to be a dominant tenure amongst LIGs in urban areas this is almost entirely provided in slums and informal settlements.

Box 1: Six decades of housing policy in India

During the 1950s and 1960s, LIG housing provision was dominated by the state. The private sector had a limited role to play in providing this housing, although they did provide for MIGs and HIGs. Government interventions centred on handing over finished housing units at a highly subsidized rate or for free. Since only a very small fraction of the country's total budget was set aside for housing programs and since this form of provision was costly, the programs benefited very few. Moreover, due to the large subsidy involved and because the target demographics often found the housing unaffordable or locationally unsuitable, units were often sold by the beneficiaries to HIGs.

Although responsibility for housing provision was increasingly devolved to the states, financing came largely from the Central government. The heavy subsidies were a burden and limited the scope of these programs. Programs were fragmented and had little integration with social or physical infrastructure delivery. Many programs focused on slum clearance yet did not adequately rehouse slum dwellers. Thus slums often reappeared. The 1956 Slum Clearance and Improvement Scheme, the 1952 Subsidised Housing Scheme for Industrial Workers and Economically Weaker Sections and the 1959 Rental Housing for State Government Employees were some of the large schemes introduced at this time (Hingorani, 2011).

By the 1970s as the financial limits to providing finished units became apparent slums began to be seen as housing solutions. Emphasis now turned to slum upgrading or providing basic serviced sites on which beneficiaries could build their own housing. Instead of the pure-subsidy approach of before, there was an attempt at partial cost recovery. Subsidies were reserved for infrastructure or other basic services that would enable residents to make their own investment in housing. Simultaneously, the need for a more integrated approach was recognized. Shelter programs focused on LIGs, were dovetailed with poverty alleviation programs – at least on paper. Thus housing policies were framed together with health or education programs for women and children or vocational training opportunities e.g. 1986 Urban Basic Services Scheme (UBS). Actual outcomes however were poor because there were frequent changes to the structure and institutional framework of programs and very little community involvement in project design. Serviced sites that were typically in peripheral locations were often usurped by HIGs.

In 1987 with the first National Housing Policy (NHP), a facilitative rather than direct role for government was suggested, with greater involvement of the private sector and individual households. At the same time State governments were forced to take more financial ownership by borrowing from new housing finance companies (HFCs) such as Housing and Urban Development Corporation (HUDCO), Housing Development Finance Company (HDFC Ltd), the National Housing Board (NHB) etc. and think about new avenues for financing such as cross-subsidization. While expansion of finance did benefit the MIGs, HIGs and the private construction industry they had little impact on LIG housing.

The 1990s saw a larger involvement of Urban Local Bodies (ULBs) under the 74th Constitutional Amendment. However meagre budgets, insufficient land banks and a lack of capacity has seen little housing development undertaken by ULBs.

With the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in 2005, for the first time, integrated, urban-focused reforms were implemented that addressed both housing and infrastructure provision. JNNURM repealed ULCRA and made some of the first concrete land reform policies in decades such as allowing the private sector to assemble land for the first time. Yet JNNURM has faced a number of criticisms – apart from the lack of community participation, failure to extend credit facilities to the poor, and ignoring slum upgrading in favour of new construction it is also argued that it did not adequately integrate housing and infrastructure delivery to the extent required.

Finance and subsidies: The principal **mode of financing** for home ownership is through self-financing ('equity' financing) with some debt from banks or specialized housing finance companies (HFCs). Though in the last two decades the volume of debt extended by mortgage lenders has increased, mortgage penetration in India is far below other countries. Beneficiaries of debt financing have largely been MIGs or HIGs with formal employment. Demand for credit has outstripped supply as lenders are constrained on the resource side. This has limited their ability to expand mortgage credit market. Almost 80 percent of resources for lenders are raised through issuing bonds/debentures, commercial papers, borrowings from commercial banks and refinance from National Housing Bank (Tiwari, 2012). Mortgage backed securitization, which links the mortgage lenders to the capital market and has been a major source of funding for mortgage lenders in developed markets such as the US, has not developed in India. The reasons are an absence of secondary market for mortgage-backed securities and the high stamp duty that mortgages attract under the Transfer of Property Act (ibid).

Formal sector housing finance in India rarely caters to LIGs. Limited availability of credit for housing allows lenders to be choosy. Formal financiers find it difficult to measure risks for LIGs and have perceived huge transaction costs in underwriting mortgages for these households. Though, over time, the microfinance sector has developed a successful and sustainable business model by catering to specific needs, capacities, and leveraging pre-existing community networks, its reach and extent of financing is limited (Tiwari, 2012). Moreover, the microfinance industry is currently facing challenges. Having grown almost unregulated, the industry initially gave huge returns on equity which attracted large sums of private equity coming into the sector (Sreekumar, 2010). Now the government in Andhra Pradesh, which has the largest presence of microfinance institutions, has attempted to regulate the industry. An ordinance has been issued which is based on the premise that microfinance institutions are exploitative, charge high interest rate, and use coercive collection methods (ibid). The consequence has been that microfinance has almost completely stopped in the country and some institutions are in a state of bankruptcy. The future of microfinance in India is presently unclear. While regulation is unavoidable, it is in the interest of industry and the country that cooperative regulation evolves which does not unduly stifle the industry and at the same time addresses government concerns (Tiwari, 2012).

Subsidies and incentives for LIG housing are limited and adhoc. There are some fiscal incentives such as income tax exemption for builders of small size units (this benefit was withdrawn in 2007), tax exemptions for highway projects that include a housing component, tax deductibility of interest paid on housing loan up to a certain limit, exemption from capital gains if residential property is

held for more than 3 years before sale (and capital gains are reinvested in residential property or other specified asset) and tax benefits to HFCs (Tiwari, 2012). There are a few direct subsidies to below poverty line households such as part contribution for slum up-gradation. Particularly since the National Housing Policy (1987) the government has been absent from providing direct financial support for housing.

Land: For decades, the escalating cost of land has been one of the biggest constraints to housing delivery and affordability in India, particularly in large cities. Land costs typically dwarf construction costs and put housing out of the reach of many households. The first significant attempt to make land available for affordable housing came with the 1976 ULCRA. This Act aimed to force 'surplus' urban land onto the market by restricting the amount of land that could be held by individuals or private landowners. Any excess land could be acquired by the state very cheaply and used to build LIG housing. However, implementation of ULCRA was exceedingly poor, locked huge chunks of land in litigation and by creating a perceived scarcity, pushed land prices even higher (Wadhwa, 1989).

Land ownership patterns remain skewed. While the Central Government, Defence Forces and Indian Railways hold large tracts of land across the country, they have by and large been resistant to handing this land over for affordable housing. Municipalities in contrast, hold very little land except in cities such as Mumbai and Delhi where they have historically played a more prominent role.

Much land ownership is concentrated in private hands, and this is only increasing as a 'land rush' is seeing the private and corporate sector consolidating ownership of land. While some acquisition is legal, there is also widespread illegal acquisition of land largely due to the problem of unclear titles, poor land records, poor judicial enforcement of rights and political influence.

Budgetary allocation: Urban local governments in India are among the weakest in the world both in terms of capacity to raise financial resources and financial autonomy. While transfers to local governments from state or central governments have increased in recent years, the tax bases of urban local bodies are narrow, and inflexible and lack buoyancy, and they have also not been able to levy user charges for the services they deliver to cover O&M and depreciation costs (HPEC, 2011). At the state level as well, the fiscal deficits of states have been rising over the years. Consequently the total capital expenditure of ULBs on infrastructure is merely about 0.7 percent of GDP in 2011-12 and an additional 0.45 percent of GDP is spent on O&M (HPEC, 2011).

The share of housing in GDP is 5 percent and a large part of this comes from private sector (mainly households). Central government's budgetary expenditure on housing programs as a percent of GDP is less than 0.1 percent.

Box 2: Current models to deliver low income housing in India

PPP Model:

Under the PPP model of slum upgrading that has been employed for slum up-gradation in Mumbai over the last two decades, developers are handed over slum land and given additional Floor Space Index (FSI) over what is normally allowed. Developers can use this FSI to build market rate housing but must also rehabilitate slum dwellers on the same plot. The idea is that the market rate housing will cross subsidize the cost of resettlement housing so that this housing can be given for free to slum dwellers.

However this model poses a number of problems. For one, in an attempt to maximize profits, most developers would provide very poor resettlement housing. Prima facie, the model appears to be self-sustainable, however, the sustainability comes under threat when property prices for market rate housing are not sufficient to generate enough surplus to cross-subsidize or when the density of slums to be developed is so high that the market rate housing is not able to cover the cost of rehabilitated houses. The higher density in redevelopment zones imposes severe negative externalities on the rest of the city and in many cases slum dwellers who cannot afford the cost of maintenance in their new units move back into slums.

Moreover, as Annez et al. (2010) argue “Merely trading higher FAR for apartments for slum dwellers without extracting charges for the infrastructure that is essential to supporting new developments will aggravate the already substantial shortfalls in urban infrastructure. FAR schemes should not be an excuse for continuing the unfortunate past practice of urban development on the cheap. Just as the Development Authority business model has done, TDRs designed to focus only on provision of low cost housing without recognizing the need for additional infrastructure miss an opportunity to use the fiscal potential that these transactions offer” (as cited in Hingorani 2011). By passing on the cost of cross subsidization to HIGs, this model also causes distortions in other parts of the housing market which is already heavily taxed.

Slum Network Partnership (SNP):

An alternative model for slum upgrading is the SNP model implemented in Ahmadabad. SNP has been unique in that it created a partnership between the local government (Ahmadabad Municipal Corporation, AMC), NGOs working in the slums, private industry and the slum communities. These partners designed, financed and implemented slum upgrading projects with the AMC providing guaranteed secure tenure for 10 years to participating households. While the approach has been successful, the program has suffered from financing difficulties – in the absence of a private player who has no commercial interest, slum dwellers cannot afford to foot the entire upgradation bill. In this case the AMC must bear the cost, which has greatly limited the extent to which the project can be, scaled (Marshall, 2010).

Community managed eviction and resettlement:

To rehabilitate families evicted due to Railways improvement project, a model of “community-managed eviction and resettlement” was followed. Here too, slum dwellers and the community played an active role in selecting an alternate site, designing the project and co-financing it through their savings collectives. This project was a success and demonstrated the importance of strong community involvement but hinges on having the right set of partners, an acceptable alternative site for resettlement and good local government.

Market provision:

The fifth model is the market provision of low-income housing where private developers will build homes in the Rs 0.3- 1.1 million range for households earning between Rs. 8-11,000 a month. The biggest problem with this model however is that developers can do little to correct the fundamental distortions in land markets that make housing unaffordable in the first place. This housing too will be on the outskirts possibly away from public transportation. Since infrastructure in these areas is generally badly developed there is an additional cost on developers if the local authorities do not provide. However, there has been some success in developing housing under this model especially where mass production and innovation in building techniques and quick turnarounds on project delivery have been possible.

5.2 Legal, planning, economic and policy framework

One of the laws that have profound implication for the housing market and basic infrastructure delivery and where most activity in the recent years has happened is the ‘Guaranteed Land Titling Bill’ ensuring security of land titles in urban India. While the importance of ‘guaranteed land titles’ cannot be understated for economic development, the Bill is being pushed through states by the central government through an optional reform mandated to access central government finance for urban infrastructure development under JNNURM. This at most is a weak push and only a few states have enacted ‘Guaranteed Land Titling Bill’ so far. Similarly, attempts to address delays in the court systems have not seen much progress.

From a planning perspective, one of the key criticisms of JNNURM is that despite its attempt to integrate housing and infrastructure, programs remained fragmented with related issues such as land, health, education and employment are being handled by separate Ministries at the central level and implemented in silos at the local level. Moreover the project-based approach for funding infrastructure takes a piecemeal view of city development and should be reworked to a more holistic approach that can address more than one type of infrastructure at a time. Most importantly however, there is no mandated link between the City Development Plan (CDP) that cities must prepare to receive JNNURM funding, with the actual urban planning process in the city. It is only by achieving coherence between plans at various levels and scales that successful and targeted investment can be undertaken.

In terms of economic policy, SEZs and townships, while meeting other economic goals allow for creation of enclaves divorced from the planning process. These are areas where inclusionary housing are unlikely to be enforced and infrastructure networks are built that benefit a few.

Policy fragmentation is a key issue that must be addressed. For example, the Housing and Habitat Policy, which sets the strategic framework for the sector does not integrate housing with the basic infrastructure services (such as water, wastewater etc.) delivery. In fact, water is governed by National Water Policy 2002 (MoWR, 2002) which deals with all aspects of water including urban water and waste water services delivery. National Water Policy also faces the problem in its implementation due to lack of statutory backing (Upadhyay, 2011) and also in its design, which is largely 'supply-focussed' favouring large projects (Tiwari and Pandey, 2011). Moreover, the National Housing and Habitat Policy and the National Water Policy are formulated by different ministries. Consequently the programmes that emerge from these policies are not in sync with other.

5.3 Constitutional Basis

While countries like South Africa have recognized housing as a fundamental right, the constitutional position in India is still unclear. In the past, judicial pronouncements have included housing as part of the 'right to life', yet others have overruled such an interpretation. In 1989, in *Shantistar Builders vs. Naryan Khimalal Totome and others* the Supreme Court ruled that "...reasonable residence [was] an indispensable necessity" for human development required to fulfill "the right to life" (as cited in Bhan, 2009). This "right to life" it was clarified in the 1996 *Chameli Singh vs State of Uttar Pradesh*, "in any civilized society implies the right to food, water, decent environment, education, medical care and shelter" (as cited in Bhan, 2009). However, only seven years later in *Ahmedabad Municipal Corporation vs Nawab Khan Gulab Khan* in 1996 for example, a bench of the Supreme Court warned authorities to "be vigilant" against encroachments for the longer they allowed the settlements to stay, the greater the chance that encroachers would claim "a semblance of right to obstruct removal of the encroachment" (as cited in Ramanathan, 2006).

Indeed there are a number of important linkages missing in current policy making. The most fundamental of these is the lack of integration in planning and financing for infrastructure and housing. As compared to the pyramids presented above, many pieces and key linkages are missing which lessen the efficacy of existing and future policy interventions.

6. The way forward

Clearly, much remains to be done to address the housing and basic infrastructure gap in a systematic manner. Though there have been some models that have been used to address the problem of low income housing in India (Box 2), a much more integrated approach would be required. Given the size of the challenge ahead, it is important to realise that results will be staggered and sequencing of interventions will be as crucial as policy coherence. This section highlights the key steps that need to be taken going forward, and organizes them loosely in terms of short, medium and long-term interventions. Some of the broader issues, such as land, are discussed separately.

6.1 Short-term

In the short term ULBs should focus on providing basic infrastructure in slums. This is a service that slum dwellers are not able to negotiate for themselves and will greatly improve their living

conditions as well as public health and liveability in cities. Provision of basic infrastructure has been limited in these areas because it is thought that provision will imply de facto grant of tenure to the land to slum dwellers. Simultaneously then, some difficult decisions need to be made regarding land. In the short term, instead of going for full land titling, like in the SNP model, security of tenure could be granted for 10-15 years. Like Baan Makong residents' purchase of land could be facilitated. In the case of government land, some slums could be regularized. It will be crucial to draw on the often well-established community groups or slum dwellers federations that exist in slums. This will bring equity and transparency to the process, ensure sustainability and encourage people to invest in their own homes. In smaller towns, preventive policies such as creation of serviced land should be undertaken to prevent slums from forming.

Revised building codes or revised floor area ratio (FAR) regulation could be formulated to facilitate slum upgrading as above. Land pooling and land readjustment mechanisms may be used to get land for infrastructure in congested slums. Communities may also be asked to contribute to the cost of internal infrastructure as was done in the Orangi pilot project in Pakistan.

As the process towards increased formalization of housing begins, transit housing should be developed. This will go hand in hand with creation of local or metropolitan plans.

6.2 Medium term

In the medium-term, government needs to begin integration of the planning process across scales. Identifying new growth corridors and centres, acquiring land and planning for physical and social infrastructure will allow for more guided development in the future. All such development must include housing elements.

There should be a serious effort to develop rental housing. This may be done through developer mandates or employer provided housing. Various demand and supply side measures are available to make such housing possible (See Table 2). Issues with regard to financing – whether resources available to developers or to individual households – should be taken up. This will also allow liquidity to flow into the market for affordable homes. Government has long toyed with the idea of land based finance for both housing and infrastructure – where feasible these alternate financing mechanisms should be used.

6.3 Long term

In the longer term, the issue of granting conclusive titles to landowners can be taken up. Initially security of tenure is most important to allow people access to infrastructure and a decent home. This requires policies and programmes facilitated by public and private sector investment to develop a range of tenures with public rental homes, transit homes, public ownership housing to complement market provided housing. As transit homes develop and a market for affordable housing, people will slowly begin to move up the housing ladder. Those who enter the formal housing system will naturally get land titles, whereas those who choose to enter rental housing might trade ownership for the mobility and low cost that rental affords. As long-term proactive measures like transit-oriented development create new land for housing and industry density in slums may decrease.

6.4 Housing and basic infrastructure services as constitutional right

The unclear constitutional status of housing has led to the formulation of a 'weak' housing policy, as there is no binding obligation for the government to deliver affordable housing for all. With regard to basic infrastructure services, though water is recognized as a constitutional fundamental right under 'right to life' with state having the responsibility to ensure that this right is not denied to anyone, this right has seldom been honoured as remedies in case government fails to meet its obligations have not been stipulated (Upadhyay, 2011).

Thus a key step is that housing and basic infrastructure services are defined as a right in the constitution either separately or under 'right to life' with unambiguous interpretation. Rights will have little meaning if they are not accompanied with obligations for the state and a 'remedies' regime for non-compliance. The way forward is to define the minimum core obligation of the state with regard to housing and basic services under the right to life and Municipal Corporations/Councils/state shall be obliged to honour this fundamental right to every citizen.

Similarly, the Housing and Habitat Policy from which regulations, institutions and programmes emerge, needs statutory backing to be effective. The most recent housing policy in India, "National Urban Housing and Habitat Policy 2007" states its focus as 'provision of affordable housing for all' and where affordability is an issue "seeks to assist" those "who cannot afford to pay the entire price of a house by providing them access to reasonably good housing on rental and ownership basis with suitable subsidization" (MHUPA, 2007). The Policy outlines that states and local bodies 'will ensure suitable flow of financial resources to potential EWS/LIG beneficiaries as well as undertake viability gap funding' of housing and supporting infrastructure projects including slum up-gradation (ibid). The problem, however, is that unless these policy guidelines have statutory backing, they have no teeth. This can also be seen from the fact that very few programmes at the state or local bodies' levels have come up that address the problem of inadequate housing.

6.5 Augmenting fiscal resources for the government

Even if financial resources with government are insufficient, from the 'rights' perspective, government cannot abdicate its responsibilities. Sources of public finance to fund housing and basic infrastructure services have to be explored beyond traditional sources. The wide variety of land-based instruments for financing urban infrastructure currently in use in many Indian cities can be classified into three groups: monetary exactions (e.g. betterment charges, impact fees), land exactions (e.g. Town Planning Scheme of Gujarat), and monetisation of under-utilised public land assets. There is a much larger potential for further unlocking of land values by rationalizing various land charges upwards, which currently are very low and selling or leasing surplus land possessed by central agencies like railways, defence, public sector undertakings, local and state governments.

Public housing, by definition, is subsidized housing. Though governments in many countries are shifting away from direct construction and management of public 'rental' housing, there is increasing assistance for homeownership through direct demand subsidies and increasing use of housing allowances (rather than direct provision) to assist low income families renting houses in private or non-profit sector (UNHABITAT, 2003). There are variants of supply-side subsidies that have also been tried to reduce the cost of supply of housing for low income households. These

subsidies take a number of forms across different countries (Table 2). In India, given that even the private rental housing is underdeveloped, approaches ranging from construction of public rental housing by government on their own or through PPPs to direct demand subsidies or supply subsidies to incentivize construction of low income housing would be required.

Table 2: Key supply-side and demand-side subsidies

| Country | Supply-side Instruments | Demand-side Instruments |
|-------------------|---|--|
| UK | Debt finance (Open market) Capital subsidy (Loan repayable on sale of property) Revenue subsidies to local authorities if rent doesn't meet expenditure | Rent rebates and allowances upto 100% |
| Ireland | For local authorities: Construction cost and land acquisition almost 100% funded by Central government. For HAs: Non-repayable loan to cover construction costs and fixed annual maintenance subsidy | Housing Allowance. All rents determined as 3% of income over 100 Euros/week |
| USA | Low Income Housing Tax Credit Few, carefully targeted capital grants Bonds issue to meet construction or mortgage subsidy costs (must be voter approved and subject to cap). Block grants to | Down payment assistance / Housing Vouchers and Allowances Revision of mortgage insurance requirements Sweat equity and self-help programs |
| Australia | Tax incentives to social rental owners | Deposit assistance, Regulated mortgage interest rates, Subsidized loans Property tax concessions. Rental housing allowance |
| Canada | Loans for upgrading social rental housing, Land and cash offsets, Mortgage insurance reduction for lenders. Operating subsidies for public housing. | Housing allowance, Mortgage reductions |
| Austria | Tax exemptions (less important) Sale of housing construction convertible bonds to raise capital for govt approved LPHAs. Direct subsidies for construction and renovation (most | Rental assistance. But as rents are largely cost linked, this is less important. |
| France | State subsidies and grants Cheap loans to private builders Tax incentives Local authorities finance | Housing allowance upto 60% of rent Controlled rents Zero-interest housing loans |
| The Netherlands | HAs had exemption from corporation tax, got loans guaranteed, could buy council land at reduced prices for social housing. Now no supply side subsidies must fund themselves through rent. | Housing Allowance. Rents deregulated, each HA can vary rent under the government maximum for that HA. |
| Denmark | Subsidised loans Tax exemptions to encourage large institutional investors in rental sector. Income and real estate tax exemption Cap on construction costs | Flat Rate Mortgage Interest Tax Relief to promote homeownership. Housing benefits (Rents also linked to historic construction costs) |
| Germany | Grants Tax Incentives (for all rental housing, even non-social) | Housing allowance (rent or mortgage repayment) Controlled rents |
| Switzerland | Federally secured bonds to raise money for non-profit builders . Federal low interest loans (meet ~5% of project costs). State guarantee for social sector revolving fund so banks lend to them cheaper. Small subsidies to buy land. Tax exemptions. | Private pension regulations to encourage home ownership and tax exempt savings to provide deposit for residential property. Rents linked to construction cost. |
| Singapore | Government finance and access to Central Provident Fund | Concessional loans to encourage home ownership. Subsidized rent |
| Republic of Korea | Private builders get tax exemptions, favourable prices in residential land acquisition and cheap loans from National Housing Fund | |
| Hong Kong | Produced by government at cost | Rents heavily subsidized with revenues partially collected from other sources such as car parks or shop |

Source: Tiwari and Hingorani (2011)

While subsidies are necessary for LIGs, reliance on them can be reduced by developing effective housing finance system. An effective housing finance system would require well developed securitization market to better allocate risks associated with lending, mortgage guarantee/insurance system and a substantially larger microfinance industry in India.

6.5 Land for housing and basic infrastructure

Acquisition of land for affordable housing projects and basic infrastructure services is problematic as the cost of land in cities is expensive. Moreover, there is little available land within city limits. Where this land is available, it may not be of the size required to build a larger housing development. Therefore, the majority of land available for affordable housing development tends to be close to industrial corridors or on the outskirts of the city in peri-urban areas. Though the National Housing and Habitat Policy 2007 requires that 20-25 percent of floor area ratio (FAR) be set aside for lower income housing, the progress has been slow and limited to development projects on the periphery of large cities. Urban local bodies, municipal or regional development authorities should take responsibility for providing land, preferably within city limits. Where this is not available, they should “create” new land by investing in expanding infrastructure corridors and developing basic sites that developers can purchase.

Acquisition could be made easier in a number of ways. For instance, one developer (personal communication with Naresh, Architect Janaagraha) recommends that affordable housing be included as a component of industrial development under the industrial policy of the government, and therefore the government use eminent domain to make plots available. Land acquired for industrial purpose can then be sold to developers for affordable housing. Moreover, all industrial clusters should be required to provide on-site affordable housing for their employees or others to purchase. At the same time, the bureaucratic purpose for land acquisition should be streamlined so that developers can get clearances faster.

7. Conclusion

The paper develops a framework for delivering “housing and basic infrastructure services for all” for the urban Indian context. An important ‘conceptual’ point raised in the paper is that to deliver on ‘housing and basic infrastructure for all’, various institutions have to work in tandem – a well-defined constitutional right, housing and habitat policy that has statutory backing, legal and planning regime that facilitates development, housing finance system that is well integrated with broader capital markets, state and local governments that have capacity to develop programmes for housing and basic infrastructure for LIGs and have financial resources to deliver on these. In this context, it is important to note that the goal of ‘housing and basic infrastructure services for all’ cannot be addressed in isolation from other objectives of the government. More importantly the responses have to be multi-faceted and levers from both housing market and non-housing market would be required in an integrated way. The need for comprehensive framework arises so that fragmentation of policy responses (as is the case in most government programmes such as RAY or even JNNURM), are avoided and a coherent action plan is promoted.

The application of conceptual framework to urban India indicates that there are a number of impediments at various levels that have hampered delivery of 'housing and basic infrastructure for all'. While a constitution right with statutory backing will go a long way, addressing inefficiencies in the planning system, housing finance and housing development markets would require capacity building at all levels. State and local governments need to formulate policies, based on careful research and understanding of the areas under their jurisdiction, that will help enable affordable housing developers. Only careful analysis will allow them to facilitate the work of developers while regulating it to make sure the benefits are not misused.

Investments need to be made in developing alternate building technologies and materials. Emphasis needs to be placed on educating and encouraging developers to use green building practices, sustainability features and community centred development. At the same time the fiscal and regulatory framework needs to be revised to simplify and reduce the cost of the construction processes.

Lastly, there is a need to achieve coherence and integration between plans at different levels. City plans used for securing funding under JNNURM cannot be divorced from the master plan of the city. Thought also needs to be given to the spatial implications of economic policies – to the kinds of urbanization, sprawl and density they will create, the kinds of housing and infrastructure they will necessitate, and how all of this can be provided in the most resource efficient manner.

References

- Annez, P., Bertaud, A., Patel, B., & Phatak, V. (2010). Working with the Market: A New Approach to Reducing Urban Slums in India. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1709847
- Berry, M. (2006a), "Housing affordability and the economy: a review of labour market impacts and policy issues", Research paper 5, Australian Housing and Urban Research Institute.
- Berry, M. (2006b), "Housing affordability and the economy: a review of macroeconomic impacts and policy issues", Research Paper 4, Australian Housing and Urban Research Institute.
- Bertaud, A. (2007), "Affordable housing: the supply side", presentation for Workshop on Middle & Low Income Housing in China organized by Development Research Center of the State Council (DRC), World Bank (WB) and International Finance Corporation (IFC), Beijing, July 19, 2007.
- Bhan, G. (2009). "This is no longer the city I once knew. Evictions, the urban poor and the right to the city in millennial Delhi", *Environment and Urbanization*, 21(1), 127-142.
- Bhatnagar, V. and Ramanujam, S.R. (2011), "Addressing the Challenge of Financial Sustainability in Urban Water Supply Services—Role of Performance, Monitoring, and Planning", India Infrastructure Report 2011, Oxford University Press, New Delhi.
- Boonyabanha, S. (2009). Baan Mankong: going to scale with "slum" and squatter upgrading in Thailand. *Environment and Urbanization*, 17(1), 21-46.

- Census (2001), "Census of India", Ministry of Home Affairs, Government of India, New Delhi.
- Deb, A., Karamchandani, A., & Singh, R. (2010). Building Houses, Financing Homes. Retrieved from <http://www.mim.monitor.com/downloads/whitepaper-BuildingHousesFinancingHomes-final-screen.pdf>
- Degnbol-Martinussen, J. (2001). *Policies, Institutions and Industrial Development: Coping with Liberalisation and International Competition in India*. London: Sage Publications.
- HPEC (2011), "Report on Indian Urban Infrastructure and Services", The High Powered Expert Committee for Estimating the Investment Requirements for Urban Infrastructure Services, Ministry of Urban Development, Government of India, New Delhi.
- Hingorani, Pritika (2011). Revisiting Low Income Housing: A Review of Policies and Perspectives, *Paper prepared for the India Urban Conference, November 2011*
- Hingorani, Pritika (2011). Housing Solutions: A Review of Models, *Paper prepared for the India Urban Conference, November 2011*
- Kumar, A. (1989). National Housing Policy: The Implications. *Economic and Political Weekly*, 24(23), 1285-1291.
- Mahadevia, D.(2006). NURM and the poor in globalising mega cities.*Economic and Political Weekly*, 41(31), 3399-3403.
- Mathur, O.P. (2009). Slum-Free Cities: A New Deal for the Urban Poor. Retrieved from www.nipfp.org.in/opm_files/.../Final%20Poverty%20Rep.pdf
- Marshall, S. (2010). Of squatters and schemes : considering city-level strategies for housing the poor in India. (Masters Dissertation). Retrieved from DSpace@MIT <http://hdl.handle.net/1721.1/59580>
- McKinsey Global Institute. (2010). India's urban awakening: Building inclusive cities, sustaining economic growth. Retrieved from http://www.mckinsey.com/mgi/publications/india_urbanization/index.asp
- MHUPA (2007), "National Urban Housing and Habitat Policy 2007", Ministry of Housing and Urban Poverty Alleviation, Government of India, New Delhi.
- MoUD(2007) "Report of the working group on Urban housing for the Eleventh Five Year Plan", Ministry of Urban Development and Poverty Alleviation, Government of India, New Delhi.
- MoWR(2007), "National Water Policy", Ministry of Water Resources, Government of India, New Delhi.
- Nayyar, D. (1998). Economic Development and Political Democracy. Interaction of Economics and Politics in Independent India.*Economic and Political Weekly*, 33(49), 3121-3131.

NSSO (2010), "Housing Conditions and Amenities in India 2008-09", National Sample Survey Office, Ministry of Statistics and Programme Implementation, Government of India, New Delhi.

Patel, N. (2011, March 11). Battle over Mumbai's Slums. *The Guardian*. Retrieved from <http://www.guardian.co.uk>

Patel, S., d'Cruz, C., & Burra, S. (2002). Beyond evictions in a global city: people-managed resettlement in Mumbai. *Environment and Urbanization*, 14(1), 159-172.

Ramanathan, U. (2006). Illegality and the urban poor. *Economic and Political Weekly*, 41(29), 3193-3197.

Ramanathan, U. (2005). Demolition Drive. *Economic and Political Weekly*, 40(27), 2908-2912.

Rao, P.S.N. (2004). Transformation of Housing Policy in India - the Trend Towards Market Mechanisms. Retrieved from www.housingauthority.gov.hk/hdw/ihc/pdf/rhk.pdf

Sahu, G., Zachariah, Y., and Sandipan Baksi. (2009). National level background document on urban issues and concerns. Retrieved from tiss-uirf.org/downloads/NLBD.pdf

Satterthwaite, D. (2010). Upgrading Slums: With and For Slum Dwellers. *Economic and Political Weekly*, 45(10), 1443-1445.

Sivaramakrishnan, K.C. (1969). Urban Housing: Challenge and Response. *Economic and Political Weekly*, 4(36), 1443-1445.

Sivam, A. & Sadasivam K. (2002). Role of state and market in housing delivery for low-income groups in India. *Journal of Housing and the Built Environment*, 17(1), 69-88.

Struyk, R. and Gidding, S. (2009), "The challenge of a urban world: An opportunity for U.S. foreign assistance", International Housing Coalition (IHC) Housing for All, Washington, www.intlhc.org. Tiwari, P. (2012), "Mortgage Market Character and Trends: India", International Encyclopaedia on Housing and Home, Elsevier.

Tiwari and Hingorani (2011), "International Experience of Public Investment in Housing", A report prepared for DFID.

Tiwari, P. and Pandey, A. (2011), "Overview", India Infrastructure Report 2011, Oxford University Press, New Delhi.

UNFPA (2010), "State of World Population 2011", United Nations Population Fund, New York.

UN-HABITAT (2003), "Global report on human settlements 2003: The challenge of slums", United Nations Human Settlement Programme, UN-Habitat, Earthscan Publications, London.

UN-HABITAT (2005), "Global report on human settlements 2005: Financing urban shelter", United Nations Human Settlement Programme, UN-Habitat, Earthscan Publications, London.

UNHABITAT (2010), "State of World's cities 2010/11" Press Release, United Nations Human Settlement Programme, UN-Habitat, Nairobi.

Upadhyay, V. (2011), "Water Rights and the 'New' Water Laws in India: Emerging Issues and Concerns in a Rights Based Perspective", India Infrastructure Report 2011, Oxford University Press, New Delhi.

Wadhwa, K. (1988). Housing Programmes for Urban Poor: Shifting Priorities. *Economic and Political Weekly*, 23(34), 1762-1767.

Wadhwa, K. (2009). Affordable Housing for Urban Poor. Retrieved from www.spa.ac.in/NRC/ThemePaperAffordableHousing.pdf

Yates, J. and Milligan, V. (2007), "Housing affordability: a 21st century problem", Report No 105, Australian Housing and Urban Research Institute.