

Theme Papers

Policy Review

Case Studies



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THEME **AFFORDABLE HOUSING**

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FROM THE EDITORIAL TEAM

Housing is one of the basic human needs and each person longs to have a house in their life span. The latest estimates by the Technical Group on Urban Housing for the 12th Plan has estimated the total urban housing shortage in 2012 as 18.78 million, of which almost 96 per cent pertains to the economically weaker sections and the lower income groups. The investment requirement for addressing this shortage would be in the order of Rs. 9.4 lakh crore, assuming an average per unit cost of Rs.5 lakh.

Affordable housing has also been one of the prime concerns for the government. The strategy to achieve this goal cannot be conventional as there is a need to deliver cost-effective housing at an unprecedented pace. A Task Force on 'Affordable Housing for All' defined affordable housing in terms of a) multiples of household income; b) size of the tenement and c) percentage of household income in case of rented accommodation. This definition highlights the position that affordability is a major concern for urban poor, who in the absence of access to formal housing resort to slums and informal settlements.

To overcome the present situation, three issues require our attention. First, is to understand the need for a multipronged strategy for housing delivery. The success of ownership driven housing programmes needs to be assessed. The challenge is to retain a house by the target group despite speculative market, more so, in big cities. Though the concept of rental housing being thought of as an option is a positive development, rental housing without a robust O&M package is likely to get converted into another slum. Additionally, retrofitting, rehabilitation and refurbishing older housing stock will also attribute towards enhancing the supply of housing stock. To meet the housing needs of new migrants and young professionals, night shelters and hostels may be planned in all class-I cities and above. PPP models can be utilized for this purpose.

Second aspect is to work out a strategy to increase the ability of households to acquire housing at market prices. The present policy subsidizes land, interest rates, services etc. in order to reduce the cost of housing. These incentives become deterrents to retaining ownership and the housing units gets passed on to higher income groups for speculative reasons. Instead, enhancing the purchasing power of individual households by direct subsidy transfer, once in a lifetime, would empower them to shop for their house, without any restraint of size or location. For the most vulnerable groups, such as senior citizens, single-parent families, the disabled, etc., some form of publicly funded allowance strategy can be implemented, providing individual households with adequate income to afford housing.

Third aspect pertains to limited access of the poor to sources of institutional funding and apprehension of loan delinquency which has made institutional lenders wary of lending to the poor/weaker sections. Since formal sector finance is not available to many poor households, there is a universal and persistent challenge for both shelter, micro-finance and community funds. Some estimates suggest that only 5-10 percent of the effective demand for shelter micro-finance is currently being met. The ability to accept deposits, access international support or seek private sector finance, access capital, especially for medium-and long-term capital, remains a challenge for many micro-finance institutions. A Credit Risk Guarantee Fund will be able to revive the highly fragmented micro-finance sector.

This issue of Shelter has tried to address some of these concerns. The theme papers by Dr. Manika Negi and Dr. Akshay Sen give an overview of options like PPP and 'Rent-to-own' respectively, for providing affordable housing. The papers of Yes Bank, Dr. Poonam Prakash, Dr. Girish Karnad and AK Jain discuss the policy framework that exists for providing housing to all segments of population, with focus on the urban poor. Technologies play an important role in delivering safe structures at reduced cost and this has been discussed in the papers by Rebekah Kurien and Arun Kashikar. Thoughts to ponder on the causes and consequences of urbanization of poverty have been appropriately brought out by Sangeeta Maunav in her two articles. Case studies on affordable housing have been provided by Asjad Bashir Alvi & Akshay Sen and Dr. Renu Khosla et. al. The experiences of Bangladesh in the area of affordable housing have been shared in the articles by Nazrul Islam & Salma A Shafi and Dr. Manoj Roy & David Hulme.

Hope you enjoy reading this issue of Shelter.



HUDCO -HSMI Publication, April 2013

THEME : AFFORDABLE HOUSING

There is a growing requirement for shelter and related infrastructure in urban areas due to rapid pace of urbanisation, growing informal settlements and the resultant gap between demand and supply of affordable housing. For a large developing nation - India, we need to constantly find innovative solutions and discover better practices. Affordable housing has today acquired special significance in the light of growing shortages. This issue of SHELTER is an attempt at looking at various facets of affordable housing.

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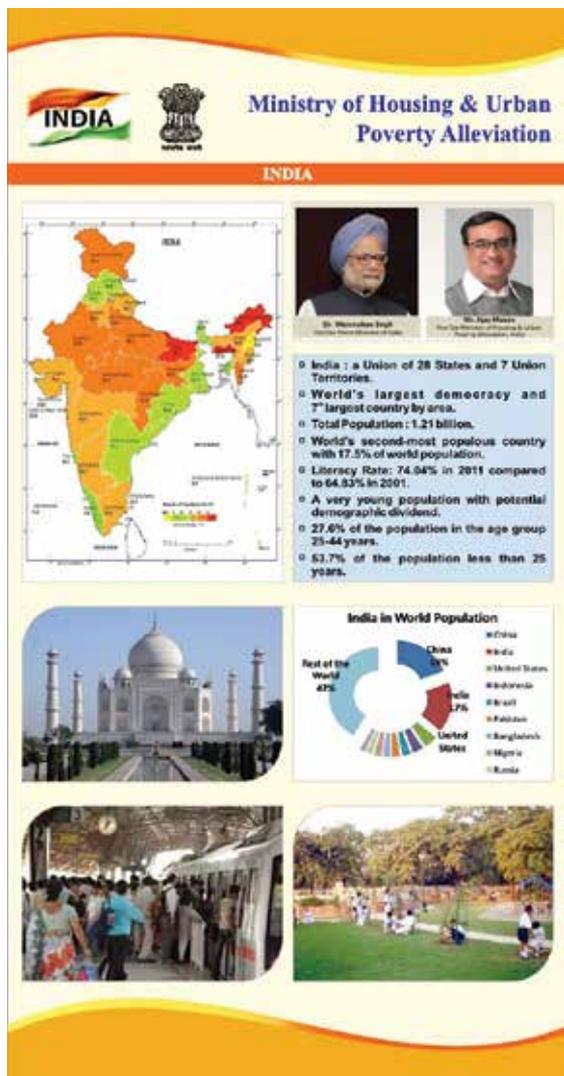
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INDIA AT THE UN-HABITAT EXHIBITION, NAIROBI APRIL 15-19, 2013



INDIA Ministry of Housing & Urban Poverty Alleviation

INDIA

Dr. Manmohan Singh
Hon'ble Prime Minister of India

Shri. Ajay Maken
Hon'ble Minister of Housing & Urban Poverty Alleviation, India

- India : a Union of 28 States and 7 Union Territories.
- World's largest democracy and 7th largest country by area.
- Total Population : 1.21 billion.
- World's second-most populous country with 17.5% of world population.
- Literacy Rate: 74.94% in 2011 compared to 64.83% in 2001.
- A very young population with potential demographic dividend.
- 27.6% of the population in the age group 25-44 years.
- 53.7% of the population less than 25 years.

India in World Population

Country	Percentage
China	19%
India	17%
USA	4%
Other countries	60%

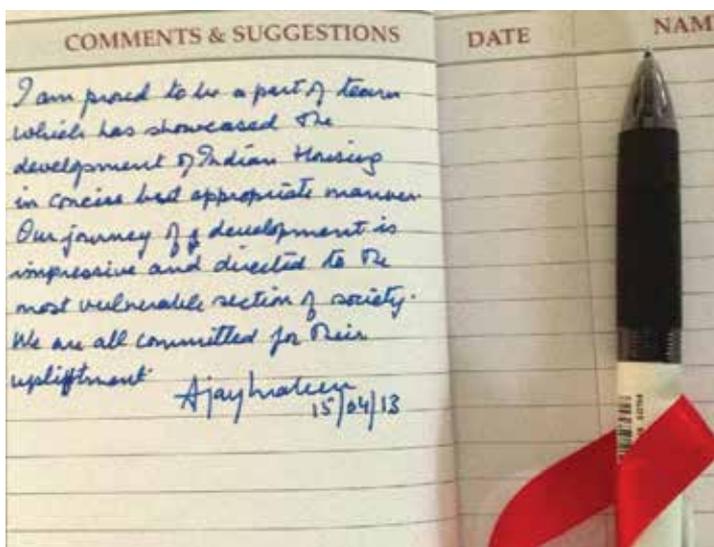
Rest of the World 4%

China 19%
India 17%
USA 4%
Other countries 60%

China
USA
India
Other countries



Shri Ajay Maken, Hon'ble Minister at India Pavilion, UN-Habitat, Nairobi



Hon'ble Minister's Comments on the Exhibition, organised by HUDCO

India participated in the Exhibition at the UN-HABITAT for the first time. Hon'ble Minister, Housing and Urban Poverty Alleviation, Shri Ajay Maken inaugurated the exhibition on 15th April 2013. The exhibition showcased India's overall development and the strides made in housing & urban development. The recent initiatives of the government of India in the urban sector, along with the contribution of HUDCO and other organisations, were displayed. The Indian segment of the exhibition, which was coordinated by HUDCO, received wide appreciation and was visited by a large number of dignitaries and delegates.



INDIA AT THE 24th SESSION OF THE GOVERNING COUNCIL MEETING OF UN-HABITAT, NAIROBI, APRIL 14 -19, 2013

The 24th Session of the Governing Council (GC) of UN-Habitat was held during 15th – 19th April, 2013 at Nairobi. Shri Ajay Maken, Hon'ble Minister of Housing and Urban Poverty Alleviation (HUPA), Government of India, led a delegation to the event comprising Shri V.P. Baligar, Chairman and Managing Director, HUDCO and Shri Susheel Kumar, Additional Secretary (Housing), MoHUPA. In conjunction with the GC meeting, the 1st meeting of the 4th Bureau of Asia Pacific Ministerial Conference on Housing and Urban Development (APMCHUD) was held on 14th April, 2013 at the UN-HABITAT premises, which was chaired by the Hon'ble Minister of HUPA. As part of the GC event, an exhibition was organized by HUDCO, which was inaugurated by the Hon'ble Minister, HUPA on 15th April, 2013 at 9.00 AM. The High Commissioner to India at Nairobi Shri Sibabrata Tripathi, Shri V.P.Baligar, Chairman and Managing Director, HUDCO and Shri Susheel Kumar, Additional Secretary (Housing), Ministry of HUPA were present at the inaugural function.



Indian Delegation at the UN-Habitat Governing Council Meeting



Hon'ble Minister chairing the APMCHUD Bureau Meeting

During the session, the Hon'ble Minister, HUPA addressed the Governing Council of UN-Habitat highlighting various initiatives for increasing the housing delivery in the country, particularly highlighting the programmes of Jawaharlal Nehru National Urban Renewal Mission, the Rajiv Awas Yojana, the Rajiv Rinn Yojana, the Affordable Housing in Partnership programme, the ISHUP scheme, etc. A country report on the theme of 'Promoting Equity and Productivity in Indian Cities' was circulated during the event to the participating dignitaries and delegates.

The Government of India moved a resolution in the Governing Council on the theme of inclusive urban planning, based on the outcome of the international conference organized during 18-19 February, 2013 at New Delhi which had adopted the 'Delhi Declaration' on 'Inclusive Urban Planning'. Another resolution was moved by the Government of Jordan and supported by India on behalf of APMCHUD on the theme of 'Youth and Sustainable Urban Development'. Both the resolutions were adopted by the Governing Council of UN-Habitat.

There was a meeting between Shri Ajay Maken, Hon'ble Minister of Housing & Urban Poverty Alleviation, Govt. of India and Dr Joan Clos, Executive Director, UN-Habitat on further strengthening the co-operation between Government of India and the UN-Habitat including renewal of the MoU with HUDCO and collaborating on issues of mutual interest. The contours of the MoU between UN-Habitat and HUDCO were approved and it is proposed to be signed at New Delhi.

There was also an event organized by UN-Habitat on 18th April 2013 on the theme of 'Achieving Sustainable Energy Planning for Cities in Africa and Asia'. Shri V.P. Baligar, CMD, HUDCO was a panelist and spoke on the Government of India policy on renewable energy, specially the solar mission, imperatives of energy efficient city planning and incorporation of energy efficiency concepts in the building codes and civic bye-laws. In addition, Shri Baligar also highlighted the efforts of HUDCO in financing core infrastructure, including urban transport, to make cities vibrant and sustainable. Other Panelists in the event included Hon'ble M.A. Masunda, Mayor of Harare, Mr. Gino Van Begin, Secretary General of ICLEI, Mr. Xolile George, CEO of South African Local Government Association (SALGA), and Mr. Alioune Badiane, Director, Project Office, UN-HABITAT.

MISSION FIVE ONES

HUDCO, in its efforts to be more responsive and efficient in its areas of operations, has been continuously reviewing its business strategies. In order to achieve a quantum jump in housing and urban infrastructure operations and improve interface with urban local bodies in the country, five stretch goals, namely 'Mission Five Ones' have been formulated. These are envisioned to deliver:

1. One Lakh crore cumulative release by 31st March 2014
2. One million housing units to be sanctioned per annum
3. One thousand crore Profit after Tax
4. Support 100 Urban Local Bodies
5. Reduce gross NPA to 1 per cent.

A team, called 'Team Quantum' has been constituted to coordinate and monitor the progress of these goals. The team comprises of Dr. Akshaya Kumar Sen, Dr. Vivek, Mr. Rahul Mane and Mr. Rajiv Sharma, coordinated by Dr. Subrahmanyam, Dr. P.Jayapal and Mr. Rajesh Goel. Mr. Sanjay Bhargava, who has had success with big ideas in three different financial service businesses in three different countries, is the coach for this team.

In the last 100 days of its existence, the Innovation Cell, which is also called Team Quantum, has achieved the following milestones:

1. Revival of old products such as HUDCO NIWAS Bulk Loan, Loans to ULBs, Loan to other Housing Finance Companies, Loan to Police Housing Corporations (for housing and other infrastructure), Loan to State Road Transport Corporations (for fleet augmentation and other related infrastructure), Take out finance (taken on higher rate or for shorter tenure), etc.
2. A new 'Accelerated Rural Housing Programme' has been formulated with three types of loan products, viz, fully grant scheme, grant-cum-loan scheme and fully loan scheme. This scheme has been developed for the state governments for the purpose of providing affordable housing to the rural poor. Rajasthan government is availing loan for rural housing under this programme.
3. A new scheme "Rent to Own" has been introduced for State Public Agency employees, including police personnel through State Police Housing Corporations and state transport employees through State Road Transport Undertakings. The Scheme is also proposed to be applied for slum housing in ward 103 in Punjabi Bag, Delhi on pilot basis.
4. Towards total transformation of urban local bodies, a new scheme- 'Adarsh Nagar Yojana' (ANY), has been conceptualized, initially starting with two cities, viz. Gwalior and Ajmer. Several brainstorming sessions have been held with central/

state government officials, academic institutions and city representatives. Under "ANY" scheme, HUDCO has evolved a three-fold strategy: a) to constitute a high-level task force for rapid transformation of city; b) to prepare City Business Plan to enhance city revenue and expenditure on development; and c) appoint a world class consultancy firm to identify the priorities for city development and implement potential projects. HUDCO will support the cities by extending its CSR funds and also dovetailing the "Challenge Fund" of the World Bank, for promoting these activities.

5. New innovation in housing and urban development sector is also being attempted through participation in India Inclusive Innovation Fund (IIIF) of National Innovation Council (NIC). HUDCO is contributing Rs.25 crore in the fund corpus of Rs.500 crore in order to promote IT enabled innovations in the area of "Housing and Habitat". NIC has also agreed for inclusion of "Housing and Habitat" sector as one of the sector earmarked for innovation for "Bottom of Pyramid (BoP)" citizen.
6. States are being sensitized for new innovative development such as "Knowledge City", industrial townships along with industrial corridors etc.
7. Innovation cell is designing another new product- "Senior Housing", for Senior Citizens. Under this scheme, a well furnished apartment with facilities such as dining, medical support, internet, DTH, laundry services, security, yoga centre, club, gymnasium etc. is provided to senior citizens. The beneficiary has to make some down payment, security deposit and a fixed monthly charge for enjoying these facilities.
8. Hudco Nav Nirman Yojana (Project HuNNY) is a product developed to incentivize state housing boards, development authorities or urban local bodies to take up a comprehensive township project that would address the demand of affordable housing, particularly for EWS, LIG and MIG category in small and medium towns. These townships will have excellent infrastructure and facilities so that dependency to primate city is minimised.
9. Innovative ideas are being encouraged for reducing the NPAs of HUDCO in light of the amendment to the SARFAESI Act.
10. Meet your CEO (MyC) is a confidence building and motivational initiative in which CMD would meet one HUDCO official of any rank, for 10-15 minutes in a scheduled interaction, to discuss his/her ideas and suggestions to improve HUDCO's business, processes and procedures.

Readers are encouraged to send innovative ideas to mission-five-aces@googlegroups.com

(Source: Dr. Vivek Gupta, AGM Finance, HUDCO, New Delhi)

Affordable Housing for All : An Overview of Housing Policies in India

GIRISH KARNAD T.G.

Urban planning tools including master plan, zoning and other regulations are not enough to make land available in pace with urbanization, resulting in insufficient land supply and increase in land prices. It is therefore suggested that conversion of land use be made flexible, effective and efficient.

Census 2011 has estimated that the urban population of India is at 377 million which constitutes about 31% of the country's population. By 2031, the population of urban areas is projected to reach 600 million (GirishKarnad,2011). As per the report of the Committee on slum statistics/Census chaired by Dr. Pranab Sen, the slum population in the country is 93 million in 2011.

Many asian countries are demonstrating that with strong political will and improved institutional capacity, affordable housing can be provided in large scale, particularly through national programmes. India and China are showing evidence of providing affordable housing through such initiatives (UN – HABITAT, 2011). This clearly indicates that efforts in India for providing affordable houses have been noticed across the globe. Programmes like VAMBAY, JNNURM and now RAY are major initiatives of the government towards affordable housing. In one way the government has given top priority to housing sector, on the other hand the housing shortage is phenomenal in EWS and LIG groups.

1.0 Overview of Housing Policies and Programmes in the Country:

1.1 Housing policies and Five Year Plans

The policies of urban development and housing in India have come a long way since 1950s. In the First Five year plan (1951-56), the emphasis was on institution building and on construction of houses for government employees and weaker sections. The scope of housing programme for the poor was expanded in the Second Plan

(1956-61). The Third Plan (1961-66) focused on co-ordination of efforts of all agencies and orienting programmes to meet the needs of the lower economic groups. Housing and Urban Development Corporation (HUDCO) was established and it became a major turning point to boost the housing and urban development in the country. A scheme for Environmental Improvement of Urban Slums (EIUS) was undertaken in the central sector from 1972-73 with a view to provide minimum level of services in urban slums and this scheme continued during the Fifth Plan(1974-79).

The thrust of the Sixth plan(1980-85) was on integrated provision of services along with shelter, particularly for the poor.

The Seventh Plan (1985-90) stressed on the need to entrust major responsibility of housing construction to the private sector. A threefold role was assigned to the public sector, namely mobilization of resources for housing, provision of subsidized housing for the poor and acquisition and development of land. The National Housing Bank was established to expand the base of housing finance. During the same time the government of India appointed the National Commission on Urbanization and it submitted its report in 1988.

The National Building Organization (NBO) was reconstituted

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and Building Material Technology Promotion Council (BMTPC) was established for promoting commercial production of building materials. For the first time, the urban poverty alleviation programme was established as Urban Basic Services for the Poor (UBSP). In the Eighth Plan(1992-97), the Nehru Rozgar Yojana (NRY) was launched. The plan for the first time recognized the role and importance of the urban sector for the national economy. The National Slum Development Programme (NSDP) was launched during 1996-97 with the objective to upgrade slums.

The Ninth plan witnessed the implementation of Two Million Housing Programme to provide housing for the urban and rural poor across the country. Subsequently, Valmiki Ambedkar Awas Yojana (VAMBAY) laid emphasis on housing and sanitation to urban slum dwellers.

During the Tenth Plan the country went in to the mission mode through Jawahar Lal Nehru National Urban Renewal Mission (JNNURM) and under the sub-mission of Basic Services for the Urban Poor (BSUP) over 15 lakh housing units have been assisted. At present the country is at the end of the Eleventh Plan which was marked by the launch of Rajiv Awas Yojana (RAY) for achieving a slum free India.

1.2 Environmental Improvement of Urban Slums (EIUS)

The scheme has been an integral component of the Minimum Needs Programme since 1974 and includes state sector components like water

supply, drainage, community latrines and baths, widening and paving of lanes and street lighting to improve the environmental conditions of the slum. State governments have not been able to provide funds for this scheme and improvement and up gradation work in slums is not taken up widely under this scheme.

1.3 Urban Land Ceiling and Regulation (ULCAR) Act, 1976

The ULCAR Act 1976 was enacted to prevent concentration of land holdings in urban areas and to make available urban land for construction of houses for the middle and lower income groups. However, it led to anomalies such as lack of clarity and too much discretionary powers given to state governments for granting exemptions, and compensation provided for acquisition was very little. Since the ULCAR Act, 1976 did not meet its intended objectives the same has been repealed by an act of Parliament in 1999. The repeal of the Act was one of the mandatory reforms suggested in the JnNURM.

1.4 National Housing and Habitat Policy, 1998

The National Housing and Habitat Policy, 1998 envisaged a major shift in government's role to act more as facilitator than as a provider. The policy provided for review and modification in light of changing scenario in the housing sector as and when needed. The objective of the policy was to create surplus housing stock and facilitate construction of two million dwelling units each year in pursuance of the National

Agenda for Governance. It also sought to ensure that housing along with supporting services is treated as a priority sector at par with infrastructure.

After this policy the housing sector witnessed several changes. As this policy was not able to fully overcome the housing shortage, particularly for the EWS and low income groups, the Planning Commission suggested modification of the housing policy to incorporate affordable housing programme for the urban poor. Considerable efforts were made during the Ninth and Tenth plan to enlarge the resource base and initiate innovative institutional mechanisms to augment housing delivery in urban areas. Focused efforts were also made to provide shelter and related services to the poor and vulnerable sections of the society.

1.5 Two Million Housing Programme

The two million housing programme was launched in 1998-99. This was a loan based scheme, which envisaged facilitating construction of 20 lakh additional units every year, 7 lakh dwelling units in urban areas & 13 lakh dwelling units in rural areas.

The total target given was 35 lakhs and achieved target was over 36 lakh units. The target was distributed across HUDCO, Housing Finance Institutions/banks and co-operative sectors.

1.6 Valmiki Ambedkar Awas Yojana (VAMBAY)

Government of India launched this scheme during the year 2001-02 as

a centrally supported scheme with in-built subsidy for undertaking construction of dwelling units and sanitation units especially focused for slum dwellers below the poverty line and belonging to socially disadvantaged groups.

The scheme operated for 5 years from 2001 to 2006 and Rs.93363.69 lakhs was released by the Government of India as subsidy for this scheme. The number of dwelling units sanctioned during this period was 442369 and number of toilets was 65286.

The scheme proved to be more successful as it had grant component of 50% thus making houses affordable for the poor. The advantage was also in terms of targeting the urban poor and EWS as the major urban housing shortage is in these categories.

1.7 National Urban Housing and Habitat Policy (NUHHP) 2007

National Urban Housing and Habitat policy (NUHHP) 2007 is the first ever policy of Government of India which exclusively covers housing and habitat sector in the urban context. The NUHHP views housing as a tool of productivity, equity, safe environment, pro-poor delivery of civic services and shelter as well as employment opportunities and has emphasized bottom – up planning. The urban housing backlog in the year 2007 was estimated to be 24.7 million dwelling units and the housing shortage during the planning period (2007-12) including the backlog is estimated as 26.53 million. But the most important point of concern is that most of the housing shortage is for EWS and LIG sections which does not seem to

be getting translated into economic demand, due to low affordability of the urban poor. As a result, a sizable number of this section resorts to squatter settlements and slums.

On the other hand, access to housing finance through mortgage is largely confined to middle and high income households. In this regard, the policy encourages developing sustainable network of micro finance institutions to facilitate low income households for necessary housing credit.

Glimpses of indian housing loan market are as follows:

- Most of the clients of housing finance institutions/banks under retail home loans belong to MIG/HIG categories and housing loan finance still remains unaffordable in a large way to the EWS/LIG section.
- Only 2% of the housing loan extended by HFC's are of value less than Rs.50,000/- and about 7% of the housing loans is of value between Rs.50,000/- to Rs.1,00,000/-.
- More than 73% of housing loans extended by HFC's exceeds Rs.3 lakh and about 93% exceeds Rs.1 lakh.
- The fastest growing housing loan bracket is between Rs.10 lakh to 25 lakh.

This highlights the need to evolve a system or a scheme for financing housing loan in larger scale for the lower income people whose affordability falls in the range of below Rs.3 lakh as over 90% of the housing shortage is on account of EWS/LIG households.

1.8 Jawaharlal Nehru National Urban Renewal Mission (JnNURM)

The JnNURM was launched in December, 2005. The mission has four components: Urban Infrastructure and Governance (UIG) and Basic Services to the Urban Poor (BSUP) applicable to 65 cities and Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) and Integrated Housing and Slum Development programme (IHSDP) applicable to other cities and towns.

The focus of UIG & UIDSSMT is on the development of the city-wide infrastructure administered through Ministry of Urban Development, Government of India, whereas BSUP & IHSDP focus on housing and basic amenities to the urban poor especially slum-dwellers administered through Ministry of Housing and Urban Poverty Alleviation (MoHUPA), Government of India. These schemes of BSUP and IHSDP subsumed the earlier schemes of Valmiki Ambedkar Awas Yojana (VAMBAY) and National Slum Development Programme (NSDP).

The mission and its sub-components were expected to promote sustainable and inclusive city development and at the same time integrate the housing and related infrastructure development for the poor keeping in mind the 7 point charter for the poor – land tenure, affordable housing, water, sanitation, health, education and social security.

- As on December, 2012, 527 projects of BSUP with a central assistance of Rs. 14712.64 crores

for the construction of 1005965 dwelling units have been approved. Similarly, 1083 projects of IHSDP with central assistance of Rs. 7660.08 crores for construction of 563807 dwelling units across the country, have been approved. The cumulative dwelling units assisted in the programme was 1569772 units out of which 648413 houses were completed with a cumulative project cost of Rs.41723.34 crores, and cumulative central share of Rs.22372.72 crores (www.mohupa.gov.in).

Salient features of JnNURM and its impact

JnNURM took center-stage in the overall urban transformation process as first ever biggest scheme for the reform of urban sector in India.

- It is the single largest initiative ever launched to address the problems of housing, urban infrastructure and basic services to the urban poor in a holistic manner.
- BSUP and IHSDP provide shelter and access to basic services to the urban poor.
- JnNURM triggered the process of urban renewal by improving urban governance, augmenting civic infrastructure and enhancing effective delivery of basic services such as water supply, sewerage, drainage and solid waste management.
- It has infused the much needed capital for addressing the deficiencies in urban infrastructure

creation.

- JnNURM does not limit itself to financing housing and urban infrastructure, but has made substantial effort, collectively with state governments and urban local bodies, to integrate number of other reform measures with the urban development process in the country.
- Land required for the project is to be supplied by state government. This land should be in possession of the implementing agency and have a clear title.
- In some states the scheme started at a slow pace because of the non availability of land.
- The schemes of BSUP and IHSDP have been able to focus attention on the problems of inequity in urban areas, and draw budgetary resources for the urban poor.
- States accepted a strategy of in-situ development of slums when they are located on public land and if the title of land is clear. In this way the scheme will be implemented well in time, will be cost-effective and save beneficiaries from the uncertainty of relocation.
- There is consensus across the country that the emergence of new slums can be prevented only by increasing the availability of affordable housing.
- The experiences of JnNURM have demonstrated that beneficiary led initiatives yield better results and are more successful.
- JnNURM has led to Rajiv Awas Yojana, a scheme which envisions

a “Slum Free India”, through the legal empowerment of slum dwellers by granting them legal right to dwelling space at affordable costs.

2.0 Way Ahead – Future Course of Action: Towards Providing Affordable Housing.

2.1 Rajiv Awas Yojana (RAY) – Vision of Slum Free India

The state would require to identify the cities intended to be covered in five years under RAY, and their phasing and commitment to adopt a whole city approach, so that an integrated & holistic plan is prepared for up-gradation of all existing slums, notified or non – notified, in each identified city. In the slums taken up for development in selected cities, a holistic coverage would be required, with provision of all basic and civic infrastructure and services as well as decent housing, with emphasis on planned layouts and on total sanitation.

RAY proposes central government assistance for up- gradation of infrastructure and civic amenities in slums, and assistance for capacity building. Two important components for housing are:

2.2 Interest Subsidy Scheme for Housing the Urban Poor (ISHUP)

Under this scheme interest subsidy will be available to the EWS and LIG only. Maximum loan amount is Rs.80,000 for EWS and Rs.1,50,000 for LIG category. Interest subsidy of 5% per annum on market rate of interest for a limited period of 5 years only to ensure the installment

will be less than 20% of the beneficiary's monthly family income.

2.3 Affordable Housing in Partnership

This scheme is applicable to all cities covered under RAY. Launched in 2009, this scheme emphasized 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 & building materials. With the launch of RAY in 2011, the scheme was dovetailed with RAY.

Present Status of the Scheme

RAY is the first ever programme launched by the Government of India with the concept and vision of slum free India. Each state government is expected to allot the property rights to the slum dwellers. The response for the programme at the initial stages has been very encouraging.

The scheme will be implemented through partnership between communities, urban local bodies, private developers, state governments and government of India. The scheme is expected to begin in 250 cities which have an estimated 32.10 million people living in slums. They will be benefited with property rights, access to decent shelter, basic amenities and improved quality life.

Under the slum free city planning Rs.100 crores has been released to 34 states/UT's.

So far 24 pilot DPRs of 11 States(21 cities) with total project cost of Rs.1076.63 crores have been approved till December 2012.

2.4 Real Estate (Regulation and Development) Bill, 2011

Establishment of a "Real Estate Regulatory Authority" in each state by the appropriate Government (Center for the UTs and State Governments in the case of States), with specified functions, powers and responsibilities to facilitate the orderly and planned growth of the sector is proposed in this Bill.

The Bill is expected to ensure greater accountability towards consumers, bring transparency and fairness in transactions and reduce frauds and delays in real estate sector significantly.

The bill is also expected to promote regulated and orderly growth through efficiency, professionalism and standardization. It seeks to ensure consumer protection, without adding another stage in the procedure for sanctions. The builders would be brought under single forum and provided incentives by Government to build affordable homes.

2.5 Special Refinance Scheme for Urban Low Income Housing

This is a special scheme launched by the National Housing Bank (NHB) to provide long term funds to retail lending institutions at lower interest rate to enable these institutions to

increase their housing credit flow to the lower income segments in urban areas. The scheme covers loans up to Rs.5 lakhs extended to households having monthly income of not more than Rs.15,000 for purchase/ acquisition of houses. The scheme aims to improve affordability by providing refinance at lower interest rate with long repayment period ranging from 10-15 years, resulting in considerable reduction in EMIs and also hedging against interest rates volatility.

2.6 Interest Subvention Scheme

The scheme provides for 1% interest subvention on housing loan up to Rs.15 lakhs, where the cost of the house does not exceed Rs.25 lakhs. Earlier, the interest benefit was given on loans up to Rs.10 lakhs provided the cost of the house does not exceed Rs. 20 lakhs. In 2011-12, the government liberalized the scheme and increased the loan limit up to Rs.15 lakhs and cost of the house to Rs.25 lakhs. The Government has designated NHB as the designated agency for implementing the scheme both for the scheduled commercial banks and housing finance companies (NHB, 2011).

The launching of all these programmes are timely as it coincides with the formulation of RAY & proposed Real Estate Bill. Given the common focus of these programmes/schemes, the combined outcome is bound to be encouraging and positive towards providing affordable housing for the urban poor.

Based on the overview of housing policies, programmes and insti-

tutions involved in providing / channelizing housing, the following policy suggestions has been made towards providing affordable housing.

3.0 Policy Suggestions

i. The Town and Country Planning Organisation (TCPO), Ministry of Urban Development in its study of about 400 master plans in the country, found that in cities with a population of more than 0.10 million, about 30 percent of land earmarked for development, within the existing urban fences, remained unused or underutilized. This percentage was even larger for urban settlements with population below 0.10 million. Further, the standards do not make allowances for reservations for marginal/marginalized groups. This shows that in the indian planning system, master plans have not given importance to the urban poor (UNCHS, 1992).

Census 2011 reveals that there are 7936 towns in the country. TCPO has estimated that only 1233 cities/towns have approved master plans and preparation of plans for another 657 towns is in progress (ITPI, 2012). Hence for the majority of towns master plan has to be prepared. In the indian planning system, master plan is a statutory document for the overall development of the town. Hence in towns where a master plan is still to be prepared, there is enough scope for earmarking land for affordable housing/urban poor housing. Action needs to be initiated at appropriate level for implementing the same on priority. Specific guidelines may be prepared so that

master plan may focus on urban poor and their requirements like employment, housing and effective transportation. Land to the extent of 20-25% of the total area should be earmarked to provide housing for the urban poor and 20-25% funds should be earmarked in government/municipal budget for this purpose.

Expansion of the city limits needs to be based on long term requirement of the land for various economic groups. In future, all layout development plans, should earmark 20 to 25% of land for housing the EWS/LIG population. There is a need for creating EWS and LIG plots along with MIG and HIG plots in all the layout plan approved by development authorities.

Urban planning tools including master plan, zoning and other regulations are not enough to make land available in pace with urbanization, resulting in insufficient land supply and increase in land prices. It is therefore suggested that conversion of land use be made flexible, effective and efficient.

Once the master plan is prepared and approved, the same has to be implemented in its true spirit. There has to be a separate department/wing for the effective implementation of the master plan. In this way the land allocated for the desired use may be made more efficient and effective.

In all the neighborhood land use plans, mixed land use should be promoted with provision of group housing for different income groups and providing employment within the vicinity, so that each neighbor-

hood will act as a self contained unit.

ii. There should be a separate ministry in each state to look after housing and urban poverty alleviation in line with the Ministry of Housing and Urban Poverty Alleviation (MoHUPA), Government of India. It may work in co-ordination with MoHUPA in framing policy for the housing and urban poor at state level. At the municipal level, a separate department for housing and urban poverty should be established to focus on housing needs of the urban poor.

iii. Consequent to the approval of the Real Estate (Regulation and Development) Bill 2011, builders in each state should be brought under a single forum by preparing guidelines for registration of the builder, approval of the project, framing project implementation norms and penal provisions for violation of norms. The government may introduce incentives to the builder by offering land at subsidized rates, additional FAR and subsidy to create stock of affordable houses for the urban poor.

iv. In order to prevent formation of slums in urban areas, due to rural-urban migration, rural areas should be strengthened by providing good infrastructure, strengthening rural employment base and improving the transportation & communication between rural and urban areas, so that proper rural urban relationship is established and pressure on urban housing is reduced.

Urban and rural development should be made complimentary to each another. Provision of Urban

Amenities in Rural Areas (PURA) concept may be relooked and applied so that migration to urban areas can be minimized.

v. HUDCO is the country's unique premier techno-financial institution. Its capability in handling the housing sector with special focus on EWS/affordable housing has been proven over the years. Government may effectively use the experience of HUDCO for providing affordable housing to the urban poor in all states and UTs and route all the government of India programmes for housing through HUDCO. Thus, the grant from government, loan, technical and financial input towards project formulation and effective implementation from HUDCO, will benefit the state governments in provision and creation of affordable housing stock.

vi. Likewise, similar model for establishment of the SEZ could be developed. Government may encourage establishment of Special Residential Zones (SRZ's) with similar incentives in line with SEZ's like tax benefit, provision of land at subsidized rates with special focus on housing, services and employment for the urban poor.

vii. Under decentralization as per the implementation of the 74th CAA, housing and urban poverty alleviation including slum improvements is the responsibility of the municipal government. However, most of the state government still have not delegated this to urban local bodies. As per the JnNURM/ RAY each city has to create a BSUP

fund and in each newly formed layout 20-25% of land/houses are to be allocated for urban poor. Accordingly, if the local level government is strengthened they will be in a better position to provide affordable housing and employment to the urban poor. Necessary legal base needs to be created for the purpose.

viii. Implementation of RAY programme, in its true spirit, is the order of the day. Each state government should formulate slum free city plan across the state at city level. Appropriate manpower, machinery focusing towards the same should be the priority.

Necessary legal base should be put in place for allocating the land tenure to the slum dwellers.

4.0 Conclusions

Providing affordable houses is the need of the hour. In India, housing programme by the government started with five year plans. During these years many programmes were launched and taken up to provide houses to the urban poor. Off late JnNURM with its sub-mission -BSUP has made real positive impact in providing housing to the urban poor across the country. Based on the experience of JnNURM, the Government of India has recently launched Rajiv Awas Yojana (RAY) with the vision of slum free India and provision of affordable housing for the urban poor. Action has also been initiated to recognize the urban poor in master plans and allocate land exclusively to meet their housing needs.

The State Governments are positively responding to the programmes and have initiated actions. With the support of state governments and partnership with the builder, community & urban local bodies, under the able guidance of MoHUPA at the apex level, can only make the dream of achieving slum free India and affordable housing for all a reality.

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Guidelines for Creating Affordable Housing in Urban Areas (Working Draft)

PRATIMA JOSHI

In addition to transforming existing slums so that they provide more livable and legal housing, there is a need for parallel efforts to create additional affordable housing stock to cater to the future growth of low income segments of the population due to organic growth and in-migration. This can be largely achieved by redirecting private sector construction activity and capital towards the construction of low cost housing through appropriate policy changes, regulation and incentives

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In looking at options of increasing the availability of land and affordable housing for the BPL and EWS population in urban areas, it is useful to disaggregate the issue into two components.

One component is the existing slums in a city and exploring ways to convert these to decent and legal dwellings – whether in situ or in the close vicinity of where these slums are currently located. The second component is creating additional housing stock – over and above what is required by current slum dwellers in various cities – so as to prevent the growth of more slums in the future as cities inexorably grow both organically and due to in-migration.

The Working Draft prepared some guidelines for both these components, which are outlined below.

A. TRANSFORMING EXISTING SLUMS

Slums are a result of the lack of affordable housing options for the urban poor across most India cities. They are affordable because land cost are virtually nil, construction is extremely rudimentary and not in conformance with regular building code, and there is lack of civic services (and corresponding relief from civic taxes).

Slums represent a long running deadlock between the occupants and the land owners.

The occupants make use of the land but due to lack of title and legal rights they are unable or unwilling to invest in improving their dwelling structures and often live under threat of eviction. Similarly the land owner has legal ownership of the land but is unable to exercise that right and develop the property in the way that they choose. Furthermore, given the legality of the structures and the residents of these slums, most cities are reluctant to invest in infrastructure that is required to provide “last mile” connectivity for services such as water and sanitation.

Breaking this deadlock requires providing incentives that will facilitate redevelopment of the existing slum lands. The fundamental premise is that the land that the slums are on, are valuable assets and should be put to better use - either for housing the current residents (and possible additional low income families) in more decent structures with adequate infrastructure and provision for services, or for some other purpose with the existing residents being accommodated in better and legal dwellings somewhere else in the vicinity.

Landowners of slum plots can be provided incentives by way of addi-

tional in-situ development rights (say 2.0 FSI rather than 1.0 FSI) which allow him to surrender part of the land to the slum residents so that they have legal title, but still be able to build as much on the partial remaining slum plot as much as they would have on the full plot. Alternatively the incentive can be provided in the way of Transferable Development Rights or TDR, where the landowner cedes control of the land to the ULB or appropriate authority but receives the permission to build elsewhere – over the prevailing FSI or FAR rules – the amount he could have constructed on his original slum land as per prevailing rules. TDR is like “virtual land” and is used to avoid monetary compensation for land acquisition by cash strapped cities and states.

Other landowners with unencumbered plots can also be incentivized using the same approach as above to make their lands available for the construction of affordable housing for slum residents who are residing in slums where the land is required for a public purpose or is ecologically or environmentally not suitable for housing and thus need to be relocated

Slum residents, whose homes typically would have to be demolished to allow more planned redevelopment with sturdier tenements, can be provided incentives by way of legal title and a fairly large subsidy towards the cost of the improved tenements either where they currently reside or in the vicinity. In addition, providing for transit accommodation during the period of the redevelopment would be a key requirement.

Builders can be incentivized to construct new tenements on existing slum lands or unencumbered plots offered by landowners by offering compensation consisting of a combination of cash and “in-kind” consideration. The “in-kind” consideration could be in the form of TDR, which as mentioned above would allow the builder to build over the prevailing FSI in any plot in the city by using the TDR that they receive as compensation for building slum tenements.

However while implementing such an incentive based redevelopment of slums, there are a number of concerns and potential risks that need to be addressed such as fragmented redevelopment of slums, overburdening the infrastructure and services in parts of a city due to very high densities as a result of TDR and high FSI/FAR, providing choices to slum dwellers rather than a one size fits all approach, ensuring fair compensation to landowners and developers to name a few. The guidelines below are aimed at addressing these issues while promoting the overall objective of transforming slum housing into a more decent and legal affordable housing stock for the urban poor and at the same time minimizing the burden of redevelopment on the city.

Specific Guidelines for “Slum Transformation and Redevelopment Scheme” (STARS)

1.0 City Level Planning and Preparation

1.1 Enumerate and survey all slums in the ULB and determine eligibility

of each slum to participate in STARS. Individual slums should be defined based on community and spatial contiguity and should be treated as being indivisible for the purposes for redevelopment under STARS even when the underlying ownership of land is fragmented.

1.2 Eligibility criteria can be established by each ULB based on local conditions but should typically include minimum size (number of structures or residents) and tenure of the settlement.

1.3 Classify all eligible slums settlements under STARS into three categories. First are those that have to be relocated because of the slum plot being on land that is reserved for public use or is environmentally/ecologically not suitable for residential use (e.g. river beds and embankments). Second are those that are on plots where land values in the vicinity are in the top quartile of land values in the ULB and hence should be considered for commercial use rather than in-situ redevelopment, and the third category would be the remaining slums.

1.4 Establish tenement density norms for slum housing – this will vary by city but should be in the range of 200 to 300 units per hectare (approx 1 FSI) for Tier 3 and smaller cities, 300 to 450 units per hectare (approx 1.5 FSI) for Tier 2 cities and 450 to 600 units per hectare (approx FSI 2.0) for Tier 1 cities. Densities higher than this will lead to overcrowding in these redeveloped slum pockets, as well as unnecessarily high structures, and cause a burden to the entire area that the slum(s) are

located in. Exceptions to the above can be made for the few slums where the existing tenements densities are higher than the above norms.

1.5 Assess the total housing that can be created on existing slum lands where in-situ development is feasible and desirable (based on the density norms established above) and the resultant excess or deficit in housing stock after using existing slum lands for redevelopment

1.6 Identify the approximate TDR that is likely to be generated across the city – for both in-situ development and relocation using unencumbered land - if TDR is used as the sole compensation mechanism for landowners and builders

1.7 Define TDR “receiving pockets” in each zone or sub section of the city based on relative “carrying capacity” of different areas and establish norms for the amount of TDR that can be used in these receiving pockets over and above the normally permissible FSI.

1.8 Ensure that there is adequate TDR receiving capacity on an aggregate city wide basis taking into account STARS and any other schemes that will lead to TDR (e.g. BRTS or metro development with TDR as an incentive)

1.9 The ULB should also identify potential investment in selected infrastructure elements (e.g. water supply or sewerage) required to absorb the estimated TDR to be released (and resultant population increase in these defined receiving pockets) and determine ways to fund the same. One key mechanism

would be levying a TDR consumption fee at the time that the TDR is consumed, with the fee being pegged to ready reckoner or other indicators of property values in the receiving pocket that the TDR is consumed. These fees should be exclusively earmarked for localized infrastructure investments in the TDR receiving zones.

2.0 Slum Dweller Eligibility and Benefits

2.1. Only those who are in “eligible” settlements to be considered for individual eligibility and benefits.

2.2 Benefits should be progressive and linked to tenure with a gradual rather than an abrupt cut off. Suggested gradation of benefits (which can be tailored by each city) is as follows:

2.2.1 Those with 5 years or less of tenure would only be eligible for rental units of 160 sf carpet area with rental rates set by ULB and locked in for period of 5 years.

2.2.2 Those with between 5 and 10 years of tenure would be eligible for 160 sf carpet area on ownership basis but would have to pay 30% of the cost of the construction cost of the tenement

2.2.3 Those with more than 10 years of tenure would be eligible for 240 sf carpet area and would have to pay 25% of the construction cost of the tenement.

2.2.4 Those with commercial establishments would be entitled to commercial establishments in the new scheme on the same lines as outlined above for residential units.

2.2.5 In case the slum residents are RELOCATED elsewhere even though the existing slum plot is suitable for residential use, the tenement sizes in 2.2.2, 2.2.3 and 2.2.4 shall be increased by 40 to 60 sf carpet area and the contribution shall be reduced by 5% (from 30% to 25% and from 25% to 20%). This incentive would not apply where relocation is not optional but is mandatory for the reasons mentioned earlier.

2.3 Benefits should accrue to those residing in eligible slums rather than those who are the “owners” of the existing slum tenements have rented out the tenements to others. This will ensure that the benefits are flowing to those most in need.

2.4 People should only be allowed to avail the benefit of subsidized housing through a scheme like STARS once – hence ULBs will need to put systems in place (including bio-metric measures and shared databases on a state-wide basis), to ensure compliance on this front.

3.0 Landowner and Builder / Developer Compensation

3.1 For slums on privately owned land that are identified through the initial city level planning exercise as being candidates for in-situ redevelopment, the following mechanism can be used:

3.1.1 The landowner and other developers can submit proposals for in-situ development in conformance with the norms and specifications established by STARS. This would include building a specified tenement density (between

200 and 600 depending on tier of city as specified above) on the plot which in most cities should result in some extra housing stock being created over and above the existing requirements of eligible slum residents.

3.1.2 Bidding would be on the basis of TDR required to execute the scheme, with the lowest bidder who meets the specifications being awarded the bid.

3.1.3 Developers submitting bids for redevelopment of slums where they are not the landowner or do not have agreements with the landlord to pursue redevelopment have to earmark a fixed amount of TDR (to be fixed by the STARS program in each city) as compensation to the landowner in case they are the winning bidder for a particular plot.

3.1.4 Landowners will be excluded from Capital Gains tax on the value received for their land under the STAR program (requires central finance ministry approval)

3.1.5 This mechanism, unlike a “fixed” compensation system that some states have tried, will ensure that the government pays only as much it needs for each slum redevelopment and will also ensure that all slums and not just most profitable ones get redeveloped as happens with a “fixed” compensation system.

3.1.6 Approval of majority or super majority of slum dwellers need not be required for in-situ schemes although participation in all stages of the process would be formalized.

3.2 For those slums on private land where relocation is desirable to unlock the full value of the slum plot

(which are to be identified through the upfront slum survey and master planning exercise) the following shall apply:

3.2.1 Eligible slum residents would be entitled to greater benefits than in the case of in-situ redevelopment as outlined above in point 2.2.5

3.2.2 Any landowner or developer can submit a proposal to re-house the affected eligible slum residents on privately owned and unencumbered land within a specified radius of the original site (3 km for Tier 3 cities, 5 km for Tier 2 cities, and 10 km for Tier 1 cities). The norms and specifications for such re-housing shall be as prescribed by STARS.

3.2.3 All proposals that meet the approval of 70% of the eligible and affected slum residents shall be considered

3.2.4 Of those proposals that meet the pre-determined norms and specs and have the required approval from the slum residents, the scheme that requires the least compensation from the landowner/developer shall be awarded the scheme.

3.2.5 Also, while awarding these schemes, priority should be given to those proposals which can serve the re-housing needs of more than one slum that needs to be relocated.

3.2.6 The landowner of the plot where the slum currently exists will pay a “slum clearance fee” equal to 20% of the value of the property after development. This fee would be payable in 3 or 4 instalments tied to clearance of the slum from the plot, commencement of development

on that plot, and completion of the proposed development.

3.3 For slums on public or private land where relocation is mandatory because of the land being needed for a public purpose or because it is unsuitable for residential use, the same approach as above would apply in terms of soliciting bids from landowners or developers for re-housing the eligible residents on unencumbered private land (without the additional “relocation” incentive however as in the case of optional relocation and without the “slum clearance” fee to the current landowner)

4.0 Transit Accommodation during redevelopment

4.1. Slums requiring relocation should be taken up first and in these cases, relocation to an interim site should be avoided and instead residents should be moved to their final permanent tenements once completed.

4.2 For slums that are to be developed in-situ, ULBs can pursue one of two approaches. The first is to require each project to be self-contained which would include taking care of the temporary housing arrangements for affected and eligible residents during the demolition and redevelopment period. This would be part of the norms/specifications laid down by STARS in that ULB, and these costs would be factored into the bids by developers/landowners. The second is to establish a handful of “temporary housing or transit accommodation” camps in different parts of the city (which can be built using the

same TDR incentives as mentioned earlier) and make these available to people affected by the redevelopment projects (which would have to be phased or staggered). Those doing in-situ development would be able to avail of this transit accommodation for a specified fee per person per month/year rather than having to make their own arrangements.

5.0 TDR Bank:

5.1 Since the TDR is awarded by the authority to builders/land owners, in lieu of land or development projects implemented by developers for the poor, it would benefit the city if a TDR Bank was created and managed by the awarding authority.

5.2 Without a transparent and clear monitoring mechanism for TDR generated and consumed, there is a possibility for TDR scams as been reported in cities that have implemented the TDR concept.

5.3 This TDR bank should be vested with the ULB or appropriate development authority either in the ULB or the metropolitan region.

5.4 This type of TDR bank with full transparency on the TDR generated and consumed in the ULB will also prevent hoarding of and speculation in TDR.

6.0 Provisions to Control Misuse

6.1 Joining of tenements to create larger dwelling units more suitable for “LIG/MIG” residents: Redeveloped tenements would be organized as cooperative housing societies and would normally be subject to the lowest property tax rates in the

ULB as well as concessional rates for civic amenities such as water and sewerage. However in the case of units being combined in a particular society, the entire society would lose these benefits – which would create group accountability for compliance.

6.2 Sale of new tenements by beneficiaries: Since the redeveloped and upgraded housing units are being provided to current slum residents (rather than owners of the dwelling units in those slums), it is reasonable to expect the beneficiaries to live in their new homes which should constitute their primary residence. Those wishing to sell within 5 years of moving into their new homes would either have to sell their homes back to the ULB at the original construction cost or pay the ULB a transfer fee of 30% of the sale proceeds in order to sell it in the open market. After 5 years beneficiaries would be free to sell by paying a transfer fee of 15% of the sale proceeds.

6.3 Rental of new tenements by beneficiaries: Based on the same rationale as in point 6.2 above, rentals by the new owners should be discouraged in the first 5 years. Those wishing to rent their new homes would need to pay an annual, predetermined “non-occupancy” fee to the ULB. In case of undisclosed rentals, the entire cooperative society would stand to lose their favorable tax and amenities status, should any of the units be found to be occupied by someone other than the beneficiary.

6.4 Replacement of original beneficiaries with more affluent residents:

Should there be large gap between the cost of the new units as funded by the ULB and beneficiaries and the market value of the same, there will be economic incentive for the original beneficiaries to sell out to more affluent buyers. One way to prevent this “upward migration” in prices is to ensure that the design norms for slum redevelopment schemes specify narrow internal roads (not accessible to cars) and make provisions for just cycle and 2-wheeler parking. This will automatically limit the attractiveness of such schemes amongst more affluent segments.

B. CREATING NEW AFFORDABLE HOUSING STOCK FOR FUTURE NEEDS

In addition to transforming existing slums so that they provide more livable and legal housing, there is a need for parallel efforts to create additional affordable housing stock to cater to the future growth of low income segments of the population due to organic growth and in-migration. This can be largely achieved by redirecting private sector construction activity and capital towards the construction of low cost housing through appropriate policy changes, regulation and incentives as outlined below:

1. Increase the supply of land available for residential housing which would involve the following actions:

1.1 Impose a tax on all vacant land in the metropolitan regions around ULBs to dissuade land hoarding and speculation and bring more land into productive use

1.2 Simplify the process of conversion of land falling in metropolitan regions from agricultural to non-agricultural status, especially for those that want to use such land for creating affordable housing. This conversion should be handled by a single agency and done within a short, guaranteed timeframe on payment of a fixed premium linked to ready reckoner rates.

1.3 Either reserve land or provide incentives for affordable housing schemes (as listed further below) in outlying areas of the metropolitan region that are slated to get better access through public transport – especially bus based public transport. This will facilitate the creation of low cost housing stock in areas where land is relatively inexpensive and that will soon be well connected by public transport which is key to ensuring livelihood opportunities for the residents of such schemes.

2. Reduce costs and increase profitability levels of affordable low-cost housing schemes to encourage more private sector players to enter this market to create the desired housing stock. Specific measures to do this would include:

2.1 Allow higher FSI or TDR benefits for small housing schemes where 80% or more of the units are small sized (160 to 400 sq feet carpet area) and the selling price is below a certain ceiling which can vary by zone in each city (e.g. 75% of ready reckoner value or Rs 1200 per square foot) and be adjusted periodically. This would reduce the cost of land per built square foot while reducing the possibility of the benefits simply

flowing to land owners in terms of higher land values.

2.2 Reduce or waive (depending on average unit size in a scheme) all central, state, and local taxes, as well as development premiums charged.

2.3 Establish a time bound, single window system for all clearances, permissions and NOCs required during residential construction to avoid delays and reduce transaction costs for affordable housing schemes

2.4 Make all profits from the development and sale of affordable housing tax exempt to increase the relative profitability of these schemes for developers as compared to other forms of residential and commercial construction

2.5 Controls need to be put in place to ensure that the benefits flow to those they are meant for. These would include some of the same measures as mentioned in section A above (coop society level penalties for combination of small units, hefty “transfer” fee upon sale within first 5 years, design parameters that would dissuade MIG buyers).

2.6 It is important to note that the above waivers and exemptions of duties and taxes will not cause a net loss to the exchequer at the centre, state or city since these incentives are being directed at economic activity that otherwise would not take place at all.

3. Harness market forces that lead to creation of “regular” housing stock to co-create affordable housing stock through an expanded use of the “Accommodation Reservation” mechanism:

3.1 The Accommodation Reservation (AR) mechanism, which has already been adopted by several states, usually requires creation of small sized units (equal to 10-25% of the total square footage under construction) in any residential schemes of regular housing on large plots of land (e.g. 2 Hectares or greater).

3.2 These units are either handed over to the ULB (in which case extra FSI is granted on the plot as compensation) or can be sold in the open market by the developer themselves.

3.3 However housing developments on smaller plots, which constitute a majority of the development in most cities are exempt from the AR mechanism which dilutes its impact and creates inequity

3.4. To address this, for any development on small plots, the developer should be required to pay an AR fee (equal to 10 or 15% of the Ready Reckoner value of the overall scheme) as their contribution.

3.5 The AR rule should also apply to all township schemes in the state irrespective of where they are located.

3.6 This would ensure that roughly one small sized affordable housing unit is automatically generated for every two units of regular residential housing stock that gets created through natural market forces.

4. Remove barriers to rental housing to promote growth of the low-cost rental market

4.1 States need to enact new rental laws, which accord more rights to property owners as far as setting

rent, retaking possession, and evicting defaulting tenants, which would apply to renters and rental agreements for all new small sized, affordable properties while preserving the current rules for current properties and rent agreements.

4.2 Establish special fast-track courts or mediation agencies in all cities that would speedily settle housing related disputes between tenants and landlords.

4.3 Allow anyone to own affordable housing, rather than limiting sale of these to just the poor. The intent should be to create enough of these units, so that there is a thriving rental market in addition to an ownership market in this segment.

4.4 Exempt rental income derived from low cost/affordable housing units from income tax so as to promote others to purchase and rent out such units

5. Establish a dedicated “Affordable Housing Authority” in cities or the entire metropolitan region around major cities to facilitate the implementation of the affordable housing strategy in the region. This entity could be funded through the fee and land/tenement bank collected from regular construction activity using the AR mechanism specified above. The Affordable Housing Authority once constituted, would:

5.1 Establish regulations and norms for affordable housing in terms of size, specifications, and provisioning for O&M.

5.2 Serve as a single window clearance agency for all permissions for AH schemes in the ULB or the metropolitan region.

5.3 Liaise with the various development bodies and agencies to ensure adequate provisions for social amenities and physical infrastructure in conjunction with affordable housing permissions and construction.

5.4 Directly intervene to build certain type of dwelling options (e.g. night shelters and dormitories for single migrant workers) that may not be catered to by the market even after all the above policy changes and incentives.

C. ROLE OF THE CENTRE IN ENABLING THE ABOVE

The Centre can help facilitate the adoption of the above guidelines and model schemes (once refined and finalized) by various states and ULBs within those states through incentives along the lines of JNNURM. States and ULBs would need to commit to action steps and timelines

to implement these guidelines and schemes in return for which they would be able to access various funds and subsidies which could include:

1. ULB level capacity building grants to create affordable housing master plans that are integrated with the overall development plan for the ULB or metro area.
2. Grants to conduct the detailed slum surveys and enumeration required prior to implementing a program like STARS aimed at eradicating existing slums.
3. Contribution of a fixed amount (which can vary based on city size) for infrastructure and amenities for tenements built through implementation of a STARS type scheme.
4. Provision for reduction in income tax and other central taxes and duties as outlined above for all affordable housing projects within a state.

APPEAL TO CONTRIBUTORS

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Review of Low Income Housing Provisions in Delhi Master Plan 2021

POONAM PRAKASH

In the 2001 master plan, EWS housing was to be provided in the form of plots of 25 sq.m. Given that the MPD 2021 now provides for 350 FAR and 90 percent ground coverage, a twenty five sq.m. plot would have provided a built space of about 78 sq.m. compared to the proposed built space of 30 sq.m. proposed for an EWS household in the MPD 2021, which in any case can not be considered an adequate physical space for a family of five.

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1.0 Introduction

Delhi is one of the cities in the country where public sector continues to play an important role in housing development for all income groups. Development in Delhi including provisions for housing are guided by the Delhi Master Plan. The Master Plan is a statutory document prepared under the Delhi Development Act. In Delhi, master plan was notified in 1962 and subsequent revisions were notified in 1990 and 2007¹. Master Plan for Delhi provides for allocation for housing for all groups including low income housing. Public sector has been the main provider for low income housing in the earlier plans. In the Master Plan of Delhi (MPD) 2021 a major shift in the approach to low income housing provision through involvement of private sector participation is proposed.

This paper focuses primarily on the provisions in the low income housing provisions in MPD 2021 since its notification in February 2007, subsequent modifications till 2013 and its implications for implementation of low income provisions. It argues that the MPD 2021 provisions and subsequent modifications have systematically reduced provisions for the low income housing and are unlikely to achieve the objective of adequate housing identified in the MPD 2021.

2.0 Adequate Housing as an Objective in the MPD 2021

In the introductory chapter, the MPD 2021 identifies housing as one of the critical issues and “adequate housing particularly for weaker sections of the society as one of the aspects requiring planning and action” to make Delhi a global city².

The document also acknowledges that “one of the most important aspects of planned development pertains to the provision of adequate well-planned shelter and housing for the different categories of inhabitants of the city” and there have been quantitative and qualitative shortages in housing.” Chapter 4 on Shelter, aims to ensure effective housing and shelter options for all the citizens “especially for vulnerable groups and the poor by creation of adequate housing stock in rental and ownership basis.”

From the above statements on adequate housing in the MPD 2021 adequate housing for the purpose of this paper is interpreted as creation of “adequate housing stock” and provision of “well planned shelter”.

In order to achieve this stated vision of ‘adequate housing’ MPD proposes a shift from plotted housing to group housing, private sector participation and removing ‘unnecessary controls’ along with enhancement of ground coverage and floor area ratio (FAR) for all residential plots. Next

sections review these shifts and their implications for creation of adequate housing stock and well planned shelter.

3.0 Creation of Adequate Housing Stock

Adequate housing can be interpreted at two levels. First is the adequate quantum of housing that should be available and accessible to different income groups. MPD 2021 provides targets for the perspective year and assesses requirement of 75000 dwelling units (DUs) per year till the year 2021. Out of this it proposes 'housing for the urban poor' to the extent of 50-55 percent of the total housing.

An indicative scenario of housing supply in different housing typologies for the next two decades as proposed in the master plan is given in Table 1. Total percentage of economically weaker section (EWS) and lower income group (LIG) component proposed by the DDA is 54 percent, which would be around two lakh units for the period between 2007-2012. It identifies six housing typologies with slum rehabilitation and unauthorized regularized colonies infill forming the major share of these. Group housing would be provided by both public and private with mandatory provision of 35 percent of total DUs as two room or less.

Following sections examine the group housing, slum rehabilitation and employer housing provision for lower income groups.

3.1 Group Housing

According to the proposed scenario, one fourth of the housing stock (approximately 12500 DUs/year) of about 50000 DUs/year is proposed to be created through group housing. Since 2007 till 2012 about fifty thousand dwelling units should have been developed through group housing. Since policy for housing development by private developers is still being formulated the Delhi Development Authority continues to be the main provider for low income housing so far.

i. Public Sector Housing Provision

In 2010 the DDA had announced a housing scheme with different categories of units located in different parts of the city. In this scheme 12,297 dwelling units were two room or less. Out of this Janta flats (area 25-30 sq.m.) were about 660 (5%) units. No other general group housing scheme has been announced by the DDA in the last five years. As can be seen from the above figures, not only the quantum of housing provided is inadequate than required these units were also priced in the range of 11 lakhs to 37 lakhs rendering them inaccessible to the EWS/LIG³. Particularly noticeable were one bedroom flats in Vasant Kunj area (a posh south Delhi colony near the airport), which were furnished during Common Wealth Games 2010 and then priced between 34-37 lakhs. Many of these at current market rates are priced at 70-80 lakhs.

ii. Creation of Housing Stock by Private Sector through Reservation of FAR or Dwelling Units for EWS/

LIG in Group Housing

Reservation of space/units/land for EWS housing has become a required measure in the past few years particularly in private developers housing. In the MPD 2021, in a significant shift from the previous plan, private sector participation is allowed for housing development. Private sector would reserve built space in the form of 15 percent of the floor area ratio (FAR) or 35 percent of the dwelling units whichever is more in all group housing projects⁴. Permissible FAR for group housing projects is 200. Two modifications have been made to this proposal since 2007. In January 2009, public notice was issued to make the 15 percent FAR over and above the permissible FAR of 200 as well as over and above the permissible density to give incentives for development⁵. Second modification which is still in the process of finalization was part of the public notice issued through the ongoing process of master plan review. This proposal is to delete the provision of 35 percent dwelling units reservation and retain only the FAR reservation⁶.

A simple mathematics would show that proposing 15 percent FAR over and above the permissible FAR of 200 implies a reservation of thirteen percent and not fifteen percent. This means that lesser proportion of space for EWS/LIG and an advantage of 3000 sq.m. on every hectare to the private developer. Similarly, by removing the provision of 35 percent proportion of dwelling units and retaining only FAR provision, the dwelling units that

Table 1 : Indicative Percentage of Housing Types

Type	% housing Component for EWS/LIG	% of Total EWS/LIG Component
Slum & JJ - In-situ Rehabilitation; Relocation/Reconstruction & Upgradation.	25	46.3
Houses on Independent Plots & Redevelopment	4	7.4
Group Housing (Min. 35% of total DUs mandatory 2 room or less)	14	25.9
Employer Housing	2	3.7
Unauthorised Regularised colonies infill	6	11.1
Other Housing areas/ Up-gradation of Old areas Traditional areas	3	5.6
Total	54	100

Source: Ministry of Urban Development (2007) Gazette Notification S.O.141, p17 and 23, Ministry of Urban Development, Delhi, p.18

are likely to be provided would be much less (20-25 percent instead of 35 percent) than anticipated in the master plan. In case of the experience of private developers during construction of Common Wealth Games Village developed by Emaar MGF, newspapers reported that the developers had constructed additional FAR without providing the EWS/LIG units⁷.

Problem of creation of adequate housing stock through private sector participation is further compounded by the fact that the MPD 2021 has removed classification of income categories thereby making it difficult to monitor creation of housing stock specifically for LIG.

3.2 Slum Rehabilitation and Unauthorised Regularised Colonies

In addition to provision of EWS/LIG through group housing, as can be seen in the Table 1, almost forty six percent of housing typology for EWS/LIG housing is in the form of

slum relocation and rehabilitation and another 11.1 percent through unauthorised regularized colonies. MPD 2021 has recommended drastically reduced facility norms for these areas⁸. This implies that about sixty percent of the housing stock to be made available for EWS/LIG would be substandard and developed at reduced facility and infrastructure provisions as discussed later.

3.3 Employer Housing

Provision of EWS/LIG housing in the employer housing was likely to contribute about four percent of the housing stock for EWS/LIG amounting to about 2000 units. In January 2009 public notice was issued with a proposal to modify the Master Plan to exempt employer housing from the requirement of providing 15 percent reservation or 35 percent dwelling units for community service personnel/EWS and lower income category⁹.

From this discussion it can be seen that quantum of adequate housing

stock cannot be made available as targeted in the MPD 2021. Further aggravating this is the recent public notice for regularization of farm houses with one acre plots in urbanisable areas seriously impacting the provision of low income housing.

4.0 Provision of 'Well Planned Shelter'

For the purpose of this paper well planned shelter would include residential land allocation, type and space provided for shelter, densities and provisions of facilities.

i. Residential land allocation and type of space for shelter

Reservation in the form of built space or dwelling units was a major shift from the earlier plans whereby instead of plot area of minimum 25 sq.m, now dwelling units are to be provided for EWS/LIG. Implications of this provision needs to be seen firstly in the context of the land allocations made for the EWS/LIG in the earlier plan of 2001. In 2001 plan 45 percent of the housing was to be

for EWS and LIG. Land allocation for housing requirements based on projected population were made at a city level. MPD 2021 provides no account of the land so allocated for the purpose of low income housing in the previous plan. Assessment of housing shortage given in the MPD 2021 too provides no assessment of “implementation backlog” to be carried forward in this plan.

In the 2001 master plan, EWS housing was to be provided in the form of plots of 25 sq.m. Given that the MPD 2021 now provides for 350 FAR and 90 percent ground coverage¹⁰, a twenty five sq.m. plot would have provided a built space of about 78 sq.m. compared to the proposed built space of 30 sq.m. proposed for an EWS household in the MPD 2021, which in any case can not be considered an adequate physical space for a family of five.

ii. Differential Densities

MPD 2021 has reintroduced the concept of differential densities which was abandoned in the 2001 plan for the reasons of optimal utilization of land. In addition to differential densities, net densities have been increased significantly particularly for slums/EWS housing and category I.

Proposed net residential densities in the MPD 2021 are as given:

Slum/EWS housing (upto 30 sq.m)-600 DUs/Ha = 2700 pph

Category I (above30-upto40sq.m.)- 500 DUs/ Ha = 2250 pph

Category II (above40-upto80sq.m.)- 250 DUs/ Ha = 900 pph

Category III (above80sqm) - 175 DUs/Ha = 788 pph

At the city level master plan also proposes gross residential densities which range upto 600 pph. As proposed by the MPD 50-55 percent of the housing is to be two room or less. Net residential density for this category of housing would be between 2500 pph to 3000 pph and a gross density of about 1200 pph to 1500 pph¹¹.

Master Plan also provides for further relaxation of densities in consultation with Central Government. In case of in-situ rehabilitation scheme in A-14, Kalkaji, in south Delhi, to be developed by private developer, a density relaxation from 600 du/ha to 1335 du/ha was given to make the project viable for the developer. Provision of such high densities with tiny dwelling units in walk-up or high-rise buildings seem contrary to the notion of provision of well planned shelter.

iii. Differential facility norms

Linked to the concept of density is the provision of facilities. On one hand MPD provides very high densities for slums/EWS and the situation is further aggravated by reducing facility and open space standards for these areas. Considering almost 25 percent of the housing is through slum rehabilitation, the land entitlements of the slums/EWS are being usurped from both sides through reduction in space for shelter as well as facilities.

According to the master plan “reduced space standards shall be adopted. Depending on the availability of land, facilities like community hall, dispensary etc. can be grouped together.” Table 2 draws a comparison of only those activities which are required to be provided in slum rehabilitation areas and

Table 2 : Comparison of Facilities Provided for Neighborhood level in general housing area and in Slum/EWS Rehabilitation Areas, Regularized Unauthorized Colonies

Facility	Area for General Housing (Sq.m./10000 persons)	Area for Slum Rehabilitation / Unauthorized Colonies
Primary School	2000-4000 sq.m.	1600 sq.m./10000 persons
Sr. Secondary School	6000 – 8000 sq.m.	2000 sq.m. /10000 persons
Multipurpose Hall/ Banquet Hall	800 - 2000	500 – 1000 sq.m.
Basti Vikas Kendra	–	
Religious Site	800	
Health Centre	–	
Park/tot lot	5000	
Total	14600 - 19800	3700 sq.m.

Source: Ministry of Urban Development (2007) Gazette Notification S.O.141, p17 and 23, Ministry of Urban Development, Delhi, p.22-23

does not include other facilities to be provided at the neighbourhood level. From the above discussion, net densities in these areas are almost three times the other areas and facility provisions are one third that of general housing areas. Subjecting almost forty to fifty percent of the families to this kind of substandard physical spaces and reduced norms requires a serious review.

5.0 Conclusions

Approach to low income housing provision is a major departure from

the previous versions of the plan with involvement of private developers, built tenements for EWS and enhanced coverages and FAR. Though the aim of the plan is to provide adequate housing in terms of quantum, options, planning and design, detailing of the concept of adequate housing shows that it is unlikely that adequate housing stock and well planned shelter can be provided with the strategies adopted. While many of the provisions and further modifications have removed conditions to the

benefit of the developers and of the low income families, many other provisions are formulated simply to regularize the existing situation, again making available the land for purposes other than the entitlement of the low income families. Currently master plan review process is ongoing and it is imperative that housing data is monitored and the implications of current provisions are carefully considered to achieve the objective of adequate housing.

Notes

- ¹ Master Plan in Delhi is prepared under section 10 of the Delhi Development Act 1957 and modified under section 11 of the Act.
- ² Ministry of Urban Development (2007) Gazette Notification S.O.141, p.1, Ministry of Urban Development, Delhi.
- ³ Delhi Development Authority (2010) DDA Housing Scheme 2010 Brochure, DDA, Delhi. (Almost ten lakh people had purchased the forms for the scheme when it was announced.)
- ⁴ Ibid, p.22.
- ⁵ Delhi Development Authority (2009) Public Notice dated 11 January 2009, F3(24)2008-MP, <http://www.dda.org.in> accessed on 26/3/2013.
- ⁶ Delhi Development Authority (2012) Public Notice dated 1 October 2012, F3(09)2012-MP, <http://www.dda.org.in> accessed on 26/3/2013.
- ⁷ "Government waived Village EWS clause, so floor area ration cut: DDA to HC", Indian Express, 25 January 2012.
- ⁸ Ministry of Urban Development (2007) Gazette Notification S.O.141, p17 and 23, Ministry of Urban Development, Delhi.
- ⁹ Delhi Development Authority (2009) Public Notice dated 11 January 2009 F3(24)2008-MP, www.dda.org.in accessed on 26/3/2013.
- ¹⁰ Such high ground coverages and FAR with lower provisions for roads etc. require re-examination.
- ¹¹ Gross residential density is taken as roughly half of the net residential density.

GRANT ASSISTANCE UNDER HUDCO CSR TO KOLKATA MUNICIPAL CORPORATION

HUDCO has been extending financial assistance under its CSR activities to various State Govt. agencies in the States of West Bengal and Sikkim. In West Bengal, a project for renovation/construction of Night Shelters in Kolkata was sanctioned to Kolkata Municipal Corporation (KMC) with HUDCO's CSR Fund of Rs.76.05 lacs. As per the survey report of KMC, there are about 60,000 shelterless people majority of whom are residing on pavements. To accommodate this huge number of people in the city of Kolkata by providing shelter, KMC had decided to construct night shelters at various locations in phases. The task is also in compliance to Hon'ble Supreme Court of India's order to provide adequate night shelters in the cities to accommodate homeless people. Accordingly, KMC approached HUDCO during CMD's visit to Hon'ble Mayor of KMC for providing grant from HUDCO CSR Fund for this purpose. HUDCO sanctioned, the first CSR Grant assistance to KMC for Rs.76.05 lacs for construction/renovation of night shelters at various locations. HUDCO has released 75% of the sanctioned grant assistance amounting to Rs.57.00 lacs to KMC.



Works at two sites viz. Chetla Hat Road and Galiff Street have already been completed. Work orders for other three locations viz. Canal West Road, Northern Park and Karaya Road have been issued. Night shelter at Galiff Street is accommodating about 40-50 homeless women with toilet and provision of drinking water. Night shelter at Chetla Hat Road is accommodating about 70-80 mentally retarded homeless women. KMC has entrusted the job of operation and maintenance to NGOs. KMC has also approached HUDCO for considering further CSR grant assistance for conservation of heritage properties mainly renovation/improvement of Town Hall, Kolkata and modernization of open vats with portable compactors for municipal solid waster management system. (Source: Regional Chief, HUDCO Kolkata)



From Squatters to High rises – How affordable is the socialisation process?

SANGEETA MAUNAV

The corridors of public policy and development planning reverberate with sounds of ‘inclusive planning, sustainable development and community participation’. I am often tired at their spill over towards my side. These constructs are neither new nor obsolete. Possibly the nomenclature has adopted newer forms. It is as if to say that you first create inequity and degradation, economic or geo-cultural, and then devise learned ways to mitigate the same.

My gratitude to *Hansa Bai*, the other new house owners of the BSUP colonies in Thane that I visited, and the Thane Municipal Corporation.

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Hansa Bai is a rag picker, and that is the only way her family makes a living. I had the fortunate occasion to visit her abode, the newly built one. At the very threshold of the entrance door, there is neither a touch of a warm welcome nor a pleasant disposition that one would invariably expect from a hostess. Her neighbours call her ‘bhangi’, the notorious local word for scavenger. They did not even want me to exchange conversations with her. But she insisted and vigorously so.’

The occurrence of Hansa Bai in this article is a function of the ‘whole slum approach’ adopted in the implementation of BSUP under JnNURM, and in this instance, the BSUP project at Thane, Maharashtra. The approach, as the phrase indicates, suggests selecting the entire slum population for project delivery, addressing the respective housing and service gaps of different individuals or groups inhabiting the area. That ‘slums’ or ‘urban poor’ are not homogenous constructs, is a phenomenon widely accepted now. And wisdom demands that we do, lest we are caught in the trap of our pseudo belief in the standardized public good delivery designs that has pervaded development practice in India till recent times. Two particular occurrences that presided the selection of beneficiaries in the implementation of BSUP Thane in the year 2006 need mention at this juncture. **One**, the Road Widening project in the year 2001, and the other, the Integrated Nallah Development Project (INDP).

The Project Affected Persons

(PAPs) of these two projects were identified, selected and allotted houses on priority as beneficiaries of BSUP, and this is a commendable approach towards selection of beneficiaries. The PAPs scanned a spectrum of socio-economic indices, from rag pickers to functionaries of Indian Railways. The common denominator, however, was their poor habitat conditions and their virtual impossibility to afford a house of their own in the city of Thane or its surroundings, thus making them vulnerable to eviction at any time from the settlements that were either ‘pattas’ provided by the Government or ‘Government/Private lands’ where they settled unauthorised. We must also be aware that these beneficiaries had undergone multiple evictions in their years of struggle to survive in the city.

On the 3rd of May, 2012, as I reached Building No. 21, MMRDA Site, Tulsidham, with some men, women and children from neighbouring buildings around me, I were suddenly caught by my wrist, very tight, almost hurting me. I could not though comprehend the local accent that her shrill high pitched voice communicated. This was Hansa Bai, the rag picker. She literally dragged me towards the open duct, its view shut from outside vide a latched door, where lay a huge pile of household rubbish.

Paradoxically, it was only the rag picker who cut through her neighbours' refined resistance to expose this to me ie someone documenting the project as a 'Best Practice.' This was not all. As I walked up, into and around the buildings, I learnt so much more. In some of the buildings, the lift was kept operational only at certain hours of the day to avoid excessive power consumption. In others, I found some children using the remote sensed lifts for play. In-fact it was reported that the lifts were purposively switched off to avoid unwarranted usage and consequent repair and maintenance. A talk with the Corporation, and I learnt further that the City Corporation wanted "to give these people the best" and they did. It was the only way that the City Engineer and Mission Leader felt he could redress his guilt and pain that arose from years of leading and participating in the demolition drive, bulldozing homes of the poor and vulnerable in the name of development. Moreover, some of the beneficiaries, especially those that were economically better off had already observed the property value index of the BSUP project. The cost of the flats, we call them dwelling units in Government literature, flats measuring around 25 sqmts, had reached almost Rs. 25.00 lacs from the construction cost of around Rs. 3.00 lacs by the time of the beneficiaries occupied them. Irrespective of their levels of income and affordability, the beneficiaries had paid 10-12% of the cost as their contribution. The moment some of the new owners walking along with me exuded signs of excitement on the property value, a chord struck

hard into the depth of my eardrums. They even facilitated my attention to the 'Hiranandani' building standing tall on the other side, conspicuous through the lanes of the BSUP Housing colony.

The implementation of the BSUP project at Thane, for me, remains a very good practice in community oriented governance in social housing delivery, and I have been on a continuous look out to disseminate the simple yet meaningful lessons that any city could adopt. Though the project processes and some of the effective outcomes are not a subject of concern in this article, it is worth carrying home that Thane Municipal Corporation has made a commendable contribution to the process of identifying, selecting and allotting houses on priority to those most vulnerable. A digitised lottery system that reshuffles the list of beneficiaries in a way that not only mitigates conflict of house allotment in high rises, but also automatically places households with any physically challenged member, on the ground floor, is worth replicating. This notwithstanding, the public exhibition of this lottery process also enabled the Corporation to use the space and time to generate awareness about different programs of the Central and State governments for urban poor to enhance the program outreach. Most important of all, it was a historic achievement of the Thane Municipal Corporation that the demolition of houses for in situ redevelopment took place without a demolition notice for the first time and the beneficiaries participated in the demolition of their own houses.

This was possible due to efforts in convincing the community that was facilitated by the City Engineer and three Class-IV employees, who are slum dwellers themselves. It was their intrinsic leadership potential and commitment that contributed to the trust building between the slum dwellers and the City Government. The beneficiaries had just moved from slum habitations to high rises. While, not every building that I could visit was maintained efficiently by the Residents Welfare Association instituted in each building, obviously because of differences in affordability, people were happy that they had received permanent ownership rights for the first time. They even expressed that this project had given them security, dignity and social status, their children would be brought up in cleaner surroundings and that they would be free from being labelled as 'slum dwellers'. They had moved from 'slums' to 'buildings', this in their own verdict was an upward social mobility. All this notwithstanding, a Hansa Bai latches on to my mind and I wonder why.

- A 'Hansa Bai' is kept outside the social frame of reference. A distinct hierarchy and differentiation, of power and conflict is symbolised even in the manner they chose to gather around me, the economically better off ones comforting themselves on chairs in the community rooms as those that are down below stand watching. I feel they need to speak. They try, but alas, are shut away by the stronger side.
- What could have been the reason

for the pile of rubbish gathering in the open duct? Was it because the families residing at the upper floors found it convenient to undo the household garbage into the accessible open duct because the lifts were either kept off or were out of order, thus saving them the difficulty of climbing up the stairs on return? Or was it simply because they were used to do so in the squatters?

- Did the notion of upward mobility from squatters to high rises come at a price that exponentially exceeds the financial ability of the beneficiary community to maintain this upward rise? Should the exercise in housing delivery not take into account the heterogeneity of the slum settlement, the inability of many of the beneficiaries to bear the cost of maintenance of a remote sensor lift in the long run?

The chord that had struck my eardrums relates to 'The possibility of public housing becoming instruments of real estate investment in the distant future'. This chord does not exist in vacuum. In some of our cities, housing board flats have been bulldozed for speculative real estate developments. In the city of Chennai, some elderly people, recipients of public housing, have seen their own homes turn into debris in their desire for quicker money. These developments have violated land use norms, building bye-laws and terms of Agreement executed between the Housing Board and the owners. Few of these families who have lost their homes forever, now have neither a shelter to call their own nor the

means to afford one more. To put it simply, they have been rendered homeless. Most of them, I am told had their lives' earnings spent to purchase the Housing Board flats.

An architect or engineer that I am not, I would not move to strain myself into the subject of building design, I mean the functional significance of open ducts between buildings. But, of critical significance to me are the following:

- *The incognito prevalence of a distance between the community socio-economic fabric on the one hand and public/social housing delivery approach on the other, despite a City Government's best motive and effort for community oriented pro-poor housing delivery. This had the concomitant danger of unrecognised and unaddressed social differentiation reinforcing stratification, a design of political economy choices in space and time.*
- *The anxiety over public housing being left open as a tool for real estate investment in future, this being a political economy process and intended outcome.*

The issues or the apprehension of the arrival of such issues in time may at the first instance seem too impossible. Yet it leaves much to think. **One**, The potential and practice of reinforcement of socio-economic stratification within urban poor population that goes unrecognised in the housing interventions across the country, inadvertent or otherwise, may be traced within the approach and process employed in selecting beneficiaries. More

often than not, they are a function of political patronage choices and governance inadequacies. Appreciably, Thane Municipal Corporation has successfully mitigated this risk. But inadequate socialisation of the community to high rises, engendered by policy and political timelines on the one hand, and urbanisation of poverty trends on the other, keeps even a committed City Government like Thane at some distance from reaching distributive goals. **Two**, In the event of these houses metamorphosing into 'investment avenues' from being 'shelter needs' in the distant time, those who are economically weaker or the ones who are socially vulnerable especially the elderly, would be the most to suffer. The distributive pattern of our economic growth will not make Hansa Bai to be financially secure even in the coming 20 to 25 years or much more. Hansa Bai just needs a place to securely anchor the ragged cradle of her grandchild; to park the boxes of used polythene bags & plastic bottles; and most important of all, a place for her family and herself to rest during the night. In the future, one Hansa Bai, may find it virtually impossible to shoulder the pressures of the economically stronger lobby. I must clarify that affordable public housing is rooted in its intent to provide shelter to all. If left open to speculative markets, we defeat its very purpose and at the same time the Government fails to retain the housing stock created. Every individual, rich or poor, may sell their house and move to a different place for dwelling, and this is also possible for BSUP beneficiaries with better

economic and social standards over generational developments. But, in view of the fact that this house had been provided by the Government at a nominal cost to beneficiaries (vis-à-vis the construction cost and market value) in the interest of sheltering the urban poor, there should be such arrangements that restrict sale in the open market. Instead, buy back arrangements with the State/City Governments, at reasonable prices, could be explored. Short lock-in periods may not be appropriate in the long run. The socialisation process of individuals into such arrangements need legislative instruments for implementation. My arguments, may seem to have capitalistic overtures, restricting one sector of the population from taking advantage of speculations and property prices, thereby widening the divide. Let me be cautious therefore to emphasise that this may not be seen as an attempt to keep the poor in their existing plight, while allowing those that can afford to take the economic advantages of real estate development. The size of land and

housing struggle that went colossal with economic liberalisation in the early 90s is not a subject of discussion here. In the least and at this point of time, I could only mention that the Transferable Development Rights (TDRs) along with space made available vide clearances for redevelopment and densification through high rises, not only made real estate development both in infrastructure and housing more lucrative but would also further reinforce structural inequalities in the country. I could only hope that economic policies are more distributive by their very designs and the parabolic skew towards speculation is more regulated thereby bringing comfort to development indicators in the country.

The corridors of public policy and development planning reverberate with sounds of 'inclusive planning, sustainable development and community participation'. I am often tired at their spill over towards my side. These constructs are neither new nor obsolete. Possibly the nomenclature has

adopted newer forms. It is as if to say that you first create inequity and degradation, economic or geo-cultural, and then devise learned ways to mitigate the same. From the dawn of human social life, through our ancient scriptures prescribing ways of life and classical literature on society, economy and polity, the predominant thought that underlies prescriptive discourses is ecological harmony. I wonder, if this could come by with urbanization of poverty on one side and strategic re-densification through high rises on the other. Cutting across critical development theorists and deconstructionists of community mobilisation, participation and empowerment on the one side and the discourse of Public Housing being an economic instrument of capital formulation, saving and investment, or a social policy facilitating poverty alleviation, I take myself back to my principal point of departure, I mean, the Socialisation process. And I ask myself-'How affordable is the socialisation of individuals and groups from squatters to High rises?

CREDIT GUARANTEE FUND SCHEME FOR LOW INCOME HOUSING

The banks and HFCs are reluctant to lend to poor due to high credit risk for the capital lent to them. Towards this, to comfort the lenders and to cover credit risk, the Government of India has created a Credit Risk Guarantee Fund Scheme for Low Income Housing under Rajiv AwasYojana (RAY) which would encourage lending for affordable housing by Banks/HFCs. To administer the CRGFS, a Credit Risk Guarantee Fund Trust has been created with the initial corpus of Rs. 1000 crore. Under the arrangements, the CRGFS is managed by National Housing Bank. Under the Scheme, the CRGFT would provide credit guarantee support to collateral-free/third-party-guarantee-free individual housing loans up to Rs. 5 lakh extended by lending institutions for Low Income Housing. The guarantee cover has been fixed at 90% for housing loans upto 2 lakh and 90% for housing loans above Rs. 2 lakhs and upto Rs. 5 lakh. The Scheme covers the housing loans to eligible borrowers for the purposes of repairs, home improvement, construction, acquisition, and purchase of new or second hand dwelling units, involving an amount not exceeding Rs. 5 lakh per loan. For the purpose of the Scheme "Eligible borrower" means new or existing individual borrowers in EWS/LIG categories of the population or a group of individuals or housing society of at least 20 members who are seeking individual housing loans not exceeding a sum of Rs. 5 lakh or such amount as may be decided by the Trust from time to time and a housing unit of size upto 430 sqft (40 sqm) carpet area and to which housing loan has been provided by the lending institution without any collateral security and/or third party guarantees. For the purpose of the Scheme "Lending Institutions" include Commercial Banks, Regional Rural Banks, Urban Co-operative Banks, NBFC-MFIs and Apex Cooperative Housing Finance Societies, Housing Finance Institutions, or any other institution (s) as may be directed by the Govt. of India from time to time. (Source: Akshay Kumar Sen, AGM (Economics), HUDCO, New Delhi)

Way Forward for PPP in Affordable Housing

MANIKA NEGI

Given the magnitude of the housing shortage and budgetary constraints of both the central and state governments, the endeavour of the government to encourage Public Private Partnership is no doubt encouraging. However, it would be pragmatic to draw from the lessons learnt and take full advantage of the various strengths and capabilities of the policy.

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There is a growing requirement for shelter and related infrastructure in urban areas due to rapid pace of urbanisation, growing informal settlements and the resultant gap between demand and supply of affordable housing. For a large developing nation like India, we need to constantly find innovative solutions and discover better practices. Today affordable housing has acquired special significance in the light of growing shortages and the National Urban Housing and Habitat Policy (NUHHP) 2007 has set the country the challenging goal of 'Affordable Housing for All'. Following this, several state housing and habitat policies have been attempted/formulated. The governments are seeking to promote various types of public-private partnerships (PPP) for realising the goal of affordable housing for all. The paper is based on the recent study (Dec'2012) and attempts to review the PPP Models of Rajasthan state for provision of affordable housing.

1.0 Introduction

The 'Affordable Housing Policy 2009' formulated by Rajasthan state government aims at reducing the housing shortage in the state. The challenge of growing requirement for shelter and related infrastructure in urban areas of Rajasthan is sought to be tackled through a series of initiatives, measures and policy guidelines at the state level with the involvement of private developers while also creating rental housing as transit accommodation for the migrants to urban areas, thereby checking the creation of slums. Better known as 'Sahbhagita Awas Yojana', the Rajasthan Model Policy

is a good attempt at providing an enabling environment to maximise the number of affordable houses.

2.0 Salient Features of the Policy

To execute the policy, various models of affordable housing have been framed, incorporating various incentives for developers and subsidies for beneficiaries provided by both the central and state government.

- The **first model** mandates the Rajasthan Housing Board to construct 50 percent of the plots/houses and flats for the EWS/LIG categories. It also mandates the other local bodies to construct 25% of the flats as well as plots for EWS/LIG categories and the private developers to earmark at least 15% of the dwelling unit/plots (or 5% of the total residential area of the scheme whichever is higher) in each of the private township and residential schemes.
- As per the **second model**, the private developers are supposed to construct houses for the EWS/LIG categories on the land owned by them. The developer constructs G+3 EWS/LIG flats on minimum 40 percent land owned by him and flats are handed over to the government at pre-determined price of Rs. 750 per sq. ft. The developer gets additional

FAR, twice the permissible limit on the entire plot. Additional FAR can be utilised on remaining plot area or exchanged for TDR.

- The **third model** stipulates that the private developers can construct houses for EWS/LIG categories on land acquired by the urban local Bodies on payment of compensation by the developer.
- In the **fourth model**, government land would be offered free of cost to the developer who constructs maximum number of flats for EWS/LIG.

In the II and III model certain percentage of the land is earmarked for construction of EWS/LIG flats. Bids are invited and the developer offering maximum number of (free) EWS/LIG flats is selected. The developer is free to construct and sell MIG/HIG flats on the remaining land.

- The **fifth model** is based on various schemes approved by the Government of India and on the lines of 'Mumbai Model' of slum redevelopment with private sector participation focussing on slum housing development.

The policy also outlines other incentives for private developer participation which includes initiatives such as waiver of EDC charges, building approval and other fees; greater allocation of FAR; fast track approval systems; buy back of housing stock by the government at predetermined rates etc. The tripartite agreements between banks/financial institutions, borrowers and

developers, is there to help mobilise funds through NGO's and other intermediate organisations and also help create a much needed multiplier effect that goes beyond land subsidies and cross subsidisation.

Affordable housing under this policy, till January 2012, has come up under Models I, II, IV and V. Layout and type design followed under some the models are depicted in next page.

3.0 Review of On-going Work

A close review of on-going work under different models at various locations has revealed that public participation has been successful in making optimum use of land, integrating innovation by use of cost-effective technologies, water harvesting, incentivising use of land through TDR and gap funding through shelter fund created for the purpose(in theory). The private developers' participation too has been found to be very encouraging. The incentives by way of TDR have spurred their involvement and they have been able to generate good returns while also addressing the social cause. The advantage that accrues to each stakeholder under the policy is:

To State:

- No investment on land and construction

To Private Builders:

- Returns in terms of concession
- No burden of external development works which shall be taken up by ULBs

To Urban Poor:

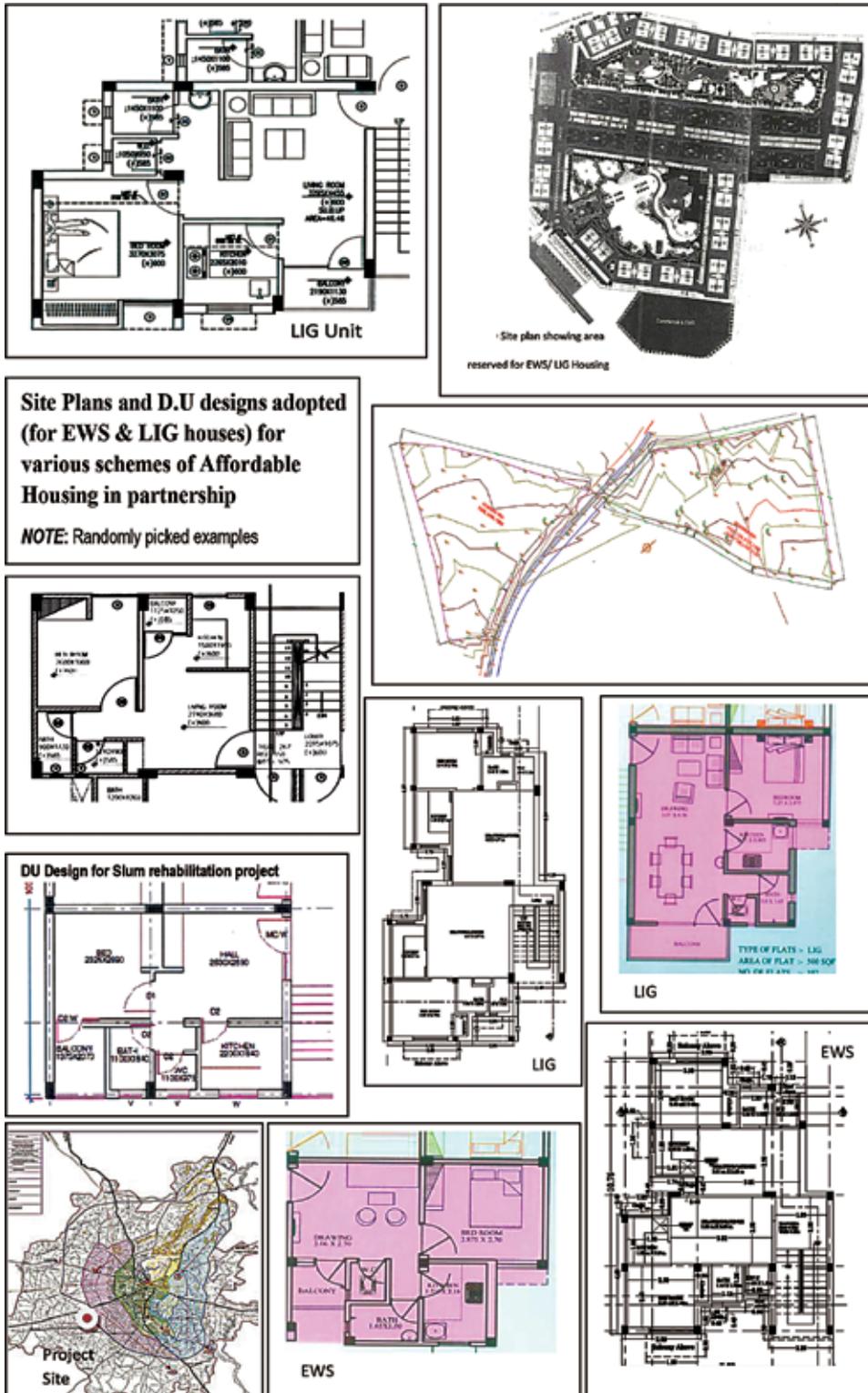
- Zero land and land development cost

- Subsidized cost as a result of incentivising private developers and central assistance as part of affordable housing in partnership.
- Low EMI because of interest subsidy under ISHUP scheme.

3.1 Issues Afflicting the Policy

However, other than the theoretical feats, there have been certain issues plaguing the very objective of the policy. These have been identified as follows:

- **Missing Regional Approach:** A practical and effective regional affordable housing strategy over both the short and long term aiming at a balanced well planned development with significantly greater number of affordable houses is absent. The Rajasthan Urban Housing and Habitat Policy (RUHHP) 2007 recognises the link between urbanisation, rural-urban migration and decrease in agriculture and further the need for supply of land, shelter and employment opportunities so as to divert the flow of migrants across various urban centres. It also recognises the right to adequate housing and thereby the need to address the seven essential components such as legal security of tenure; availability of services, materials, facilities and infrastructure; affordability, habitability; accessibility; location; and cultural adequacy for fully realising the right to adequate housing. The Affordable Housing Policy 2009 aims at reducing the housing shortage but there is an apparent need to



translate the two policy recommendations into spatial plans and a policy where affordable housing needs are addressed in the context of the larger region. The approach so far has no regard to the spread of the schemes in the city/state. The question remains- are we moving in the right direction with overall housing scenario in mind? Will the proposals be effective in achieving the desired outcome?

- Unit Design vis-à-vis life style:** The DPRs for the affordable housing projects make a good reading. Generating economic sustainability, by creating a work-live environment by integrating the SJSRY components for livelihood generation, are highlighted in each report. However, a look at the house design does not suggest any consideration to the life style, occupation, family needs of the community who these structures intend to house. Addressing social sustainability to the extent that home ownership generates a sense of pride and security remains an issue to be tackled. The houses need to be permitted and designed to accommodate non-residential use to promote economic upliftment.

- **Credit worthiness and need for innovative financing instruments:** NGOs have invariably been roped in for identification of beneficiaries and help them in accessing interest subsidy, central assistance and shelter fund. However, progress on ISHUP (as on January 2012) for all the schemes under ‘Sahbhagita Awas Yojana’ showed that of the total applications, only 20% were sanctioned by the banks and amount disbursed to a miniscule 0.5% of the total. The poor whose credit worthiness is generally questioned, need to be provided more flexible, innovative financing instruments such as, mortgage insurance, something which is now being thought of, but of which much remains to be seen.
- **Lack of off-site development:** The non-availability of infrastructure like sewage lines, electrical lines at the site boundary affects the pace of work. The binding condition of STP in every project is dissuading for the developers. The poor condition of roads connecting the site affects transportation of goods and material which has made the construction activity cumbersome. The clause on ‘Site Selection’ as outlined in the policy needs to be followed in letter and spirit.
- **Problematic site specifics:** The sites offered for development by the developers have been difficult. The sites in a few cases were found to be very irregular and in others either inaccessible or having low marketability. The developers have mostly offered

these sites for affordable housing projects and exchanged the additional FAR for TDR to be utilised at better locations where they would get better returns.

Given the magnitude of the housing shortage and budgetary constraints of both the central and state governments, the endeavour of the government to encourage Public Private Partnership is no doubt encouraging. However, in light of the issues highlighted, it would be pragmatic to draw from the lessons learnt and take full advantage of the various strengths and capabilities of the policy. The SWOT analysis carried out for the policy in practice is brought out in the following pages. Based on the learning, the guiding principles for effective affordable housing strategy, able to address the issue of housing shortage and urbanisation holistically, have been evolved.

SWOT Analysis

S. No.	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
1.	• PPP combines strengths of both the sectors- public and private to supplement the affordable housing shortage.	• Does not address historical specificity, cultural and social needs.	• Has essential elements for provision of affordable housing.	• Beneficiary satisfaction at stake as the people’s involvement in design and planning missing.
2.	• Strong political will and leadership involved.	• Affordable housing models rely on central assistance – subsidies and lacks collaboration with community stakeholders and their resources.	• Has potential to address long term city and national targets.	• Transformation of dwelling units/flats may take place as beneficiaries are not part of the planning and design exercise.
3.	• Clear policy and institutional framework.	• Affordable housing options do not provide for options like upgradation, flexibility in design and tenure options.	• PPP helps leverage resources – mobilise non-public sector resources both w.r.t. land and finance.	• Properties might change hands as adequate regulations to check the resale of dwelling units are not worked out.

4.	<ul style="list-style-type: none"> • Promotes open and transparent land market. 	<ul style="list-style-type: none"> • Not mandatory to incorporate MIG & HIG housing into housing schemes for the lower income communities which otherwise could facilitate upgradation of the communities at large. 	<ul style="list-style-type: none"> • Opportunity for more housing can be had by increasing the allowable density, inclusionary zoning and redeveloping existing non-profit housing projects. 	<ul style="list-style-type: none"> • Pressure on rural land impacting agricultural land unless planned and balanced regional strategy is enforced.
5.	<ul style="list-style-type: none"> • Third party inspection to monitor implementation of the scheme builds confidence in the hands of stakeholders 	<ul style="list-style-type: none"> • Lacks the regulatory framework to create rental housing and improve the existing housing stock. Universal home ownership is unlikely and therefore, stress should be on rental housing. 	<ul style="list-style-type: none"> • Use of alternate cost-effective and speedier technologies can be promoted for mass scale housing. 	<ul style="list-style-type: none"> • Inappropriate housing development to impact cultural and social values as current approaches less focussed on social sustainability,
6.	<ul style="list-style-type: none"> • The affordable housing projects are supposedly supported with the self-employment programme for affordable housing through SJSRY. The scheme thus provides home ownership and opportunities to build a stable work force, economic development and community stability. 	<ul style="list-style-type: none"> • Lacks a holistic approach only those projects having social and physical infrastructure in the vicinity of the project site are approved so as to minimise the financial burden on the concerned local body and other government agencies. • Overall city/state infrastructure is not in pace with the growing demand. 	<ul style="list-style-type: none"> • The State has the opportunity to take up planned development for which regional land trusts need to be created. The trusts shall acquire land and hold it in perpetuity in order to remove the property from speculative market and preserve it specifically for affordable housing projects in future. 	<ul style="list-style-type: none"> • Creation of slum like situation. The grant of double FAR/FSI and TDR would necessitate sufficient infrastructure to accommodate the rise in density and the lack of which may lead to slum like situation.
7.	<ul style="list-style-type: none"> • Risk perceptions in the minds of the customers are lower as the units are being marketed by public sector vis-à-vis the private sector. 	<ul style="list-style-type: none"> • Project based subsidies to supplement tenant rent/master leasing where housing provider leases individual units / entire building, is absent. 	<ul style="list-style-type: none"> • Each project proposal may offer choice to many lower income migrants and homeless by way of boarding houses, housing sites etc. 	<ul style="list-style-type: none"> • Anticipation of higher values as development progresses. This may encourage speculation.
8.	<ul style="list-style-type: none"> • Capable of preventing growth of new slums. 	<ul style="list-style-type: none"> • Does not provide solution to the scale of documented need. 		
9.	<ul style="list-style-type: none"> • A wide array of government fees and charges, municipal approval, processing time, public process, marketing expenses etc. lead to increase in cost of building a house which has been suitably waived or reduced thereby cutting on cost and time involved. 	<ul style="list-style-type: none"> • High housing price to income ratio and difficulty in arranging housing finance may adversely affect the take-off of dwelling units. 	<ul style="list-style-type: none"> • Development of micro finance instruments to supplement the shortfall in finances. 	<ul style="list-style-type: none"> • The off-take of housing units is contingent upon subsidies and credit worthiness of the urban poor. Failure to channelize the funds to the developer may adversely affect the concerned authority.
10.	<ul style="list-style-type: none"> • Priority given to fast track approval of application and proposals for affordable housing projects. 	<ul style="list-style-type: none"> • Does not integrate community based commitments. 		

11.	<ul style="list-style-type: none"> • Govt's responsibility in partnership is to ensure prudential regulation and supervision and this has been adequately built into the approach for Affordable Housing by way of : <ul style="list-style-type: none"> - Reduced stamp duty. - Fee waivers and other charges - Reduced processing time - Incentivising land assembly as affordable housing needs very low cost or preferably free land. - Minimising risk of pvt builders/developers. 	<ul style="list-style-type: none"> • Selling the flats at pre-determined prices would impose compulsory subsidy on the private developer which can destabilise the financial viability of the partnership. 		
12.	<ul style="list-style-type: none"> • The models have synergy with the interest subsidy scheme and the SJSRY. 			
13.	<ul style="list-style-type: none"> • The regulatory mechanism is such that it is a win win situation for all stakeholders. Risk sharing mechanism built in to safe guard the interests of the public sector, private sector and community. 			
14.	<p>The implementation of models displays good synergy amongst the stakeholders. The need for speed and clarity of commitment are recognised as a mechanism to contain cost.</p>			
15.	<p>Involvement of NGOs to help in identification of beneficiaries and filling up of loan applications by them.</p>			
16.	<p>Pre-bid meeting with the developers to answer queries and accommodate suggestions saves time.</p>			
17.	<p>O&M post implementation built in the partnership structure</p>			

4.0 Guiding Principles for Affordable Housing Strategy

Rajasthan is pre-dominantly a rural state and due to shortage of land in urban areas G+3 storeyed schemes for urban poor has been promoted and the state government is to prepare master plans for all urban local bodies so as to address the housing problem. The rural-urban migration and the consequent growth of slums have been attributed to the lack of rental housing available to the poor when they migrate to the cities.

Historically, people have found ways to solve their housing needs but integrating this section of growing population is crucial for well-planned urban development. Subsidizing the housing cost for the urban poor through PPP, cash subsidies, interest subsidy is the present day practice. While subsidies are considered to be solutions to the housing affordability issue, there is much more required to address the problem viz., reducing housing construction and development cost through innovative technologies, alternate development standards without impacting the quality of services provided and incremental housing unit designs which grow with the increasing affordability and the family size/requirements. Additionally, checking illegal transfers pertaining to property for speculative gains, raising funds to reduce pressure on government exchequer and developing and maintaining the housing stock for its increased life span while reducing dilapidation due to ill maintenance, also needs to be looked into. Optimal use of land and

revenue generation, and community based commitments to build their stake in housing so provided are also crucial.

New models of supply and management which involve greater partnerships between public and private and involvement of the community become a pre-requisite to successful and efficient strategy for affordable housing. The guiding principles are outlined as follows:

4.1 Encourage PPPP (Public Private People Participation)

Public and private sector and community based organizations can effectively contribute to addressing the local housing affordability needs through an intelligent use of available tools and resources in the form of various programmes, regulations and constitutional amendments to improve housing affordability, regionally, in collaboration with other community stakeholders and resources. Strategy involved:

- Nurture a supportive local government environment across the state that encourages collaboration and innovation and understands the hardships of the community to considerably address the housing affordability issues.
- Generate community awareness about the problems and the vital role played by the community in consensus-building process that identifies the opportunities and ultimate goals for the community.
- Build community resources and energy to help establish community based support and partnership for improving housing affordability.

- Encourage community savings to help increase the bankability of the poor and thereby their affordability.

4.2 Form Land Bank and Encourage Optimal Use of Land as a Resource

a) Forming of land trusts by acquiring land and holding it for specific purpose like affordable housing and other infrastructure to support the livelihood requirements of the community needs to be promoted. The house/plot to the beneficiary may be given on lease and not outright purchase while also defining the ceiling for the land holding. Model III of the Affordable Housing Policy 2009 of Government of Rajasthan is a good initiative and should be appropriately modified to achieve the goal of affordable housing at regional/state level.

b) For optimal use of land and greater financial viability, other initiatives, as follows, can be reinforced:

- Redevelop existing under-developed sites
- Encourage infill opportunities for vacant land pockets
- Redefine density norms to improve affordability
- Promote mixed use development for greater financial viability

c) Land to be effectively used as a source of revenue by :

- Levying betterment charges where essential
- Land monetization to convert a government debt into available

currency, by issuing TDR certificates

- Levy land tax – property tax, tax on vacant land, user charges etc.
- Increase in FSI while pricing FSI beyond permitted limits

d) Forming land banks keeping in view the balanced regional development, understanding rural-urban linkages. Rajasthan is predominantly a rural state and has scope for planned and balanced regional development addressing the long-term goals of affordable housing.

4.3 Ensure Strategic Physical Planning

Besides ensuring that the proposal meets the master plan requirements, strategic initiatives on transportation and economic development and recognising the inter-relationship between housing and other aspects of the sustainable community should be the focus to achieve the objective of adequate housing. There should be separate density norms for affordable housing meant for the EWS/LIG so that the high rise structures designed for them do not turn out to be high rise slums.

4.4 Enforce Biometric Verification

To check illegal transfer of property, adequate regulations to prevent the property from changing hands would result in long-term sustainability. In case resale is permitted, then the regulations should be such that the percentage of premium earned should go to the shelter fund or alternatively the housing unit be sold to another person of the same target group who is in the waiting.

4.5 Effective Resource Mobilisation

The capacity of housing authorities to provide sufficient accommodation through the public housing system is limited and besides PPP there is a need to stimulate community investment.

The poor build houses incrementally and raise assets on their own. There is very little penetration of financial services and financial institutions who are hesitant to finance them. On the lines of Community Organization Development Institute (CODI), Thailand initiative can be taken to fund schemes and provide loans to organized members of the community for acquiring a house or plot to build upon. Such financial instruments for incremental and new housing need to be established.

4.6 Promote Diverse Tenure Options and Housing Type

Rental housing schemes to be made essential to provide for the urban –urban migrants changing cities in search of better prospects. The scheme should be supported by credit programmes and other forms of assistance encouraging master leasing. Besides, all developments should promote diversity and choice for urban poor in terms of tenure options, housing types etc. and offer choice to many lower income migrants and homeless by way of boarding houses, housing sites etc.

4.7 Integrate Elements of Sustainability

Answers to the following would ensure sustainability:

Social & Economic Sustainability

Does the project proposal

- Address gender equity, equality and social inclusion, economic and social mobility.
- Ensure that the affordable housing will be available and affordable for future households? If so, which of the partners will be involved in on-going retention?
- Have safeguards for long-term management of the service delivery.

Financial Sustainability

- What are the mechanisms for leveraging resources, cost recovery?
- Are some of the contributions or assets ring-fenced, so that :
 - Either they can be extracted and used for their original purpose if these dwellings are no longer affordable
 - Or they can be used as an asset to finance additional affordable housing

Environmental Sustainability

- What is the extent of dependence on non-renewable resources?
- Are mandatory requirements of rainwater harvesting and sewerage treatment plant met by the project?
- Is change in landuse (CLU) in line with the master plan provisions?

Cultural Sustainability

- Would the development proposed integrate the behaviour pattern, life style and heritage?
- Are there effective linkages between housing and other

aspects of sustainable housing that generate a sense of security and pride?

4.8 Other Initiatives that Need to be Reinforced Include

- Creation of shelter fund
- Streamlining municipal approvals – fast tracking
- Waiving or reducing approval fees/charges to encourage investment

5.0 Conclusion

To conclude, provision of affordable housing has to be a conscious decision balancing the needs of the people and the objective desired. PPP approach to address the problem of housing shortage for the EWS / LIG people is not an answer by itself, what is required is the vision and the conviction to address the need.

The EWS and LIG who are the focus of the affordable housing programmes of the government are not recognised in their true sense. The people continue to remain victims in the changed socio-economic landscape despite the best of policies talking of community participation. We forget to give due cognizance to

their ambitions and aspirations in our enthusiasm to propel the policy further.

The policy needs to be thought of as a dynamic plan of action capable of change to be in synchronisation with the requirement of the times, the people and the overall scenario in which it operates. Policies need to be understood in their proper context and we should not shy away from trying them, if we fail, redesign them. This dynamism will lead to success.

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IHSDP and BSUP Projects at a) Bilaspur, b) Chandigarh and c) Mumbai



Affordable Housing : A Commercial or Institutional Challenge?

**TUSHAR PANDEY
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The process of slum redevelopment and rehabilitation still lacks a robust institutional structure. Cases of failure of agreements between developers and residents of these settlements undermines the confidence of the poor for entering into redevelopment of slums, squatters and illegal colonies. Residents of these settlements are uncertain if they would be able to secure a house in the redevelopment scheme, owing to lack of streamlined processes and legal recourse in the system.

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There is an inevitable surge in urbanisation, with over 300 million more people expected to 'urbanise' over the next decade¹. Owing to deficit in affordable housing, the urban fabric of Indian cities today is dotted with slums, squatters and illegal colonies with million plus cities accounting for over 40% of the slum population². High price of land and formal real estate, need for policy reform and institutional inefficiencies have affected the supply of affordable shelter. As a result slums are formed and proliferates as there has been limited political will to take the tough decisions necessary for resolution³. It is well established that urban centres contribute to the growth of the economy, nearly two-thirds of the GDP comes from cities. The sheer volume of population residing in informal housing, results in vote-bank politics, emerging as an important influence on decisions governing policies, land and housing. Housing and infrastructure provide a backbone for the growth of urban areas, ensuring sustainable development and better quality of life for citizens. Political will is paramount in determining the course of development of affordable housing in India.

1.0 Introduction

As per 2011 census, India has a population of 1,210.98 million, out of which, 377.1 million reside in urban areas. During 2001-2011, the urban population of India grew at a CAGR of 2.8%, resulting in the increase in level of urbanisation from 27.81% to 31.16%. Rapid urbanisation coupled with paucity of housing stock has resulted in people increasingly living in slums, squatter settlements and unauthorized colonies.

1.1 Lack of Shelter and Services – Manifold Implications

High price of land and real estate in cities has forced the poor and economically weaker sections of the society to occupy the marginal lands characterized by poor housing stock, congestion and obsolescence. Housing conditions are appalling, marked by poor sanitation, diseases and physical dangers. Migrants to these burgeoning slums and illegal settlements also face difficulty in securing access to vital services and protecting their lives and livelihoods. A wide gap between the demand and supply of housing – both in terms of quantity and quality, exists in the country.

Haphazard urbanisation owing to lack of housing has far reaching implication for cities. For instance, the number of unauthorized colonies jumped from 1,432 in 2007 to 1,639 in 2012. The study, 'Squatting Rights', has revealed that a large slum population has no access to toilets, and lack of adequate sanitation forces over 50 million men, women and children to defecate in the open every day. Only 55% of Delhi's population is served by the sewer system (planned areas), the rest is discharged into drains that lead up to Yamuna⁴. Despite of pumping in crores of rupees, pollution levels in the river have increased⁵.

Housing and basic infrastructure catalyse the 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, the outcomes though are unsatisfactory.

The paper explores major issues in the development of affordable housing in the country.

1.2 Definition

According to the Task Force on Affordable Housing set up by the MoHUPA, government of India in 2008, affordable housing for various segments is defined by size of the dwelling and housing affordability derived by the household income of the population.

KPMG and CREDAI, have broadly defined affordable housing for Indian cities based on three key parameters - income level, size of dwelling unit and affordability. Affordability is correlated to income and property price. If the monthly carrying costs of a home exceed 30–35 percent of household income, the housing is considered unaffordable for that household.

2.0 Housing Policy and Politics

Developing affordable housing in India confronts major challenges due to several economic, regulatory and urban issues. Political control influences both policy and planning decisions.

Cities are fractured – economic and spatial divide

2.1 Excessive Control on Land Development

Land cost is the chief contributor to housing cost, particularly in

Figure 1 - Affordable housing encompasses housing for the EWS, LIG and MIG.

Size		EMI/ Rent
EWS	minimum of 300 sq ft super built-up area minimum of 269 sq ft (25 sq m) carpet area	Not exceeding 30-40% of gross monthly income of buyer
LIG	minimum of 500 sq ft super built-up area maximum of 517 sq ft (48 sqm) carpet area	
MIG	600–1,200 sq ft super built-up area maximum of 861 sq ft (80 sqm) carpet area	

Source: Guidelines for Affordable Housing in Partnership (Amended), MoHUPA, 2011

Figure 2 - Affordable Housing Norms for Different Categories

	Income level	Size of dwelling unit	Affordability
Economically Weaker Section (EWS)	<INR 1.5lacs per annum	Upto 300sq ft.	EMI to Monthly Income – 30-40%
Lower Income Group(LIG)	INR 1.5 to 3lacs per annum	300 to 600 sq. ft.	House price to annual income – Less than 5.1 (Deepak Parekh Task Force)
Middle Income Group (MIG)	INR 3 to 10lacs per annum	600 to 1200 sq. ft.	

Source: KPMG Analysis, Knight Frank

large cities. There are a number of persistent structural distortions in the market for land, particularly in urban areas.

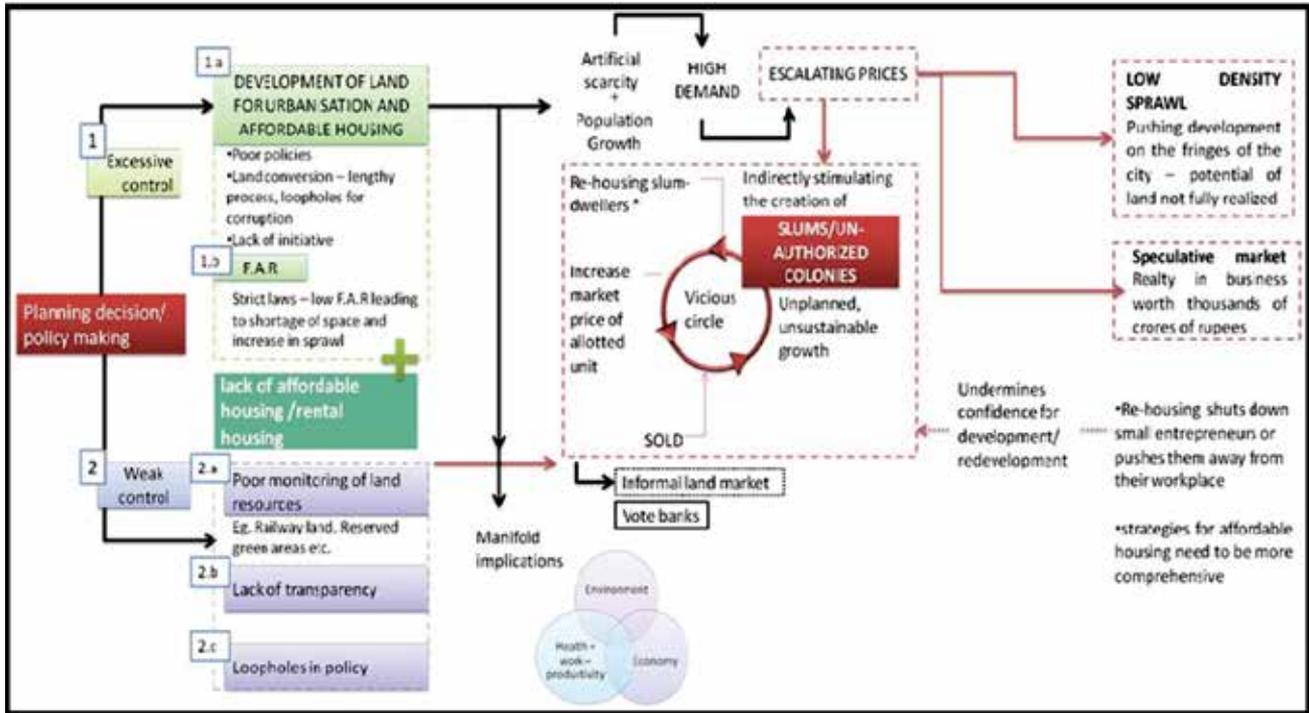
Excessive control over availability and usage of land and Floor Area Ratio (F.A.R) has led to artificial scarcity which against the high demand for shelter has led to escalating housing prices. Controlling construction in centrally located areas has pushed development towards the periphery which has led to unfavourable consequence such as longer commuting trips, public transport becoming difficult to operate and unnecessary extension of urban infrastructure.

2.2 Poor Monitoring of Resources

Institutional inefficiencies and regulatory bottlenecks have led to asymmetry in access to information and high transaction costs to developers. Wide gap between the demand and supply along with poor management of land resources and lack of transparency in the system has led to the proliferation of slums and unauthorized colonies.

This situation has often been leveraged by political interests seeking commercial interest of vote bank appeasement for the dwellers in these slums. Government owned land such as railways, etc. located in central areas on the other hand have tremendous potential to be

Affordable Housing Delivery Model



unlocked. However, this requires proper and transparent valuation mechanisms. Public Private Partnerships have in this context evolved an institutional innovation technique to achieve this as also to rope in private sector expertise and investment in developing these resources, while still retaining control by the public agency.

2.3 Informal Market Transactions

Poor households, who cannot afford to substitute capital for land, constitute an informal market independent from and parallel to formal market. Their productivity has not yet reached the point where they can afford to buy a house in the formal market. Over the period of time lack of affordable housing and poor

land monitoring turn temporary tenements in permanent settlements. There is a large rental market in the informal sector whether through slumlords, who illegally own and lease out land and units, or through unregistered 'dormitories' or 'paying guest' facilities.

2.4 Housing Supply

Private developers predominantly target luxury, high end and upper middle segment, which fetch higher returns over low income housing. Shelter for the urban poor is primarily delivered by the government. 96% of the shortage in housing pertains to the Economically Weaker Section (EWS) and Lower Income Group (LIG) households.

Government interventions are centred on providing finished

housing at a highly subsidized rate – however, the target demographics find housing unaffordable or the location of the housing unsuitable, and is often sold by the beneficiaries to HIGs at a significant profit.

The process of slum redevelopment and rehabilitation still lacks a robust institutional structure. Cases of failure of agreements between developers and residents of these settlements undermines the confidence of the poor for entering into redevelopment of slums, squatters and illegal colonies. Residents of these settlements are uncertain if they would be able to secure a house in the redevelopment scheme, owing to lack of streamlined processes and legal recourse in the system. For example, residents of Dharavi, Asia biggest slum, have protested that

the redevelopment plan will deprive many of their livelihoods, does not allot enough space in light of current tenement sizes, and does not account for Dharavi's sizable population of renters and more recent migrants.

3.0 Policy Framework and Regulations

Housing has multifarious characteristics encompassing location, size, legal rights, cost etc., which make it difficult for policymakers to deliver as the trade-offs between each of these needs to be carefully evaluated. Moreover, since housing is largely a private good – privately financed and owned/rented – individual preferences and socio-economic circumstances play an important role.

Post-independence housing programs had a broader focus-covering high, middle and low income groups under its ambit. Subsequent policies have focussed on housing for the poor.

Lack of formal subsidized rental housing that caters to middle/lower income group 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. Restriction on renovation of property also contributed to dilapidated housing stock. This has now been repealed. The private rental market is picking up amongst MIGs and HIGs, with shorter 11-month lease and licence

Figure 3- Parameters for Affordable House

Parameters	Low Cost Housing	Affordable Housing
Amenities	Bare minimum to none	Basic
Target Income Class	EWS & LIG	LIG & MIG
Size of Dwelling Unit	<= 300 sq.ft.	300-1200 sq.ft.
Locations	Generally within city but can also be located on city peripheries due to high cost of land	Within city
Project Developer	Mostly Government agencies	Private Developers and Government
Mostly available source of finance	Micro Finance Institutions	Traditional banking system
EMI to Monthly Income	Not exceeding 30 percent of gross monthly income	Not exceeding 40 percent of gross monthly income

Source: Suisse, Knight Frank, KPMG Analysis

Figure 4 - Requirements for Affordable Houses

	Minimum Volume of Habitation	Provision of Basic Amenities	Cost of the House	Location of the House
EWS	<ul style="list-style-type: none"> • minimum of 250 sq ft carpet area • minimum of 2,250 cu ft internal volume 	<ul style="list-style-type: none"> • sanitation, adequate water supply and power 	<ul style="list-style-type: none"> • cost of the house such that EMI does not exceed 30-40% of gross monthly income of the buyer 	<ul style="list-style-type: none"> • located within 20 km of a major workplace hub (could be suburban hubs as well) in the city
LIG	<ul style="list-style-type: none"> • 300-600 sq ft carpet area • 2,700-5,400 cu ft internal volume 	<ul style="list-style-type: none"> • provision of community spaces and amenities such as parks, schools and healthcare facilities, either within the project or in the neighbourhood, depending upon the size and location of the housing project 	<ul style="list-style-type: none"> • reasonable maintenance costs 	<ul style="list-style-type: none"> • adequately connected to major public transit hubs
MIG	<ul style="list-style-type: none"> • 600-1,200 sq ft carpet area • 5,400-10,800 cu ft internal volume 			

Source: KPMG Analysis, Knight Frank

agreements. The notable absence from housing markets is the public rental housing in India, which is a major form of affordable housing in countries like UK, France, Netherlands, Sweden, etc.

The first National Housing Policy was initiated in 1988. It was followed by a series of public sector interventions and related developments of human settlement sector in India, with the formulation of National Housing Policy in 1994, National Housing and Habitat Policy (NHHP) in 1998 and follow-up of 74th Constitution Amendment of 1992. The

policies focus on the role of public sector as 'facilitator', and increased role of private sector. The National Urban Housing and Habitat Policy was announced in December 2007. Prior to this all the policies were generic and did not specifically address to the housing challenges in urban India.

NUHHP 2007 has identified 'Affordable Housing for All' as a key focus area to address concerns that could potentially encumber sustainable urban development.

With the intention to provide housing and encourage urban

reforms in India, Jawarhar Lal Nehru Urban Renewal Mission (JNNURM) was launched in December 2005. One of the aim of this programme was construction of 1.5 million houses for the urban poor during the mission period (i.e. 2005–2012) in 65 mission cities.

Various recent schemes for housing include Slum Rehabilitation Authority (SRA) schemes, Basic Services for the Urban Poor (BSUP), Integrated Housing and Slum Development Programme (IHSDP), Affordable Housing in Partnership (AHIP) and Interest Subsidy Scheme for Housing the Urban Poor (ISHUP).

For success, loopholes in the existing policies need to be plugged. For example, SRA scheme has been criticised because it provides free housing to encroachers. Once occupied, increase in the market price of dwelling units encourages people to sell, and return to slums.

Rajiv Awas Yojana (RAY)–envisages a ‘Slum-free India’ by encouraging states and union territories to tackle the problem of slums in a definitive manner. Under RAY, while the Centre gives 50% of the project cost to redevelop existing slums and create new affordable housing stock, the remaining 50% cost has to be borne by states, municipalities and

the beneficiaries. RAY promises property deeds to slum dwellers, which might actually lead to proliferation of slums – squat with assurance of ownership rights from the scheme.

RAY has failed to take off, with States expressing reluctance to comply with mandatory provisions for availing central funds under the scheme such as according property rights to slum dwellers and earmarking 25% of the municipal budget for spending in colonies and slums where the urban poor live.

4.0 Union Budget 2013-14

In order to promote home ownership, the 2013-14 Union Budget allows for an additional deduction of interest up to Rs 1,00,000 from the taxable income if a person buys his first home, by taking a loan of up to Rs 25 lakh from a bank. The value of the property should not exceed Rs 40 lakh, and should be his first house.

4.1 Priority Sector Lending by RBI

The following provisions have been made by RBI for encouraging development of affordable housing –

(i) Bank loans to any governmental agency for construction

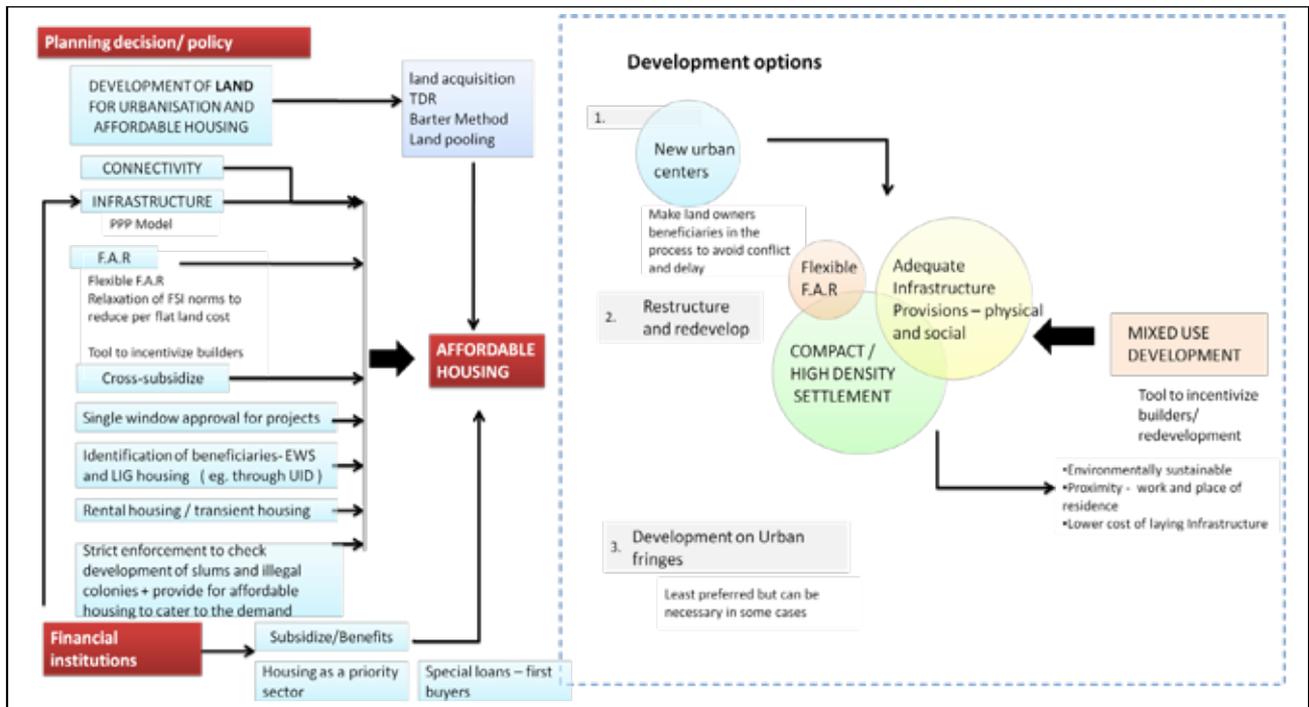
of dwelling units or for slum clearance and rehabilitation of slum dwellers, subject to a ceiling of Rs. 10 lakh per dwelling unit.

(ii) Loans sanctioned by banks for housing projects exclusively for the purpose of construction of houses only to economically weaker sections and low income groups, the total cost of which does not exceed Rs. 10 lakh per dwelling unit, will qualify for priority sector status. For the purpose of identifying the economically weaker sections and low income groups, the family income limit of Rs. 1,20,000 per annum, irrespective of location, is prescribed.

(iii) Bank loans to Housing Finance Companies (HFCs), approved by NHB for their refinance, for lending for the purpose of purchase/construction/reconstruction of individual dwelling units or for slum clearance and rehabilitation of slum dwellers, subject to an aggregate loan limit of Rs. 10 lakh per borrower, provided the all-inclusive interest rate charged to the ultimate borrower is not exceeding lowest lending rate of the lending bank for housing loans plus two percent per annum.

(iv) The eligibility under priority sector loans to HFCs is restricted to five percent of the individual bank's total priority sector lending, on an ongoing basis. The maturity of bank loans should be co-terminus with average maturity of loans extended by HFCs. Banks should maintain necessary borrower-wise details of the underlying portfolio.

In regularizing the slum settlements of Baan Makong in Thailand, low income communities were asked to negotiate tenure to the land on which they were living themselves – most often this involved outright purchase of the land, at prevailing market prices. Communities were able to make this payment through a combination of their own savings and a subsidized loan from the government which they then repaid.



4.2 Urban Housing Fund

Urban Housing Fund will be set up by the National Housing Bank and will help in creation of new homes in the budget and affordable housing categories, helping bridge the housing shortage in the country. A scheme for the same has not been formulated yet.

4.3 Land Acquisition Act

The Land acquisition act which is meant to provide land for public purposes has sometimes been misused through a nexus between commercial and political interests. This has resulted in mistrust and suspicion of the intentions of any policy effort to facilitate and provide for affordable housing.

Flaws in existing policies portray that under the schemes designed to

be pro-poor, capitalism and commercial interest eventually supersede any, of these schemes either directly or indirectly.

5.0 China's Housing Policy

Five years ago, China responded to the global financial crisis with massive stimulus program. According to some estimates, over US\$700 billion was pumped into the economy⁶. Large sums flowed into fixed asset investment, including real estate and infrastructure projects. This left the country battling with soaring residential housing prices and prospects of a possible dangerous property bubble. Perceived risks of social unrest caused by large portions of urban population being priced out of the housing market paved way for China to reverse its policy course.

5.1 Policy tools designed to regulate the market and reduce speculation –

Key policy measures included, among others, limits on multiple home purchases by individuals, stricter mortgage qualification rules including higher down payment requirements, introduction of property tax schemes in some jurisdictions and aggressive reductions in the availability of financing to developers. Informal lending markets were cracked down by officials and banks were required to reduce loans extended to new real estate projects, thereby reducing the funding for new real estate deals. Steps also include requiring local governments to allocate enough money through budgetary spending for construction of low cost housing.

China's restrictive housing policy phase continued for some time and had significant impact. For example, by January 2012, according to the National Bureau of Statistics, new home prices in the nation's four major cities of Beijing, Shanghai, Shenzhen and Guangzhou had declined for four consecutive months in a row. In addition other cities did not portray any notable gains in home prices.

5.2 China's new Housing Policy Phase is Characterized by Both – Restrictive and Promotional Approach

The property sector, and particularly the residential housing sector, is recognized as a key driver of economic growth in China. China's gross domestic product is fueled by the production and purchase of building materials and equipment, the payment of wages of construction workers, and revenues and fees generated by banks, real estate brokers and others from property transactions. Moreover, the real estate industry is an important funding source for local government budgets. Local governments depend upon land sale premiums and taxes from the sale of housing units to fund operating expenses and repay debt. The ministry has announced that local governments should continue their policy of setting aside no less than 10 percent of land sales proceeds to affordable housing projects. And the Ministry of Finance added, the central government will also strictly supervise the low income housing funds from misuse. Local govts will also provide subsidized loans to private developers to help them ease financing pressure.

6.0 Paradigm Shift

Housing policy interventions should address the market imperfections as and where they arise. The institutional framework should have the potential to address housing needs of wide spectrum of society. The market is able to cater to the needs of the upper end of the society, but where affordability is a problem, policy interventions are necessary that address the needs of this demography.

Policies that guide the housing market require bridging the gap between demand and supply through range of measure targeting tenure, finance and land markets - to operate in an efficient manner. Government has a big role to play through laws, policies and fiscal support in those areas where markets cannot function on their own.

Political commitment towards the development of large-scale affordable housing is the greatest necessity of urban India today. 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. Concerted efforts are required by multiple institutions to facilitate mass development in this sector. This would not only prevent the proliferation of slums and unorganised real estate, but would also improve the life of about half of the city's population living in them.

Notes

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- 4 Lack of sanitation causes diseases, sexual harassment, reveals survey, The Hindu , published - October 1, 2012 <http://www.thehindu.com/todays-paper/tp-national/tp-newdelhi/lack-of-sanitation-causes-diseases-sexual-harassment-reveals-survey/article3953334.ece?css=print> accessed on March,11,2013
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‘Rent-to-Own’ – A Viable Option for Affordable Housing

**AKSHAYA KUMAR SEN
RAJIV SHARMA**

‘Rent-to-own’ is intended to be a ‘rental-cum-ownership housing’ scheme which offers the low-income potential home buyers an opportunity to own a house when they are ready to deposit a certain percentage of the house price as initial down payment, while occupying the house on rent which is less than the market rent. The rent-to-own scheme is aimed at economically weaker sections and low-income households, who do not earn enough to afford to buy/own a house through the usual route.

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1.0 Magnitude of Urban Housing Shortage

After 65 years of independence, the housing shortage in the country remains an area of huge concern, in spite of many housing programmes undertaken by the Government, especially for the poor. As per the latest estimates by the Technical Group on Urban Housing for the 12th Plan, the total urban housing shortage in 2012 was 18.78 million and almost 96 per cent of this shortage pertains to the economically weaker sections and the lower income groups of the society. The investment requirement for addressing this shortage would be in the order of Rs. 9.4 lakh crore, assuming average per unit cost of Rs.5 lakh. The ever increasing demand for housing and consequent development of slums drags down the productivity of the city and its potential contribution to economic growth.

In India, affordable (social) housing has always remained a priority area of the government. Since Independence, recognizing the crucial role of housing development for planned and holistic development of the country, a large number of schemes were being operated with particular focus on housing for weaker sections and lower income groups of the society. These schemes are implemented by the State Governments through state level public housing agencies viz. Housing Boards, Development Authorities,

Improvement Trusts, Slum Clearance /Improvement Board, etc. with Government budgetary support and long tenor loans from financial institutions, particularly HUDCO.

2.0 Government of India’s Enabling Policies & Programmes

In line with the emerging context and with a view to promote affordable housing for all, the Central Government has been formulating facilitatory guiding instruments such as National Housing Policies and flagship programmes at regular intervals. The National Housing Policy of 1994, the National Housing and Habitat Policy of 1998 and the National Urban Housing and Habitat Policy (NUHHP) of 2007 bear the testimony of Government of India’s focus on the prime goal of providing Affordable Housing for All. In order to fulfil the mandates given in these national policies, various programmes have been implemented by the Govt. of India. Some of the recent major Programmes by the Central Government with focus on social housing include: Jawaharlal Nehru National Urban Renewal Mission (JNNURM) under which a total of about 1.6 million housing units have been sanctioned throughout the country to address the housing requirements of the urban poor; Interest Subsidy Housing for Urban Poor (ISHUP) which envisages provision of interest subsidy to EWS and LIG segments

to enable them to buy or construct houses and is expected to benefit in facilitating 3.10 lakh weaker section beneficiaries; Affordable Housing in Partnership (AHP) Programme which aims at operationalising the strategy envisaged in the National Urban Housing & Habitat Policy (NUHHP) 2007, of promoting various types of public-private partnerships – of the government sector with the private sector, the cooperative sector, the financial services sector, the state parastatals, urban local bodies, etc.; and the new Rajiv Awas Yojana (RAY) which is intended to incentivize the states to move towards a slum free status in a systematic and time bound manner. The RAY programme attempts a universal coverage of slum improvement / development towards a slum free India. Accordingly, the coverage would benefit approximately 15 million slum households in all the urban areas of the country (which is based on the rationalized estimate of slum population of 75.26 million which is 26.31% of the urban population of the country as of 2001, as assessed by the Committee on Slum Statistics/census, 2010 of the Ministry of Housing and Urban Poverty Alleviation, Government of India and assuming 5 persons per household). Besides the central government schemes, several States have their own major initiatives for provision of housing with particular reference to the weaker sections of the society. In addition, the Government of India has extended a range of fiscal initiatives including income tax exemptions and concessions to incentivise investment in affordable housing.

Clearly, the burden of affordable housing has been borne almost solely by budgetary sources so far. Though there has been a significant growth in the supply of affordable housing in the last decade, due to the initiatives of the central and state Governments, yet, the housing shortages as well as the total finances available fall far short of the requirements. It is well recognised that the Government sector alone would not be able to provide affordable housing for all. It is also well documented that the bulk of the population is outside the reach of formal housing finance system owing to a variety of structural and operational inadequacies of the system. In view of this, all the stakeholders in the sector are required to be involved with innovative strategies and programmes to achieve the national goal of 'Affordable Housing for All'.

3.0 'Rent-to-Own' – a Viable Option

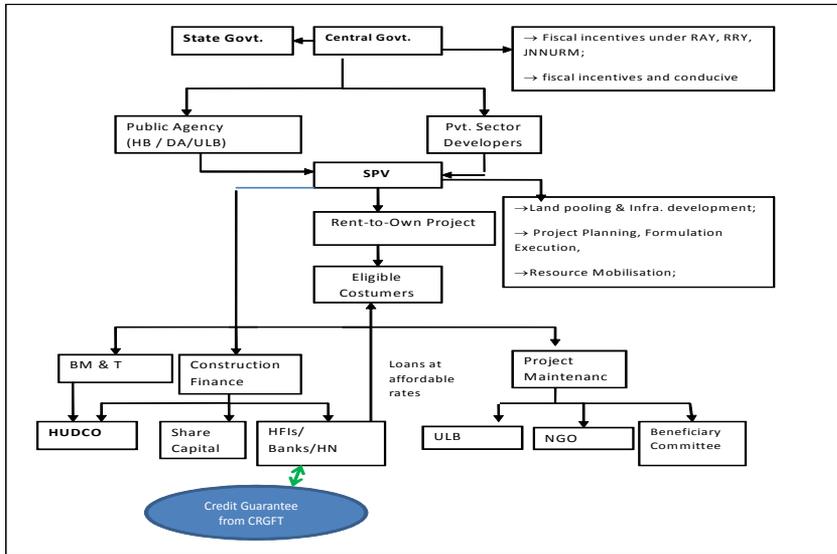
One of the innovative programmes for reaching the national goal of provision of affordable housing for all could be 'Rent-to-Own' housing scheme. Countries like U.K., Ireland, Sweden, USA, etc. have devised various models of rent to own schemes for housing different categories of people including the lower income segments of the society. 'Rent-to-own' is intended to be a 'rental-cum-ownership housing' scheme which offers the low-income potential home buyers an opportunity to own a house when they are ready to deposit a certain percentage of the house price as initial down payment, while occupying the house

on rent which is less than the market rent. The rent-to-own scheme is aimed at economically weaker sections and low-income households who do not earn enough to afford to buy/own a house through the usual route. The purpose is to give the prospective buyers a breathing space to save for a deposit to buy a house. Under the Scheme, there is no contractual obligation to buy the house. The scheme can give access to properties that would otherwise be unattainable for a first-time buyer and while renting, the prospective buyers are dealing with a 'social landlord' which may offer an extra feeling of security. The rent-to-own scheme provides numerous benefits to the potential buyers such as : (a) The security of tenure by owning your own property; (b) Protection against possibility of large rental increases; (c) An asset – the beneficiary's equity builds up month on month in the property; (d) In case of not able to pay for property or rent, could be shifted to the so-called 'Shelter' – a dormitory on the ground floor of the project; (e) Fair pricing of the housing units.

The rent-to-own scheme can be carried out by the Urban Local Body (ULB) of the area or a Special Purpose Vehicle (SPV) created by various stakeholders including state public agencies, ULBs and private developers. One of the business models of the scheme could be as given in the following figure.

As per the business architecture of the scheme (figure-1), the State Government can draw whatever central assistance available under programmes such as RAY, RRY,

Figure - 1 : 'Rent-to-Own' Housing Model



JNNURM, etc. and form a Special Purpose Vehicle (SPV) for 'Rent-to-Own' Scheme through State Public Agencies (e.g. SHB, DA), Urban Local Bodies and Private Developers. The SPV would be engaged in land pooling from various public agencies, infrastructure development and planning, formulation & construction of 'Rent-to-Own' houses. The SPV would also be involved in resource mobilisation at affordable terms of finance, pricing of units and collection of rent/repayments from the beneficiaries. The eligible beneficiaries would also be getting home loans from financial institutions, after making the initial down payment of 25% of the house. The lending institutions can get credit guarantee from the Credit Guarantee Fund Trust (CGFT) to cover the risk element. The project can be maintained by the Urban Local Body (ULB) of the area or through an NGO or any beneficia-

ry Committee. The Scheme can be designed in such a manner that a buyer can save a deposit after 5 years of tenancy to pay at least 25% of the price of the house or can buy outright at the end of 5 years of tenancy. In case the buyer opts for a shared ownership, he/she has to pay according to the increased price of the house (inflation indexed or any other standard valuation of the property) prevailing at the time.

4.0 Conclusion

Given the magnitude of urban housing shortage and limited resources of the Government, it is imperative that innovative programmes such as 'Rent-to-own' may be devised for providing affordable housing solution to the economically weaker sections and lower income groups of the society including the slum households. As owning a house is a single most important goal of a household,

the affordability of such type of scheme could range between 30-40 per cent of the household monthly income. Assuming the land is available at subsidised rate by the State/ULB, the affordable 'Rent-to-Own' houses can be constructed for various target groups. In regard to Building Designs, ideally, horizontal expansion is well-suited to low income housing because it reduces the operation and maintenance costs to a great extent.

However, if land rates are high for a city, then vertical expansion (G+5 or G+10) is possible on economic considerations. With support from city and state government, qualified home buyers could be offered incentives to own a 'Rent-To-Own' home. In order to promote this scheme, concerted and coordinated efforts from all the stakeholders covering the governments, public/private sector, corporate sector, cooperative sector, community and individuals is required. Towards the same, HUDCO has already conceived a 'Rent-to-Own' scheme for employees of various Public Institutions where the Public Institutions can avail loan from HUDCO on behalf of their employees which would enable the employees to own a house over time through the support of their Institutions. Much more needs to be done towards promotion of 'rent-to-own' scheme for formal sector as well as informal sector households, particularly enabling urban poor including slum households to own a house.

Out of the Box -Designing for the Poor

**RENU KHOSLA
JULIA KING
SHAHENA KHAN
PRANAV SINGH**

When people build themselves several things shall happen. First, they shall take the investment burden off the State. Second, there will be less State inside the house and more where it is needed – city vision building, provisioning of infrastructure and creating an enabling legal and administrative environment for access to land, services, tools and resources.

“I see what I see very clearly, but I don’t know what I’m looking at.”

V.S Naipaul, *The Enigma of Arrival*

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1.0 Lessor Rights

The right to housing, especially affordable for low income households in cities of the global south is the central issue in the right to the city discourse; a right that enables all citizens to access the benefits that the city has to offer. The ‘right to the city’ is both an immediately understandable and intuitively compelling slogan (Lefebvre, 1968). It is however, a theoretically complex and provocative formation (Marcuse, 2012, p.29). The UN defines the ‘right to the city’ within a framework of ‘equality’ rights: social, political, economical and cultural (UN, 2008, pp. 57), stressing the rights to basic needs, self-determination and freedom. Two analogous concepts relating to right to housing are citizenship and participation. At the heart of urban citizenship, the claim to housing comes hand in hand with ration cards and electricity bills that help the poor secure the rights to education, healthcare and other city benefits. In India, the challenge is that, while formally all Indians are citizens and have rights but in the case of marginalized settlements they are “citizens without a city” (Arjun Appadurai, 2001). The lack of participation is the second critical aspect of the right to housing. It is only through the actualization of formal rights and the translations of those formal rights into collective capacities can one talk about the ‘rights to the city’. This paper

presents actual practices on the ground, in the context of affordable housing in Delhi, Agra, Gangtok and Raipur aimed at actualization of the rights to housing and the city.

2.0 When People Build by Themselves

2.1 Edge City, Savda Ghevra Resettlement Colony, Delhi

‘Welcome to Haryana’ reads the text message on the cell phone; but we are not in Haryana, we are in Savda Ghevra (SG) a resettlement colony located on the outskirts of Delhi first settled in 2006.’ (Julia King, 2012). When fully occupied, SG will most likely be the biggest resettlement colony in Delhi; currently home to more than 8,500 families relocated from slums in the city centre, displaced on the back of regeneration projects mostly in anticipation of the 2010 Commonwealth Games. SG is characterised by lack of services and a housing economy with little to no state or private sector intervention. The resettlement of SG links affordable housing with security of land tenure as justification for displacement. This is regressive, rather than housing with civic amenities, SG offers plots on the urban periphery away from livelihoods and previous social and political networks, and with highly formal regulatory structures, most notably, against resale. Those who can afford to take up the challenge must make a substantial

Incremental Housing at Savda Ghevra, Delhi

September 2010



August 2012



(from the perspective of the poor) investment – initially in recovering from the shock of demolition (with no compensation) and then paying for the plot (although subsidized), which is on a 10-year lease, and finally investing in the construction of a house. Ursula Rao (2010) notes that with little access to formal credit, home ownership is an unstable arrangement that blurs the boundaries between the informal and formal. The result is a housing stock that grows incrementally in line with the owner's requirements, earning capacity and materials and resources available. For some, this results in consolidated 2 storey plus houses of concrete and steel but for most families, on average consisting of 5 to 6 members, this means living in one storey structures of *chattai* (temporary) materials in 12.5 or 18 sq meter plots, the size of a parking space.

The image above illustrates this incremental housing stock - the same street photographed almost two years apart shows the typical increments and upgrades occurring in SG.

Out of the 16 houses 4 have made a significant upgrade from a *chattai* to consolidated structure whilst others house have changed the colour of the building or added shading out front. This illustrates how with little to no assistance, improvements have been made by those who have taken up residence. The incapacity of the state to develop the land has highlighted what the residents have been able to do by themselves with their scarce resources.

2.2 No Two are Alike: A House is a Reflection of Poor People's Affordability and Requirements

Slums are heterogeneous and complex environments – varying by their degree of poverty, access to services, livelihoods, family sizes, life cycles, etc. This is reflected in the diversity in housing and building types that come in all shapes and sizes; from solid concrete frame construction to traditional stone and brick units to squalid windowless shacks made of mud, thatch and tarpaulins. Slum dwellers usually build their own houses, incrementally,

when in need and according to their pocket and so each house is unique.

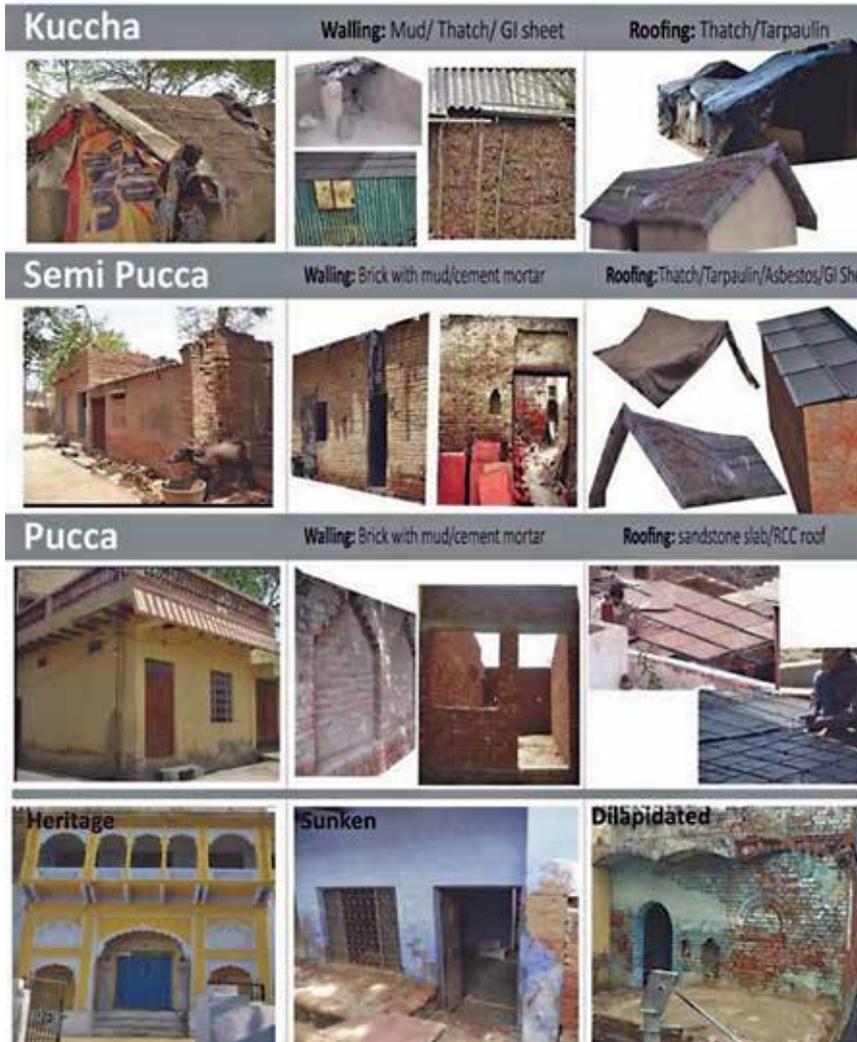
Recognizing this individuality, the Centre for Urban and Regional Excellence (CURE) undertook a participatory housing typology study under the Citywide Slum Upgrading Project in Agra¹, and expanded the range of housing categories from a pure structural (*pucca*, *semi pucca* or *kuchha*) perspective to variation by material, construction style and design. Houses were grouped by; a. wall types - old Mughal (*kakaiyaint*) or contemporary bricks, lining with cement or lime mortar, and plastered or unplastered; b. roof types featuring reinforced cement concrete (RCC) slabs, sandstone slabs, asbestos or plastic sheeting; and c. construction styles based on living styles and livelihoods; courtyard houses, houses with shops/production units, yards for animal and parking carts, etc. in the front.

Overall, preference was for load bearing structures of brick and cement with sandstone slab roofs on iron girders because these are easy to construct, require less skilled labour, allow incremental additions and are cheaper. They also enable use of locally available and climatically appropriate construction material.

There were other significant learnings: (1) in cities like Agra slums are mostly urbanized villages with legal land rights and leases and hence most houses are *pucca*. (2) Houses are old with some having heritage features. (3) Houses are mostly poorly built and structurally compromised as they have developed without help of engineers, critical when dealing with vertical

HOUSING TYPOLOGY IN SLUMS

Condition, Building Technique & Material, Spatial Layout



structures and (4) one house design cannot fit all. Variable housing needs result in customization to contexts and living styles.

2.3 Gangtok: A House in the Hills

Hill cities, too, have their slums. In Gangtok one can see these shanty neighbourhoods perching on lower

slopes of unstable hills or burrowed below better housing. The location of these settlements determines their housing type and material. Hillside shanties have temporary structures built using local materials like wattle and daub with timber framing or Corrugated Galvanized Iron (GC) with tarpaulin stretched over bamboo frames. The burrow housing

is semi-*pucca* or *pucca*, tenement like, windowless, airless, dark, with steep staircases and made of cement concrete. Such housing caters predominantly for the non-Sikkimese worker population - migrants from neighbouring states - who provide the labour workforce in the city. Unable to own homes, these forced renters have nonetheless made interesting additions: vegetable gardens on small available open spaces and shared toilets draining directly into the neighbourhood *jhora* (hill stream). The owner landlords are not poor but reluctant to invest in housing upgrades and so overall living conditions are highly unsanitary. Families huddle together in small spaces adding to the density and precariousness of inhabitable living conditions. As hill cities have huge space constraints, housing for the poor, non-residents is a major challenge.

3.0 Designing for the Poor: Addressing Variability

From just one type of design to a set of core design templates and principles, CURE worked with communities in each of these cities (and others not included in this paper) to evolve designs that are respectful of context, site shape, plot area, place density, location, condition of standing structure, living styles, occupations, family needs, resource availability and community culture.

3.1 Communities Participate in Designing their Houses

Housing when seen as an individual's aspirational need, throws the right amount of light on the rationale



behind CURE’s ‘out of the box’ thinking that questions the one size fits all approach that has defined centralized affordable housing practice. The typical box like structures designed by well-qualified professional architects under JNNURM (Jawaharlal Nehru National Urban Renewal Mission) first and now RAY (Rajiv Awas Yojana) may be built with the right structural specifications, but is it what people want?

CURE, under the belief, that the typical building blocks of government low-income housing lacks the expressive touch/ sensitivity that is needed to transform a built structure to a home, typically uses the participatory approach for preparing housing designs. CURE takes the drawing board to the beneficiary communities - drawing on their ideas, aspirations, existing capacity and suggestions from street meetings, area workshops and design studios. Working on the ground CURE managed to capture the unheard voices recorded over year plus periods. These feedback were incorporated into the housing design aspects such as informal activity spaces on upper floors of high-rise apartments (what the city wanted), room for future growth (what the families asked for) and work sheds on the ground (to generate income). In Delhi, slum negotiations helped

to accommodate renters, non-resident owners and owners with larger plots as recompense for staying on site. The outcome of the process was a two-room dwelling unit which had the mandatory 25 sq. m., toilet, bathroom, kitchen, but an added loft and a small balcony. Space was also sliced out for commercial development for bringing in the resources. The case studies that follow in this section exhibit similar housing projects under CURE that followed the participatory approach to addressing affordable housing needs.

3.2 A Toilet and a Core House in Delhi

Most houses in Savda Ghevra had not upgraded and remained single storey or temporary even after 7 years of secure land tenure. It was in this context that the SG Core House project looked to build on and learn from existing expertise and capacity to help encourage and support a local affordable housing economy. The tenet of the core house is that once families invest into their home and build up a multi storey structure they will be able to live healthy and fulfilled lives.

The original idea of the Core House was to facilitate vertical growth by providing a strong engineered frame,

capable of cheaper and incremental infill options. Working closely with communities and contractors a prototype design emerged and is being tested in Savda Ghevra. The Core House model addresses the challenges of housing finance options typical to poor and marginal communities. Housing loans are charged (because it is a low-income/slum resettlement colony) at high-risk interest rates. Standard loans are high-risk principally because the concept of collateral in self-built, often precarious housing isn’t there. What collateral does a *chattai* 3x4 meter house offer? Thus, the micro financing market for affordable housing struggles to operate in an area like SG. In response to this the concrete frame of the Core House on the one hand engenders and promotes the existing incremental way of building but also introduces a housing standard that enables loans and other more standard forms of housing credit.

The course of three year research in SG has looked at what are the principle triggers behind housing upgrades. What emerged was a set of principal concerns of the residents: pani (water) potties (toilets) and makaan (housing). Rather than seeing housing as the delivery of



shelter alone, work began on how to address housing within this wider context. The result, in parallel to developing housing models, a decentralized sanitation infrastructure was designed, engineered and approved by the Government; construction to begin mid-2013. The core house principles are being used to offer cheap and quick upgrades which incorporate a toilet into the home which will connect with the decentralized sewerage. The Core House offers an almost endless combination of new and upgrade housing options which are affordable; and working with housing loans from the beginning, enables a healthy housing economy.

The core house model is an alternative to the “one-size-fits-all” approach— only a variety of solutions can begin to address the complexity and heterogeneity at the bottom of the pyramid. The focus on enabling upgrading keeps costs low and engenders communities in that it supports the process of consolidation and the subsequent social capital gains.

3.3 Heritage Houses - Unique Typology, Unique Approach

Heritage houses are an important housing typology of Agra’s old city settlements. There are 44 heritage houses in Tajganj, the core area surrounding the Taj Mahal. These are in disrepair, and owners are too poor to maintain them. The area also lacks in basic services and is highly regulated by building restraints designed to protect the Taj Mahal. Some of these houses are incorporated within a Tajganj Heritage Walk, a slum livelihoods initiative by CURE.



Restoration of the heritage houses is critical for both the survival of the city’s physical heritage and to encourage tourism. CURE’s plan is to bring in services and structural stabilization to these houses while retaining their architectural form. With the help of community

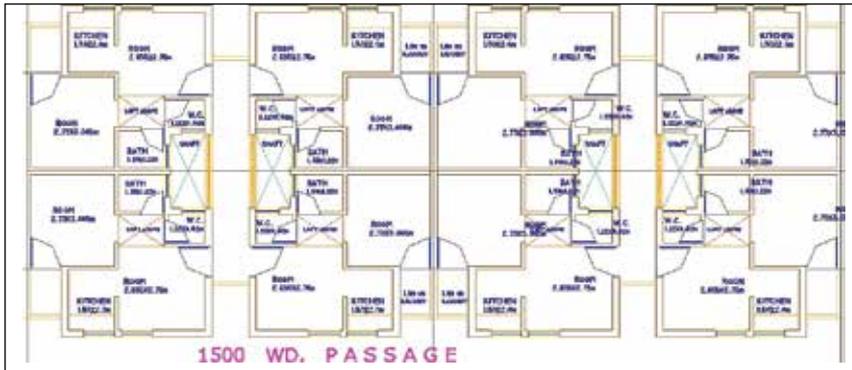
workshops and review of archival literature, house designs in Tajganj were documented and a conservation plan was prepared. In a skill-building workshop, the use of traditional materials and techniques for restoration were demonstrated to support and encourage affordable restoration. In addition, the crumbling walls of an old well, a traditional community resource, were restored using old Mughal bricks and lime mortar.

3.4 Raipur: The Local Vernacular

Slum housing typically exhibits the character of their location and the readily available, cheap construction material; building them organically helps maintain a local vernacular character. Raipur slums have a typical character of an urban village – a village centre, a temple, a peepal tree surrounded by a platform. The small meandering streets and cul-de-sacs are just wide enough for bullock carts, cycles, and two wheelers. Houses are made of mud bricks and roofs with hay and clay tiles. The characteristic feature is that of space optimization. The houses mostly have a courtyard, and an *otla* (a raised platform used for washing clothes, sitting and storing). While the basic purpose under RAY shall be to upgrade the housing to mandatory specifications of space, toilet, kitchen, etc., enabling the poor to build on their own, embraces a local and cultural narrative.

4.0 Building their Homes: Imagine the Unimaginable

Because social housing under JnNURM and RAY is built by the



state, it rarely factors in the nuances of family needs and cultural contexts. Leaving it to the people seems unimaginable for now. However, the above stories suggest that it is possible to do so by addressing some of the strategic aspects of housing development; access to money, tools and trunk infrastructure.

4.1 Money

Linking housing to revolving housing credits and toilet upgrade credits is based on the observation that there are already informal loaning groups among women—a process referred to as microcredit—revolving credit loan facilities managed informally / locally outside of the state or banking sector. It is the ambition to ignore such initiatives rather than to support and empower them.

Construction and upgrading a house requires large sums of money that the poor usually do not have in savings. The inability of formal Housing Micro Finance Institutions (HMFI) to reach credit to slum households impelled CURE to expand its Livelihoods Credit Model and Fund for Core Housing in Savda, with wider applicability. The fundamental approach is to top

up household savings through easy, customized credit at low interest rates – lower than the 16-20% charged by HMFIs. Carved out of a Project Grant and member contributions, the Community Credit Fund (CCF) is managed by a community committee that represents all interest groups. Applications are reviewed by the community, and based on project viability the money is lent. The community is responsible for ensuring the payback that is usually delayed to allow families to shore up their savings. The capacity to repay is enhanced by helping set up business enterprises. Because resources are limited, CURE has only financed two houses. The construction is over and the building ready to live. A Water Treatment Plant and Kiosk is being set up, operated and managed by the family, to help payback the loan.

4.2 Tools

Besides money, using the right construction material and techniques are also critical for building a sustainable house. While people shall continue to build on their own, CURE provides the technical knowhow to rejig designs and connect to the city infrastructure. However, the exit plan is to build a

database of skilled workers and contractors and contract templates to help people pick the right builder and oversee the construction by themselves. As a start, CURE is overseeing construction. Eventually a help line service shall be set up for those needing help. This would help strengthen the local systems and response mechanisms.

5.0 Leave building to the Poor: Challenges for Rajiv Awaj Yojna

The relationship between people and their built environment is complex and dynamic. Architect John Tuner who popularized self-built housing in the 60s and 70s had said, “if I have ever had an original thought, then this was it: that the independent variability of motivating priorities explains the counter-productivity of prescriptive housing production systems”, a statement which still rings true. Clearly housing under BSUP and RAY is of the authoritarian type. It relies on Hernando de Soto’s paradigm of a positive casual relationship between home ownership and investment. The reality however is that housing investment is less dependent on security of tenure and legal status in low-income settlements and more on matters of perception by residents regarding the probability of eviction, the availability of services, and the passage of time.

RAY envisages a massive influx of capital investment - 90% of which shall be subsidy – to ensure every poor family has a house of their own in the city. There are several reasons why this shall not work.



First is land. Land under slum occupation, even when as low as 5-10% of the city, is somehow seen as a money-spinner for cash strapped municipalities (because city land is expensive, slums are mostly in high-value city areas and slum dwellers lack citizenship). Second are the fault lines in the scheme. In-situ upgrading is recommended but land issues are left to local governments, who opt for the easier solution, relocation. Third is about process. Formal and set pathways in the government are being used to build for the informal in informal settlements. DPRs that unlock State resources for local development are prepared by engineers, reviewed by

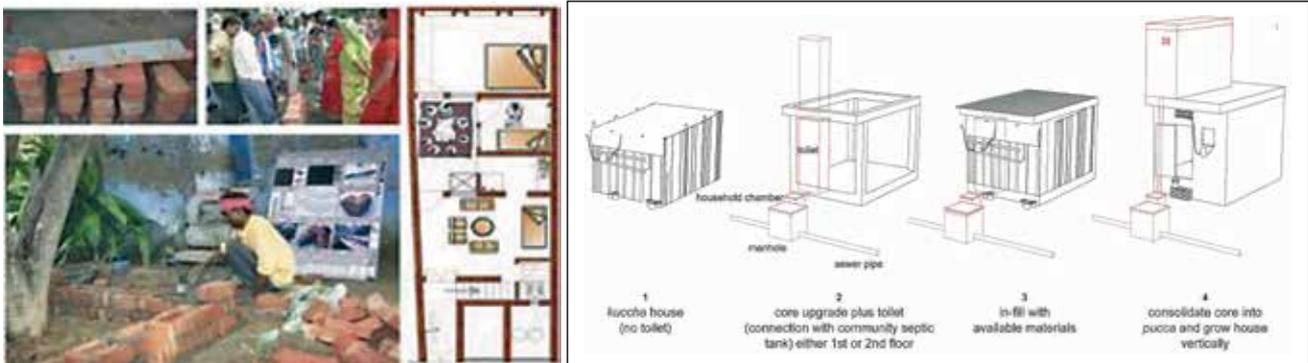
engineers and built by engineers. Participation is merely tokenistic - tick the box.

When people build themselves several things shall happen. First, they shall take the investment burden off the State. Second, there will be less State inside the house and more where it is needed - city vision building, provisioning of infrastructure and creating an enabling legal and administrative environment for access to land, services, tools and resources. Development shall then be sustainable. This does not mean that the government is off the hook leaving those most vulnerable to fend for themselves, but that

the poor become an integral part of the city's narrative. The SG Resident Welfare Association (RWA) is an advocacy tool for the community - an effort among the urban poor to mobilize and mediate between the formal, master planned narrative of Delhi as a 'world class city' and the reality of living in marginal space physically and metaphorical on the urban periphery.

Third, when local governments with the support of civil society agencies put in place participatory planning and project management processes, these result in emancipatory benefits. The community builds a collective cultural vision or aspiration. Simultaneously, institution building happens alongside the desire to fulfil individual and family needs and change the built environment.

For cities to function as a positive agonistic context for all citizens they need more than an oversimplified, one-size-fits-all approach. The government can empower communities to make their own housing choices if it sets aside tired assumptions about the delivery of housing and single use zoning; and if it can engage with stakeholders especially



when it comes to affordable housing. The participatory approach is not an instant fix but it is a good way to start.

Note

¹ CURE is implementing Citywide Slum Upgrading Plan, Agra in partnership with Agra Nagar Nigam with support from Cities Alliance, to prepare a reform-linked Slum Free City Plan in synergy with the Rajiv Awas Yojna(RAY) initiative of the government, using participatory processes.

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RAIN WATER HARVESTING (RWH) SYSTEM FOR DOMESTIC USE : A CASE STUDY FROM THE NORTH EASTERN REGION

Rain water harvesting (RWH) scheme with its numerous individual as well as community benefits has been an effective tool in sustainable management of water resources in the North Eastern region.

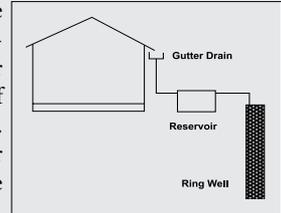
The two major components in a typical domestic RWH system used in the N. E. Region comprises of :

- 1) **Guttering and pipe network to collect the rainwater from rooftop** : The gutters are constructed with brick masonry or fabricated metal sheets like tin/ aluminium etc. and PVC pipes are used for pipe network.
- 2) **Storage tanks** : The major impediment in adopting the RWH system by domestic household is the high cost of construction of the reservoir for storage of the rain water. A comparison of the three viable options of water reservoir can be :

Type	Cost per liter *
Brick masonry & RCC water tanks	Rs. 12.00 – Rs.15.00
PVC water tanks	Rs. 8.00
Ferro-cement water tanks	Rs 6.00

N.B. * Analysis done for a 3000 litres surface water tank without staging at Guwahati, Assam price.

Ferro-cement is the most cost-effective option for storage water tanks. It is a proven technology and can be easily adopted at the grass root level by the masons & workers. There is of course a practical limitation regarding the size of the water tanks to be constructed due to cost considerations. As the rain water runoff during a heavy shower is of considerable volume, surface storage water tanks of a given size may not be sufficient to collect all the water. As such, it is always practical to divert the excess water to an open well/ sump for collection/recharging of the sub-surface aquifer.



Economics of a domestic RWH system:

Component	Costing	Remarks
Fabricated galvanized tin channels for collection of the rain water from roof tops.	Rs. 2500/-	Costing to be on higher side if gutter drains of brick masonry is used.
PVC Pipes for the down pipe system	Rs. 2000/-	—
Ferro-cement water tank of 3000 liters capacity	Rs.18000/-	Costing to be on higher side if Brick masonry / PVC water tanks is used.

With a total cost consideration of around Rs. 22500/-, a 3000 litres capacity RWH system can be installed by the domestic household. Such a system is quite useful in augmenting the water availability for the household, besides recharging the sub-surface aquifer as well as reducing the runoff volume and during peak flow, thereby mitigating floods as well.

(Source : Rana Kumar Phukan, Senior Manager (Projects) HUDCO, Guwahati)

Housing for Slum Dwellers in Delhi – Implementing ‘Rent- to Own’ in Ward 103

ASJAD BASHIR ALVI
AKSHAYA KUMAR SEN

The rent-to-own scheme is designed to accommodate all 961 households, living in the three slums in ward no.103, Delhi. It is estimated that total built up area required for accommodating 961 households with average unit size of 25 sqm. would be 24,025 sq.m. approx. At FAR of 400, the total land area required would be 6006.25 sqm.

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1.0 Introduction

Slum is a commonly used term for thickly populated urban areas with dilapidated and substandard housing and squalor. The Census (2001) of India has defined Slum as “a compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.” The key reasons behind the growth of slums

are migration of disadvantaged rural population to economically more affluent cities in search of jobs and livelihood. Such migrants, find it difficult to afford accommodation in regular areas of cities and tend to occupy space in unattended open land or existing slums, thereby adding pressure on the urban space.

2.0 Slums in Delhi

The census 2001 reported 20.25 lakh slum dwellers in Delhi, also known as Jhuggi-Jhopari (JJ) clusters, which

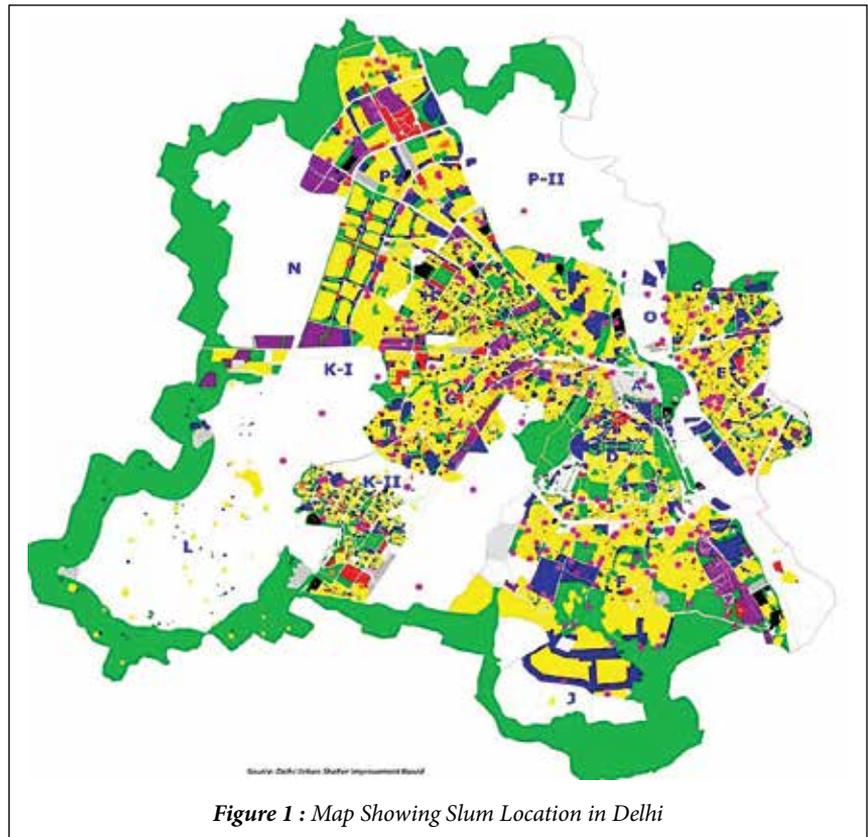


Figure 1 : Map Showing Slum Location in Delhi

has now increased to around 32 lakh. There are a total of 685 JJ clusters and are scattered all over the city of Delhi. Generally they are situated on the vacant land along railway lines, roads, drains and river embankments and also vacant spaces near residential, industrial and commercial complexes. Around 56 percent of squatters are near the residential areas and 40 percent along the road side.

Fig 2 gives an overview of slums in Delhi. The reason for the decrease in slum population between 1997 and 2001 is because of large number of demolitions which took place during this period. In the year 2001-2002 more than 12,000 families in around 30 clusters were displaced.

Fig 3 illustrates distribution of slums as per their location. The figure indicates that South Delhi has largest number of JJ Clusters (25%) followed by North Delhi (17%). More than half of all the JJ clusters in Delhi are on land belonging to Delhi Development Authority (DDA). Over the years the sizes of the JJ Clusters has increased and hence clusters with small number of JJs had been on a decline. At present most of the JJ clusters (311) have 100 to 500 jhuggies while another 104 have 500 to 1000 jhuggies within.

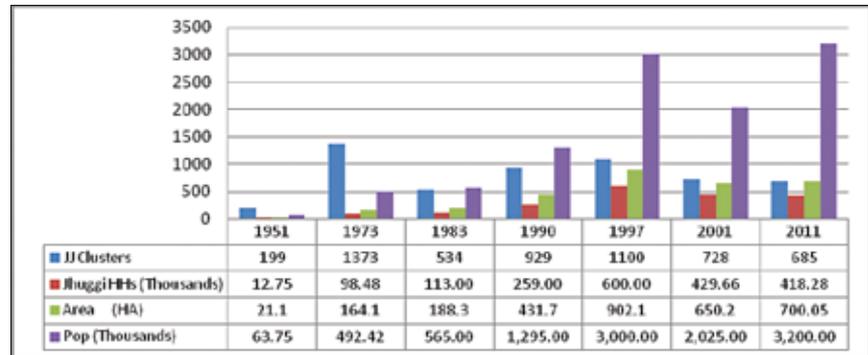


Figure 2 : Growth of Slums in Delhi

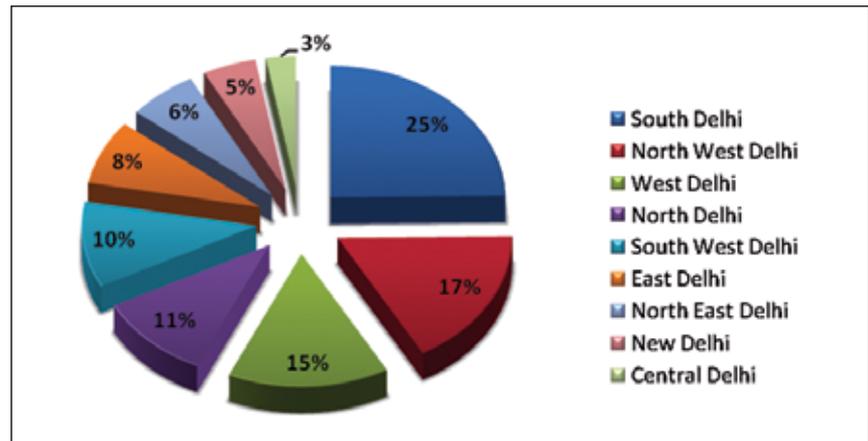


Figure 3 : Distribution of Slums According to their Location

3.0 Governments Contribution Needed to Achieve a ‘Slum-Free City’

In most of the Slum Improvement Programmes in Delhi the housing is fully or partially subsidised by the government with beneficiary share being negligible. As per the data available from Government of National Capital Territory (NCT) Delhi, the central and state funds earmarked for providing houses under BSUP component of JNNURM would benefit 67,800 slum households only, which is only 16% of the estimated slum house-

holds of 4.18 lakh in Delhi (Table-1). In the business as usual scenario, it would take around 31 years to provide houses to all existing slum households in Delhi.

To achieve the objective of making Delhi a slum free city, the Government of NCT Delhi along with the Central Government has to shell out a huge amount of money, as the slum population in the city is continuously increasing. It is estimated that a total investment of Rs. 19,742 crore is needed to provide housing to 4.18 lakh slum households presently residing in Delhi, assuming average

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² Assistant General Manager(Economics), HUDCO, New Delhi

Table 1 : Funds allocated by Central and State Govt. for BSUP

Name of the Project	No. of flats	Project Cost / approved under JNNURM (in Crore)	ACA Committed (in Crore)	Total State Share (in Crore)	Physical Achievement
(A) DSIIDC	44616	2048.99	883.31	1070.29	Completed - 13820
(B) DUSIB	18204	912.11	431.3	480.81	
(C) DDA	4740	196.06	77.31	118.74	Work started for 3060 DUs
(D) NDMC	240	21.89	7.87	14.02	Tender to be invited
TOTAL	67800	3179.1	1399.79	1683.86	Completed-13820 In progress-15224

Source: Government of National Capital Territory Delhi

unit cost of Rs. 4.72 lakh (Average unit cost of BSUP project).

With the problem multiplying itself rapidly, alternative ways of housing finance for the poor needs to be devised so as to address the problem of housing the slum dwellers.

In this context, 'Rent-to-Own' scheme can be an effective mechanism for financing housing for slum dwellers. The present paper provides a detailed 'Rent-to-Own' scheme structured for households residing in three slum clusters of ward no.103, Punjabi Bagh, New Delhi.

4.0 'Rent to Own' for Ward No. 103, Punjabi Bagh, New Delhi

4.1 The Scheme

'Rent-to-own' is a rental-cum-ownership housing scheme which offers the slum dwellers an opportunity to own a house by paying an initial deposit and occupying the house on rent which is less than the market rent. The details of this scheme are given in article- 'Rent to Own- A viable option for Afford-

able Housing' in this issue of Shelter magazine.

The rent-to-own scheme is aimed at urban poor households living in slums who do not earn enough to afford to buy/own a house through the usual route. To be eligible under the scheme, the following conditions are to be fulfilled: (i) The household should have lived for at least five years in the specified slum. (ii) the household should be a first-time buyer; (iii) The household's annual income should not be more than Rs. 1 lac; (iv) The household must prove that it cannot buy a house in

the open market; (v) The house hold should have an 'Adhaar Card' or some other document to prove his residency in the specified slum.

4.2 Selected Slums

a) Location:

The selected slums are located in ward no. 103 (Madipur) of Municipal Corporation of Delhi in Punjabi Bagh Area. These slums have a good access and are on the Mahatma Gandhi Road (Ring Road).

b) Socio Economic Profile:

There are around 961 households in the three slums identified for this project. Most of the households earn their livelihoods from the bungalows of the posh Punjabi Bagh working as maids, domestic helps, drivers, security guards etc. Others cater the services of the locality working as washer men, barbers, cobblers and vegetable & fruit hawkers. Average household income in these selected slums is found to be around Rs. 7,000/per month while a few households even earn as much as Rs. 15000/per month and above as the number of working heads increase.



Figure 4: Location of the Selected Slums

Table 2 : Unit Cost with Land Development

No. of DUs	961
Avg. Unit Size (Sq.m.)	25
Total Built Up Required (Sq.m.)	24,025
Total Land Area Required (Considering FAR = 4) (sq.m.)	6,006.25
Total Cost of Const. @ Rs.10,000/sq.m.	Rs. 24,02,50,000
Additional Cost @ Rs.1000/sq.m.	Rs. 2,40,25,000
Total Project Cost	Rs. 26,42,75,000
Total Unit Cost (with-out land)	Rs. 2,75,000.00

c) Costing:

The rent-to-own scheme is designed to accommodate all 961 households, living in the three slums in ward no.103. It is estimated that total built up area required for accommodating 961 households with average unit size of 25 sqm. would be 24,025 sq.m. approx. At FAR of 400, the total land area required would be 6006.25 sqm.

It is estimated that the total cost of the project would be Rs. 26.43 crore which translates into per unit cost of Rs. 2.75 lakhs (without land cost as land is assumed to be provided by the state government). Table-2 gives the details of the cost estimates of the project.

d) Financing of the project:

The rent-to-own project can be constructed by Delhi Urban Shelter Improvement Board (DUSIB) or any SPV created by the State Government. Land could be provided by the land owning agency (e.g. DUSIB in ward no. 103). Cheap or concessional finance is one of the major requirements for the success of the scheme. Such finances could be availed from HUDCO since their

rate of interest for Economical-ly Weaker Section (EWS) housing is highly subsidised. The security will be the mortgage of the houses. The government could also induce other HFIs/Banks to lend concessional loans to the implementing agency for this purpose. The Credit Guarantee Fund Scheme can also be used for additional guarantee cover for the scheme.

e) Repayment of loan from the Beneficiaries

Table-3 below gives the EMI option for various down payment plans

worked at an interest rate of 8.5 percent. EMI may vary if there is any change in the rate of interest.

As the average monthly income of the slum households of the selected slum clusters is Rs.7000 per month, the EMI upto 30% of the monthly income can be paid by the beneficiaries for availing the ‘rent-to-own’ scheme. As can be seen from Table-4, the scheme with Rs. 2.75 lakh as unit cost is quite affordable to the slum households with varying down payment plans. The developing agency will take the loan from a refinancing agency and then will subsequently disburse it to the end beneficiary. The loan will be repaid from the rent that would be collected from the beneficiaries. The EMI that is collected could have an extra component of rent, which would be decided by the developing agency. That extra component will go to the developing agency as their rental income which may be used to meet the O&M expenses of this project.

Table 3: EMI options for Various Down Payments

Unit Cost	Down Payment	Loan Amount	Interest Rate	Repayment Period	EMI
Rs. 2,75,000	Rs. -	Rs. 2,75,000	8.50%	15 years (180 instalments)	Rs. 2,708
	Rs. 25,000	Rs. 2,50,000			Rs. 2,462
	Rs. 50,000	Rs. 2,25,000			Rs. 2,216
	Rs. 75,000	Rs. 2,00,000			Rs. 1,970
	Rs. 1,00,000	Rs. 1,75,000			Rs. 1,723
	Rs. 1,25,000	Rs. 1,50,000			Rs. 1,477
	Rs. 1,50,000	Rs. 1,25,000			Rs. 1,231
	Rs. 1,75,000	Rs. 1,00,000			Rs. 985
	Rs. 2,00,000	Rs. 75,000			Rs. 739
	Rs. 2,25,000	Rs. 50,000			Rs. 492
Rs. 2,50,000	Rs. 25,000	Rs. 246			
Rs. 2,75,000	-	-	-		

4.3 Building Design

Architecturally, horizontal expansion is well-suited to low income housing because it reduces the construction as well as O&M costs to a great extent. However, since land rates are high, then vertical expansion (G+3) could be considered on economic considerations. The following multi-story structures are proposed for the 'rent-to-own' project in New Delhi.

The units will begin from first floor level. The ground floor will be dedicated for 'shelter' or 'dormitory' for those who are not able to own a flat or cannot pay the rent. The ground floor would also be used for spill over activities of the slum dwellers, storage for hawkers, skill development centres, children play area and other such activities. Providing such a space would ensure that the way of living of slum dwellers, i.e., by socializing is taken care of to some extent. Multi story apartments can come up with proper arrangements for its maintenance.

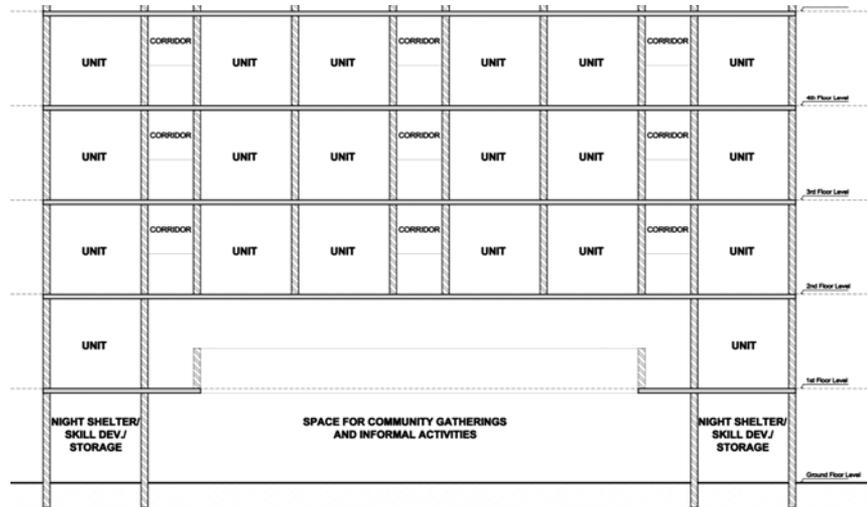


Figure 5: A Schematic Section of Proposed Building

5.0 Conclusion

Given the huge urban housing shortage and limited resources of the Government, it is desirable that the efforts of the Government need to be supplemented by other stakeholders through designing of innovative schemes such as 'Rent-to-own' scheme which would go a long way in solving the housing problems of the slum households.

This scheme also advocates that the limited Government resources would provide many fold houses, than constructing houses on 'grants only' basis. This case study of Delhi also indicates that provision of affordable housing for urban poor can be done with viable financing model where slum households pay an affordable EMI in place of rent, to own their house.

INDIAN BUILDING CONGRESS AWARD FOR EXCELLENCE IN BUILT ENVIRONMENT



IBC Trophy -2011 awarded to Smt Manju Safaya, Executive Director (D&D) and Team Leader for the Project of The Pilgrim Centre- Siddheshwar Dham, Namchi , Sikkim.

Project Description

The Pilgrim and Cultural Centre built over 7 acres was completed in 2011 and inaugurated by the Shri Jagad guru Shankaracharya Swami Swarupananda Saraswati Maharaj on 8th Nov 2011 in the presence of Hon'ble Chief Minister of the State Shri Pawan Chamlin. The complex included replicas of twelve Jyotirlingas, four Dhams and the effigy of Lord Kirateshwar. The Cultural Centre- phase two of the project proposal included a Security Block, an Auditorium for 200 people, a V.I.P. Guest House and a hundred bedded Yatri Niwas. The Landscape for the project includes design for the pedestrian circulation for ambulatory paths, shaded pavilions, heavy plantation and local species of trees, shrubs and flowering. The buildings and terraces are sited along the contours as per the Green building requirements to minimise cut and fill. The structures are designed with high safety and earthquake resistant features. The entire team worked efficiently to minimise site interference and retain slopes, vegetation and drainage lines. Local materials were used for the project and wood was used effectively to ensure comfort in the interiors. However, the carvings were in fibre glass, while the finishing of the structures was metallising to withstand the climatic conditions, minimise maintenance costs in annual painting and appear aesthetic. The ancient technique of plastering with hydrated lime was revived for the Lord Shiva statue with local admixtures to give the sheen and longevity.

(Source: ED (D&D), HUDCO, New Delhi)

Innovations in Affordable Housing in India

REBEKAH KURIEN

Mass housing targets set by the government to house the urban poor can be realised by adoption of the innovative building materials and technologies, which are cost effective, faster and sustainable. Partial prefabrication methods also have a great potential in the present housing scenario.

Urbanisation took effect in India after independence. Though it helped in improving India’s economy, the country also witnessed a substantial increase in rate of migration particularly from rural to urban areas. The steady increase in rate of migration developed a huge gap between the demand and supply of shelter for the migrants. Drastic shortage of housing led to the emergence of slums and squatters in the cities. Current statistics show that 26% of the urban population in India live in slums and is projected to increase in the future. Unless this growing trend is stopped the growth and development of the entire nation will be effected.

This paper deals with understanding and reviewing the present housing scenario and shortage, to review various innovative building materials available in the market and to analyse the cost and time effective technologies that can benefit in affordable housing for the masses.

India’s population is constantly on the rise and is projected to be the most populous in the world by the

year 2030. But the land available is constant. We therefore need to solve this problem of housing shortage at the earliest.

1.0 Introduction:

As per the 2011 census, the country had a population of 1,210.98 million, out of which 377.10 million (31.16%) live in urban areas and 833.08 million (68.84%) live in rural areas.

For the first time since Independence, the absolute increase in population is more in urban areas than in rural areas. During 2001 – 2011, population increased by 181.4 million.

Level of urbanization increased from 27.81% in 2001 Census to 31.16% in 2011 Census. The proportion of rural population declined from 72.19% to 68.84%. This growing concentration of people in urban areas has led to problems of land shortage, housing shortfall and congested dwellings.

Of the 377 million living in India’s roughly over 7,900 towns, an estimated 90 million are poor. 26

Table 1: Population of India

	2001 (in million)	2011 (in million)	Difference (in million)
Rural	743	833.08	90.4
Urban	286	377.10	91.0
Total	1,029	1,210.98	181.4

Source: Census of India 2011

Keywords: housing shortage, affordable techniques, cost effective, time effective

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Table 2(a): Housing Shortage

HOUSING SHORTAGE 2012			
Sl. No.	Households that require new houses	In 2007	In 2012*
1.	Living in non-serviceable <i>kutch</i> houses	2.18	0.99
2.	Living in obsolescent houses	2.39	2.27
3.	Living in congested houses	12.67	14.99
4.	Homeless	Not included	0.53
5.	Sub- total (1+2+3+4)	17.24	18.78
6.	Housing deficit (total no. of households-housing stock)	7.47	Not included
7.	Total housing shortage	24.71	18.78

Source: Ministry of HUPA *figures estimated for 2012 by technical group in million dwelling units

Table 2(b): Housing Shortage According to Income Groups

Sl. No.	Category	2007		2012	
		Figures	%	Figures*	%
1.	EWS	21.78	88.13	10.55	56.18
2.	LIG	2.89	11.69	7.41	39.44
3.	MIG/HIG	.04	0.18	0.82	4.38
4.	Total shortage	24.71		18.78	

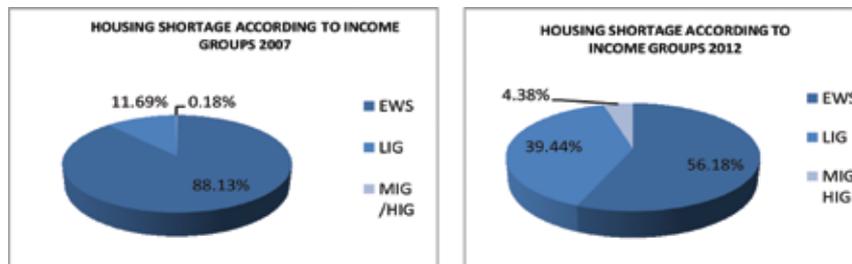
Source: Ministry of HUPA

percent of India's urban population lives in slums. In the metro city of Mumbai 54% of the population are slum dwellers but occupy only 6% of the land. Urbanisation has resulted in people increasingly resorting to informal housing and has deteriorated the housing conditions of the economically weaker sections of the society.

2.0 Urban Poverty and the need for Affordable Housing

According to estimates of the Technical Group constituted by the Ministry of Housing and Urban Poverty Alleviation (MoHUPA), the urban housing shortage in the country at the end of the 10th Five-Year Plan was estimated to be 24.71 million for 66.30 million households.

Graph 1 : Housing Shortage According to Income Groups



Source: Ministry of HUPA

2.1 Government schemes that assist in rehabilitating slums

The government of India has taken several initiatives in resolving the housing shortage in the country especially among the lower income category. National Slum Development Programme (NSDP), Valmiki Ambedkar Awas Yojana (VAMBAY), Integrated Housing and Slum Development Programme (IHDS), Basic Services for the Urban Poor (BSUP) are some of the government schemes which focus on integrated development of slums.

2.2 Affordability of various income groups

Cost of construction is proportional to the cost of materials and also the area of the dwelling unit. On the recommendations of the planning commission, the Government of India has adopted the following minimum standards (Table 3.0)

2.3 Selection of material and technology

When building for the economically weaker and lower income category of the society, selection of material and technology becomes critical. This selection is determined by various factors as listed below;

Factors affecting Choice of Materials and Technologies

- Scale of construction
- Availability/suitability of raw materials
- Cost variation with conventional materials
- Availability of skilled labour
- Availability of adequate power for production of components

- Environmental aspects
- Disaster-resistant requirements
- Savings in cost
- Savings in time of construction
- Acceptability by people

Drawbacks of conventional building construction

- The demand for conventional building materials like burnt clay brick, cement, steel, river sand, water etc. is increasing every year

- Limitation to increase production of bricks and river sand supply will mismatch demand leading to price rise.
- Growing consumption of fuel/energy leading to increase in emission of CO₂ has become a major concern causing climate change.
- Cost of cement and steel are also likely to rise due to the high energy consumption
- Building construction needs water and water is becoming a scarce resource

Therefore the cost of conventional building materials and the overall cost of construction are bound to increase in the future.

2.4 Innovative building materials for construction of mass housing

For an effective implementation of housing for the urban poor we need to consider three major factors; cost, time and sustainability. Some

Table 3: Affordability of Various Income Groups

Income category (in rupees/ month)	Area of dwelling unit	Affordability to pay EMI/ Rent (% of income)	Affordability to pay cost of house (multiple of annual income)
EWS (539-3300)	<ul style="list-style-type: none"> • Minimum of 300sq.ft super built up area • Minimum of 250 sq.ft (25 sq.m) carpet area 	20	3
LIG (3301- 7300)	<ul style="list-style-type: none"> • Minimum of 500sq.ft super built up area • Maximum of 517 sq.ft (48 sq.m) carpet area 	30	4
MIG (7301-14500)	<ul style="list-style-type: none"> • Minimum of 600-1200 sq.ft super built up area • Maximum of 861 sq.ft (80 sq.m) carpet area 	40	5

Source: Affordable Housing for Urban Poor, National Resource Centre, SPA New Delhi, 2009, Guidelines for Affordable Housing in Partnership (Amended), Ministry of HUPA, 2011

Table 4: Building Construction Materials and Technologies

Area of application	Conventional	Appropriate / Innovative	
		Materials	Technique/ Technology
Foundation	<ol style="list-style-type: none"> 1. RCC raft foundation 2. Columns and footings 3. Pile foundation 		1. Brick arch foundation
Wall	<ol style="list-style-type: none"> 1. Clay bricks 2. Stone 3. Timber 4. Glass 	<ol style="list-style-type: none"> 1. Fly ash bricks 2. Stabilised earth brick 3. Hollow concrete block <p>Precast</p> <ol style="list-style-type: none"> 1. AAC blocks 2. AC wall panels 3. Precast solid cement concrete blocks 	<ol style="list-style-type: none"> 1. Rat trap bond 2. Rapid wall
Roof	<ol style="list-style-type: none"> 1. Steel 2. Timber 3. Asbestos sheets 4. Terracotta tiles 5. RCC 	<ol style="list-style-type: none"> 1. Precast RC channel units 2. Precast RC planks 3. Precast concrete/ ferrocement panels 4. AC roof panels 	1. Filler slab

of the conventional and innovative building technologies are listed in Table 4.0

2.5 Building materials for construction of affordable housing

Foundation

Conventional methods of foundation are found to be economical and more practical for low cost houses in slums, which generally consists of low rise structures. In seismic regions, special attention is required to make the foundations continuous, using horizontal reinforcement. Prefabrication is not recommended for foundations in normal situations. In the case black cotton and other soft soils it is recommend to use under ream pile foundation which saves about 20 to 25% in cost over the conventional method of construction.

The use of brick arch foundation saves 40% in concrete and masonry.

Super Structure

i. Autoclaved Aerated Concrete Blocks (AAC block)

Autoclaved Aerated Concrete (AAC) block is an environmental friendly construction material. The

manufacturing process emits no pollutants and creates no by-products or toxic waste products. AAC blocks are manufactured using Portland cement which is mixed with quartz (silica/pfa), water and an aeration agent. The aeration agent reacts with the concrete and the chemical reaction produces air pockets in the concrete. It is then compacted which gives it its structural strength. The finished product is twice the volume of the raw materials used, making it extremely light and resource-efficient. Standard size of a block is 600x200x50-300(thickness).

Advantages

- Excellent thermal protection. The thermal conductivity of AAC is 6 to 7.5% that of conventional concrete, making it energy-efficient.
- Excellent soundproofing material and acoustic insulation.
- Aerated concrete provides fire and termite resistance.
- It is recyclable.

ii. Autoclaved Aerated Concrete panels (AAC panels)

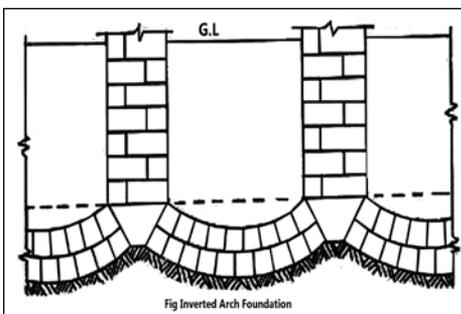
AAC wall panels are slim and light-weight which perfectly substitute

plasterboard, plywood, particle board and brick walls because of their sheer strength. Their low weight, ductility, fire and moisture-resistance properties make them hardy survivors of climatic and accidental disasters. AAC panels are ideal as walls, partitions, mezzanine flooring, ceilings and prefab structures for low cost housing.

An AAC panel is a sandwiched panel of two fibre-reinforced cement sheets, enclosing a light-weight concrete core composed of Portland cement, binders and a mix of siliceous and micaceous material aggregate. Usually, AAC horizontal wall panels have maximum length and height of 20' and 24" respectively. Thickness of such panels ranges from 6" to 12".

Advantages

- They use flyash, which is a waste material.
- No water is needed to cure and construct with AAC panels
- They are highly energy efficient, since they are poor conductors of heat.



Inverted brick arch foundation (Source: theconstructioncivil.org)



Construction of wall using AAC blocks



Interlocking edge of AAC wall panel

- Being pre-fabricated, they are also easy to install and reduce construction time by 80%.

iii. Fly ash brick

Fly ash brick is a building material, specifically masonry units, containing class C fly ash and water. The raw materials for fly ash brick are fly ash, sand/stone dust, lime, gypsum and cement. FAL-G bricks (fly ash lime gypsum bricks) are a higher alternative of fly ash bricks and are stronger because of the gypsum content. Standard brick sizes are 230x150x80 mm, 230x110x75 mm

Advantages

- Fly ash bricks are lighter than clay bricks therefore reducing the dead load on a building.
- Due to high strength, practically no breakage during transport and use.
- Due to uniform size of bricks mortar required for joints and plaster reduces almost by 50%.
- Due to lower water penetration seepage of water through bricks is considerably reduced.
- Gypsum plaster (plaster of Paris) can be directly applied on these



Construction of a building using fly ash bricks

bricks without a backing coat of lime plaster.

- These bricks do not require soaking in water for 24 hours. Sprinkling of water before use is enough.
- Costs 20% less than traditional clay brick manufacturing.
- It is fire resistant and structurally strong and durable

Disadvantages

- Mechanical bonding strength is weak. But this can be rectified by adding marble waste.
- Limitation of size. Only modular size can be produced. Large size will have more breakages.

Other alternative materials are stabilised earth bricks, hollow concrete blocks etc.

3.0 Construction Technologies

3.1 Rapid Wall

Rapid wall is a single panel walling system that serves as both the internal and external wall and eliminates the need for bricks, blocks, timber and steel wall frames and plasterboard linings. It is the most ecologically sound and technologically advanced building product available in the world today. Rapid wall uses natural gypsum or by-product, chemical waste gypsum and turns it into a glass-fibre gypsum plaster, single panel or load bearing walling system, roofing panels fencing etc. All panels are up to 12 metres long and 3 metres high. The panels are cellular in form and 124 millimetres thick.

Advantages

- Prefabricated Rapid wall means faster construction.



Construction of a model house using rapid wall technology in India

- Speed of assembly reduces labour costs.
- Clean construction reduces potential damage and finishing time drastically.
- High thermal efficiency, therefore less recurring cost for heating and cooling the building.
- Fire, cyclone, hurricane and earthquake resistant. It has a fire rating of 4 hours
- Water, termite and sound resistant.
- For low-rise buildings a substantial energy saving of approximately 66% can be made, compared to timber frame and clay brick construction.
- Rapid wall panels are 100% recyclable, and environmentally friendly.

3.2 Rat-trap Bond

This double-wall technique uses bricks on edge with a cross brick between each and produces a 9-inch thick wall with an insulating air cavity in between. Surprisingly, this technique reduces the number of bricks required by 25%, thereby reducing material used, including mortar (1:8 mix), and overall cost. Rat-trap technique is equal to the strength of a solid 9-inch wall in either flemish or english bond.

Advantages

- The overall saving on cost of this wall compared to the traditional 9" wall is about 26 per cent
- This technique reduces the number of bricks required by 25 per cent,

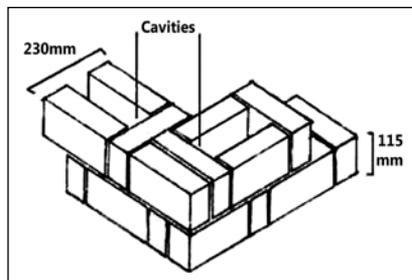


Figure 6: detail of rat trap bond



Slum rehabilitation at Karimadom colony in Thiruvananthapuram, using rat trap bond technique

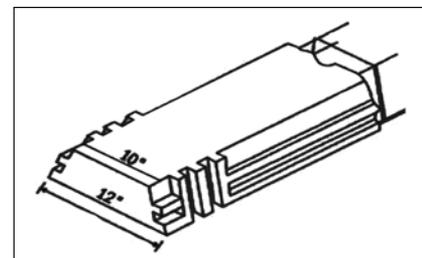
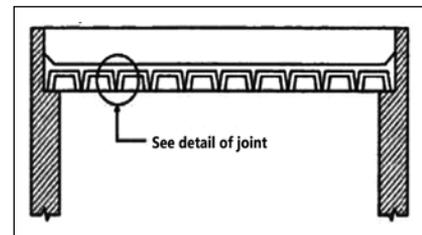


Roofing detail- Laying of precast RCC planks over RCC joists

- They provide approximately 10-20 per cent better thermal insulation than solid brick work, due to the air gap
- As the construction is appealing to the eye internally & externally, plastering is not necessary
- By avoiding unnecessary plastering, we can save up to 10 per cent of the brickwork cost.

Disadvantages

- Trained masons are required for this technique to avoid wastage of mortar falling into the gap.
- In using concealed wiring and plumbing if one brick is broken, then more than one brick will fall down.



RCC channel roofing component

4.0 Roofing

4.1 Precast RC Plank Roofing System

This is a system which uses precast concrete elements to construct a roof which can also be used as an intermediate floor. It consists of two main elements;

1. The plank which represents smaller sections of a slab, of reduced thickness and reinforcement.
2. The joist which is a beam spanning across the room to provide bearing for the planks. The joist is partially precast, with the remaining portion being cast in-situ after the planks are installed.

The planks can be made in standard sizes of 0.3m x 1.5m and the joists can be 0.15m x 0.15m in size for a roof span upto 4 metres.

Advantages

- Reduces overall cost of roof by 15-20% because of reduction in both cement and steel consumption.
- Saves construction time – the space can be ready in 2 days as compared to 14 days, needed before shuttering can be taken off in case of conventional RCC slab.
- Moderate size of components which can be easily handled manually without mechanical handling and erection equipment.
- Simple technology which can easily be adapted by semi-skilled labour.

4.2 Precast RC Channel Roofing

Precast channels are trough shaped with the outer sides corrugated and grooved at the ends to provide shear key action and to transfer moments between adjacent units. They are used for economical and faster



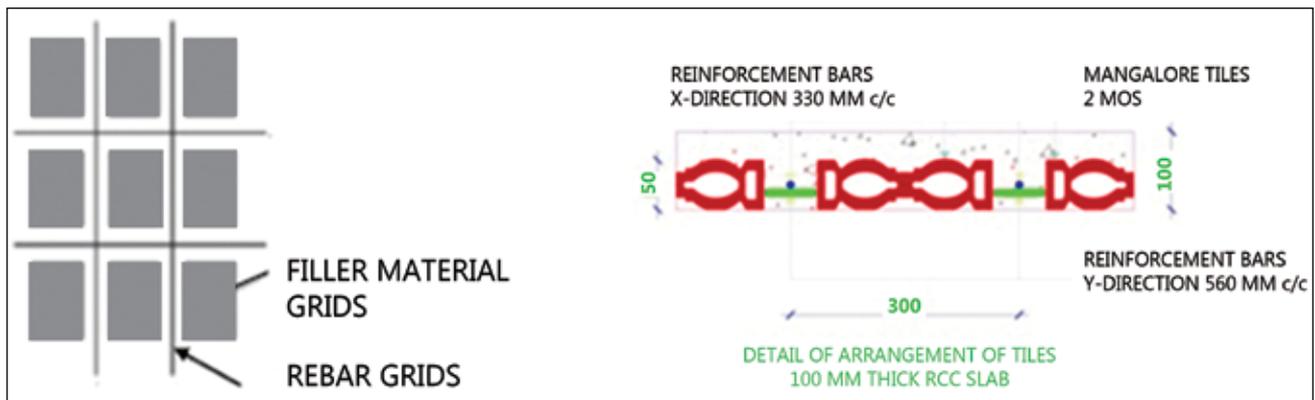
Picture showing a building at Laurie Baker Center, Trivandrum. Roof constructed using filler slab technique.

construction of floors and roof of single and multi-storeyed buildings such as houses, schools, offices etc. The raw materials used are cement, aggregate, and reinforcing steel. R.C Channel units have structurally efficient sections and can span upto 4.2 m. Nominal widths of units are 300 mm or 600 mm with overall depths of 130 mm to 200 mm. The

lengths of the units are adjusted to suit the span. The flange thickness is 30 mm to 35 mm.

Advantages

- No adverse affect on environment
- Results in savings of 30% in cement and 5% in steel
- 15% saving in overall cost as



Detail of filler slab using Mangalore tiles.

compared to conventional R.C slab

- 20% saving in time

5.0 Filler slab

Lightweight, inexpensive materials such as low grade mangalore

tiles, bricks etc. are used as filler materials in filler slabs to replace the redundant concrete in tension zones. Hollow concrete blocks, stabilized mud blocks/ hollow mud blocks, clay pots, coconut shells etc. can also be used as filler

materials. These materials are laid in the grids of steel reinforcement rods (6mm or 8mm dia.), and concreting is done over them. The concrete mix used is 1:2:4. The grid size depends upon the design, span, and the material used.

Table 5: Comparative analysis of conventional clay bricks and AAC blocks

Sl. No	Parameter	Clay Brick	AAC Blocks
1	Soil composition	One sq.ft of carpet area with clay brick walling will consume 25.5 kg of top soil	Uses fly ash which is a thermal power plant waste product & thus no consumption of top soil
2	Size (standard)	230 mm x 110 mm x 75 mm	625 mm x 240 mm x 100-300 mm
3	Variation in size	5 mm (+/-)	1.5 mm (+/-)
4	Fire resistance (8" wall)	Around 2 hours	Upto 7 hours
5	Cost benefit	-	Reduction in steel deadweight leading to savings in steel and concrete
6	Energy saving	-	Approximately 30% for heating and cooling
7	Rate	Rs. 5-9 (per brick)	Rs. 60 (per brick)

Source: Hyderabad Industries Ltd.

Estimated Cost Saving on using Innovative roofing materials

Sl. No	Cost-Effective Technologies	In place of Conventional options	% of Saving
1	Ferrocement shell roofing	RCC	40
2	L-panel sloping roofing	RCC	10
3	Filler slab roofing	RCC	22
4	RCC channel units	RCC	12
5	Brick arch for lintels	RCC lintels	30
6	Brick on edge lintels	RCC lintels	50

Table 6: Estimated Cost Saving on using Innovative / Cost Effective Building Materials

Source: BMTPC

Sl. No.	Parameter	Normal clay brick	Fly ash brick
1.	Colour	Colour varies with soil	Uniform pleasing colour like cement
2.	Shape	Uneven shape as it is hand made	Uniform in shape and smooth in finish
3.	Size	225 mm x 100 mm x 65 mm	400mm x 200mm x 150mm.
4.	Composition	Lightly bonded	Dense composition
5.	Finish	Plastering required due to uneven surface.	No plastering required
6.	Weight	Heavier in weight	Lighter in weight
7.	Water absorption	20-25%	6-12%
8.	Rate (1000nos) *DSR 2012	Rs. 3100	Rs. 3300

Table 7: Comparative analysis of conventional clay bricks and fly ash bricks

Advantages of Filler Slab Technology

- By adopting RCC filler slab construction compared to a RCC solid (conventional) slab, in case manglore tiles are used as a filler material, saving of approximately 19% of the total concrete and including the cost of filler material, saving of around 5-10% of the concrete cost is achieved.
- Filler slab technology can also be applied to mass housing projects and township projects to gain cost saving and also saving in high energy consuming materials.
- Better thermal comfort can be achieved if there is a cavity and air is trapped in the slab. Filler materials like manglore tiles can be installed in two layers entrapping air to increase thermal insulation.
- Filler slabs can be kept exposed (with proper workmanship) to create aesthetically pleasing ceiling with a view of filler material from below and thus the cost of plastering and/or painting can be avoided.

Technologies like precast ferrocement channels also help in reducing construction time and requirement of steel by 50%, thereby saving cost. It also has a 40% lower energy consumption compared to RCC roofs

5.1 RCC Filler slab vs. Conventional Solid RCC Slab

Table 9 shows the consumption of materials and cost savings for 1 m³ quantity of the slab.

6.0 Comparison Study between Conventional and Innovative Building Material and Technology

6.1 Comparative analysis of conventional clay bricks and AAC blocks

Even though the cost of AAC is slightly higher there is overall savings in time and cost of construction in future due to the increasing rate conventional materials like sand and steel. Table 5 gives detail of Comparative analysis between conventional clay bricks and AAC blocks.

6.2 Comparative analysis of conventional clay bricks and fly ash brick

The conventional clay bricks come

in regular size of 230mm x75mm x100mm whereas flyash bricks come in sizes 400mm x 200mm x 150mm. Thus, one such fly ash brick can replace seven clay bricks thereby resulting in saving of more than half of the budget for bricks. Some of the properties that make fly ash blocks more suitable than brick are listed in Table 7.

6.3 Comparative analysis of conventional building construction and rapid wall construction

Comparison study for the construction of a 2- storey building using rapid wall technique and a conventional building is given in Table 8.

Table 8: Comparative analysis of conventional building construction and rapid wall construction

Sl. No.		Rapid wall building	Conventional building
1.	Plinth area	1201 sq.ft	1301 sq.ft
2.	Period of construction	37 days	165-180 days
3.	Labour requirement	150 man days	720 man days
4.	Cost of construction (Only structure)	Rs. 5,60,000	Rs.8,60,000
5.	Rate of construction per sq.ft	Rs. 466/sq.ft	Rs. 656/sq.ft
<i>Cost of dwelling unit of 226 sq.ft (using rapid wall technique): 1,04,00 Cost if row dwelling units : Rs 82,000 (saving by common wall, its foundation, erection charge, painting, etc.)</i>			

Source: Presentation on techno-economic an construction advantages of RFC rapid wall panels, RFC limited

Table 9: Estimated Cost Saving on Using Filler Slab instead of Conventional Slab

Sl. No.	Material description	Conventional slab	Filler slab	Savings in cu.m	% Savings /cu.m	Savings (Rs./m3)
1.	Cement (Kg)	422.67	342.35	80.31	19%	418
2.	Sand (cu.m)	0.48	0.39	0.09	19%	21
3.	Aggregate (cu.m)	0.96	0.78	0.18	19%	127
4.	Steel (Kg)	20.20	17.48	10.72	38%	536
					Total	1102

Source: BMTPC

7.0 Potential of pre-fabricated construction techniques in the design of affordable housing

In India, adoption of prefabrication building techniques has many merits in the context of availability of materials, labour and technical skills. Advantages of prefabrication are:

- i. In prefabricated construction, as the components are readymade, self-supporting, shuttering and scaffolding is eliminated, with a saving in shuttering cost.
- ii. Better quality control, shape and

size of precast elements can be achieved.

- iii. Similar types of components are produced repeatedly, resulting in increased productivity and economy in cost.
- iv. The work at site is reduced to minimum and therefore, work is qualitatively better, reliable and clean.
- v. There is saving of time as the elements can be cast before-hand during the course of foundation being laid and even after laying slab, the finishes and services can

be done below the slab immediately.

Saving of time means saving of money.

Limitations of prefabrications

- i. As the precast elements have to behave monolithic on erections, extra reinforcement may be necessary to take care of handling and erection stresses.
- ii. The cracks may develop at the joints between the precast and in-situ concrete due to shrinkage and temperature stresses. To overcome this, extra steel is required across the joint.
- iii. As there are chances of leakage/seepage through the joints between the precast components, extra care is required to make them leak proof.
- iv. Cost of machinery is slightly high.
- v. Due to the limited number of factories and the distance from the site, the transportation cost is sometimes high.
- vi. Leaves little room to continue fostering of personal and collaborative skills, culture and tradition.



Picture showing low cost prefab housing in Haiti

Table 10a: Comparing Various Demonstration Houses Under VAMBAY in India

Sl. No.	Demonstration Houses under VAMBAY in India			
1.	Project	Bilaspur, Chhatisgarh	NAGPUR, Maharashtra	Kudalu, Bangalore
2.	Scheme	VAMBAY- MHUPA	VAMBAY- MHUPA	VAMBAY- MHUPA
3.	No. of dwelling units	100	70	100
4.	Unit area (sq.ft)	194	194	194
5.	Cost per unit	Rs.40,000	Rs.50,000	Rs.60,000
6.	Technologies used	<ul style="list-style-type: none"> • Fly Ash Bricks • Pre cast Plank & Joist Roof • RCC Door frame 	<ul style="list-style-type: none"> • Fly Ash Blocks • Filler slab Roof • Ferro Cement and Fly Ash • Polymer Doors 	<ul style="list-style-type: none"> • Solid/Hollow Concrete Blocks • Filler slab Roof • Ferro Cement and Fly Ash Polymer Doors

Source: BMTPC

Table 10b: Comparing Various Demonstration Houses Under VAMBAY in India

Sl. No	Name of project	Demonstration Housing Project at Laggerre, Bangalore, Karnataka	Demonstration Housing Project at Dehradun, Uttarakhand
1.	Name of scheme	VAMBAY – MHUPA	VAMBAY – MHUPA
2.	Location of site	Laggerre, Bangalore	Dehradun
3.	No. of Units	252 (Ground +2)	100
4.	Built-up area of a unit	275sq.ft	181sq.ft
5.	Unit consist of	2 rooms 1 kitchen, 1 bath room, 1WC	1 room,kitchenspace, 1 bath room, 1WC
6.	Cost per unit	Rs.60000	Rs.45000
7.	Cost per Sq.ft	Rs.218/-	Rs.249/-
Technologies / Specification			
1.	Foundation	Random Rubble Stone Masonry	Step footing in solid concrete blocks
2.	Walling	<ul style="list-style-type: none"> • Solid Concrete blocks for 200mm thick walls • Clay bricks for partition walls • RCC plinth band for earthquake resistance 	<ul style="list-style-type: none"> • Solid /hollow concrete blocks • RCC plinth, lintel, roof level band, vertical reinforcement in corners for earth quake resistance
3.	Roof/Floor	<ul style="list-style-type: none"> • RC filler slab using clay bricks as fillers in ground • RC slab for second floor • IPS flooring 	<ul style="list-style-type: none"> • RCC planks & joist with screed • IPS flooring
4.	Doors & Windows	<ul style="list-style-type: none"> • Pre-cast RCC door frames • Coir polymer Door shutters • Steel sheet window shutters • Clay jalli in ventilators 	<ul style="list-style-type: none"> • Pre-cast RCC door frames • Wood substitute door shutters • Fly ash polymer door shutter for toilet. • Cement jalli in ventilators and windows

Source: BMTPC

8.0 Case Study

BMTPC has been promoting cost-effective & environment-friendly building materials & construction techniques in different regions of the country. Details of the major projects handled by them is given in table 10:

9.0 Conclusions

Today, sustainable development is no more an option for better living but the only solution for the sustenance of the present and future generations. We need to be sensitive about the millions in our country, who are without proper shelter and infrastructure and use the limited resources wisely. We need to explore the innovative building technologies and best utilize the land that is scarcely available and costly.

Mass housing targets set by the government to house the urban poor can be realised by adoption of the innovative building materials and technologies, which are cost effective, faster and sustainable. Partial prefabrication methods also have a great potential in the present housing scenario. In rehabilitation/rebuilding projects, fast construction will help to rehabilitate the affected quickly. Awareness about various materials have to be created in the public to promote the construction of sustainable, energy efficient and cost effective buildings. An approximate cost comparison between conventional and innovative building materials is given in Table 11.

“We need to have an integrated framework, in which spatial development of cities goes hand-in-hand with improvement in the quality of living of ordinary people living there.” (Source: JnNURM)

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Table 11: Comparison of Innovative with Conventional Constructions

Sl. No	*Parameter	Conventional construction	Innovative /appropriate construction
1	Time	40- 50 days	10-25 days
2	Cost (approx.)	Rs. 1.5-2.5 lakhs	Rs. 0.8-1.2 lakhs
3	Rate(approx.)	Rs.500-750/ sq.ft	Rs. 250-400/ sq.ft
		Savings	Rs. 250-300/sq.ft

*parameters based on construction of a 300 sq.ft dwelling unit

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INCENTIVIZING BANKS/HFCs/FINANCIAL INSTITUTIONS FOR FINANCING AFFORDABLE HOUSING

Government of India has extended a range of fiscal initiatives to incentivise investment in social affordable housing. These fiscal incentives have had a positive impact on pick up of housing finance from the formal sector mainly for middle and higher income groups. Most of the housing units generated by the private sector - be it developers or the banks and HFCs - have catered to upper and middle-income groups and not to the economically weaker and lower income groups due to perceived poor credit history/ high credit risk of these groups. For example, in 2011-12, Public Sector Banks and Housing Finance Companies have disbursed about 16.6% & 3.3% respectively for loan size of up to Rs.5 lakhs which is lower than its preceding year (26.7% and 8.5% respectively). As a result, housing for the EWS/LIG categories has been neglected. In view of this there is a need for incentivizing Banks and Financial Institutions for lending to the affordable housing needs of the weaker section and lower income groups of the society. Toward this, some of the key recent programme initiatives undertaken by the Govt. of India include Interest Subsidy for Housing Urban Poor (ISHUP) where 5% Interest Subsidy is given for loans upto Rs. 1 lakh and the NPV of the subsidy amount is given to the lending Bank upfront; operationalization of Credit Risk Guarantee Fund Scheme (CRGFS) which will act as a risk-mitigant for lending to the urban poor for housing whereby the lending institution can get a guarantee cover of 90% for a loan of upto Rs. 2 lakh and 85% for a loan of between Rs. 2 lakh - Rs. 5 lakh; allowing issuing of Tax-free Bonds for low cost housing & core infrastructure projects to HUDCO and other Financial Institutions; and permitting Banks & Financial Institutions to raise resources through External Commercial Borrowing (ECB) route for Affordable Housing and Slum Rehabilitation.

For enhanced flow of funds for affordable housing sector from the Banks and Financial Institutions, following measures may be required:

- i. Place cap on Priority Sector Loans for Housing upto Rs. 5 lakhs: To facilitate ensured flow of funds from the banks for housing to the economically weaker sections and lower income groups, the priority sector loans to individuals for housing may be reduced from the existing Rs. 25 lakhs to Rs. 5-10 lakhs. Loans beyond Rs. 5 lakhs should not be treated as priority sector loans for housing.
- ii. Mandate Banks to earmark certain percentage of Banking Sector Fund for Affordable Housing: It is desirable that the banks may be directed to earmark 5% of their Incremental Deposits for lending to loans upto Rs.5 lakh, from the existing 3% of their Incremental Deposits.
- iii. To assuage the high operational costs involved in lending to the poor, an incentive to Banks/HFCs for lending to this section may be provided in the form of 1% of the loan amount as subvention for covering their operational costs.
- iv. Banks/HFCs may be permitted to float tax-free infrastructure bonds to raise cheaper funds so that they can reduce the lending rates for EWS/LIG housing loans. (Source: Akshay Kumar Sen, AGM (Economics), HUDCO, New Delhi)

Use of Technology in Tata Housing

ARUN KASHIKAR

While deciding technology, focus is on reducing the labour dependency and increasing automation, in addition to improving safety, quality and sustainability of the proposed technology.

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Use of Technology in Tata Housing can be broadly categorised in following three areas: 1) Structural systems and related technology, 2) Technology in Infrastructure and 3) Technology for sustainability Initiatives

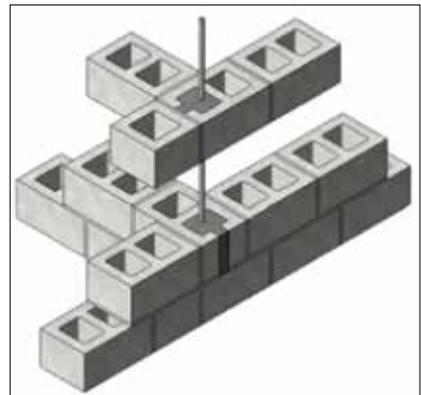
1.0 Structural Systems and Related Technology

Most of the construction in India in building industry is using RCC framed structure. RCC framed structure has beam-column frame as main load bearing member. RCC frame resist vertical loads like self-weight of structure, live loads and super imposed load, in addition to lateral loads like wind and earthquake. All walls in this type of construction are non-load bearing walls. This means major part of structure is 'load' rather than 'load resisting members'. This obviously is most inefficient structural system but is sustained because of advantages like flexibility, ease of construction and its amenability to customisation post construction. Tata housing has consciously tried to move away from this to more efficient shear wall-slab system. In shear-wall slab system most of the elements of structure, which are wall and slab are load bearing members, making the system more efficient not only in terms of cost but also lateral load resisting behaviour of the structure. While deciding technology, Tata Housing focus is also

on reducing the labour dependency and increasing automation, in addition to improving safety, quality and sustainability of the proposed technology. Some of the technology implemented in this category are:

1.1 Load bearing shear wall construction using High Strength Reinforced Hollow Concrete Block technology (RCB technology)

Load bearing brick walls construction was major form of structural system used in India till recently. This is now largely replaced by RCC framed construction, all over the country except some exception of rural houses in some pockets. Conventional load bearing construction went out of vogue because of two issues: a) Strength of brick used was limited by the quality of local clay available, which made wall thickness higher as height of building increases and b) This was not good earthquake resistant





Use of Reinforced concrete hollow block masonry construction

Internal view of RCB structure after finishing

structure. Recent advancement has made it possible to manufacture high strength concrete blocks, which can replace conventional clay bricks. This enabled us in keeping the wall thickness to 200mm even for seven storey building. Introduction of reinforcement and ductile detailing of building made it one of the best systems for earthquake resistant structures. In fact, the technology, which is adaptation of conventional load bearing construction by using reinforcement in high strength load bearing hollow block masonry wall, (known as RCB structure in India) is used as earthquake resistant seismic rehabilitation structures in almost all earthquake hit areas in India, post-earthquake.

51 (G+4) buildings of 'Shubh Griha' and 29 (G+4) buildings of 'New Haven' are being constructed using RCB technology at our 'Arvind Smart Value Home' project being constructed at Ahmedabad.

This technology has many advantages viz.

- i. Customer acceptability is not an issue, as look and feel is same as conventional technology
- ii. There is a significant cost and time saving compared to the conventional construction

iii. Specialised labour is not required as this is adaptation of conventional load bearing structure used in India for many years.

There are some limitations also, which makes its use limited to value homes, like:

- i. As most of the walls are load bearing walls, modification of the walls post construction is not possible
- ii. Wall thickness less than 200mm is not possible which increases the architectural loading
- iii. This technology cannot be used easily for the structures more than 10 storey height.

In addition to RCB, Tata housing is also using System Formwork for monolithic construction like Mivan in various projects like 'New Haven' at Boiser, 'Shubh Griha' at Vasind, 'Aquila Height' at Bangalore and 'Amantra' at Kalyan.

We have also used 'left in place shuttering' known as Plass-wall which also doubles up as plaster for constructing villas in our project at Boiser.

Tata housing as also started a project at Peenya-Bangalore, where complete structure is constructed using precast shear wall slab system.



2.0 Use of Technology in Infrastructure Development

2.1 Soil stabilization Using Bio-enzyme for Internal Roads

Most of the projects being developed by Tata Housing are township projects and these projects have network of permanent internal roads. In addition to these permanent roads, temporary roads are required during construction to cater for construction vehicle movement. Normally, these construction roads get damaged during construction activity and therefore have to completely redone even if they are at the same location of permanent road, after the end of construction activity.

Since permanent roads have to be redone, even if, in many cases, the location of construction roads being same as the permanent roads, the cost of roads becomes high. Also the cost of roads mainly depends on the strength of sub-grade. There is limitation in improving the subgrade only by mechanical means.



Sub-grade is an integral part of the road pavement structure as it provides the support to the pavement from beneath. The sub-grade soil and its properties are important in the design of pavement structure. The main function of the sub-grade is to give adequate support to the pavement and for this the sub-grade should possess sufficient stability under adverse climatic and loading conditions.

Various techniques are being used for stabilisation of sub-grade soil. The principle of soil stabilised road construction involves the effective utilisation of local soils and other suitable stabilising agents. Bio-enzyme stabilisation is one of the innovative and eco-friendly methods which can be used for stabilising the sub-grade. Bio-enzymes are products of fermentation of organic matter and are in liquid form. The Bio-enzyme alters the engineering properties of soil such as the capacity to bear loads. Use of bio-enzyme is eco-friendly way to reduce the cost of road and improve its performance.



This technology has many advantages viz.

- i. Saving of 15-20% in construction cost of road
- ii. Improved performance of road resulting in reduced maintenance cost

Entire road except the pavement can be constructed for construction period and used as construction road. The permanent road can be constructed above same sub-base and base with minor repair

- iii. This saves the cost of complete redoing of sub-base and base used for permanent road after construction is over.

2.2 Road constructed using Bio-enzyme – without asphaltting – Can be used for construction purpose without further treatment.

The pilot stretch of road using bio-enzyme is done at 'Amantra', Kalyan. The tests conducted on this were found to be satisfactory, and

therefore this technology is now being implemented at Ahmedabad. The construction road is being done using bio-enzyme which will be used



as base for permanent road after the end of construction.

We have also used alternative retaining walls like GraviLoft walls which makes use of patented structural lofts for reducing the reinforcement in retaining wall at Prive- Lonavala, Amantra-Kalyan and Smart Value homes-Vasind. We are using gabion walls, which is economical and environment friendly alternative to conventional retaining wall at Promont-Bangalore and Kasauli.

3.0 Technology in sustainability initiatives

3.1 Biochar to mitigate Climate Change at Kasauli

Initiative: At our Kasauli site, the waste bushes, pine leaves/wooden pieces and weeds are used to make charcoal. This waste material is burned in kiln for 15 minutes. The burnt material is shifted to another drum to produce bio char product. The bio char is shifted in a pan and finally used as manure in nursery.

Basics of Biochar: Biochar is a name for charcoal which is used for particular purposes, especially as soil amendment. Like all charcoal, biochar is created by pyrolysis of biomass. Biochar, thus, has the potential to help mitigate climate change, via carbon sequestration. Independently, biochar can increase soil fertility, increase agricultural productivity and provide protection against some foliar and soil-borne diseases. Furthermore, biochar reduces pressure on forests, though the degree to which results offer long term carbon sequestra-



tion in practice has been challenged. Biochar is a stable solid, rich in carbon and can endure in soil for thousands of years.

Environmental Conservation

- Use of local soil for landscaping instead of purchasing outside soil.
- Increased water holding capacity by about 18%.
- Increased nutrient retention, reducing need of nutrients
- Enhanced soil micro flora and fauna, improving plant growths
- Capture and retention of carbon, benefiting Carbon Cycle (Carbon Sequestration)
- No impact on current landscape design, turf, cultivation of plant species.

3.2 Pervious Concrete Use in Projects at Vasind, Eden Court & Aquila Heights

At our Vasind, Eden Court and Aquila Heights sites, pervious concrete is used for the road development and internal pavements.

Pervious concrete is a special high porosity concrete used for concrete flatwork applications that allows water from precipitation and other sources to pass directly through, thereby reducing the runoff from a site and allowing groundwater recharge. The high porosity is attained by a highly interconnected void content. Its void content ranges from 18 to 35% and density ranges from 1600kg/cum to 2000kg/cum. The infiltration rate of pervious concrete falls into

the range of 80 to 720 liters per minute per square meter. Typically pervious concrete has little (<10% by weight of the total aggregate) or no fine aggregate and has just enough cementations paste to coat the coarse aggregate particles while preserving the interconnectivity of the voids.

Advantages of pervious concrete pavements:

- Percolation recharges groundwater

- Water resources are conserved
- Less need for irrigation
- Adjacent trees and vegetation are allowed more rainwater
- Runoff to streams and lakes is reduced,
- Cooler and cleaner surface has less impact on air temperature - Urban Heat Island Effect.

REVITALISING THE BUILDING CENTRE NETWORK

The Building Centre (BC) Programme, a Government of India initiative, was started in 1988 under the erstwhile Ministry of Urban Development. Under this programme, a national network of building centres was set up all over the country with the mandate to undertake training, production of building materials, guidance & counselling to home builders, and demonstration projects for the transfer of alternative building materials and appropriate construction technologies, on the 'lab to land' concept.

Over time, a majority of the BCs became inactive or dysfunctional and the programme was discontinued in 2005. However, the concept remains a very relevant one. Recognising this fact, HUDCO, has constituted a committee for the revitalisation of the BC network, chaired by eminent architect Shri Kirtee Shah, with other expert members as well as HUDCO and BMTPC officials. The committee has taken two major initiatives for their revival:

I. Pilot Action Projects

12 pilot action projects involving 18-20 building centres have been sanctioned as a CSR project to BMTPC, and is being monitored and developed jointly by HUDCO and BMTPC. While up-scaling and strengthening the traditional activities of the BCs, emphasis of the suggested pilot action is also on exploring new directions and responding to the new challenges and opportunities.

II. Comprehensive action plan for the revitalising 88 building centres of Andhra Pradesh.

HUDCO is working with Andhra Pradesh State Housing Corporation (APSHC) to prepare a comprehensive action plan/programme for the revitalization of 88 building centres in Andhra Pradesh. The programme components are as follows:

- State level resource centre

To establish a state level resource centre at the existing building centre premises at Gatchi Bowl to support documentation/display/library of the on-going efforts in the State.

- Facilitation of construction of select IAY clusters

In order to demonstrate contextual application of design, technology, sensitivity to socio-cultural requirements, it is proposed to take up construction of IAY houses in three clusters, with each house of 20 to 30 sqm area and costing Rs. one lakh approximately. In each cluster it is proposed to take up about 15 to 25 houses as demonstration houses.

(Source: Gayatri R. Rajesh, Fellow, HSMI, New Delhi)



Innovative and Pragmatic Ideas for Social Housing

A.K. JAIN

The key to success of social housing is the adoption of participatory local planning which allows the communities within a given constituency to link together, survey their housing problems as a group, and then enter into a collaborative process with their municipal governments and with other concerned organisations in the city to jointly develop programmes which resolve their problems.

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1.0 Introduction

As per 2011 Census, India has a population of 1210.98 million, of which 377.10 million (31.16 %) live in urban areas. During 2001-11 the urban population of India grew at 2.8 per cent, resulting in housing and infrastructure shortage. As per the Technical Committee Report on Urban Housing (MoHUPA, 2012) total housing shortage in urban India is 18.78 million units. 2011 Census shows that in India there are nearly 78.87 million households, of which 0.39 million are homeless. As compared to 3 percent in 2001, it reduced to 0.5 per cent in 2011.

About one-half of the population of India's major metropolitan centres, like Delhi, Kolkata, Mumbai and Chennai are living in various types of illegal, squatter and slum settlements. The proportion is even higher in many other cities. On an average about one-sixth of the population is living in the slums, bastis and Jhuggi-jhompri clusters, which are mainly the settlements of the poor. The poor live in various types of housing which includes pavement dwellers/homeless (about 1 per cent of total population), traditional areas, villages and old city (about one-third), hutments (about one-sixth) and irregular colonies (about one-sixth). The contribution of the public sector housing programmes in housing the poor (site and services and built houses) had

been about 32%. The role of private sector in housing had been marginal (about 16 %) and its contribution towards EWS/LIG housing had been almost negligible. The following types of areas provide housing and the chart indicates a representative share of various income groups:

- 1 Homeless/ Pavement/doorstep dwellers
- 2 Slum clusters/basti on marginal lands
- 3 Unauthorised colonies in peri-urban areas
- 4 Old City /villages
- 5 Public Housing/ site and services,
- 6 Public Housing /built up units
- 7 Private Housing

2.0 Where the Poor Live

Delhi had been an exception where about one-third of EWS/LIG families live in public housing comprising resettlement plots or ready-built units, usually given on a subsidy. As Delhi has largely followed public sector control on land, there had been a limited market sector housing, which looks at shelter as a commodity. The prevailing policies and programmes in many cities offer incentives to develop profit-making housing projects, which by and large have been unable to reach the poorest. In most cities the cooperative sector, which is formed by

Socio-Economic Level	Slum/ JJ Clusters	Unauthorised Colonies	Old City/ Villages	Public Housing - Site and Services	Public Housing Built up Units	Private-Greenfield Schemes
EWS	■	■	■	■	■	■
LIG	■	■	■	■	■	■
MIG	■	■	■	■	■	■
HIG		■	■	■	■	■
Total %	16	16	16	16	16	16

Notes:

- i) Figures are based on Delhi, adjusted for clarity
- ii) Government staff housing (3%), Homeless/pavement dwellers (1%) have not been shown.
- iii) As per MOHUPA (2012) EWS covers a family having income up to Rs. One lakh pa and LIG Rs.1 to 2 lakh pa.

Source: Census of India 2011, Delhi Development Authority and A.K Jain, (2008) Urban Housing and Slum.s

groups of people, caters mainly to the MIG and HIG. It is yet to percolate at the level of social housing, except few successes.

In almost every city poor build their own shelter, sometimes by encroaching on public lands and sometimes illegal buildings and colonies on private, agricultural lands, without approval. In this housing delivery system, individual families construct their own housing on land which they have bought themselves.

The peri-urban areas are often illegally sub-divided plots having non-conforming land use and unapproved buildings. Slums and Jhuggi Jhompri/squatters clusters and illegal colonies may be both on public or private lands. The illegal colonies provide an average plot size of 100-200 sqm which largely caters to the MIG, while average size of a jhuggi in a slum cluster is 8 to 12 sqm, which generally caters to EWS. It is a paradox that the number of homeless, squatters and

slum dwellers in the Indian cities is increasing in proportion to public housing programmes. The informal solutions to the deficiencies of housing and urban development programmes in open defiance of planning legislation illustrate the extent to which popular measures regulate the process of change and provide shelter to the poor.

A basic reason for growth of slums and informal settlements is the failure of the authorities to provide afford-

able and inclusive social housing to the masses. The cities continue to engage their resources on regularisation, upgradation, or rehabilitation of existing informal settlements. The government policies realise the need of social housing and have various programmes which aim to provide housing of a reasonable, good and acceptable standard. At the same time they continue to believe in the private sector contribution towards social housing. Accordingly, land and housing policies favour PPP and privatisation. The fact that most of the poor live outside the planned areas-in the slums, old city, villages, illegal colonies, etc., the planners continue to ignore such areas and are more comfortable in dealing with green-field development.

The realisation that the traditional, informal, illegal and squatter settlements house majority of urban poor population of a city, demands that these are brought in the mainstream of planned development through in-situ redevelopment or up-gradation. These families may be facilitated to take up rehabilitation by formation of community organisations and co-operative societies. The redevelopment and up-gradation can be encouraged by value addition, increased living area/FAR and better services. The concept of approval of redevelopment schemes needs to be liberalised, without insisting upon submission of old approved plans, land registry and clearances. Transfers, power of attorney and succession may be accepted for building approval. Remunerative use of part of the land, mixed land use, higher density and extra floor area

ratio (FAR) with Transferable Development Rights (TDR) can be used as the incentives. The present mode of land assembly and acquisition needs to be replaced by innovative tools, such as land reservation for social housing, transfer of development rights (TDRs), mixed land use, bonus FAR and market component of housing to cross-subsidise the social housing.

3.0 A City-wide Strategy

A city-wide strategy involves the participation of people, government, institutions, housing cooperative, and the private developers in social housing. As recommended by National Urban Housing and Habitat Policy, in every housing scheme at least 10-15 per cent of the land should be reserved for housing for the EWS. The acquisition and development cost of the land can be borne by rest of the project so that land is available for EWS housing free of cost. Such reserved lands can be handed over to a designated agency for promoting housing for low income and weaker sections. Advantage of this would be to have social housing spread in different parts of the city and not concentrated at one place. This will also enable the service requirements to be met locally. It may be made mandatory to reserve lands for workers housing near work centres and transport corridors.

4.0 Participatory Local Planning

The key to success of social housing is the adoption of participatory local planning which allows the communities within a given constituency to

link together, survey their housing problems as a group, and then enter into a collaborative process with their municipal governments and with other concerned organisations in the city to jointly develop programmes which resolve their problems.

A GIS based inventory of all potential lands suitable for social housing, redevelopment and resettlement should be prepared with its constant updating. After identification of potential sites, it is necessary to assign suitable land use for such sites, and provide proper services and linkages. The plans of housing development, regularisation and resettlement should be based on the assessment of ground realities, existing land use, land ownership, land values, socio-economic characteristics and physical conditions of the settlement. Thus constant updating of digitised maps and data is necessary. Based on the land and housing inventory, the community can access the land and housing fund for the infrastructure development and the construction of dwelling units. The criteria of selection of specific strategy of relocation, in-situ upgradation has to be based on certain indicators, for which a database must be developed. The site selection should consider employment generation and community welfare as the most important elements.

The form of each individual community development is flexible, which could involve in-situ upgrading, relocation, land sharing or reblocking. The housing plan covers and networks all the settle-

ments and carries out of a process in which all the local stakeholders look at the situation and plan together. The cornerstones of this process essentially are the following:

- Collective land management;
- Collective financial management;
- Collective social management; and,
- A decentralised community based management system.

The participatory community planning process includes its integration with city development plan, social development, community organisation development, savings activities development, income generation and social welfare. A working committee networks with local communities which includes the representatives of the local community, local authority, service agencies and the NGOs. The architects, planners and engineers act as a catalysts in facilitating local planning and development. However, local plans have to be a part of a comprehensive, collaborative process. This involves surveying the settlements and then preparing housing plans which attempt to resolve the tenure, housing and infrastructure problems. This way the housing solutions for the city's poorer citizens link with the larger town planning process. This is very different from the conventional project-by-project approach, in which a few scattered communities may be improved, but because they are neither linked with each other, nor linked to the overall development process of the city, they have no strength. The upgrading process should trigger transforma-

tion of the city's larger development process, in which communities are increasingly accepted as legitimate and valuable partners. In the most conventional upgradation and housing programmes, the government takes the role of planner, financier and leaving communities with little room for participation, with hardly any scope for them to grow, learn or change. In the participatory model, it is communities who take the decisions and do all the work, while the government takes the role of facilitator and supporter to communities..

According to famous American thinker, Jane Jacobs, "Planning for vitality must aim at unslumming the slums and clarifying the visual order of cities, and it must do so by both promoting and illuminating functional order, rather than by obstructing or denying it." The partnership in social housing would not only consist of construction of dwelling units at any one time but it would be a continuous relationship that would take care of functional order and partnerships among the communities, government and service agencies. It should enable:

- Upgrading unserviced social housing;
- Reduce high concentrations of public housing, and build a better social mix;
- Reduce maintenance liabilities; and
- Implement best practices in urban design.

Public-Private and Peoples' Partnership (PPPP) could be a key strategy for delivery of quality social housing,

public services and promoting competitiveness. They cover a range of community and institutional partnership arrangements, joint ventures, concessions, outsourcing, and equity stakes in lands and services in a long term partnership. In order to promote a broader, more holistic and more integrated process of community development beyond physical improvements, it is necessary to integrate social, environmental and economic well-being of the local communities. Because physical change is something immediately tangible, it can be a potent means to bring about deeper, but less tangible changes to social structures, managerial systems and confidence within poor communities.

By a creative, participatory process each housing, redevelopment or upgradation scheme can be unique having its own identity. It is possible to upgrade old communities or to design new ones in ways which follow the spatial patterns which can often bring charm and delight to informal settlements: winding lanes, houses built in clusters around a quiet cul-de-sac, shady places to gather and sit, places for markets, temples, playgrounds, etc.

To promote a comprehensive and holistic kind of community development, which brings about improvements to all aspects of people's lives, it is necessary to develop the following layers of housing and upgrading plans:

1. Infrastructure development plans may indicate paved lanes and roads, water supply and electricity systems, storm and sewage

drains, solid waste disposal at household and community levels.

2. Environmental development plans may include tree planting and greenery, community gardening, public toilets, drainage, wastewater and trash recycling, alternative energy systems, playgrounds, recreational areas, etc.
3. Social development plans may include vocational training, employment and welfare centres, anganwadi, creche, child and mother care, youth and day-care centre, clinics, hostels for poor or elderly members, community centres, co-operative offices, multi-facility centres, communication system, police and fire-fighting facilities, etc.
4. Economic development plans for the community may include developing markets, ration and fuel stores, establishing conservation or tourism areas, enhancing people's earning through community enterprises, loans for small business, support for household workshops, vocational training, etc.

While developing the city level shelter, land and infrastructure plans, there is a need to relate those with the urban poor and to redirect the resources for the economic emancipation and self-reliance of the poor. These must involve transformation and innovation in the relationship among people, government's financial institutions, etc. The success of this collective enterprise depends upon the involvement of people at the grass root level for

which civic engagement, sustainability and equity are the guiding principles.

5.0 Finance

With the Central Government's substantial contribution through the JNNURM (Basic Services for Urban Poor), the social housing and slum rehabilitation schemes have become viable and affordable. It has triggered many projects all over the country. Under the JNNURM (BSUP) around 16 lakh houses have been sanctioned. Now a fund of Rs 45,000 crores is being sanctioned for Rajiv Awas Yojana. Simultaneously to make loans available to the poor a Rs, 1000 crore Credit Risk Guarantee Fund (CRGF) is being made available. Under CRGF money will be given as collateral security to those who seek loans from the banks for EWS or LIG houses. It is estimated that with this fund around 1.2 million affordable housing units will be generated.

The JNNURM-BUSP project in Thane is a typical example, where only 10 to 16 per cent of the house cost is borne by the allottees. In Thane there were 211 slums having 5.49 lakh slum dwellers. Thane Municipal Corporation (TMC) prepared redevelopment projects covering 9 slum areas and 9426 families with a project cost of Rs. 337.55 crore. The funding pattern of the project is four layered-Government of India contributed 50 per cent, Government of Maharashtra 25 per cent, TMC 9 per cent and remaining 10 to 16 per cent by the slum families. TMC has also used Transfer of Development Rights (TDR) and Floor Space

Index (FSI) for funding the viability gap. Smart cards were issued to slum families so that benefits reach to the genuine people.

Land in a metropolitan city is the most expensive component of housing. If land cost is excluded, social housing becomes affordable and viable. This is demonstrated by Greater Vishakhapatnam Municipal Corporation (GVMC). The rehabilitation of Vishakhapatnam slum population (6.48 lakh) is the responsibility of the GVMC and Andhra Pradesh State Housing Corporation. The GVMC has built about 15,320 houses under the JNNURM. Most of the land was reserved by mandatory earmarking of about 10 per cent land for EWS/LIG in all housing projects/layouts. Accordingly, the cost of land was not included in the cost of the house in the project undertaken by the GVMC under the JNNURM-BSUP schemes. The programmes for sanitation, education and health services are also integrated in the BSUP projects by involving the local community and the NGOs.

Slum rehabilitation scheme of Chandigarh Housing Board is another example of subsidising social housing by combining JNNURM and State Government financing. In Chandigarh 25,728 slum dwellers were identified in 18 slum clusters. A detailed project report was prepared under JNNURM (BUSP) to rehabilitate slum dwellers in walk-up apartments and to make Chandigarh slum free.

Awas and Janaadhar in Bangalore have taken up participatory slum rehabilitation and social housing

schemes. The financing is mainly from the HDFC and various other HFIs, micro-savings and part funding by the government and local body. The NGOs themselves contribute in the form of project planning, management, liaison and coordination.

Financing for social housing or slum redevelopment need not be the sole responsibility of the government. The priority should be to ensure that such schemes are self-financing, which can be brought in by provision of incentives like additional FAR, development rights, commercial components, etc. Charitable institutions, CSR and multilateral funding agencies can also assist in financing of such schemes. To make social housing schemes bankable, it is necessary to mobilise finances from Central and State Governments, take advantage of mandatory reservations, optimise utilisation of land by higher density and FAR, besides reducing the cost and time in land development, shelter construction, infrastructure provision and maintenance.

The financing of the social housing can be further supplemented by mortgage guarantee fund, social housing fund, Mutual Fund, Provident, Insurance and Pension Funds and General Obligation Bonds. Rationalization of Stamp Duty and its reduction to a maximum 5 percent, as stated in National Urban Housing and Habitat Policy and JNNURM Reforms is necessary. Value Added Tax (VAT) for Stamp Duty would avoid repeated taxation. Social housing should also be available on rental basis as many

poor families cannot afford huge down payments and EMIs.

In order to create a competitive housing market, it is necessary that as a rule at least one-fourth of housing is built/developed by individuals/plot owners, one fourth by cooperatives/community/slum Association, one-fourth by government/local body and one-fourth by the private sector/PPP.

National Urban Livelihood Mission (NULM) can be linked with social housing programmes, such as Rajiv Awas Yojana to link housing and livelihoods.

To curb the resale of social housing and its speculation, it is necessary to review the tenure and design of the dwelling units and their clusters with a view to:

- Reduce the cost and enhance affordability;
- Provide toilets, common space, etc. in a manner, which would dissuade the beneficiaries to go for quick sale;
- To licence shelter units initially on rental basis, convertible into tenure after 10 years, or so. Alternatively, the land tenure can be given jointly to husband and wife/parents, or to the co-operatives/resident associations;
- An evolutionary pattern of dwelling, which can be expanded with the needs and resources.

6.0 Security of Tenure

The challenge of land tenure and transfer of ownership of government land under slum clusters and illegal colonies is a major issue

and a determinant of its planning and development. This needs to be reviewed with reformed law and procedures of ownership/tenure rights so that the poor become the legitimate owners. This will encourage legitimate approval of the layout plans and building plans, gradually converting informal/illegal settlements into planned areas. In slum areas rental tenancy can be given for an initial period which can be subsequently converted into ownership rights. For the promotion of group housing and collective community development, the applicability of Apartment Ownership Act may be invoked with the joint ownership of land by all the residents.

Community land trusts as shared equity can ensure that homes made affordable through public subsidies, remain affordable over a long-term. Under this model, a nonprofit community land trust is established to own the land on which homes are situated. The affordability covenant clause specifies that the property will remain affordable by setting certain terms and conditions related to its long-term use. An affordability covenant may restrict to whom a rental unit is rented and at what level or to whom and at what price a unit will be sold.

7.0 Management and Maintenance

Management after the occupation of the scheme/housing by the target group is one of the main concerns, which is often neglected. Control over the resale of individual units, recovery of the loans and maintenance of the service and regular

payments for the services and taxes need regular management. A housing scheme must provide an effective process for the involvement of community organisations in the task of maintenance of its physical and social infrastructure facilities. The garbage collection and disposal are most often inadequate and poorly maintained. This results in pollution of drains and unhygienic living conditions. For this it is necessary that:

- a) There is a comprehensive plan of maintenance and management of the scheme, including tenure, financing, hygiene, community activities, etc.
- b) A housing co-operative should be formed and made responsible for coordination with service agencies with respect to collection and segregation of garbage,

sanitation, sweeping, street lights, water supply maintenance, security, and other services, such as maintenance of parks, roads, streets, etc.

Effective management and maintenance of social housing schemes can be brought by partnership among private sector, NGOs and community-based organisations/co-operative societies of end users. The management and maintenance of the services needs to be ensured through the following measures:

- Creating awareness among the communities and involving them as partners with the emphasis on Community Action Plan (CAP).
- Contracting out the maintenance of physical and social infrastructure services

- Working out a systematic maintenance cycle (daily, weekly, monthly, etc).

For participatory and coordinated maintenance it is necessary to work out an accountable structure for regular monitoring the physical and financial targets on short term, mid-term, and long term basis. Effective involvement of the community organisations at grass root level will help in the process of motivation and the beneficiaries to sustain and manage the built environment concerning day to day issues such as drainage, solid waste management, water supply, electricity, public health, sanitation, education, skill development, etc.

8.0 Case Studies

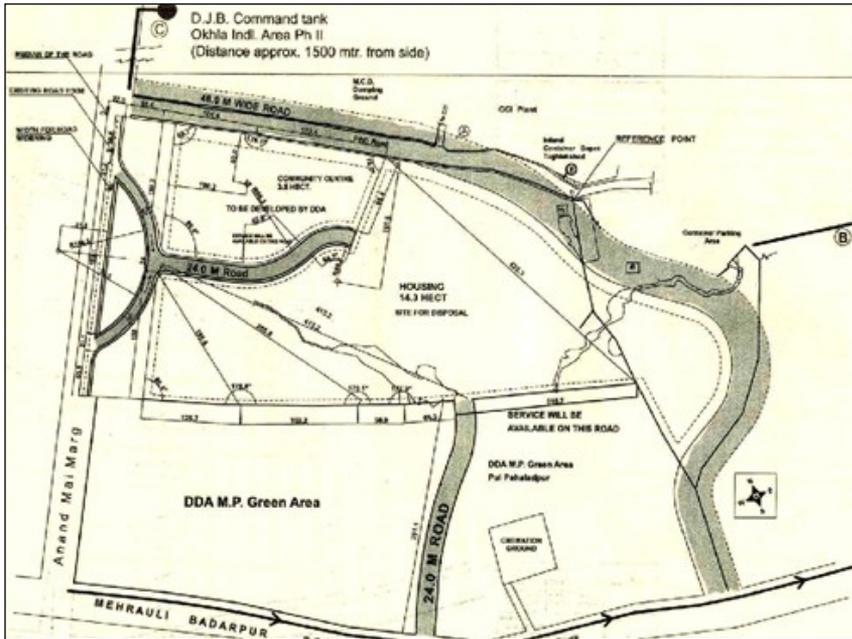
8.1 Delhi Model

Delhi, the national capital, has a population of 167.5 lakh, which is projected to grow to 230 lakh in 2021. About half of the total population and 70 per cent of the poor are in the unplanned, traditional and informal settlements.

Keeping in view the fact that the inner city, villages, slums, illegal colonies, etc. are catering to the housing needs of the poor, Master Plan for Delhi- 2021 has adopted a multi-pronged strategy, which incorporates the development of new housing, upgradation and re-densification through redevelopment of existing areas, including unauthorised colonies, villages and the inner city. The future provision of 24 lakh dwelling units is dominated by smaller dwelling units (25 to 40 sqm plinth area) which will be about 50

Delhi Housing Scenario – 2011	
Total Census House	44.8 lakhs
Occupied Houses	77.7 per cent
Vacant/locked houses	11 per cent
Dilapidated	3 per cent
Two rooms or less	61 per cent
Three rooms	20 per cent
Four rooms	0.4 rooms
Number of persons living per house	
No. of Persons	Per cent
1	3.7
2	9.7
3	13.6
4	22.7
5	18.8
6 to 8	24.9
9+	6.6
Toilets	97 per cent
Drinking Water	81.3 per cent (32% in India)
Electricity	99 per cent (67% in India)
Owner Occupied	68.2 per cent
Rented	28.2 per cent

Source: Census 2011



- Category I (above 30-up to 40 sq.m)-500 DUs/Ha
- Category II (above 40-up to 80 sq.m)-250 DUs/Ha
- Category III (above 80 sq.m) -175 DUs/Ha

Besides reserving adequate land for low income housing, every group housing has to ensure the reservation of minimum 15 per cent of FAR or 35 per cent of the dwelling units, whichever is more, for the EWS and lower income category. A liberalised FAR of 400 has been proposed for slum rehabilitation in Delhi Master Plan-2021.

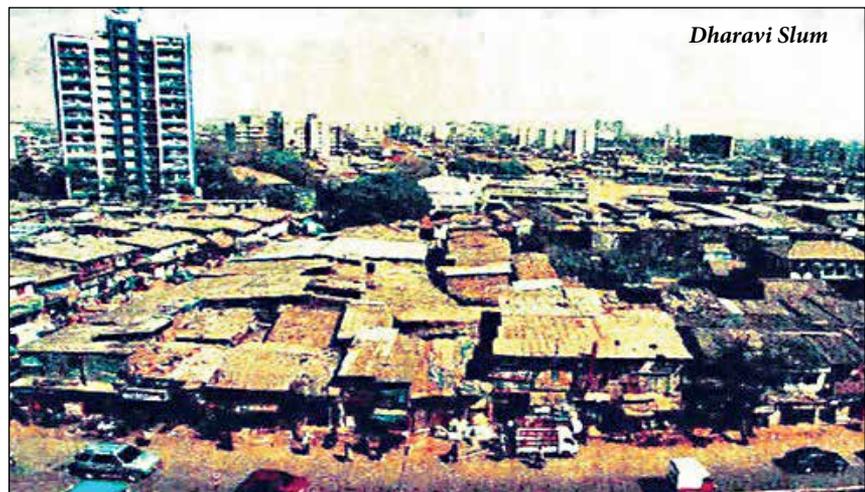
This implies that the pattern of housing shall be compact, high rise and high density so as to make optimum use of land and other resources. As the pilots Tehkhand Project and Kathputhli Slum Rehabilitation Project demonstrate, the key to PPP for low income housing is (a) using land as a resource, (b) market sale component of housing (maximum one-third FAR/land), (c) commercial FAR (10%) (d) optimum FAR (400) and density

to 55 per cent of total housing units. About 40 per cent shall be provided by urban renewal, densification, infill development, in-situ slum rehabilitation in existing urban areas. In view of the limited availability of land and the increased requirement of housing, plotted residential development has been discouraged, and low rise housing is proposed to be replaced by multi-storeyed housing. The MPD 2021 has projected the concept of collective community in-situ rehabilitation and infill development for slums, informal and illegal settlements.

Accordingly, the norms of mixed land use zoning, density, FAR, and building controls have been framed which encourage and open up new areas for social housing and for the redevelopment of existing areas. To optimise utilisation of scarce urban land, differential residential density norms have been adopted. A fixed

density could lead to under-utilisation of land and FAR or imposition of artificial limits to optimal use of land. The following density norms, with corresponding category of dwelling units (DU) have been stipulated in Delhi Master Plan-2021:

- Slum/EWS housing (up to 30 sq.m)-600 DUs/Ha



Dharavi Slum

pattern (500 to 600 Dwelling Units per Ha).

8.2 Dharavi Redevelopment Project (DRP)

A Master Plan for Dharavi, the largest slum in Asia, housing about 5 lakh people and covering an area of 215 Ha has been prepared in consultation with the stakeholders, slum dwellers, local political leaders, NGOs, etc. The Master Plan incorporates the following :

- Integration of the residents into the mainstream;
- Interactions for livelihood and lifestyle within the community;
- Inherent flexibility of trade;
- Cohesive mixed use for efficient use of space;
- Close interaction with community by developer.
- Pedestrian dominant
- High standards of specifications for construction of building, housing, amenities and infrastructure.

In Dharavi project, the standard of construction and the responsibility of the developer are substantial. However, incentive of 1.33 FSI for market sale with an overall 2.5 to 4 FSI makes the project bankable and financially viable.

The developer has to build state of art infrastructure for roads, water supply, sewerage, storm water drainage, rainwater harvesting, etc. As such, the city or the state will have to spend any amount towards the development on a project. The project is to be monitored by an independent PMC appointed by the

state government to ensure that the responsibilities of the developer are fully discharged.

Seventy per cent of the premium received by the government would be shared with the land owners/residents.

8.3 Nagpur Model

In Nagpur land has been used as a resource and vacant government lands are used partly for commercial use that subsidised the construction of affordable housing in remaining site. The occupants, who may be slum dwellers, EWS, LIG, etc. are selected as per criteria of the government. Another alternative which has been adopted is the PPP model, where private lands are surrendered to Municipal Corporation in lieu of TDR (Transferable Development Rights). Construction of social housing as per prescribed designs and specifications is carried out on these lands by private operator, a part of which is funded by Government of India through BSUP (JNNURM) and part through the TDR. This model is a good example of providing social housing where government lands and resources are not available in required quantity and at right locations.

Shelter for the poor is a continuous and a participatory process. It needs the resources and supports of both the communities and government agencies in terms of land, services, tenure, finance, public transport, etc. The concept of Community Local Area Plan (CLAP) has been adopted for Nagpur Slum Redevelopment, which provides useful clues to mobilise the local resources

and potential of slum dwellers in improving their living conditions. As such support-based approach and community participation have been combined in upgradation of slum and squatter areas.

9.0 Conclusions

In a people-centred, participatory process, the concepts of planning, housing, resources, productivity and efficiency are redefined according to the people's need, which address their specific, local problems. The reference in this approach is the standard of living and the satisfaction of human needs. The consideration of people's needs requires that they should be in control of the planning process and the decisions taken throughout. With many new schemes and financial support of the government and other agencies several successful schemes of participatory, local planning of social housing have been implemented, which need to be institutionalised into a composite and flexible framework.

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UNION BUDGET 2013-14: IMPLICATION FOR HOUSING AND REAL ESTATE SECTOR

The Union Budget 2013-14, presented on 28th February 2013, has announced some positive measures for housing and real estate sector which are outlined below:

- The allocation for JNNURM has been increased to Rs. 14,873 crore for FY 2013-14 from Rs. 12,522 crore in FY 2012-13. This will enhance the flow of funds for completion of on-going projects under JNNURM. It will also help in taking up more activities under new improved JNNURM.
- An Urban Housing Fund (UHF) to be set up by the NHB with an initial corpus of Rs. 2000 crore by the Govt. of India to ensure better flow of institutional housing finance for urban poor. This is a very welcome step as it will boost in the growth of affordable housing market in the country, especially for the urban poor.
- To provide housing finance to targeted groups in rural areas at competitive rates, the assistance under Rural Housing Fund (RHF) operated by the NHB has been increased by Rs. 2000 crores, from the current level of Rs.4000 crore to Rs. 6000 crore. This will boost the rural housing sector and the HFCs like HUDCO who are providing housing finance in rural areas will stand to benefit in terms cheaper and long tenor funds from NHB.
- For the first time home loan borrowers, additional deduction of upto Rs. 1 Lakh in interest payments for housing loans upto Rs. 25 lakh has been allowed, in addition to the existing interest payment rebate of upto Rs. 1.5 lakh. This will further accelerate the housing activities in the country.
- For the year 2013-14, raising resources through tax-free bonds upto Rs. 50,000 crore has been allowed for infrastructure financing based on the requirement, capacity and the utilization of already issued tax-free bonds by the Companies. This will provide the sector the much-needed long-tenor and low-cost funds. Since HUDCO has raised and utilized the resources raised through tax-free bonds better, HUDCO stands a better chance of getting the approval for raising resources through tax-free bonds again for core infrastructure activities. Further, India Infrastructure Finance Company Limited (IIFCL), in partnership with Asian Development Bank, would also provide credit enhancement to companies undertaking infrastructure projects in the country.
- Infrastructure Debt Funds (IDFs) would be encouraged to raise resources to boost infrastructure growth. IDFs can raise upto Rs. 25,000 crore through tax-free bonds as a long tenor and cheaper option for infrastructure financing in the country.
- As a measure to promote road and highway development in the country, more emphasis has been given to the road sector. To encourage public private partnerships road projects in a smooth and regulatory manner, it has been proposed to establish a Regulatory Authority for the Road Sector.
- For the power sector, the sunset date for tax holiday under the existing provisions of Section 80 –IA has been extended upto 31st March, 2014.
- Additional funds may be made available to Delhi-Mumbai Industrial Corridor (DMIC), as per the requirement, in order to encourage development industrial towns on this corridor. Further, new corridors on the lines of DMIC, such as Bengaluru-Chennai IC, Bengaluru-Mumbai IC, will be encouraged.

(Source: Akshay Kumar Sen, AGM (Economics), HUDCO, New Delhi)

Towards Affordable Housing for Low Income Groups in Urban Areas of Bangladesh

NAZRUL ISLAM
SALMA A. SHAFI

Housing for the urban poor remains a grey area where Government policy or initiative has not been taken to address the issue at any level of planning. Community sponsored shelter schemes aided by public, private/NGO cooperation are rare. Few projects and programs have been worked out by GOB and donors in the past but currently these are no more visible.

Key words: Access, Affordable, Formal, Informal, Delivery, Housing, LIG.

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Housing in Bangladesh is generally provided by both the public and private sectors for all income groups. In the pre-liberation period many formal housing schemes for the urban poor were constructed by the public sector. However, after liberation, large scale migration of people to the cities and rapid urbanization changed the housing scenario for marginalized groups. With increase in number of landless and homeless on one hand and rise in land price, inflation etc on the other, the poor and low income groups no longer benefit from the public sector housing supply. As an alternative the private sector has taken over the bulk of supply of housing to these groups informally and at the same time in the most market-oriented way. Affordable housing in urban areas now is mainly rental housing and close to 60 percent of this housing supply is offered through the informal delivery process. The recipients of this supply consist of the bulk of poor, low and middle income groups who live in rental housing constructed on public and private land. The present paper analyses the national housing environment and focuses on housing policies, programs and gaps in the delivery process mainly to come up with recommendations that can benefit urban low income groups so that they can have access to affordable housing.

1.0 Introduction

With over 150 million people Bangladesh is the world's seventh most populous country. Although still low in the urbanization level compared internationally, Bangladesh has experienced phenomenal growth of urban population since liberation

of the country in 1971. The growth rate was 6.7 percent per year during the (1961-74) period as against 3.7 percent per year in the previous decade. In 1974, urban population increased to 8.9 percent from 5.2 percent in 1961 (Table 1). During the 1981-1991 period - a slower growth of urban population, 5.4 percent, has been observed compared with the previous decade. At about 20.0 percent level of urbanization, the total urban population was 22.45 million in 1991 and that at 23.1 percent level, the total urban population rose to 28.6 million in 2001. The total population in the 2011 census has been found to be 150.4 million. With a revised definition of what is urban and the total urban population at 34.6 million; the 2011 census estimated the level of urbanization at 23 percent, exactly the same as in 2001 census. According to the 2001 census definition level of urbanization would be 28 percent and the total urban population would be approximately 42 million.

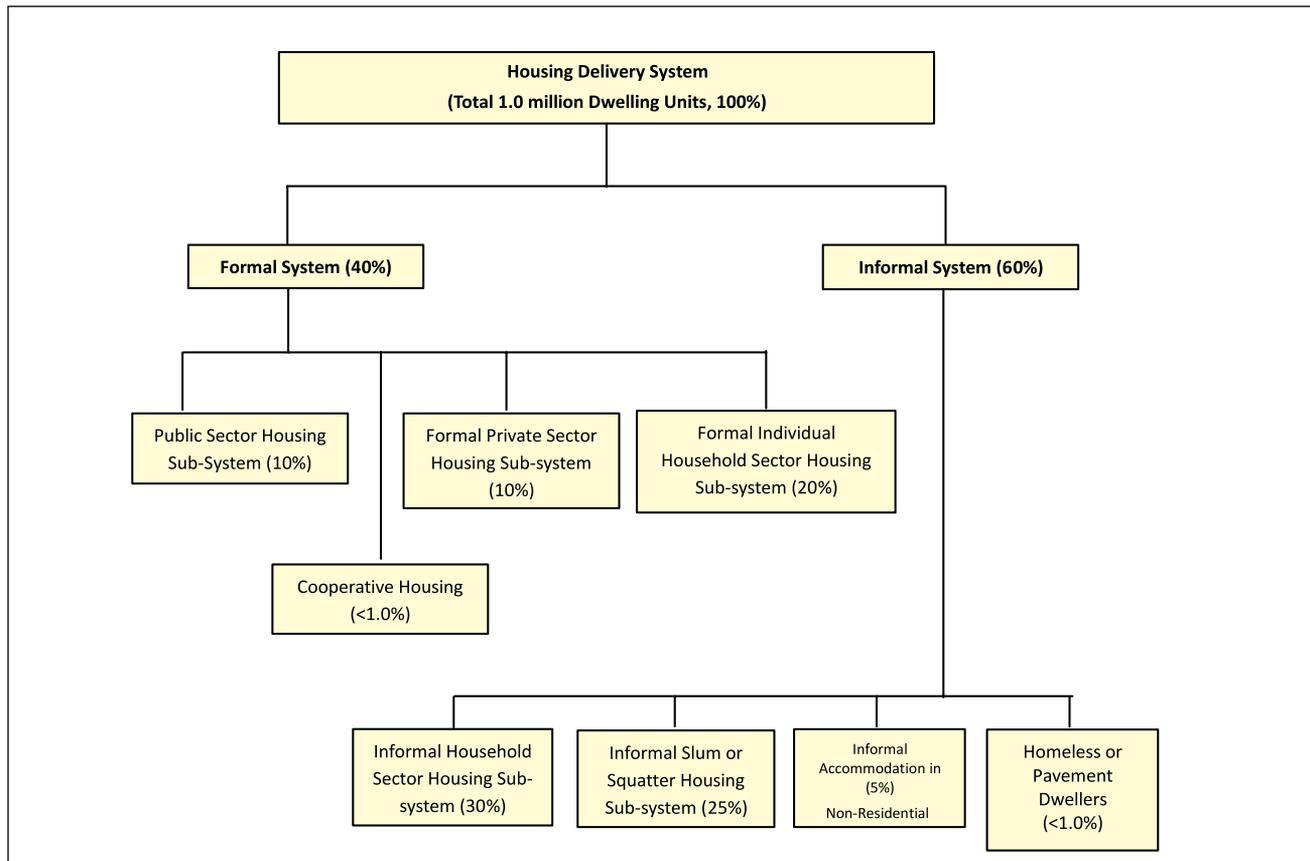
The rate of growth of urban population is likely to fall to some extent in the future, but would still be quite high. The urban population would possibly cross the 50% mark by 2040 and the 60% mark by the year 2050 when the total urban population would rise above 100 million. Such a fast growing urban population demands urban amenities among which affordable shelter is a priority.

Table 1: Level of Urbanization and Growth Rate of Urban Population in Bangladesh 1951-2011

Census year	Total national population (million)	Growth rate of national population (%)	Total urban population (million)	Level of urbanization (%)	Decadal increase in urban population (%)	Annual Exponential Growth rate of urban population (%)
1951	44.17	0.50	1.82	4.33	18.38	1.69
1961	55.22	2.26	2.64	5.19	45.11	3.72
1974	76.37	2.48	6.27	8.87	137.57	6.66
1981	89.91	2.32	13.23	15.18	110.68	10.66
1991	111.45	2.17	20.87	19.63	57.79	4.56
2001	123.10	1.47	28.61	23.10	37.05	3.15
2011	150.04	1.37	33.55	23.30	17.27	1.59
2011*	150.40	1.37	42.11	28.40	47.19	4.12

Source: Government of Bangladesh: Bangladesh Population Census, 1991. BBS, 2003 1981; Report on Urban Areas, 1997; and Preliminary Report, Population. * (2011 census data according to 2001 definition).

Chart 1. Housing Delivery System and Sub-systems in Urban Areas and their Proportionate Contribution (rough estimates only), 2012



But there is a marked lack of interest of the government to take realistic measures to augment the housing supply process. A particularly critical need is to provide secure shelter to the large number of growing poor migrants in all cities, large and small. It is found through actual survey that an average of 25 percent of the population of urban areas are residents of slum and squatter settlements. Besides, a large proportion of the urban population live in informal settlements and this includes a good percentage of the people belonging to the middle and lower middle income bracket.

2.0 The Housing Delivery System

At present the housing delivery system in urban areas is mainly divided among the formal and informal delivery process with a number of sub-systems. An approximate idea of the percentage distribution among the sub systems is shown in Chart 1.

3.0 Components of Housing

Housing as a product or commodity comprises of various components namely, land, infrastructure and utility services, building materials, design and technology, finance, labor, management, & entrepreneurship.

3.1 Land

Land is the primary component for housing. Ownership of land is an important factor in housing. It belongs to either public or private owners or cooperatives. Of the total land (35 million acres) available

in the country, 27% (or 9.5 million acres) is classified as non-agricultural and is mostly

used for housing, roads and other construction purposes. Of the 27%, only about 3 percent (1.06 million acres or 1656 square miles) is under urban areas and the rest are under rural areas. With population growth, more land is being taken over for housing and settlement purposes in both rural and urban areas.

In a recent study conducted on urban households, it was found that in big cities 83% of slum households and 73% of non-slum households have no land of their own (Urban Health Survey, 2006). However, in secondary cities and municipal towns, two thirds of the households have built their houses on own land.

Price of land is a major determinant of housing and land price has increased very rapidly in almost all urban areas, but in astronomical rates in Dhaka and other major cities. Dhaka presents one of the highest prices of residential land anywhere in the world such as being Taka 100 million for a katha (or Taka 100,000 per sft. or more than USD 12,000 per square meter) in Gulshan, the most expensive location in Dhaka. In Dhaka, price of land comprise between 60%-90% of the total price of an apartment unit.

3.2 Infrastructure and Utility Services

The concept of housing is not limited to a mere house, it encompasses a physical and social environment, and includes proper and adequate provision of infrastructural elements

like roads, water, sewerage, sanitation and garbage disposal, drainage, electricity, fuel and also social services. In rural areas, over 90 percent of households have access to safe drinking water, generally the source being hand tube wells. In urban areas, piped water supply is available inside houses in 26% of slum houses and in nearly 60% in non-slum households in metropolitan cities (Urban Health Survey, 2006). Major sources of drinking water are still the tube well in small and medium size cities.

Quality of sanitation has improved in Bangladesh since the independence of the country but still not more than 56% of the urban households and 15% of the rural households are served with standard sanitary facilities such as flush toilets and septic tanks, or water sealed toilets.

The proportion of households with electricity connections has also increased since independence, and yet only about two thirds of the households in urban areas in 1991 were served with electricity. The share was less than 10% in rural households. The use of solar panels has marginally improved access to electricity in rural areas in recent time.

3.3 Building Materials

Irrespective of location, housing in general is classified by type of materials used for construction. In this way houses are classified into four categories i.e. a) Jhupri (shacks); made of jute sticks, tree leaves, jute sacks etc. b) Kutcha (temporary); made of mud brick, bamboo, sun-grass, wood and

occasionally corrugated iron sheets as roofs. c) Semi- *pucca* (semi-permanent); where walls are made partially of bricks, floors are cemented and roofs of corrugated iron sheets. d) *Pucca* (permanent,

life span over 25 years); with walls of bricks and roofs of concrete. The four types are also associated with durability where jhupri and kutcha are temporary and semi-*pucca* and *pucca* are semi-permanent and

permanent. The dominant type of housing by building material is kutcha type in the rural and *pucca* and semi-*pucca* type in urban areas (Table 2).

Table 2: Dwellings by structural types in Bangladesh, 2001

Structure	Total		Urban		Rural	
	Number ('000)	Percent	Number ('000)	Percent	Number ('000)	Percent
Jhupri (Shacks)	2202	8.8	434	7.6	1768	9.2
Kutcha (Temporary)	18625	74.4	2732	47.7	15893	82.3
Semi- <i>Pucca</i> (Semi-Permanent)	2535	10.1	1321	23.1	1214	6.3
<i>Pucca</i> (Permanent)	1672	6.7	1241	21.7	431	2.2
Total	25034	100.0	5728	100.0	19306	100.0

Source: Population Census 2001, Volume 3, Urban Area Report (BBS, 2008)

In urban areas, building materials commonly used in housing for the poor are, bamboo, rags, thatch, polythene sheets etc. Middle income groups and the rich choose more durable materials. There is need for replacement of forest based building materials and mass production of new building materials. Such materials should have to be affordable by the majority of people and also have to be durable. The question of hazard resistance is also important.

3.4 Building design and technology

Building design and technology are important components in housing as these reflect the cultural, social as well as functional needs of the people. There have been significant changes and development in recent time both in the designs of houses or buildings and in technology.

Urban housing exhibits radical changes in design and technology, specially applied for high-rise apartment buildings. Elevators, for example have become a common element in such buildings. Use of steel/ aluminum and glass makes demand for new technology. Pre-fabrication of elements is also a new feature. Most new residential buildings are not really earthquake resistant. The Bangladesh National Building Code, however, now makes more stringent building construction technological requirements.

3.5 Housing Finance

Finance is an essential element in housing. Finance is needed for purchase of land as an initial step to build a house. If the land is already available free, finance is required for the process of constructing structures or buildings and provision of utility services. Finance for urban

housing in Bangladesh is arranged through one or more of the following ways:

- Own or family savings;
- Overseas remittances;
- Liquidation of assets i.e. land sales, property sales etc;
- Owners of land arranging their finance through partnerships with real estate companies;
- Loans taken from friends and relatives;
- Formal loans from banks and mortgage companies; and
- Formal loans taken from employer institutions.

Formal loans are provided by the House Building Finance Corporation (HBFC), and other banking sectors i.e. commercial, public as well as corporate banks. DBH is a private partnered bank giving loans

for only the urban dwellings. Institutions other than banks such as mortgage and insurance companies also forward loans for housing to their employees.

The rate of interest of loan vary according to the type of the banks i.e. public/private and the amount of loan also vary. This figure ranges from 14.5% to 16.5% in urban area and 2% to 5% for fund extended by NGO's to the rural poor. The amounts of loan provided by HBFC for private homes extend up to TK 5 million for a house and Tk. 4 million for apartment purchase. But all these are beyond the purview of the affordability of the urban poor.

Cost of housing construction varies depending on the design and quality of finish. For rich specifications the price may go beyond Tk. 20,000 per square foot and for the average middle priced units the cost will be in the range of Tk. 4,000 to Tk. 7,000 per square foot. Low cost *Pucca* housing will cost at least Tk. 2,000 per square foot and semi-*pucca* house will cost at least Tk. 1000 per square foot.

3.6 Labor, Management and Entrepreneurships

Much of the labor input for housing construction in all areas, have been in the form of petty commodity production by individuals, households, and community initiatives. Urban poor slum and squatter housing are either self built or with the help of hired labor within reasonable limits. Unskilled labor is in ample supply in urban areas and a large percentage of these are the poor migrant women. However, severe shortages

exist in skilled manual, technical and managerial services in the housing construction industry. Demand for increasing number of new housing and rebuilding of old ones is being met with increasing number of technical human resources, such as architects, engineers, management executives and sales promoters. During the last three decades, particularly with the emergence and growth of the modern real estate sector, the roles of these professionals have been better appreciated. There is a need for training of unskilled labor to improve the quality of housing and production irrespective of cost.

4.0 Role of Government in Provisions of Housing:

The contribution of the government to the housing process is made in the following ways,

- Building houses and flats for employees of all income groups;
- Developing sites and services schemes for high and middle income groups;
- Developing core housing for low income groups;
- Developing cluster villages in rural areas; and
- Provision of house building finance loan to those who own land.

Although housing is a basic need and a basic right, the government can provide only limited support to those who need it. The contribution by the government to housing is, however, still very insignificant compared to demand. The govern-

ment agencies involved in housing is the Public Works Department (PWD), and the National Housing Authority (NHA). In addition, the city development authorities like the Rajdhani Unyan Katripakhya (i.e., Dhaka Capital Development Authority) Chittagong Development Authority, Khulna Development Authority, and Rajshahi Development Authority, some city corporations, some government and autonomous authorities have some housing schemes. The Ministry of Housing and Public Works have formulated the National Housing Policy to facilitate the development of housing sector which contributes nearly 10% of the National Gross Domestic Product (GDP).

Housing for the urban poor remains a grey area where Government policy or initiative has not been taken to address the issue at any level of planning. Community sponsored shelter schemes aided by public, private/NGO cooperation are rare. Few projects and programs have been worked out by GOB and donors in the past but currently these are no more visible. The problems of such non implementation of low income group housing are mainly;

(i) Lack of initiative of the Government to address low income shelter as a policy issue. If provision of low income housing was taken as a national policy for implementation, issues of land and finance has not been addressed to facilitate shelter programs

(ii) Lack of community cohesion and social movement to create pressure for shelter. The ignorance

and the inability of the common people have prevented them from demanding their basic rights.

(iii) The contribution of the urban informal sector to the national economy is well established yet shelter for the LIG has not been included in the mandate of any political party.

5.0 The Challenge of Affordable Housing in Urban Bangladesh

The Government, Grameen Bank and other NGOs, CBOs and donors have provided housing for the rural poor in many areas of Bangladesh. This experience is not easy to replicate in the urban areas particularly in large cities due to limited supply and high cost of urban land. Also the use of traditional method and materials is not cost effective because of their temporary nature. In this very complex situation there is no single solution to the problem of shelter for the urban poor. Rather a series of measures have to be simultaneously addressed if the government is ready to implement a national policy for shelter. Appropriate institutional measures have been recommended in the housing policy document as well as studies on housing finance and delivery.

The challenges to provide affordable housing delivery by the formal sector are;

- i. Land allocation for providing new housing and resettlement of slum and squatter population.
- ii. Upgrading of informal low cost settlements.
- iii. Basic services provision and minimum upgrading of existing

slum and squatter settlements.

Housing Delivery and finance have to be facilitated to match and meet the requirements for affordable low income group shelter needs. Some of these steps are,

- Expanding the range of financial resources available for housing finance.
- Encourage existing MFI's to finance urban poor housing. Collaboration with private sector developers to encourage them to build low cost housing and deliver to the actual consumer at minimum profit.
- Design sustainable housing which will be lower in costing. They should be targeted to groups who have permanent nature of jobs i.e. industrial workers, government and semi government low income employees as priority groups.
- Inclusion of low income housing in all existing projects and programs for housing and land development by public and private sector. Re planning of existing sites & services schemes, public housing areas of PWD, NHA & City development authorities. This will free substantial amount of land for LIG housing.
- Construction of large scale low cost real estate projects in multi-storied buildings for the LIG particularly in the city corporations and municipal towns.

5.1 Housing Needs & Finance for Urban Low Income Groups

A review of housing sector policies and programs in Bangladesh for

delivery and finance for LIG shelter discloses that all measures taken in the sector have been limited to mainly the MOH & PWD which with its concerned departments have planned, budgeted, financed, and executed all projects. Benefits in the process have reached very few of the LIG. On the other hand, maximum subsidy has gone to the MIG and HIG in the form of expensive developed land. Ironically, the poor who are beneficiaries and received land or shelter have found difficulty in adjusting to changed social circumstance. Lack of community building organization to support them and need for employment and security have often forced them to abandon their shelters. At times they have sold out their homes and moved out. The national environment for housing policies and programs shows that there is need for housing and also gaps in the finance systems for LIG to access credit, such as the following:

- Gross shortage of housing in terms of need.
- Public formal supply is less than ten percent.
- Close to 30 percent people live in slums & squatter settlements.
- Housing policy exists only in theory and no practical measures have been thought out for implementation.
- No single organization is in sole charge for providing shelter to LIG.

6.0 Conclusions

The features highlighted above clearly reveal the inadequacy of the

current system in providing shelter or even facilitating the informal sector to improve and accelerate shelter delivery. Areas which need intervention are;

- Organize the private sector housing supply business to provide service to the low income group and at their affordable range
- Improvement of banking systems to facilitate prospective low income housing and land delivery institutions in any form
- Tapping potential source of funds both domestic and external to contribute to LIG housing.
- Identify support organizations for LIG shelter delivery
- Develop linkages among CBOs and NGOs involved in micro credit delivery.
- Increase flow of funds into housing by channeling municipal property development funds, real estate taxes, and other property taxes.
- Accumulation of funds from LIG groups for housing, along with other micro-credit savings.
- Ensure HBFC funds for LIG housing schemes with defined amounts, interest rates mode of payment, and management of funds.

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ADARSH NAGAR YOJANA (ANY) : ACCELERATED DEVELOPMENT WITH HUDCO ASSISTANCE

It is felt that small and medium sized municipal towns have great potential for development but lack professional support and networking for doing so. To start with, two towns have been identified for test run, which if successful will be scaled-up and replicated to cover many other towns with an objective to transform urban India by 2020.

This project looks at innovative ways for city transformation not only in physical sense but also in a socio-economic sense so that in a 2-year time frame, city will have top infrastructure, no slums, rising per capita income, no housing shortage and no transportation problems. In the time frame of 2-years, the city may be comparable to some cities in the developed world, on many indicators. Adarsh Nagar Yojana (ANY) has been conceived as a project to showcase the importance of convergence for upliftment of a town through community empowerment and engagement.

The objectives of this project are:

1. To prepare a plan for city transformation through physical and socio-economic interventions;
2. To bring efficiency and transparency in city governance through IT enabled solutions;
3. To prepare a business plan for city by unlocking its assets and identifying new revenue potentials;
4. To undertake transformation projects through innovative financing options; and
5. To develop a replicable model for other Urban Local bodies.

Proposal

Two cities in India, namely Gwalior in Madhya Pradesh and Ajmer in Rajasthan have been shortlisted for this project. These cities have been selected because both these cities could possibly use international and domestic tourism for rapid revenue growth. Vibrant tourism would

increase jobs and also make the cities attractive for businesses, thus starting a virtuous cycle.

The proposed milestones for ANY are:

- To constitute a high level Task Force, headed by the Minister in-charge of the district or local MP/MLA. There could also be a sub-committee headed of the Task Force, headed by the collector, with all other District level officers for project formulation and implementation.
- Setting-up of Tourism Investment Promotion committee for preparing tourism promotion plan, planning tourism infrastructure, organizing cultural festivals at regular intervals and marketing tourist products in domestic and international market
- Appointing a world class consultancy firm (transformation manager) for the city who would be identifying physical requirements of the city and its revenue potential. The agency will identify the priorities of city development & list potential projects, promote revenue generating projects like Shaadi Mahal, Habitat Office Complex, Conference Centres, etc on PPP basis and mobilize resources for implementing identified projects.

HUDCO team is looking for partners, who wish to contribute to the objective of city transformation by sharing best practices, networking with institutions with similar experience and contributing to this process through technical skills. Your support and inputs would be important in delivering quality outputs in this project.

For further details, please contact at the email: hsmi_rs@yahoo.co.in

(Source: Rajiv Sharma, Fellow, HSMI, New Delhi)

How the Private Sector Meets the Demand for Low - Income Shelter in Bangladesh

**MANOJ ROY
DAVID HULME**

In order to support informal private developers, visionary policy thinking is required - not a return to the irrelevant assumptions of procedural planning. Note that the remit of the existing planning paradigm in Bangladesh is either to produce guidelines within which private developers must operate, or to engage in land acquisition and reselling as serviced plots or with fully constructed units built on them.

Key words: Bangladesh, informal land markets, low-cost housing, private slum developers, urban poverty.

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Much recent thinking on urban poverty neglects the potential contribution of the private sector to provide low-income housing built on private land. But in countries such as Bangladesh, the share of low-income people living in private settlements is rising – and this increase seems to be certain to continue. This paper draws on selected case studies from urban Bangladesh, where the poor urban population is projected to outnumber the rural poor by 2040. The next generation of low-income settlements is already being built on private land. The analysis shows that private settlements often evolve in three distinct phases, involving different market actors promoting different practices. Not all settlements go through all three phases however, and there are marked differences across cities and towns in the ways these phases evolve. The study also finds that, although the land markets are informal, they are intricately linked with more formal urban development processes. The conclusion presents a set of policy questions, highlighting the importance of: (i) creating an institutional framework that can support private sector developers; (ii) how to develop an approach to planning that can move beyond procedural planning and can operate in a context of private landownership; (iii) how to integrate national and international agencies into more effective urban governance; and (iv) how to

identify and promote the transient innovations that the private sector is creating.

1.0 Introduction

The issue of privately built low-income urban settlements is not new nor is it confined solely to low-income countries¹. But very few studies have appreciated the fact that small-scale individual private developers provide shelter for millions, perhaps tens of millions, of low-income urban population. For example, in the 1990s, researchers uncovered the practice of informal tenancy in Africa. They revealed the widespread practice of private landlords constructing informal low-cost structures in backyards for rental purposes (Gilbert et al., 1997). There are also studies that acknowledge low-income tenants' vulnerability, as they face difficult terms and conditions, with few alternative options available (Mitlin, 2010). Similarly, there are detailed studies on shelter initiatives set up by groups of tenants turned developers (Mukhija, 2004) and on informal public-private partnerships to construct low-income settlements (Mukhija, 2006). But these too serve as a caution that the processes of privately built low-income settlements are difficult to institutionalise.

Clearly, private involvement in low-income shelter provision is now both desirable and inevitable in the

fast-growing cities of the developing world. Consider the case of Dhaka, the capital city of Bangladesh, where annual in-migration is 0.3 to 0.4 million people – the vast majority of whom are poor people moving from rural to urban areas (World Bank, 2007). This is on top of the natural growth amongst the low-income urban population, which is considerably higher than that in better-off sections of the urban population. While annual shelter needs are estimated to be in the range of 0.3 to 0.4 million additional units, the formal sector only provides one to two percent of this demand (CPD, 2003). It must be noted that the availability of land to squat on has significantly reduced in recent times. Not only has most available public land already been squatted, but political resistance to squatting has heightened significantly (Mitlin, 2010).

This means that the bulk of new shelter needs must have been provided by informal private developers. These are mainly individual landlords in possession of varying amounts of land, with different levels of financial capacity and driven by a variety of incentives. These developers have created a range of practices depending on their profiles, capacities and preferences, and these practices are likely to vary widely both within and between cities and countries. There are of course many factors to consider. But one of the most important factors that determine the nature of the low-income land markets is the legal and political framework that governs the urban land management in the

cities/countries in questions. This framework is made up of cultural values attached to land, property ownership rights, the roles of government in securing and regulating such rights, as well as in planning and managing cities and urban areas (Blanco et al., 2011).

This paper presents preliminary findings based on research of the practices of informal private developers in Bangladesh's three largest cities – Dhaka, Chittagong and Khulna. The datasets are drawn from detailed case studies of three private settlements (one in each city) and three squatter settlements² (one in each city), the on-going ClimUrb³ representative survey 2013, and from rapid studies of several similar settlements in each city. The data have been triangulated with discussions with key informants, and analysis of the academic and 'grey' literatures. We also held a concluding dialogue in each city, with members of the local academic community, policy makers, civil society organisations and members of the selected settlements, for a broader testing of findings. Further details on the analytical framework and methodology are presented in Roy et al. (2011; 2012).

The settlements⁴ that have been subject to detailed study are: Shandekha (in Dhaka, comprising 512 households); Naafez Garh (in Chittagong, comprising 2,454 households), and Magbara (in Khulna, a collection of six sub-units, with 70 households).

The establishment of the Shandekha settlement (Dhaka) is linked

with the construction of the Dhaka Integrated Flood Protection Embankment-Cum-Western Bypass road which began 1991-92. Its evolution is closely linked with the various phases of the embankment-cum-road. The Naafez Garh settlement (Chittagong) also evolved during the past two decades. However, several new settlements were erected overnight in 2005 when Chittagong Development Authority (KDA) started initiated its Kalpolok high-class residential area, involving land acquisition and then reselling as serviced plots. The owners of the new settlements did not want their land being acquired cheaply. As such, they constructed low-income settlements so that the KDA had to pay a significantly higher compensation, which KDA was unable to do and so the landowners kept operating their low-income rental business. All but one landowner did not change the original pattern (i.e. single-storey temporary structures). The 'stand-alone' landowner appeared to be a prudent business man, as he replaced the temporary settlement with a six-storey permanent structure comprised of over 80 low-income rental units. The Magbara settlement (Khulna), in contrast, has evolved over the past decade on a number of closely located, privately owned land holdings (sub-units). Earning some rental income rather than leaving the lands empty appears to be the only motive for these landowners. The landowners have developed a common type of rented dwelling for tenants and we studied six sub-units with six separate owners.

2.0 The rise of private settlements: scale and nature

Statistics on urban poverty in Bangladesh are never precise. There exist two different approaches by which urban poverty is measured in the country. One is the Household Incomes and Expenditure Survey (HIES), conducted once in every five years. It involves survey of a representative sample population base from which the scale of urban poverty is estimated. The second approach involves cluster sampling-based studies of low-income settlements. Several surveys have been undertaken using this approach, but without using a standardised methodology, resulting in difficulties in comparing/ integrating them to support trend analysis (World Bank, 2007).

The Centre for Urban Studies (CUS), for example, undertook two surveys in 1995 (CUS, 1996) and 2005 (Islam et al., 2006), but the results cannot be directly compared (Angeles et al. 2009). Very recently the Urban Partnerships for Poverty Reduction Project (UPPRP) has undertaken a slum census in 29 UPPRP cities and towns (except Dhaka) (Fortuny et al., 2011). But the differences between the sampling process and methodology used in the UPPRP census and those of the CUS surveys are vast. Worryingly, none of the six sub-units (established in 2000 or before) that we studied in Magbara in Khulna, is covered by the UPPRP dataset. Thus, the UPPRP study cannot be considered to have included all the private low-income settlements in the cities studied. This implies that all existing surveys have under-estimated the scale of private settlements.

Another difficulty associated with surveying private settlements is that they can be temporary. This emerged as a major finding in our on-going ClimUrb 2013 survey of low-income settlements in Dhaka. We built our sampling frame using the CUS 2005 dataset to randomly select our sample clusters, so that we did not end up doing yet another survey that ignored existing datasets. However, in many cases we found that the selected settlements had simply disappeared – often having been cleared either for formal sector real estate development or for unauthorised tenement buildings which are not slum-like structures although the tenants are on low incomes.

Notwithstanding the problems of under-representation of private clusters in existing surveys, it is clear that the proportion of low-income people living in private settlements is rising rapidly. The CUS study has concluded, with caution, that between 1996 and 2005, the proportion of low-income people in private settlements rose from 48.8 to 70.3 percent in Dhaka. We are in the process of comparing our dataset with the UPPRP 2010 census to establish the trends in our case study cities. But we can safely assume that in Chittagong and Khulna, as in Dhaka, a significant rise in the population living as tenants in private low-income settlements will have occurred.

Our on-going ClimUrb study also reveals many interesting contrasts between the life of an owner-occupier household in a squatter settlement and that of a tenant household in a private low-income settlement. The

situation in Khulna is reported in Roy et al. (2012 and 2013). Both these studies and our preliminary findings from Dhaka and Chittagong reveal significant contrasts between dwellers in squatter/public land settlements and private settlements. Residents of squatter settlements face much more severe problems associated with insecurity of tenure, but in terms of their ability to tackle these problems – individually, as groups and through having access to external support – they significantly outperform residents of private settlements.

3.0 Understanding the development process of private low-income settlements

The remarkable rise of private low-income settlements has been made possible by an important impetus for the key market actors. Our study indicates that although the low-income land markets are informal, they are intricately linked with the formal urban development process. The urbanisation process in Bangladesh is governed (albeit very imperfectly) by the Structure Plans and Detailed Area Plans (SPs and DAPs). In Dhaka, the SP came into force in 1997 but the DAPs were not introduced until 2010. Similar plans have been/are being prepared for other city corporations and small and medium-sized towns across the country.

A common feature in SPs is that they cover a much larger area than is governed by any single municipal authority. The SP defines the overall land-use pattern and includes plans and programmes to integrate the

Figure 1: Phase one of Sandekha settlement in Dhaka in 2011

Photograph by Shareq Rouf Chowdhury.

city-region through major infrastructure projects. In accordance with the SP, the DAPs then produce more detailed proposals for smaller areas. As is common in developing countries, the process is highly top-down, and is never implemented as planned. Nonetheless, the plans give rise to both speculative and real markets for low-income settlements. This begins as soon as the SP process starts, and escalates as the large scale infrastructure projects commence implementation. This is most vividly evident in the peripheral low-lying areas where agricultural or wetlands are bought (and sometimes grabbed) by speculating powerful local political and elites, who quickly convert them into low-income settlements.

Our study reveals three distinct phases through which many of these settlements evolve. As the following discussion shows, not all settlements go through these phases, and there are marked difference across cities and towns.

The **initial phase** shows a common pattern of impermanent bamboo

stilt structures with hanging/open latrines, and is marked by a chronic absence of basic services (Figure 1). It is usual at this stage to have some shared facilities, such as common kitchens, water points (tubewells or taps) and latrines – but of very poor quality. Basic services are installed either privately by the owners or provided informally by intermediaries who are part of the local power structure. In Dhaka, for example, we saw generator-based electricity being supplied to tenants by private entrepreneurs in Shandekha settlement. It emerged that the provider is the local municipal councillor, who runs the business via his nephew.

In most cases the landowners run their rental businesses though either appointing middlemen (managers/caretakers) or by renting land out to third party developers. The land rental arrangement allows dwellings to be constructed and rented out by a third party developer, while some basic services, e.g. water and electricity, are provided by the landowner. A key reason for this practice is that the low-income tenants have very

limited rent-paying ability and that they are usually unable to pay in monthly instalments. In most cases they prefer to pay weekly, and many even struggle to do so. There are therefore heavy transaction costs on the part of the rent collector which wealthy individuals prefer to delegate to third parties. There are also social factors – being a slum landlord is not a prestigious tag for the elite class.

Gradually more services are provided, for some of which the political affiliation of the landowner plays an important role. For example, the landowner of Shandekha settlement in Dhaka is an influential local politician who was able to install municipal water supply for his tenants. He was also able to deploy municipal facilities to pump out excess water during the rainy seasons to ease waterlogging problems. In this way he both meets the needs of his constituents and can raise the rents he charges. In Chittagong, the private owners even brought in a gas supply for their tenants, despite the land ownership

Figure 2: The transition from first to second phase in Shandekha (Dhaka)

How dwellers were evicted by overnight mud dumping without adequate warning/notice from the landowner.

Photographs (courtesy of Shareq Rouf Chowdhury)

being disputed. However, as service provision increases, the rent goes up. Many very poor households told us that they did not want the additional services, as they could not afford rent increases. This indicates a dilemma – as slums are upgraded many of their original occupants may have to move on as they cannot afford higher rents.

After establishing the initial settlement, landowners take every opportunity to elevate their low-lying land, often bit by bit, but the process gains momentum as the development opportunity increases – through, for example, the construction of road networks. They source landfill materials from different locations – in Dhaka we found a well-established system of using mud (a by-product of piling construction) for landfilling (Figure 2), with specialised trucks distributing mud on demand throughout the night. The use of solid wastes and sand is more common, however The

initial structures are removed (this happens rapidly in Dhaka but more gradually elsewhere), to give way to the second phase. The speed of this transition can vary significantly between different cities. In Dhaka, it happens at a remarkable speed, often involving the eviction of the existing residents with little or no notice period, as happened in Shandekha. By contrast, In Chittagong and Khulna the transition appears to be more gradual and may be mutually negotiated with the existing tenants.

The practice of land rental still exists in the second phase, but for much shorter contract periods (two- to five-year contracts, with the possibility of renewal), during which the developers assemble money and seek formal planning permission for building permanent structures for real-estate or commercial purposes. The land rental price goes up, often by as much as a factor of ten. This forces developers on rented lands (who are often on modest incomes

themselves) to be creative, in at least three ways:

- They form partnerships with fellow developers to jointly rent land and construct dwellings.
- They develop housing units vertically, constructing double-storey iron blocks (with partitions and roofs of galvanised iron (GI) sheets, locally known as ‘tins’). This enables them to have more units on a given piece of land (Figure 3), leading to a shorter capital recovery period.
- They incorporate a number of innovative design practices, such as ‘cement on bamboo frame’ flooring; tenant choice of rent level, reflecting the different levels of service provided; and improved efficiency in space allocation (e.g. toilet blocks and communal kitchens on the ground floor and bedrooms on the upper floor). This is particularly the case in Dhaka where high land prices create a strong incentive for efficiency.

Sometimes this progression to the second phase (and/or the third phase), may not occur.

This depends on a number of factors, in particular on whether:

- (i) The residential or other forms of development activities are permitted in the SP/DAP for the area in question; or
- (ii) There is a viable low-income rental market.

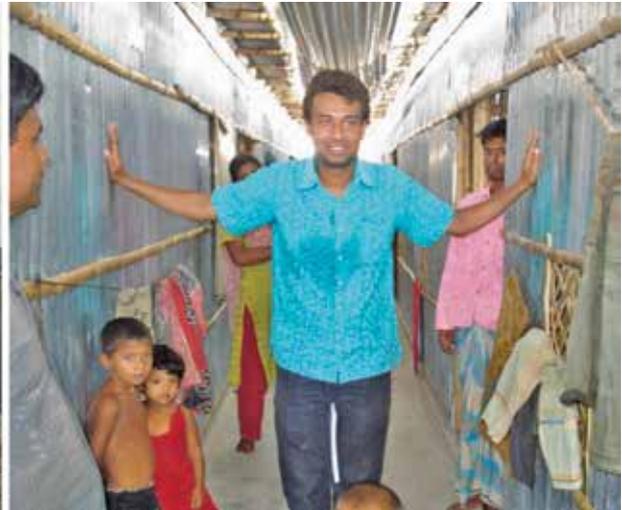
The presence of the first factor often leads to a shift from initial low-income settlement to an alternative, formal development opportunity,

Figure 3: Second phase of Shandekha settlements in Dhaka

Photographs (courtesy of Manoj Roy)



(a) dramatic skyline of mushrooming two-storey 'iron blocks'



(b) low floor-to-ceiling height and narrow circulation space inside such an iron block.

such as real-estate development. However, in areas where this is not the case, the second and third phases proceed at least until the time when the SP/DAP guidelines and/or the other two factors become favourable for formal development. It must be emphasised that while (in theory) the planning process requires that SP/DAPs be revised once every five years, in practice the process takes substantially longer. In Dhaka, for example, the SP was prepared in 1997 and DAPs in 2010 (having been delayed from 2005). Meanwhile, many areas that were designated as low-lying and not suitable for development in the SP have already been in-filled to make them suitable for development. But the landowners will have to wait until the SP/DAP land-use allocations are updated before proceeding to high cost land development. The landowners we interviewed in Dhaka expressed their deep frustration about the slowness

of the updating/ revision process. Thus it appears that the presence of planning regulations and the impact of their ineffective application is felt most directly at the second stage.

Not surprisingly, the landowners are unhappy with this situation. But, interestingly, this has encouraged them to be innovative, which is evident in the third phase which is marked by the replace-

ment of temporary structures with permanent buildings, while still maintaining the existing design principles (e.g. in terms of space allocation). However, there are at least two ways this third phase is different from earlier phases.

- First, the land rental arrangements are no longer practiced, perhaps due to the high investment costs of constructing per-

Figure 4: Third phase of a low-income settlement in Dhaka



(a) an unauthorised permanent structure with 80 low-cost rental units; and



(b) Design innovations allowing natural light and ventilation, as well as facilitating escaping of heat generated in community kitchens (through the punch-through-floor).

Photographs (courtesy of Manoj Roy)

manent structures. In the third phase the landowners construct dwellings and use managers to oversee settlements and collect rents.

- Secondly, the structures can be up-to six-storey high, and have many innovative design features to make the accommodation practicable for low-income households. Indeed, to our utter surprise, one particular structure in Dhaka shows extraordinary levels of design sophistication (Figure 4). Indeed the level of sophistication is so high that even professional architects find the design extremely innovative and practical. Given that these are not meant to be long lasting structures, and they may soon be knocked-down to give way to high-rise and high class apartment blocks, we call these ‘transient innovations’. It will be a pity to lose them.

We also observed significant levels of awareness of the viability of the low-income rental markets amongst private developers. For example, unlike the Shandekha settlement (Dhaka), the landowners of the Naafez Garh settlement (Chittagong) are not constrained by SP/DAP guidelines or land-ownership disputes. Yet, a prudent landowner has decided to construct six-storey permanent structures specifically for low-income rental purposes (Figure 5). Our investigation reveals that until the KDA Kalpolok residential project was launched in 2005, the area was mainly inhabited by poor people. This explains why the multi-storey structures were constructed in the first place - i.e. to capitalise the existence of a viable low-income rental market. Now that the demand for middle-income rental units is growing, thanks to the Kalpolok project, the

owner of the six-storey buildings is making his move - he has already started discussions with real estate companies. It seems that the days for low-income shelters in the area are now numbered. A similar level of awareness of the market viability of low-income settlements is also present in Khulna.

4.0 Policy questions for an era of private sector low-income housing development

If private low-income settlements are an important element of the future for poor urban people in Bangladesh, a number of technical and policy questions must be addressed regarding how to support and/or regulate the developers of these settlements. We reflect on four such questions in this concluding section.

First, what institutional framework would facilitate and actively promote the innovativeness of private developers of low-income settlements – so

Figure 5: Phase three of a low income settlement Naafez Garh in Chittagong



(a) an unauthorised permanent structure with 96 low-cost rental units



(b) very wide corridor to serve as a common space for the tenants.

Photographs (courtesy of Manoj Roy):

that they can provide poor people with reasonable accommodation at a modest cost? Clearly, the prevailing urban development process in Bangladesh acts as an important backdrop, albeit through highly imperfect implementation. It can be safely assumed that the Planning Department, given its existing low capacity and influence, will find it difficult to do more than it is already doing. It is interesting to note that the imperfect implementation of SP and DAP guidelines has created the opportunity for low-income settlements in areas where development activities are prohibited (according to the planning documents). But this is an unintended consequence – a ‘private entrepreneurial flourishing’ – for which urban planners cannot take the credit.

A related observation is that in order to support informal private developers, visionary policy thinking is required – not a return to the irrelevant assumptions of procedural planning. Note that the remit of the existing planning paradigm in Bangladesh (as in many other developing countries) is either to produce guidelines within which private developers must operate, or to engage in land acquisition and reselling as serviced plots or with fully constructed units built on them. The serviced plots/ built units approach is usually implemented with all the required utility and infrastructure provisions, and as such, leads to what Watson (2009) calls as sweeping the poor away. Policies to support informal private developers must, therefore, target the process of production planning guidelines to reach the private land-

owners who operate outside the municipal authority implemented serviced plots or built units.

This leads to the **second** policy question: how could we address the mismatch between the culture of private landownership in countries like Bangladesh and the limited ability of public bodies to promote the development activities of numerous private landowners in ways that create settlements for people on low income? What incentives might be needed to encourage private developers onto pathways that contribute to a desirable urban future – in this case by providing shelter for the urban poor? It is tempting to embrace emerging institutional models, such as public-private partnerships. But Mukhija’s (2006) commentary in relation to a tenants’ cooperative in Mumbai must serve as a reminder that any direct involvement of public bodies in informal markets could end up destabilising the existing low-cost ways of doing things. This is precisely why formal market actors have been found to be less interested in developing low-income housing. Formal processes are too costly – both financially and in terms of other costs.

Clearly, thinking in terms of incentives for private sector developers makes it essential also to think about urban governance, thereby significantly expanding institutional responsibilities. Informal settlements are known to be deeply embedded within the realm of politics and in multiple forms of institutions (McFarlane, 2012). No longer can we single out public bodies as the key duty bearers and NGOs as their

main partners to assist the urban poor. Our research confirms that the selection criteria of all major NGOs and donors providing basic services usually show a strong public settlement bias – small private settlements are hardly ever supported despite their growing importance for poor urban residents. Our **third** policy concern therefore is: how might we effectively engage national and international agencies in supporting fair quality and reasonable rental cost private low-income settlements?

Finally, we need also to be concerned with identifying and institutionalising what we have called ‘transient innovations’. In a recent paper (Roy et al., 2013) we have identified a potential way forward, which involves providing market actors with information on climate change adaptation, combined with conditional grants for financially constrained developers/owners of low-income settlements. We argued that, with access to information, dwelling owners will find simple ways to help themselves and their tenants improve their adaptation potential. When the availability of, and access to information, has been sufficiently improved, tenants will also be able to more effectively choose which settlements to move to. These processes will require the active participation of civil society organisations, ideally, associations of slum dwellers, and of associations of private sector developers. They will also require that planning in developing countries takes on a new paradigm – finding ways of encouraging social organisation (by slum dwellers and private sector developers) and creating new mechanisms

for facilitating dialogue between tenants and private landowners.

Notes

- 1 For example, in the 1950s in the UK, Perce Rachman was widely criticised for making money out of poor people as a slum landlord by taking the opportunity created by the abolition of the Rent Act of 1957 (Simmonds, 2002).² Squatting involves households occupying a parcel of land that formally belongs to someone else (public or private), while paying no financial compensation. In Bangladesh, squatting on private land is uncommon, so that the terms “public settlements” and “squatter settlements” are often used interchangeably (Roy et al., 2013).
- 3 ClimUrb stands for ‘Poverty and Climate Change in Urban Bangladesh’ research programme (ESRC-DFID funded, 2010-2013). See further details at: <http://www.bwpi.manchester.ac.uk/research/climurb/>
- 4 The settlements names are given, to preserve anonymity.

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Homelessness and Unaffordability

SANGEETA MAUNAV

Rajan shares a room along with 9 other rickshaw pullers. They just have enough place to fit in, the terrace more often than not used for the night's rest. The room is more for the belongings and a place to cook their meal.

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Conversation with a Rickshaw puller along a City Street

Peeping through statistical aggregates, policies and programmes are individuals in flesh and blood, roughing the rigours of existence. This is an insignificant attempt to hear them speak, lest they be lost in the repertoire of development rhetoric. However, the author may be pardoned for her incorrigibly pseudo learned expressions once in a while.

New Delhi
The 3rd of July, 2011.

It is a Sunday morning. I board Rajan's rickshaw at Jangpura to fetch a sweet shop nearby. He indicates that at this hour I could find some shops open in Bhogal. I must acknowledge that it's Rajan and his likes who have been acquainting me with the place since my move here around a month ago. Rajan offers to ride me till Lodhi Road, a distance of around 3 kms from here. On any other day, he would reach me till the auto stand, a few hundred meters away. On Sundays, the 'committee guys' he says, would not stop and confiscate his vehicle. He could make a little extra buck, I thought, a longer ride that a cycle rickshaw would take. For the sorts of me, who love to know people and their lives, a long rickshaw ride was a perfect opportunity.

Rajan hails from Malda district in West Bengal. He set his sturdy foot forward on this land sometime during the early 1990s. His rickshaw is a rented

one and he has to pay Rs. 40/- at the end of each day to the owner, irrespective of the fact that he has earned at all or not. In erudite curiosity I enquire about his earnings, and get to learn that his earnings could be as little as Rs. 100 a day, or may even touch the 1000/- mark. Back home, he has a family of four to care, his wife, and three children. He continues, 'my son does not speak, nor does he hear. He is twelve and this is how he has been since birth. I am worried how he would make his living when I am gone'. He shares, he misses his family. It's long that he has met his near ones and hopes to visit them by the end of the coming month.

Rajan does not know how much he could send home this time, for he does not know how much his paddling would fetch him in the next few days to come. He says, he manages to save around Rs. 3000/- to 10,000/- once in two to three months to send home. He sulks, his house in the village needs reconstruction. He has to save much more. Quick I were to enquire on the mode of



money transfer that he opts for, and yet quicker comes the reply from his side - 'the middleman, a courier sort of a thing, @ 5% of the amount to be sent each time'. I have heard this for the first time, a business in financial intermediation in cities. Here was a system of business based on informal networking, I worked out. There is a book of accounts maintained with the middleman, Rajan added. The money, Rajan sends home has always reached. But what makes him not adopt the banking route, I query in haste, to which he said 'We are not educated like you. We would not be able to fill forms and operate accounts...they are all too complicated for people like us'. I try lecturing on the economy of banking. I am, but a development specialist, educated enough to open and prolong a dialogue on 'Financial Inclusion' at every opportunity that hits my way. And even when it does not, I try hard to pull it towards my side.

We have almost reached the signal ahead of Scope Complex now. I can see inquisitive eyes gaping through glass panes of cars whizzing past by. As we chat along, I learn that a new rickshaw would cost around Rs 7000/- to 8000/-. Then with the savings that he mobilises, I wonder why did he not well buy one and enhance his earnings. But Rajan is very clear. He does not want to own one, as he had barely a place to sleep, where would he manage to shelter his rickshaw in this city. Who would look after it while he was on his village visit. Now he only has to leave the vehicle at the day's end and pay his daily fee. As we ride further, I learn more. An owner of rickshaws in Delhi would generally have a minimum of 100 rickshaws. I

quickly calculate the income in my mind.

Rajan shares a room along with 9 other rickshaw pullers. They just have enough place to fit in, the terrace more often than not used for the night's rest. The room is more for the belongings and a place to cook their meal. They pay around Rs. 500/- each. One person is responsible each day, in a way, that on every tenth day, Rajan has to cook a meal for ten. My incorrigible mind muses over the compulsive strain in the family ties brought about by the hard economic needs of humanity, that too in a culture that hails the institution of family. He cannot live with his family back in his village for there would not be enough to feed. And he cannot have his family live with him in this city, for he would have no place to live and even if he tried, not enough would remain to feed. Isn't it just the other day, I read a promising article on policies and plans for 'inclusive housing', a housing design to cater to those who take to cities for work. I wonder if this meant 'not to live'. But I can just hope that when such houses finally arrive, Rajan and his likes shall live a life - not just a shelter to park themselves in the night, but a wholesome family life. I did not share this with him though, I mean the contents of the promising article, lest it pains me to see his hopes run dry. I am too petty to question the political economy that drives thousands of Rajans to city streets from the villages where their families continue to live. But I learn that Rajan's ancestors owned and farmed on vast tracts of land in the village. In fact he proudly recalls the family tales when, he is told, the entire village would congregate at his

grandparents' house to listen to the epic recitals. They were all lettered, he tells me. But the 'huge agricultural tax' imposed by the British made it difficult for them to sustain. The family gradually shifted to nearby urban centres for work as the land slowly went over to the British. A thatched house in the village is what remained. Rajan's parents took to casual labour thereof. Rajan tried rickshaw pulling in Kolkata before reaching Delhi, but could not earn enough to meet his needs. He muses over the hardships that his family went through. He says that earnings from rickshaw pulling in this city, however, has made life a little easier. But he yearns to be with his family. He also wishes that his children take to education and better livelihoods. An urban specialist, as I am, endearing my information on overcrowding of urban spaces and unprecedented urban markets, I could only plan to fit Rajan and his likes to better housing designs and enhanced livelihoods; the tracts of land in his village, the farming and epic recitals fading behind in comprehension or motive.

We have almost reached Lodhi Road. The roads have become too bumpy, the rains you see. I must accept, the strain on my already painful spine was worth the ride. But I must be careful. It's time to alight and pay. Rajan has never fixed a fare. He would always say- 'whatever I shall give him'. He is happy and says that I have paid him more. I have to chat up with him again on some other day. I have to know more on Livelihood vulnerabilities, Financial Inclusion and Housing policies. All this and more, I have to reach you about those much less fortunate than You and I.

RECENT HSMI INITIATIVES

To strengthen the academic and professional capacities, HSMI has now been restructured into four centres of excellence namely, Centre for Urban Poverty, Slums and Livelihoods (CUP), Centre for Project Development and Management (CPD), Centre for Sustainable Habitat (CSH) and Centre for Affordable Housing (CAH). Some recent initiatives taken by HSMI are:

■ **Research and Development**

HUDCO is supporting innovative research initiatives in the housing and urban development sector through its collaborative research platform. The research should lead to a tangible project or guidelines for improving a sector specific issue. The research grant is awarded to national level institutions and universities of repute in the country. So far, grant to 16 research proposals have been awarded.

■ **Rajiv Gandhi Fellowship**

HUDCO has instituted a 'Rajiv Gandhi Fellowship' to encourage students to undertake research in the habitat sector. This fellowship follows the norms of the Ministry of Human Resource Development/University Grants Commission, and is awarded for pursuing M.Phil and Ph.D. programmes at national level premier institutions. The institutions have to sign a MoU with HUDCO for availing this Fellowship for its students.

■ **Sustainable Development Fund**

The Department of Public Enterprises (DPE) has issued guidelines on Sustainable Development (SD) with the aim of making SD the overriding philosophy of the public sector so that all PSEs are environmentally responsible, socially aware and financially viable. Accordingly, the initiatives chosen by HUDCO from the Schedule-A list include those most relevant to the urban sector, viz., waste management, water management and energy management and the two initiatives from the Schedule-B list included SD reporting and training.

In line with the requirements of the guidelines, HUDCO has formulated an SD policy and constituted a Committee of Directors to plan, oversee and approve the SD activities of the corporation and set up a non-lapsable SD fund. Initiatives pertaining to use of alternate sources of energy, water saving devices, energy saving equipment have been taken-up. Additionally, some demonstration projects on rain water harvesting and waste water management have been taken up at town level.

■ **HUDCO Chairs**

HUDCO Chairs have been reintroduced in a new format. The HUDCO chairs are functional at 15 institutions in the country and are supported in terms of activities undertaken for improving the sector. The chairs conduct skill development programmes, research & dissemination workshops and documentation.

■ **Challenge Fund**

The Ministry of Housing and Urban Poverty Alleviation (MoHUPA), Govt. of India has initiated a flagship initiative to establish a Challenge Fund. Jointly proposed under the World Bank supported Capacity Building for Urban Development (CBUD) project and the DFID supported Support to National Policies for Urban Poverty Reduction (SNPUPR) project, the Challenge Fund is intended to promote the

implementation and replication of good practices in the area of urban poverty reduction.

The aim of the fund is to support urban local bodies to take up pro-poor development projects within the thematic areas and create a competitive environment amongst the urban local bodies in addressing the challenges of urban poverty alleviation in transparent, cost effective and responsive manner. It is designed to provide urban local bodies the opportunity to innovate and adopt approaches/practices to respond to urban poverty alleviation challenges. HSMI has been designated as the administrator for operationalization of the Challenge Fund.

■ **HUDCO Best Practice Award**

This award has been announced by HUDCO to promote innovative initiatives undertaken by urban local bodies. These awards are given under ten categories, viz., urban governance, housing, urban poverty & infrastructure, urban transport, environmental management, energy conservation & green building, sanitation, urban design & regional planning, inner city revitalization & conservation and disaster preparedness, mitigation & rehabilitation. The award is given to 10 selected entries and carries a cash prize as well as a trophy and commendation certificate.

■ **Network of India, Brazil and South Africa**

IBSA is a trilateral agreement between India, Brazil and South Africa to promote south- south cooperation and exchange on several mutually agreed areas of interest. At the fourth meeting of the trilateral commission of the IBSA dialogue forum in Delhi in July 2007, 'Human Settlement Development' was identified as an area of cooperation between IBSA partners. The Ministry of Housing and Urban Poverty Alleviation (MoHUPA), Government of India, has nominated HSMI, as the anchor institute to provide support to the ministry in carrying out various activities under the network.

A Working Group on Human Settlement (WGHS) was established and subsequently a Memorandum of Understanding (MoU) on cooperation in the area of human settlement development was signed at the 3rd IBSA summit held in October 2008. A Joint Working Group (JWG) meeting is being organized by HSMI in Delhi, to finalize the strategy for operationalization of IBSA activities including discussions on strategy paper.

■ **Capacity Building**

HSMI, being the research and training wing of HUDCO, has been imparting training to in-house professionals and national and international professionals in the sector. HSMI has made an impressive contribution in handholding of urban local bodies through capacity building of professionals and functionaries of national level programmes like Swarna Jayanti Shahari Rozgar Yojana (SJSRY), Jawaharlal Nehru National Urban Renewal Mission (JnNURM), Interest Subsidy Scheme for Housing the Urban Poor (ISHUP), Integrated Low Cost Sanitation (ILCS) Scheme and Rajiv Awas Yojana (RAY).

For more information on the above, please contact Executive Director(Training), HUDCO/HSMI, New Delhi.

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