

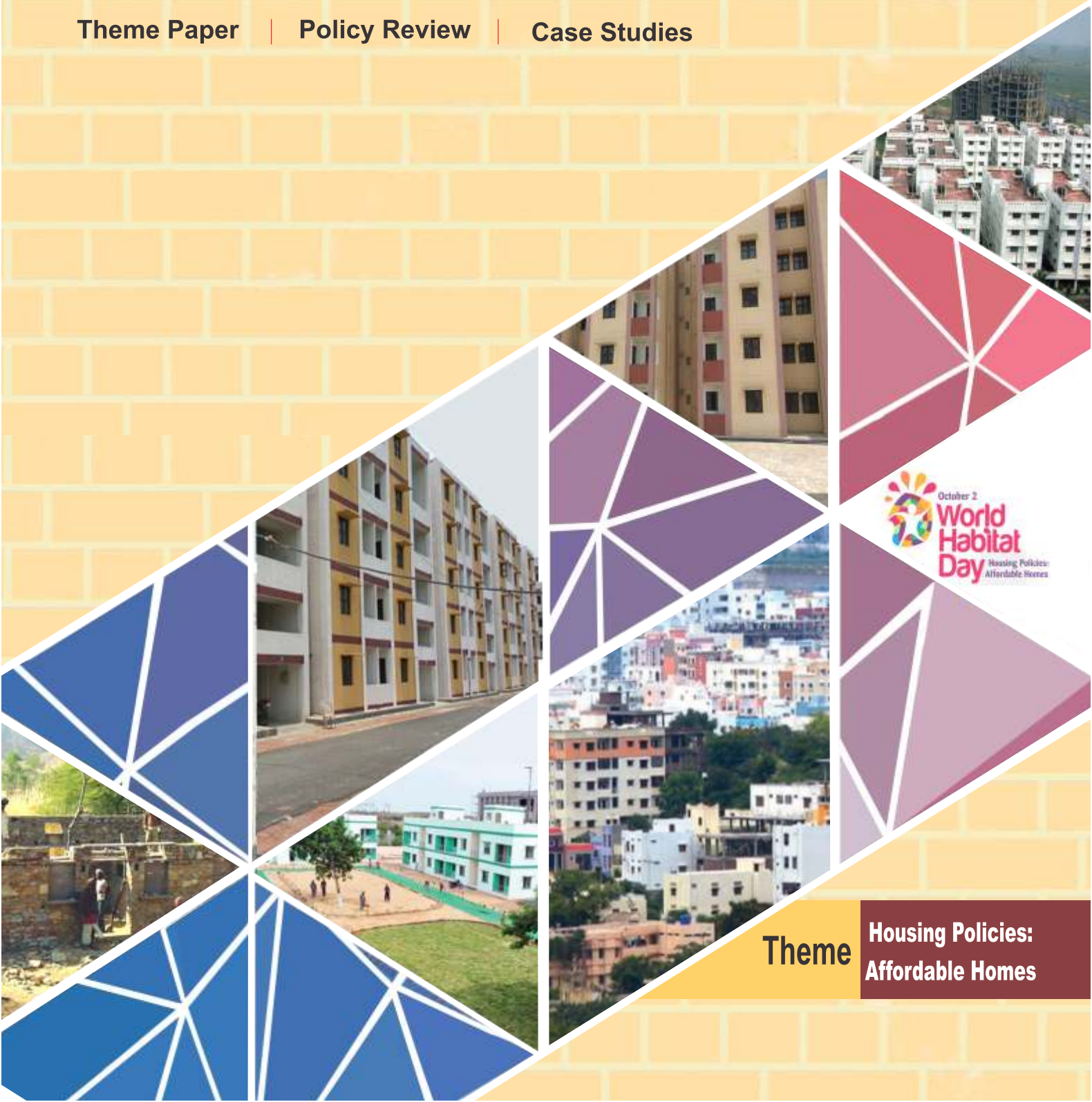
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Theme

Housing Policies:
Affordable Homes

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FROM THE CHIEF EDITOR

The theme for World Habitat Day 2017 is "Housing Policies– Affordable Homes". This theme is extremely relevant for India since "Housing for All" is a priority of the Government of India that is making all-out efforts to bridge the demand-supply gap of about 20 million houses by 2022. Interventions to realize this goal have ushered in a set of policy level reforms by the Government of India. The National Housing and Habitat Policy 2007, is set for revision, a draft national urban rental housing policy has been formulated and several incentives have been announced in the Union Budget. This is an opportunity to examine and analyze not only various aspects of housing, but also all related aspects of urban and regional development as well.

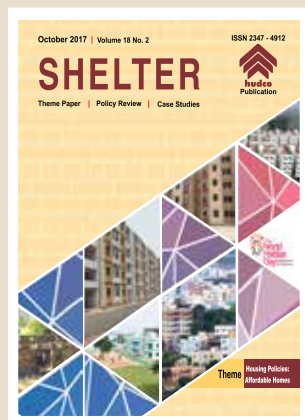
Every nation has a different definition of affordable housing, and even within India, the affordability definition has undergone changes – from the 2008 definition of Deepak Parekh Committee on Affordable Housing to the recent 2015 definition of affordability for different categories as per PMAY –Housing for All Mission. The Deepak Parekh Committee defined affordable housing for different income groups in terms of multiple of household income or percentage of household income in case of rented accommodation. The affordability criteria adopted in PMAY puts carpet size of a housing unit as 30 sqm, 60 sqm, 90 sqm and 110 sqm for EWS, LIG, MIG-I and MIG-II respectively. The affordability as per household income for different categories defined as Rs. 3 lakh for EWS, Rs. 3 lakh-6 lakh for LIG, Rs. 6 lakh-12 lakh for MIG-I and over Rs. 12 lakh-18 lakh for MIG-II. This shows the changing dynamics of affordable definition due to changes in building costs, income level, quality of buildings, etc.

Irrespective of how we define affordability, to mainstream the delivery of affordable housing, the government needs to act as an enabler for development and be involved in facilitating investments, promoting public/ private partnerships, and streamlining processes involved in identifying land parcels that are well located and have requisite trunk infrastructure. Efficiency in construction requires expediting clearances at single window, and adequate financing at affordable rates. The need to reinforce post construction maintenance of affordable housing units, is important to avoid creating 'new urban slums'. It is heartening that the Government of India has undertaken a number of steps in this direction in order to catalyze the affordable housing market in India.

This issue of SHELTER addresses some of these aspects of urban development, in the form of articles, interviews and expert opinions. 'My Opinion' highlights the relevance of the New Urban Agenda at the global level and the housing policy of India at a local level. The other experts have covered a range of themes, from housing, water & waste water treatment, child rights to urban migration, disaster preparedness and housing finance. The views of Dr. M. Ravi Kanth highlight the urgency to provide large scale affordable housing solutions. Mr. Rajiv Ranjan Mishra has touched upon the nerve of the real estate sector, by elaborating on the key aspects of RERA and Mr. Kalyanaraman on the need to streamline housing finance to achieve affordability in housing. The case study section contains two interesting projects, one pertaining to urban planning, and the second related to urban design. Dr. Ruchita Gupta examines the social and cultural transformation in urban villages of Delhi while Mrs. Usha Mahavir (et.al.) documents the design features incorporated in the Pilgrim cum cultural centre at Namchi, Sikkim by HUDCO. The Best Practices section has captured the details of the solid waste management practices adopted in Tamil Nadu.

The articles in this volume of SHELTER, provide diverse opinions and insights into a wide gamut of issues, related to housing and urban development in India. I hope that this will add to the body of knowledge on the subject, for policy makers, implementing agencies, industry, academia and practitioners.

INSIDE



Theme

Each Year, we celebrate the World Habitat Day, with a new theme chosen by the United Nations based on current issues. The Themes are selected by the United Nations to bring attention to UN-Habitat's mandate to promote sustainable development policies that ensure adequate shelter for all.

The 2017 Theme, "Housing Policies: Affordable Homes", is a corollary to the earlier theme of housing at the centre. It places the spotlight on two important housing issues, at different ends of the housing spectrum. At one end, the focus needs to be on housing policies that are efficient and effective, as well as sensitive, on the other hand, there is also urgent need for action, especially for provision of affordable homes for those who cannot afford housing.

World over, millions of people live in inadequate shelter, or in a state of homelessness. There is a lack of access to basic services, safe living conditions, or working spaces, which needs to be addressed both at the policy level, as well as the project level.

The theme is very relevant for India as well. Currently, India is poised to revise its national housing and habitat policy, while at the same time, there is a major thrust on affordable housing under the Government of India's massive mission on Housing for All.

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GENERAL GUIDELINES FOR SUBMISSION OF ARTICLES

The following checklist should be used when preparing an article for submission. Please be sure to follow the specifications exactly and completely to ensure that your article is reviewed in a timely manner and any delays avoided further along in the publishing process, should your article be accepted for publication.

1. The paper should be created using a word-processing program (such as Microsoft Word) and should be between 5,000 and 10,000 words in length. The file may be in .docx or .doc format.
2. The paper is typewritten, double-spaced, and formatted to print on 8.5" x 11" (or A4) size paper. It is written in the third person in a clear style, free of jargon.
3. The first page of the article includes the following:
 - i. the paper's title and
 - ii. an approximately 200-word abstract that emphasizes the paper's contribution to the field and its practical architectural/ planning social/ economic implications.
 - iii. the name(s), position(s), professional or academic affiliation(s), and email address(es) of the author (s), as well as the full postal address of the corresponding author;
4. The body of the paper should include the following:
 - i. an introduction to the subject,
 - ii. background information,
 - iii. discussion of procedure,
 - iv. results,
 - v. conclusions,
 - vi. implications for practice and advancement of research,
 - vii. references,
 - viii. acknowledgments (optional; if funding for the research was received from non-personal sources, the sources must be identified in this section), and
 - ix. an autobiographical sketch.
 - x. Declaration that the article is neither published nor under consideration for publication elsewhere.
5. Please ensure that:
 - i. References are complete, have been arranged alphabetically by author surname and checked for accuracy.
 - ii. Reference citations in the text are referred to by author name and year. If there are more than two authors, the name of the first author followed by "et al." has been used.
 - iii. References contain the following information, in the order shown: names of all contributing authors (last name followed by first initial), date of publication, title of article, names of editors (edited books only), title of journal or book, volume and issue numbers (journals only), location and name of publishing company (books only), and inclusive pages (journals and articles in edited books).
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 - a. Large enough to be readable when reduced to fit the journal page size (approximately 5.25" x 8.25").
 - b. A brief caption is provided for each figure/ picture/ graph.
 - c. The figure is cited in the text.
 - d. Please ensure that scanned images are of a high resolution to ensure good quality printing (not less than 640 x 480)
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HOUSING POLICIES: AFFORDABLE HOMES

UN-Habitat India

Focussed mission mode based programmes in addition to comprehensive policy framework for affordable homes and also development of human settlements as sustainable entities, is the hall mark of India's approach to address the issue of human settlement development. Provision of affordable housing with particular focus on weaker sections and lower income groups of the society has remained a priority area of the Government of India.

Contributed by: UN-Habitat India, New Delhi. (Mail to hitesh.vaidya@unhabitat.org)

Access to adequate housing is a global challenge growing fast with urbanization. Around one quarter of the world's urban population continues to live in slums and informal settlements. An increasing number of urban dwellers, especially the poor and vulnerable groups (women, migrants, persons with disabilities and HIV, elder, youth and LGBT) are living in precarious conditions, addressing their housing needs informally, lacking access to basic services and living space, isolated from livelihood opportunities and vulnerable to forced evictions or homelessness. In this context, the United Nations, which has designated the first Monday of October of every year as World Habitat Day, has chosen the theme for World Habitat Day 2017 as 'Housing Policies: Affordable Homes'. The purpose of World Habitat Day is to reflect on the state of our towns and cities, and on the basic right of all to adequate shelter. It is also intended to remind the world that we all have the power and the responsibility to shape the future of our cities and towns through appropriate policies, programmes and actions.

BACKGROUND

By 2030, UN-Habitat estimates that an additional 3 billion people, about 40 per cent of the world's population, will need access to adequate housing. This translates into a demand for 96,000 new affordable and accessible housing units every day, or some 4,000 units every hour. This can only be achieved through designing of appropriate housing and urban policies mixed with judicious programmes. Significant shifts in policies and approaches were observed over a period of time and a wide range of practical applications of the enabling principles took place in different countries with mixed results. But overall the majority of national and local governments are still struggling to meet the housing needs of their respective populations.

Five years ago, India estimated its housing shortage to stand at 18.78 million units (TG-12), 95% of which was in the EWS and LIG segments. While there is reason to believe that this shortage has decreased in the years since, both through private sector delivery as well as the launch of ambitious

government-led programmes such as PMAY, an enormous challenge remains.

The affordability gap created by income inequality as well as an exclusive housing finance system prevents the majority of the urban poor from accessing affordable housing. Accessibility to affordable finance for the weaker sections of the society is still a far cry. In respect of the formal sector (banking and Housing Finance Companies) home loans, between 2012-13 and 2013-14, loans with a loan size of up to Rs. 2 lakh fell from 2% to 1%, those up to Rs. 5 lakh fell from 14% to 9%, and those up to Rs.10 lakh fell from 34% to 26% (National Housing Bank). Thus, there is a scope and necessity for increasing the support to weaker sections on a larger scale in the Indian context.

In addition, India is also faced with the paradoxical situation of having to deal with both a massive housing shortage and, at the same time, 11 million vacant housing units scattered all across the country in 2011. These are serious mismatches which housing policies and programmes can, and must, correct.

THE INTERNATIONAL DISCOURSE - THE NEW URBAN AGENDA AND HOUSING AT THE CENTRE

Adequate housing has been recognized as part of the right to an adequate standard of living in international instruments including the 1948 Universal Declaration of Human Rights

and in the 1966 International Covenant on Economic, Social and Cultural Rights. Adequate housing must provide more than four walls and a roof. A number of conditions must be met before particular forms of shelter can be considered to constitute “adequate housing” including security of tenure; availability of services, materials, facilities and infrastructure; affordability; habitability; accessibility; location; and cultural adequacy.

The adoption of the New Urban Agenda (NUA) at the Habitat III conference in Quito, Ecuador, in October of 2016 provided a roadmap for cities and countries in an increasingly urbanizing world, giving a special prominence to the importance of housing. The Agenda, endorsed by the Government of India, commits to “Leave no one behind [...] by providing equal access for all to [...] adequate and affordable housing”.

The role of policies is further highlighted by the Agenda, committing countries to promote “the development of integrated and age- and gender- responsive housing policies and approaches [...], that incorporate the provision of adequate, affordable, accessible, resource-efficient, safe, resilient, well-connected and well-located housing”. Through the Draft Tenancy Act as well as the upcoming National Urban Rental Housing Policy, the Government of India has already taken on board the New Urban Agenda’s recommendation to

promote “access to a wide range of affordable, sustainable housing options, including rental and other tenure options, as well as cooperative solutions such as co-housing, community land trusts and other forms of collective tenure”.

International human rights law recognizes everyone’s right to an adequate standard of living, including adequate housing. While the vast majority of housing in India continues to be delivered informally, the Government has an opportunity, as well as an obligation, to seek to support both informal and formal delivery of adequate housing by creating enabling environment in which those who deliver, and occupy, homes are able to more easily access land, finance, materials, skills and know-how.

The obligation to do this arises most strongly out of the recognition that investment in housing benefits everybody. Housing plays a fundamental role in economic development, employment generation, poverty reduction and mitigation of vulnerabilities found in cities. Currently, housing construction in India accounts for 1.24% of the total output of the economy, 1% of GDP, and 6.86% of employment, more than 99% of it is informal (NCAER, 2014). Investment in construction (which includes housing) has an employment multiplier of almost 8, meaning that an additional unit of final expenditure in the construction sector generates eight times as many jobs in the economy as a

whole (IIM-Ahmedabad, 2000).

Yet for it to deliver positive outcomes, housing policy and practice requires a fundamental shift. For this reason, India sees value in the “Housing at the Centre” approach proposed by UN-Habitat. Under this approach, policies should, first, place people and human rights at the centre, to improve living conditions and create neighbourhoods where people can live in dignity and peace. Second, the issue of housing must be placed at the centre of national urban policies, in order to contribute to socioeconomic development. Third, housing should be at the centre of urban development and planning, along with the supply of land, infrastructure and finance.

These are tenets which the Government of India has incorporated into its policy-making and programme design for many years, but which can only benefit from being brought into the forefront of our minds, again and again.

Lastly, the aspirations of many of the goals of the 2030 Agenda for Sustainable Development, not only its most prominent urban one, SDG 11, will influence and will be influenced by the adequate delivery of housing and its necessary services and impacts. SDG 6 (clean water and sanitation), SDG 7 (energy), SDG 8 (inclusive economic growth), SDG 9 (resilient infrastructure), SDG 12 (sustainable consumption and production), and SDG 13 (climate

change) have an inherent housing dimension, while other goals, such as SDG 1 (poverty eradication), SDG 5 (gender equality) and SDG 10 (reduced inequalities), can hardly be achieved, unless we deliver adequate housing to those most in need.

In tandem with the SDGs, India has also committed to the Paris Agreement and the reduction of “the emissions intensity of its GDP by 33 to 35% by 2030” compared to 2005 levels. In this regard, housing will play an important role in reducing emissions, as India embarks on constructing millions of homes, and more and more Indians are able and willing to afford energy for heating, cooking, lighting, and cooling.

While India’s Intended Nationally Determined Contribution (INDC) highlights several building-related policies including the mandatory use of fly ash within a 100km radius of thermal power plants, and the reference to the Energy Conservation Building Code (ECBC), central and state governments need to do more. It is not enough to only subsidize the capital expenditure for the home itself. One also needs to consider the decades of home use during which it will be low-income families dealing with potentially exorbitant running costs affecting their personal well-being and economic development. Passive design, mandatory high-efficiency cooling systems and the convergence of PMAY with the National Solar Mission to provide rooftop photovoltaic cells to every

residential building in India are not luxuries but imperatives.

INDIA’S UPCOMING NATIONAL URBAN HOUSING AND HABITAT POLICY 2017

Provision of affordable housing has been a priority area of action in India, and the approach to the same has been guided through a comprehensive policy framework. First National Housing Policy in India was initiated in 1988, which was revised and approved by the Parliament of India in August 1994. Further, in July 1998, a new National Housing & Habitat Policy was announced with some landmark initiatives like involvement of multi-stakeholders including public private partnerships, repeal of Urban Land Ceiling Act, permitting Foreign Direct Investment in housing and real estate sector, etc. All these policies were generic and applicable to both rural and urban areas. Taking into account emerging challenges of required shelter and growth of slums in urban areas, the first ever urban areas specific National Urban Housing and Habitat Policy, 2007 was announced in December 2007 with the prime goal of ‘Affordable housing for all’. The Policy sought to earmark land for EWS/LIG groups in new housing projects for provision of affordable housing for this segment of the population.

In tune with the emerging trends in the housing sector and towards addressing the requirements in a more comprehensive manner

particularly focusing on planning and design approaches in alignment with the local and global agenda of Sustainable Habitat Development and New Urban Agenda, the Ministry of Housing and Urban Affairs, Government of India is currently engaged in a wide range of consultations to revise the National Urban Housing and Habitat Policy 2007. This major and comprehensive effort would go a long way in evolving a framework for addressing housing as part of habitat development, for sustainable development of human settlements at large.

The policy is intended to fulfil multiple functions for different groups. For citizens, this policy shall be a tool to hold government accountable, ensuring that it fulfils its role as facilitator, enabler, and, in some cases, direct provider of subsidized housing, basic urban infrastructure and liveable communities. NGOs and civil society will see their important contributions highlighted and recognized, both in the documentation and dissemination of good practices, the coordination of citizens' supervisory functions of government performance, the implementation of this policy at the community level, and in assisting citizens in the social production of habitat, which continues to be the primary mode of housing delivery in India.

For the private sector and investors in particular, this policy is intended to be an assurance of the government's commitment to addressing the undeniable

structural, legislative and regulatory challenges inherent in India's housing sector and the risks these pose to sustainable investments, the profitable development of adequate formal housing and the long-term maintenance of assets.

Urban Local Bodies, Development Authorities and Housing Boards are envisioned to deliver the government's urban vision and act as the first point of contact for citizens. For representatives of local government, this policy is intended to outline how, through its national missions and legislation, central government intends to support local efforts to build capacity, increase transparency and accountability towards citizens, simplify regulatory processes, and coordinate an often complex set of local, state and central-level agencies.

For State Governments, the present policy is intended to provide a template upon which to model state-level policies, objectives and actions. The policy has been drafted in a spirit of cooperative federalism, recognizing the authority of state governments for urban development in India, but also the central government's role in facilitating knowledge-exchange and providing the enabling environment through laws, regulations and its national missions.

For the Central Government, in particular Ministries and parastatals whose portfolios

operate within the urban realm, the policy is intended to guide, clarify, and inspire a collective vision of India's urban future. The urban reality has become so apparent that there is almost no arm of government unaffected by urban, peri-urban or rural-urban concerns, making effective geographic and social convergence of programmes and funds all the more crucial.

The National Urban Housing and Habitat Policy 2017 will require a monitoring framework at State/UT level, to periodically review the implementation of the Policy and concomitant Action Plans, with cities to prepare 15-20 years perspective plans. Given the concomitant monitoring requirements India has committed to under the 2030 Agenda for Sustainable Development, the development of the National Housing and Habitat Policy 2017 offers us an opportunity to comprehensively address this issue.

AFFORDABLE HOMES – INDIA'S APPROACH AND PERSPECTIVE

Focussed mission mode based programmes in addition to comprehensive policy framework for affordable homes and also development of human settlements as sustainable entities, is the hall mark of India's approach to address the issue of human settlement development. Provision of affordable housing with particular focus on weaker sections and lower income groups of the society has remained a

priority area of the Government of India. India's approach has been to put in place a comprehensive package covering affordable & adequate financing, appropriate planning, efficient designs and use of technologies, that together can make housing for all a reality. The emphasis has been to advocate appropriate options to bring down the cost of construction through adoption and promotion of modern, innovative, green and cost-effective building materials and technologies.

Launch of the 'Pradhan Mantri Awas Yojana (PMAY) – Housing for All programme, both in urban and rural areas on a mission mode has been a significant step indeed. The PMAY – Urban programme incorporates a variety of approaches to facilitate housing for all sections, for individuals who may or may not have land and the slum households, either individually or through collective public private participation mode, and also by enabling access to concessional finance. The unique Interest Subsidy programme offering upfront interest subsidy for economically weaker sections, low and middle income groups is an effort towards improving the access to affordable finance to the needy.

In addition, a number of recent initiatives that envisage promotion and development of human settlements as inclusive and sustainable entities, that include the Smart Cities Mission for 100 cities on competitive mode, the Atal Mission for Rejuvenation & Urban Transformation in

500 cities, the Swachh Bharat Mission (AMRUT) for all cities, the National Heritage City Development and Augmentation Yojana (HRIDAY) for 12 cities - all envisage integrated and comprehensive development of the urban areas to make them self sustaining, clean, green and sustainable entities. The Real Estate (Regulation & Development) Act-2016 envisages promoting transparency and accountability in the real estate sector. Special effort is on to promote extensively the rental housing through appropriate policy interventions so that availability of house is not a constraint for the workforce to effectively contribute for the urban economy. It is also heartening to note that India has already launched a Rural Urban Mission for promoting rural-urban continuum, to promote and strengthen the complementarity of the rural-urban settlements for mutual advantage.

With participatory and coordinated efforts of governments at different levels and with different stakeholders in the ecosystem such as development finance institutions, private sector and civil society in the design, finance and implementation of the policies and programmes, India is striving towards delivery of 'adequate, affordable, accessible, resource-efficient and safe housing' for all the citizens and also sustainable development of human settlements at large.

Under the 2030 Agenda for Sustainable Development, India

is committed to the development of the National Housing and Habitat Policy 2017 that offers a not-to-be-missed opportunities for addressing this issue.

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Endnotes

One of the first references to the right to adequate housing is in article 25 (1) of the Universal Declaration of Human Rights. The International Covenant on Economic, Social and Cultural Rights, widely considered as the central instrument for the protection of the right to adequate housing, refers to the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions (art. 11).

IS URBAN PLANNING IN INDIA EXCLUSIONARY?

The Case for Inclusionary Zoning and Housing in India

DR. ALOK KUMAR MISHRA

Inclusionary Zoning (IZ), alternatively called Inclusionary Housing (IH) has emerged as a dominant paradigm to address the affordable housing needs of the poor in cities. IZ/IH refers to a range of land use policies that aim at capturing the gains from rising land and property values due to urban planning and development. The gains captured are used for creating affordable housing for low- or moderate-income groups.

JEL codes: O18, R31, R51

Keywords: Inclusionary zoning, Affordable housing, Exclusionary urbanization, Planned urban development.

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Both research and practice suggest that inclusionary zoning is a desirable way of creating affordable housing and workplaces for the urban poor and fostering social inclusion by capturing resources created through the marketplace. It works, if designed well. It can be a profound means of securing affordable housing for the low income population within new private market residential developments. However, while urban planning in India has tended to be exclusionary, inclusionary zoning has not been adopted as a paradigm excepting in Gujarat. It is in this context that the paper aims at drawing lessons from theoretical and empirical research for designing an inclusionary zoning and housing programmes to achieve the goals of Housing for All Mission – Prime Minister’s Awas Yojana (PMAY). The findings of this research suggest that the inclusionary zoning programmes can operate well when urban land and housing markets are booming. New developments must pay for the impacts they create including those for affordable housing.

INTRODUCTION

This paper is an attempt to address the potential issues of residential exclusion of the poor, including the slum dwellers in Indian cities through the

technique of Inclusionary Zoning (IZ) and Inclusionary Housing (IH). The IZ/IH is an emerging and the dominant paradigm for the promotion of affordable housing to low income population in several countries of the world. However, the instrument is yet to be adopted in India in an appreciable way. A key Motivation for the paper stems from the goals of Pradhan Mantri Awas Yojana (PMAY), launched by the Government of India in 2015, aimed at ‘Housing for All by 2022’. The Mission is a bold attempt to address the housing needs of the Economically Weaker Sections (EWS) and the Low Income Groups (LIG). These segments jointly account for 95.7 percent housing shortage in India, estimated at 18.78 million in 2012 (MoHUPA, 2012). A major bottleneck in providing affordable housing to EWS and LIG segments is the lack of suitable, litigation-free, reasonably-serviced urban land, located at a reasonable commuting distance from their workplaces. This is attributable to the exclusionary urban planning process that Indian cities have adopted based on the concept of the ‘master plan’. The master planning paradigm, borrowed from the 1947 Town and Country

Planning Act of the United Kingdom adopts the space norms of the middle class in the city. It is formal and ignores the needs of the poor and marginalized groups as a result of which they are completely weeded out of the formal urban land markets. It is said that the master plans of cities in India have mastered over the poor and led to a regime of exclusionary urbanization in the past (Mohanty,2016). The solutions to the problems of exclusion in cities call for a multipronged strategy including reforms in the current system of land use zoning and planning.

While governments around the world have adopted public housing programmes, housing subsidy, income grant and rental housing assistance programmes to address the problems of affordability of housing, the issues of serviced land universally remain critical. This is particularly so in developing countries such as India. In this regard, while recognizing the limitations of government, innovative attempts are increasingly being made to promote private developer-led affordable housing through inclusionary methods. Inclusionary Zoning (IZ), alternatively called Inclusionary Housing (IH) has emerged as a dominant paradigm to address the affordable housing needs of the poor in cities. IZ/IH refers to a range of land use policies that aim at capturing the gains from rising land and property values due to urban planning and development. The gains captured are used for

creating affordable housing for low- or moderate-income groups. IZ policies link affordable housing to land use zoning for construction of residential or commercial real estate at market rate.

A study of the literature suggests that there are contradictory views on the economic impacts of IZ as an instrument for providing affordable housing to very low, low, or moderate-income households. Generally economists contend that any form of control on housing or house rent is distortionary from a resource allocation point of view as it reduces the quantity and quality of housing. They argue that price control leads to shortage in supply and discourages production. Some economists regard inclusionary zoning as a form of rent control that imposes price restriction on a proportion of new development, requiring builders to sell or rent the so-called 'affordable' units at below-market-rates. The units are required to retain such price control for a specified period of time. For example, in California, United States this period is typically 55 years or more. Some economists hold the view that the imposition of price control on a part of new development will not discourage production as much as price control on the whole development, but it will discourage development nonetheless. By acting as a tax on development of housing, it will raise the price of non-price-controlled housing and thus decrease the amount of new housing.

The arguments against inclusionary zoning run as follows. IZ leads to the creation of two markets for new homes: price-controlled or below-market-rate houses and non-price-controlled or market-rate houses. The price-controlled portion of the market will have many characteristics of markets with rent control such as shortages and discouragement of production. IZ mandates that if builders want to produce non-price-controlled units, they must also provide a certain number of price-controlled units. This implies that unless the 'affordable' units are subsidized by governments or some private charity, the price-controlled units will become an economic burden on the development. When subsidies do not cover the costs of below-market-rate units, IZ will act like a tax on market-rate development or on housing construction.

IS URBAN PLANNING IN INDIA EXCLUSIONARY?

India's urban population increased from 286 million in 2001 to 377 million in 2011. Class I cities with population of 100,000 or more, numbered 468 in 2011. They accounted for more than 70 percent of the urban population. The number of million-plus cities was 52 in 2011; the share of these cities in urban population stood at around 43 percent. With an estimated rural population of 860 million in 2014, the country would still have 810 million in rural areas in 2050 (United Nations 2015). Thus, India would have to confront the

dual challenges of urban and rural development for many decades. These challenges will include housing, infrastructure, basic services and employment in cities and towns prominently. Ironically, it is the cities that have to take up the responsibility of raising resources to address the concerns of rural development and poverty alleviation. They constitute the tax bases of all levels of government: central, state and local.

State of Housing

Table 1 depicts the state of urban housing in India as of 2011 – urban areas as a whole versus slums. Table 2 compares the percentage of households in cities and towns by the number of rooms. As it reveals, 4.4 percent of households in slums have no exclusive rooms as against 3.1 percent for urban areas as a whole. As high as 44.8 percent of households in slums and 32.1 percent urban households in India reside in single room tenements.

The shortage of housing in urban areas has been officially estimated in 2012 through an expert committee set up by the Ministry of Housing and Urban Poverty Alleviation, Government of India under Prof. Amitabh Kundu at 18.78 million. 17.96 million or 96 per cent of this pertains to Economically Weaker Section (EWS) and Low Income Group (LIG) categories (MoHUPA 2012). Table 3 presents the distribution of urban housing shortage in India by category of households. As the table shows the bulk of the housing shortage in India pertains to the economically weaker sections of

the society (56%) followed by low income groups (39.4 percent).

Table 1 : State of Urban Housing in India 2011: Distribution of Households by Type of Dwelling

Type of Dwelling	% of Households	
	Urban	Slum
Permanent	84.3	77.7
Semi-Permanent	11.6	16.0
Temporary	3.2	5.3
Any Other	0.9	1.0
Owned	69.2	70.2
Rented	27.5	26.3
Others	3.3	3.5

Source: Census of India 2011

Table 2 : State of Urban Housing in India 2011: Distribution of Households by Number of Rooms

No. of Rooms	% of Households	
	Urban	Slum
No Exclusive Room	3.1	4.4
One Room	32.1	44.8
Two Rooms	30.6	29.5
Three Rooms	18.4	12.3
Four Rooms	9.3	5.4
Five Rooms & Above	6.5	3.5

Source: Census of India 2011

Table 3 : Distribution of Urban Housing Shortage in India 2012

Category	Distribution of Housing Shortage	
	Number (in Million)	Percentage (%)
Economically Weaker Sections (EWS)	10.55	56.18
Low Income Group (LIG)	7.41	39.44
Middle Income Group (MIG) and above	0.82	4.37

Source: Ministry of Housing & Urban Poverty Alleviation, Government of India

State of Civic Services

Table 4 presents the state of civic services in India – urban vs. slums. The slum-dwellers in the country are subject to not only a lack of decent housing, but also clean water, sanitation, public transport, education, health care and social security. According to National Family Health Survey III data (2005-06), rank far worse than the rural poor in several health indicators.

State of Urban Poverty

The Rangarajan Committee has estimated the percentage below poverty line in urban areas in 2011-12 at 26.4 percent as against 13.7 percent arrived at by the Tendulkar Committee (see Table 5). As per Rangarajan Committee, a person spending less than Rs.1407 per month or Rs.47 a day was considered poor in cities, compared to Rs.1000 per month or Rs.33 a day adopted by the Tendulkar Committee (Planning Commission 2009, 2014). While expert committees in the past have defined poverty based on monetary criteria, it is non-monetary parameters capturing multiple vulnerabilities of the urban poor such as residential, occupational and social, that distinguish urban poverty from rural poverty. Slums epitomize these deprivations and present the worst form of poverty. The lack of security of tenure makes many slums “illegal” and highly vulnerable to eviction by municipal authorities in the name of the master plan, city modernisation drive and national and international events. Also, many slums, located in hazardous and eco-fragile areas are prone to natural and man-made disasters. Residential exclusion lies at the heart of urban poverty.

Paradoxically, the Census data reveal that 9 percent houses remained vacant in 2001 while the figure rose to 10.1 percent in 2011 (Table 6). More than 75 percent of the census houses belong to the residential category (Table 7). The vacant houses presumably belong

Table 4 : *State of Civic Services in India 2011*

Civic Service	% of Households	
	Urban	Slum
Access to Tap Water	70.6	74.0
Drinking Water within Premises	71.2	56.7
Electricity as a Source of Lighting	92.7	90.5
Bathroom Facility	87.0	81.0
Access to Closed Drainage	44.5	36.9
Open Drainage	37.3	44.3
No Drainage	18.2	18.8
Latrine within Premise	81.4	66.0
With Water Closet	72.6	57.7

Source: Census of India 2011

Table 5 : *India: Rural and Urban Poverty Estimates 2009-10 and 2011-12*

Year	Poverty ratio (%)			No. of poor (million)		
	Rural	Urban	Total	Rural	Urban	Total
Expert Group (Rangarajan Committee)						
1. 2009-10	39.6	35.1	38.2	325.9	128.7	454.6
2. 2011-12	30.9	26.4	29.5	260.5	102.5	363.0
3. Reduction	8.7	8.7	8.7	65.4	26.2	91.6
Expert Group (Tendulkar Committee)						
1. 2009-10	33.8	20.9	29.8	278.2	76.5	354.7
2. 2011-12	25.7	13.7	21.9	216.7	53.1	269.8
3. Reduction	8.1	7.2	7.9	61.5	23.4	84.9

Source: Planning Commission (2014): Report of the Expert Group to Review the Methodology for Measurement of Poverty

to the high and middle income people, including non-resident Indians. Outdated rent control regimes followed by some states discourage home-owners to rent

out their houses due to difficulty in evicting the tenant when needed and due to the fear of prolonged litigation.

Table 6 : *Urban India: Occupied and Vacant Census Houses 2001 and 2011*

Use of Occupied Census Houses	2001		2011	
	Census Houses	Percentage share	Census Houses	Percentage share
Total number of Census Houses	71,558,356	100.0	110,139,853	100.0
Occupied Census Houses	65,106,336	91.0	99,046,223	89.9
Vacant Census Houses	6,452,020	9.0	11,093,630	10.1

Source: Census of India

Table 7 : *Urban India: Use of Occupied Census Houses 2001 and 2011*

Use of Occupied Census Houses	2001		2011	
	Census Houses No.	Percentage Share (%)	Census Houses No.	Percentage Share (%)
Total Number of Occupied Census Houses	65,106,336	100.0	99,046,223	100.0
Residence	50,222,963	77.2	76,134,214	76.9
Residence-cum-other use	1,839,755	2.8	2,350,765	2.4
Non-residential	13,043,618	20.0	19,833,779	20.0
Shop/Office	7,823,575	12.0	10,696,735	10.8
School/College etc.	273,231	0.4	404,482	0.4
Hotel/Lodge/Guest house etc.	254,635	0.4	377,149	0.4
Hospital/Dispensary etc.	263,604	0.4	323,032	0.3
Factory/Workshop/Workshed, etc.	1,224,283	1.9	1,496,966	1.5
Place of worship	416,135	0.6	593,440	0.6
Other non-residential use	2,788,155	4.3	5,941,975	6.0
Occupied locked census Houses	-	-	727,465	0.7

Source: Census of India

The data presented above suggest that the urban planning process in India has favoured the production of serviced land and housing for the well-to-do and neglected the allocation of space – land and housing for the urban poor. The process needs to be reformed.

AFFORDABLE HOUSING FOR ALL MISSION

The objective of National Mission for Urban Housing or “Housing for All by 2022” is to construct two crore affordable homes over a period of 7 years from 2015 to 2022. The target beneficiaries are

poor people belonging to EWS and LIG categories, with special focus on women, Scheduled Castes and Scheduled Tribes. The Mission provides for four options to beneficiaries, Urban Local Bodies (ULBs) and State Governments. These are as follows:

- *In-situ slum redevelopment* is based on using land as a resource where ULB and State Government will provide land free of cost, especially in slums. Private developers will construct affordable houses for slum-dwellers on one part of the land and housing units for commercial sale in the market on the remaining part. State and city governments can give some financial concessions or additional Floor Area Ratio (FAR) and Transferable Development Rights (TDR) to make projects financially viable.
- *Credit-linked Subsidy Scheme* is a demand side intervention. In this, the beneficiaries of EWS and LIG categories, who are seeking home loans, will get an interest subsidy at the rate of 6.5 percent for tenure of 15 years or tenure of the loan, whichever is lower, for loan amount of 6 lakh. This

has been extended to include MIG-I & MIG-II categories where 4% & 3% interest subsidy given for a loan up to Rs 9 lakh and Rs 12 lakh respectively

- *Affordable housing in Partnership* is a supply side intervention. In this, the supply of affordable housing can be increased through private developers, public-private or inter-governmental partnerships. The program shall reserve 35 percent of houses for EWS and the minimum project size shall be above 250 houses. Each EWS house will be given Rs 1.5 lakh on an average as central assistance.
- *Beneficiary-led individual house construction or enhancement:* Under this component, the beneficiaries belonging to EWS/LIG sections will get assistance to either construct

new houses or enhance existing houses on their own. Beneficiaries will be those who are excluded from any other component under the Mission. The maximum assistance per unit under this programme is Rs.1.5 lakh.

Lessons from JNNURM

The implementation of the Housing for All Mission involves many challenges, given the experiences of the earlier national level initiatives such as Basic Services for the Urban Poor (BSUP) and Integrated Housing and Slum Development Programme (IHSDP) components under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). Table 8 presents a summary of the progress of projects under BSUP and IHSDP as on 5th Oct. 2016. Only 13 percent and 10 percent of total project under BSUP and IHSDP were completed respectively by this date.

Table 8 : Summary of Progress of Projects under BSUP and IHSDP as on 5 October 2016

Particulars	BSUP	IHSDP	Total
States	32	33	35
Cities/towns	62	881	943
Final project approved	478	1030	1508
Projects completed	66 (13%)	109(10%)	175 (11%)
Projects ongoing	419	921	1340
Final number of dwellings approved	788969	451999	1240968
Dwellings unit completed	675495	365293	1040788
Dwelling units occupied	544317	322801	867118

Source: Ministry of Housing & Urban Poverty Alleviation

The completion rate of JNNURM housing projects is poor for most states. This calls for introspection into the strategy of JNNURM. Some of the key lessons from JNNURM are as follows.

Firstly, the affordable housing problem is huge and cannot be solved by government alone. Secondly, there is an acute scarcity of serviced land to take up affordable housing. Thirdly, the ever-increasing urban population fueled by migration and reclassification of rural areas into urban, makes it almost impossible to plan for the future of cities and implement housing by securing finance. Estimation and identification of migrants and new residents constitute a very big challenge. Fourthly, as in the case of JNNURM, lack of matching funds from State Governments and cities, poor planning and implementation capacity, red-tapism, rent-seeking, and lack of incentive and motivation on the part of the local official machinery pose significant problems. Fifthly, while strategizing affordable housing and implementing slum redevelopment programmes, permission is required from a number of departments and authorities. Coordination is a huge task in programme implementation. Lastly, the biggest drawback in all the urban missions of the Government is that schemes are conceived disjointedly, but the poor need integrated programmes to enable them to escape from the clutches of poverty, which is multi-dimensional. The toughest

challenge for “Housing for All by 2022” is the availability of serviced land for affordable housing for the poor at suitable locations in large cities. The solutions to the above problems call for a multi-pronged strategy including public-private partnerships and reforms in the system of land use zoning and planning.

INCLUSIONARY PRACTICES FOR URBAN DEVELOPMENT IN INDIA

To address the problems of the housing market due to increased urbanisation and rising demand for affordable housing, the Central as well as State Governments in India have made inclusionary efforts from time to time – some successful, some unsuccessful and some with mixed success. The primary method of addressing the problem is subsidized housing programmes. Limited efforts are also made to cater to the root cause of the lack of affordability, which is rooted in the operation of urban land markets and inadequacies in the master planning system. There have been attempts to incorporate inclusionary zoning/housing considerations into national and state housing policies and programmes. However, private sector-led initiatives as envisaged by the Central and the State Governments under policies have not shown the desired success. Some promising reforms aimed at making urban planning and development inclusive, include the inclusionary zoning practice of land reservation for socially

and economically weaker sections as done in the Gujarat Town Planning Scheme. Policy announcements made by the Delhi Development Authority to promote land availability for affordable housing with approval of the Government include the Delhi Land Pooling Policy and the Delhi Transit Oriented Development Policy. Policy of Rajasthan Government to promote affordable housing through various models, pioneering effort by the Government of Madhya Pradesh for assignment of permanent and temporary pattas to slum dwellers under the Patta Act, and recent initiative by the Government of Telangana State to regularize government land under the occupation of slum-dwellers and the poor in cities and towns are some other examples worth emulating.

Some of the inclusionary initiatives taken up by the Government of India and State Governments are presented in Box 1.

Some Observations

A study of these initiatives lead to the following observations:

1. The programmes have failed to recognise the importance of rental housing in the affordable housing market. Large sections of the society cannot afford or do not want to own a house, even if they are available at very low prices including subsidises.
2. State and local governments have not seriously pursued the concept of inclusionary

zoning and inclusionary housing, although the same is articulated in national policies and programmes. Such practice is being increasingly pursued in developed countries to provide affordable housing to lower income groups along with social inclusion.

3. The main focus of programmes has been on the construction of new ownership houses and none has focused on the already-existing stock, including those languishing for lack of maintenance and those in the form of vacant houses not utilised in any form. No steps are taken to investigate the reasons for vacancy and also to make sure that this does not happen. Issues of rent control that dissuades building of rental housing are not addressed.
4. The over-emphasis on subsidies for affordable housing was the common feature in all the programmes. Some provided subsidies to developers, some to consumers and some to both. Subsidies are important to ensure the affordability of housing, but the chances of subsidies being mis-utilised are high.
5. It is very hard to find out whether the targeted population is getting the benefits of affordable housing or not. Location of project and provision of infrastructure

services, especially transportation are the key issues. The identification of beneficiaries is a weak point in all the programmes and there is no easy way to link the identity of the beneficiary with income level.

PROMOTING INCLUSIONARY ZONING AND HOUSING IN INDIA

Over the years, the practice of Inclusionary Zoning (IZ)/ Inclusionary Housing (IH) has gained momentum in many countries across the world – United States, United Kingdom, Australia, France, Spain, Canada, South Africa, Israel, New Zealand, Colombia, Malaysia, Netherlands, Italy, etc. (Calavita and Mallach 2010). The United States and Canada have adopted decentralized land use regulation at state or provincial level for inclusionary housing; Ireland and Spain centrally mandate it; England and France centrally enable its use; and Italy prompts inclusionary housing as a local initiative. Many cities around the world have witnessed positive results in terms of affordability of housing and fostering racially and socio-economically integrated communities, promoting social cohesion and getting rid of exclusionary practices. Around 500 municipal jurisdictions in the United States have embraced inclusionary housing (IH) policies, requiring developers of new market-rate real estate to provide affordable housing to

lower income groups at below-market-rate.

Traditionally, the private sector has maintained the position that the government should provide affordable housing to the weaker sections of society and the private sector has nothing to do with such welfare programmes. But as the failure of the market in providing land and housing to vast sections of the urban poor became clear and inability of the governments to correct for the failure of land and housing markets also became obvious, IZ/IH paradigms have gained momentum. With the neo-liberal policies, the private sector was also expected to help the government in addressing the pressing needs of affordable housing in India. As expected, first there was a negative response from the private sector which did not want to sacrifice its own profit for the welfare of the society. But later on, some changes have been seen in the approach of private developers towards affordable housing. It is observed that private developers are not always pushed into this sector; there are a number of pull forces also. When the government provides incentives to the private sector to “offset” costs of inclusionary housing, the pull factors become stronger. The push factors which restrain the participation of the private sector in the affordable housing market include lengthy approval procedures, high cost of development, rigid planning, etc. While it would be unrealistic to expect developers to champion

Box-1 : India: Inclusive Practices for Affordable Housing to the Urban Poor

Security of tenure to slum-dwellers: Patta Act in Madhya Pradesh; Land regularisation scheme, Telangana State.

Regulation to promote inclusive and integrated new townships: Gujarat and Andhra Pradesh.

Land banking: Pooling and allocation of encroached and un-encroached state government/ municipal land, including urban ceiling-surplus land for housing the urban poor: Gujarat, Andhra Pradesh, Telangana State, Madhya Pradesh, and Chhattisgarh.

Inclusive land use zoning: Reservation of land for EWS and LIG segments in plotted developments, e.g. 5 percent for EWS and 5 percent for LIG in Andhra Pradesh.

Reservation for EWS/LIG Houses in Group Housing Schemes: Hyderabad, Madhya Pradesh, Chhattisgarh, Delhi and Kolkata (PPP Model).

Reservations of land for housing poor in planned urban development: Under land pooling/ readjustment policy through the Town Planning Scheme in Gujarat, up to 10 percent of developable land is reserved for Socially and Economically Weaker Sections (SEWS). The new Land Pooling Scheme of Delhi Development Authority also stipulates reservation of housing for the poor based on zoning incentives provided to development entities, including significantly higher Floor Area Ratio (FAR).

Transit-oriented development: The new Transit Oriented Development Policy of Delhi Development Authority reserves housing for the poor in TOD zones, subject to significantly higher Floor Area Ratio (FAR).

Mandatory quarters for community service personnel in all HIG colonies/Integrated-inclusive new townships: Master Plan for Delhi – MPD-2021.

Reservation in FSI in Master/Zonal/Local Area Plans/Layouts: Minimum 15 percent of FAR or 35 percent of dwelling units, whichever is more for community service personnel/ EWS and LIG in Group Housing: Master Plan for Delhi – MPD-2021.

Transferable Development Rights (TDR) and Accommodation Reservation (AR): Maharashtra.

Incentive FSI for housing to project-affected persons (PAPs), Rental housing, Slum rehabilitation under Slum Redevelopment Scheme (SRS) and other housing programmes under JNNURM (BSUP and IHSDP): Mumbai, Nagpur and Pune.

Premium Floor Space Index (FSI): Hyderabad.

Farmer as equity-holder in new townships: Gujarat, Magarpatta city (Pune, Maharashtra), Amaravati (new capital of Andhra Pradesh).

Return of a percentage of acquired land to land-owners after development: City and Industrial Development Corporation (CIDCO), Mumbai and Jaipur.

Land acquired by Government placed as equity in the development of housing with reservation for affordable housing – Kolkata (PPP).

Urban Renewal: 1/3rd-1/3rd-1/3rd rule in urban renewal projects - 1/3rd for housing the poor, 1/3rd for conservation and 1/3rd for development (Supreme Court Ruling in Mumbai Textile Mills Case)

Contribution by developers towards Shelter Fund: Madhya Pradesh, Chhattisgarh, Delhi.

Fiscal incentives (e.g. concessions in taxes/development charges, etc.) to Developers for EWS/LIG Housing: Andhra Pradesh.

Basic Services to the Urban Poor (BSUP): Fund to leverage resources for housing and basic services to the urban poor – with contribution from select taxes and charges such as Vacant land tax, Property tax, Transfer of property tax, Land use conversion tax/charge, Development charge, Betterment levy, etc.: Andhra Pradesh, Telangana State.

Source: HUDCO Chair Programme, University of Hyderabad-HSMI (2016)

policies that increase their costs or administrative burden, they can be supportive of inclusionary housing for a number of reasons when such programmes minimize disincentives and maximize incentives to the developers, taking into account the various push and pull factors.

India has attempted inclusionary zoning and housing through national policies and programmes. The National Urban Housing & Habitat Policy (NUHHP), 2007 stipulated that 10-15 percent of the land in every new public/private housing projects or 20-25 percent of Floor Space Index (FSI), whichever is greater be reserved for EWS/LIG housing. The Jawaharlal Nehru National Urban Renewal Mission also prescribed for reserving at least 20-25 percent of developed land in all housing projects (both public and private) for EWS/LIG categories with a system of cross-subsidization.

In spite of the laudable intentions, a study of states/cities suggests that the national stipulations have not been implemented in practice and the JNNURM reforms have not met with success. This is because they did not link incentives and cost offsets to developers. The cases of Gujarat Town Planning Scheme (TPS) and Vijayawada Land-sharing Model are, however, exceptions. The real problem in NHHUP-2007 and JNNURM is that the economics of IZ/IH has not been taken into account. International experience suggests that developers cannot

be asked to provide affordable housing without exploring the economics of their projects. It is worth noting that the developed countries provide incentives to land and housing developers such as upzoning, density bonus, lower parking requirement, fast track permission, relaxation of design standards, etc. to make them adopt inclusionary housing. Financial incentives and subsidies like below-market rate construction loans, tax-exempt bonds, mortgage financing, etc. are also provided to developers of affordable housing by governments in these countries. Without adequate incentives to developers, inclusionary housing programmes will not succeed. Incentives are a must and these must be designed and incorporated into programmes. The Gujarat and Vijayawada cases clearly reveal the value of design. IZ/IH can be promising when a value increment financing framework is embraced - under which both developers and the low income segments gain.

Gujarat Town Planning Scheme

An excellent model of inclusive and self-financed urban development in India is adopted by Gujarat through the Town Planning Scheme (TPS). Gujarat, using the TPS as a principal method of land assembly, has undertaken planned development and expansion of cities for more than 50 years in accordance with the demands of inclusive urbanization. Gujarat Town Planning and Urban

Development (GTPUD) Act, 1976 envisages urban planning in two steps. First, a Development Plan (DP) is prepared for a designated development area. Second, the DP is implemented through the mechanism of Town Planning Scheme (TPS) for constituent smaller areas. The broad development vision, direction to the development of the city and the new areas to be included in the plan are indicated in the DP. The designated area is divided into smaller areas of approximately 100-200 hectares, each involving 100-250 landowners. Each of these smaller areas is called a TPS. The TPS model uses land pooling to promote planned urban development. The concept is carried out without the compulsory land acquisition and without straining the public exchequer. After the development of roads and public amenities on a self-financing basis, a major portion of the land is returned to the land-owners. Recently, Andhra Pradesh has adopted the Gujarat model of TPS through AP Land Pooling Scheme for building its new capital at Amaravati.

Land-sharing Model, Vijayawada

The Government of Andhra Pradesh, assembled 226.54 acres of land under the jurisdiction of Vijayawada Municipal Corporation through the innovative instruments of land pooling/sharing at Gollapudi and Jakkampudi villages for inclusive urban expansion. Under the Basic Services to Urban Poor (BSUP)

component of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), 40 percent of the assembled land was allocated for housing the poor and low-income segments. This was done by establishing a partnership between land-owning farmers and the State Government. After the land use conversion for urban use, layout approval and plotted development, 60 percent of the land was returned to the land-owners. The internal and the external infrastructure facilities provided by the municipal/government authorities in the designated area are completely free of cost. The land sharing model proved to be a win-win situation for both land-owners as well as the Government.

CONCLUSION AND REFORM AGENDA

Inclusionary zoning is a must for India. Indian cities have poor and low income groups in majority and hence cities must be designed for the lifestyles of such segments and not on the space norms. The poor are attracted to cities for jobs and therefore they need space near their work place. Thus, inclusionary zoning is inevitable. This could be promoted in three ways. The first is to provide for land reservation for socially and economically weaker sections as in Gujarat Town Planning Scheme. The second could be to impose a modest IH requirement within the existing zoning framework, where the developer bears the cost of subsidizing to the extent

he is compensated in the form of cost offsets and incentives. The third way could be to link IH with significant upzoning of either particular areas or larger areas in order to gain from the principle of land value recapture. The adoption of IZ/IH on a large scale in India would require a larger policy shift in which developers will have to shoulder a part of the wider social costs of development. Local authorities also need to contribute by removing the hurdles that block developers from producing a “fair share” of affordable housing. Affordable housing problems in metropolitan cities like Mumbai have to be solved by developers of Mumbai rather than by Government, as metropolitan cities have the ability to be self-dependent due to their strong agglomeration economies and rising land values and are not dependent on Government subsidy. In smaller cities, the Government can intervene and bear the cost of providing houses to EWS/LIG at lower than market rate.

Putting the needs of the poor on the urban planning agenda is not an easy task. Urban planning tools are rigid, slow and complex processes. There are a lot of technical, legislative and governance-related difficulties that come in the way of effective implementation of inclusionary zoning. Financing is also a key issue. Private participation is conditional on economic situation and profit prospects; additional subsidies are usually required

for the effective development of housing for low-income households. A robust legal framework, an appropriate definition of basic parameters based on rigorous studies of needs, effective mechanism for coordination between different levels of government and agencies, adequate capacity building of all concerned, design of incentives and good planning to mobilize public funding to boost inclusionary housing where the private sector lacks interest, are key aspects for successful implementation.

The problem of affordable housing in India is so huge that both markets and governments need to work together to achieve the social objectives of inclusion. While governments may focus on the poorest of the poor segments, inclusionary zoning and inclusionary housing methods can be useful to solve a part of the problem. But inclusionary zoning is not a “magic bullet” that will end all problems of affordable housing in the country. Housing delivery through the planning system is not a panacea and should not be solely relied upon to secure the required quantities of affordable and social dwellings. Inclusionary zoning, while important, is generally most beneficial for those at the higher end of the affordability continuum. It provides little scope for delivering housing for people at the lowest rung with ongoing, high and complex needs. India needs to follow the global

practice of inclusionary zoning and inclusionary housing, which are based on good economics. The developers must be adequately compensated. This requires reforms in the planning and urban management systems. Laws and procedures relating to town planning, urban development and municipalities, including development control rules and regulations need to be amended and suitable IZ programmes be designed taking into account local market conditions.

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THE DRAFT THREE YEAR ACTION AGENDA, 2017-18 TO 2019-20

The Niti Aayog has brought out a three-year action agenda, which describes policy reforms and actions required in various sectors. The agenda recognises that the key challenges faced by the urban sector include affordable housing, infrastructure development, public transport, promotion of Swachha Bharat, urban land market reform and waste management. It highlights the following housing related issues-

Urban Housing:

The agenda recognises that a key constraint to expansion of low-cost housing is the high cost of land. This makes low rent housing unviable in high land cost areas.

It recognises four factors as key to the artificially high land values in India. These are:

- First, as a legacy to the urban land ceiling and regulation act, many chunks of urban land remain tied up in litigation even today, or have disappeared from the land market. Releasing this land for commercial use should be a priority.
- Second, many sick PSE have huge land banks. Closure of these sick units can release large amount of land for development.
- Third, Central and state governments own substantial amount of land which has remained unused, or is under encroachment. This land needs to be effectively utilised.
- Fourth, the Land Acquisition Act, 2013 fixes compensation

at rather high levels. This, in turn, makes affordable housing expensive.

Another constraint on land supply is the land conversion rules. Conversion of land from agricultural use to non- agricultural uses is very difficult. This power is vested with the state revenue department. The agenda mentions that shifting this power to agencies in charge of urbanisation, and making the process transparent would go a long way in creating a viable land market. There is also need for flexibility in conversion of one land use to another in urban areas.

Available urban space can also be increased by vertical expansion. The available urban space can be expanded manifold by allowing higher FSI in Indian cities.

There is also the paradoxical situation of unsatisfied demand in rental housing, while many units lie vacant. There is need to replace the current rent control laws with a modern tenancy law, which will give full freedom to the landlord and the tenant to negotiate the lease.

However, the correction of land prices is very important to ensure that the interest rates match up with rental yields, so that more rental units can be released in the market. For this purpose, the agenda recommends instruments such as conclusive ownership titles, dormitory housing for the migrants to the city, and rental vouchers.

Source: The NITI Aayog, 2017.

POLICY IMPERATIVES FOR RURAL HOUSING IN INDIA

DR. ABHAY KUMAR
MR. ANIRUDDHA
DEKA
MR. RAJAT SINHA

While formulating schemes for improving rural houses, it is necessary to resist the temptation of imposing urban values (mainly middle class values) on rural areas. Thus, the issues of rural housing can only be addressed through an exclusive policy because the nature and extent of the housing crisis in rural areas is quite different from that of urban areas.

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The crisis of the housing sector in India, both in terms of shortages and availability of basic amenities, has deepened over the years. It is the rural sector that has faced the major brunt of this crisis. Rural housing has been assigned a lower priority in comparison to urban housing and this discrepancy is conspicuous in the government approach. This paper critically evaluates the rural underpinnings in the national housing policies. Based on the inference, this paper argues in favour of a separate rural housing policy. It also suggests policy imperatives which may go a long way to mitigate the crisis.

INTRODUCTION

Currently, the housing shortage in the rural areas is in excess of 43 million units, which is more than twice that of the urban sector. A Working Group on Rural Housing constituted in 2006 for the 11th Five Year Plan estimated the housing shortages for Rural India to the tune of 47.4 million houses (MoRD 2007). Another

Working Group formulated for assessing the housing shortage for the 12th Five Year Plan estimated the rural housing shortage as 48.8 million for the plan period (2012-17) (MoRD 2011). According to the Working Group Report, 90 per cent of these shortages pertain to BPL families, which works out to be 43.93 million houses. Alternatively, the Working Group for 12th Plan also arrived at another figure of shortage of 43.7 million houses based on the data generated by projecting growth trends of housing stocks, households, pucca and semi-pucca houses. There are a few other individual estimates that project housing shortages to be much more than that of the government estimates (Kumar, 2014; Singh, S. et.al, 2013). Notwithstanding the plausible methodology that these estimates use, it remains a fact that rural India has an enormous housing shortage of more than 43 million units.

Together with quantitative challenges, there lies a great deal of qualitative issues plaguing the

rural housing sector. For instance, the issues of adequacy, condition of housing structure, availability of separate kitchen, availability of housing amenities such as safe drinking water, sanitation facilities, electricity, drainage system, approach road etc. also need attention, while meeting the rural housing shortage. Further, the housing finance for rural India is almost non-existent. As per the 69th round NSSO data, nearly 82 per cent of the rural housing is being financed from the own means or from personal savings/loans. (Kumar et al. 2016).

Together with rural-urban divide in the housing sector, there is another important divide in terms of social categories. Deprived social categories such as Scheduled Tribes and Scheduled Castes in particular are the worst off in terms of both housing and housing amenities in rural areas. Inaccessibility of formal source of credit in the rural areas further worsens the situation (Kumar et al. 2016).

LOCATING RURAL CONCERNS IN NATIONAL HOUSING POLICIES

Intriguingly, India did not have any housing policy for nearly forty years after independence; but, within ten years i.e. from 1988 to 1998, it laid down three housing policies. However,

none of the housing policies laid down so far has provisions for rural sector because of which the challenges being faced by the housing sector in the rural areas have compounded over the years.

The draft National Housing Policy (NHP) of 1988 emphasized that housing is not a consumptive good but a productive investment. But, the government never took housing sector as area tool to boost the economy of the country and therefore the sector never received the kind of attention and financial assistance it deserved. Even when the first policy came into existence, the emphasis was on the urban housing and there was no initiative to increase the allocation and utilization of housing funds for the rural population. Further, lack of accountability between the state and the center resulted in the wastage of funds allocated for rural housing. As a result, the policy failed to make progress in terms of access of land and provisions of basic amenities and infrastructural development for the rural poor.

Like the previous housing policy, the National Housing & Habitat Policy (NHHP) 1998 also failed to address the housing needs of the rural poor. The financial concessions and other measures basically benefitted the urban middle class. It did not offer any

support to the rural poor, rather provided only grants to the rural poor. Further, the policy also failed to create a link between land, natural resource management and livelihood for the poor within their habitats. Access to basic amenities by the dwelling units was a great initiative but the identification of beneficiaries was a major problem and the role of the Panchayat Raj Institution (PRI) was not adequately addressed. The objective of creating 1.3 million houses per year in rural areas was fulfilled with the successful implementation of Indira Awas Yojana (IAY) but there was large backlog of houses along with dilapidated houses, that needed attention. The money allocated was insufficient to construct the required units, not to talk of surplus ones. The private sector concentrated themselves in the urban areas and their contribution to rural housing was like nip in the bud. As a result rural areas could not gain much from this policy.

The major reason for not so much success of policies of 1994 and 1998 was that it failed to approach the rural and urban areas in separate manner as the problems are different and so are the solutions. Further, the National Urban Housing and Habitat Policy (NUHHP) 2007, focused entirely on the housing needs of the urban areas and the rural area

remained neglected. Therefore, multiple approaches are needed to overcome the problem of housing shortages. It has to be understood that the returns on investment in rural areas is almost negligible, so private sector would never invest in rural areas. Government should therefore think of other means of financing and one option could be to amend rules of Corporate Social Responsibility (CSR) (Indian Companies Act, 2013) in order to direct some private funds towards this sector.

NEED FOR A SEPARATE RURAL HOUSING POLICY

The above discussion demonstrates the crisis of the rural housing and scarce underpinning of it in the NHP. It also exemplifies the neglect and low priority accorded to rural housing. With more than 43 million housing shortages and wide gaps in the conditions of housing and housing amenities, rural sector still does not have any significant policy to address these challenges. It has been argued by a few experts that there cannot be a separate rural housing policy (Tiwari, 2007). However, this paper strongly recommends a separate rural housing policy for India in order to cater to the deteriorating rural housing situation. There are many reasons in favour of this argument.

Firstly, the housing shortage in the

rural areas is almost two and a half times more than that of the urban areas. Besides, the shortages of rural housing have increased incessantly over the years. Yet, the concern of the Government is clearly inclined towards the urban areas. The current housing policy is exclusively for the urban areas. The last housing policy which had some provisions for the rural sector was the National Housing & Habitat Policy (1998), but for the last 18 years, rural housing doesn't have any policy direction. Despite the rapidly increasing housing shortages in the rural areas, an exclusive rural housing policy is still not a priority before the Government.

Secondly, poverty and deprivation of rural India is relatively higher as compared to urban India. This has direct bearing on the housing scenario. A poor habitat has a lifelong adverse impact on the development of its inhabitants. Poverty and deprivation forces a higher proportion of the rural poor to end up living in *katcha* houses. Moreover, poverty also adversely affects the purchasing power of the rural households which prevents them from constructing or purchasing their own house.

Thirdly, the financing structure and institutions for rural housing are not only inadequate but also incredulous in providing loans. Moreover, the collateral

and plethora of documentation required to seek loans from the formal financing institutions are difficult to furnish by rural inhabitants. Under these circumstances, the rural population end up taking loans from informal sources such as money lenders at exorbitantly high rates of interest which further forces them into poverty and exploitation.

Fourthly, the specific issues of rural housing like provision of homestead land, availability of housing amenities, access to the cheap institutional credits, access to local and cheap raw materials and technology adequacy, affordability, strengthening of rural housing institutions, skill development and livelihood promotion, require exclusive policy direction for meeting the need of more than 43 million rural households who do not have adequate house to live.

While formulating schemes for improving rural houses, it is necessary to resist the temptation of imposing urban values (mainly middle class values) on rural areas (Hirway 1987). Thus, the issues of rural housing can only be addressed through an exclusive policy because the nature and extent of the housing crisis in rural areas is quite different from that of urban areas.

POLICY IMPERATIVES

Some of the policy imperatives for the preparation of any rural housing policy in India are on follows:

Land Availability

It is important that the government needs to allocate homestead lands for the rural households or regulate the existing housing sites. Land cost which is one of the major concerns in urban areas is not much a problem in the villages. With the cooperation of village panchayats, the government can easily procure homestead lands for the re-planning of villages and construction of housing stocks (Iyer, 1965). Cluster approach needs to be adopted in developing homestead lands for homeless people, which would be cost effective and it will be easy to provide the basic infrastructure to the clustered houses. Regulation of the homestead lands can provide housing sites to the estimated 4 million landless households across the country. With adequate availability of funds, these lands can be bought by the government without any political or administrative difficulties. Allocation of homestead lands can be incorporated into the existing rural housing schemes or the integrated rural development programmes (Hanstad, Haque & Nielsen, 2008). In the allocation

of homestead lands, the adequate size of the plots should be kept in mind because small plot of land leads to congestion and unsustainable habitation, which will only lead to further shortages. The current size of the standard dwelling unit in rural areas has been increased to 25 square meters under the PMAY-Grameen which is not sufficient for adequate housing. We propose at least 30 square meters or more for a healthy habitat in rural areas. In fact, the animal shed/poultry farm which is an integral part of rural housing demands relatively larger size of dwelling units than in urban areas.

Housing Finance

Lack of adequate financial assistance has remained primary reason for the housing shortages in India. Majority of the housing finances in rural areas come from the own savings and/or informal sources such as money lenders, friends and relatives which is basically exploitative in nature.

The National Housing Bank (NHB) and the Housing & Urban Development Corporation (HUDCO) have an important role to play in providing housing finance to the rural areas. It is a laudable fact that over 60 percent of the total housing units financed by HUDCO are for rural areas. Although HUDCO has schemes

for the EWS landless, EWS land owning and the village *abadi*, these schemes need to be scaled-up to meet the needs of rural population. Similarly, NHB schemes for rural areas such as GJRHFS, PHIRA have been unable to cater the housing needs of the rural areas. Moreover, just 10 per cent of Rural Housing Fund is allocated for the rural areas. GIC, LIC, cooperatives and other financial institutions have no major contribution towards rural housing.

Interest subsidy schemes for the EWS and the LIG should be introduced for the rural masses as well. The 'Rural Shelter Fund' has to be initiated to provide financial assistance to primary lending institutions to lend for rural housing at a subsidized rate. The risk weight on the rural housing sector has to be minimized by the government with insurance of both the assets and the securitization of loans. The government should also encourage micro finance institutions in rural areas through partnerships with financial institutions so that the informal credit resources are lessened. Repayment of loans which is a major issue for the financial institutions can be tackled through the Productive Housing schemes which is a good concept and need to be promoted to ensure repayment of loans.

While the cash subsidy schemes should be limited to the EWS and the LIG beneficiaries, the demand for rural housing in the APL and the MIG category should also be addressed and financial instruments should be evolved for upgrading or repairing of houses. A multi-dimensional financial assistance programme is, therefore, required to cover all income categories of the society.

Adequate and Affordable Housing

The houses provided under the schemes must be durable, safe, well-ventilated maintain privacy and secure. Such houses should be disaster resistant and equipped with all the basic amenities. All these provisions have to be made available at an affordable rate. Given the poor income of the rural households, making houses that meets all the earlier criteria seem to be challenging and out of reach. The responsibility of construction of houses lies on the beneficiaries but due to the lack of technical knowledge, and low level of skills, the quality of houses remains poor. The state should disseminate information on standard, designs and construction materials so that people can construct them without much difficulty.

The Rural Building centers and the *Nirmithi Kendras* have to ensure that effective and

cheaper construction materials are made available to the needy. It can be done through public-private-partnership (PPP). Skill impartation is of utmost importance because housing construction has been hampered by the unavailability of skilled manpower. Research institutions and NGOs should impart knowledge on technical knowhow so as to promote alternative technologies for different geo-climatic zones.

Convergence

In order to have a holistic development of the rural habitations it is essential to converge the various rural development programmes with the dwelling units. Habitat development has to be promoted with inclusion of all the basic amenities such as clean drinking water, sanitation, smokeless *chulhas* (stove), electricity, waste management, access roads and electricity.

Besides, accessibility to education, health facilities, livelihood and infrastructure has to be established for sustainable growth. The center and the state governments have to make investment to ensure the availability of these basic infrastructures in rural areas.

Composite cluster can also be a good alternative for providing

rural shelter along with the basic amenities. An example of the composite cluster housing approach could be the 'Ahimsa Gram' project in Ratlam, Madhya Pradesh, where 100 LIG and EWS category households were provided free affordable housing along with all the basic facilities such as Anganwadi, Primary Health Centre, water, sanitation, parks, electricity and livelihood within the premise. Considering the increase in the cost of construction materials, the unit cost of dwelling units needs to be rationally decided. Better investments are also required for R&D in housing construction sector.

Rural Housing Institutions

Currently, whatever miniscule support the rural housing sector is getting, is from the public sector. The private sector has attained a magnitude in India which is difficult to ignore, but its expansion has been limited to the large cities. Through the enactment of a rural housing policy, the government can direct the private sector to contribute towards rural housing as a part of their Corporate Social Responsibility measures. With prudent and efficient policy making, adequate and affordable housing can be provided through the public-private partnership.

For proper implementation and monitoring of the schemes, the *Panchayati Raj* institutions need to be strengthened and involved in formulating policies. It can play a significant role in land mobilization, selection of beneficiaries and ensuring the sustainable housing construction. Thus, it is imperative that the government empowers the local institutions.

Sustainable Rural Housing Technologies

Eminent architect Laurence Wilfred “Laurie” Baker ushered a revolution in the field of sustainable rural housing in India⁷. His architectural style was rather unconventional which emphasized on the use of locally available materials to build cheap and environment friendly houses that provided adequate space, ventilation, lighting and aesthetic value. He was a firm believer of the Gandhian principle that “materials used for the construction of a house must be available within a radius of 5 miles.” He incorporated various architectural elements which drastically reduced the construction costs and improved the quality and sustainability of the houses.

Innovative technologies as devised by Laurie Baker can be adopted and promoted in

government housing schemes, which can provide cheap and sustainable housing units to the rural poor. Organizations such as Building Material and Technology Promotion Council (BMTPC) and National Building Construction Corporation Ltd. (NBCCL) will have to play a proactive role in providing necessary technical inputs regarding the use of locally available materials and innovative construction technologies. An initiative by the authorities in this direction would greatly facilitate the mitigation of the rural housing crisis by drastically cutting construction costs and improving the structural quality and energy efficiency of the dwelling units while minimizing the harm to the environment. Also the use of locally available materials and labour would make the implementation process easier and generate employment on a mass scale.

Skill Development

Skill impartation is also very important because often houses remain incomplete and unsustainable due to the lack of trained skilled labourers. Lack of proper skill is also a major reason behind the poor quality of houses. It may be noted that giving focus on rural housing will generate large employment opportunities in the rural non-farm sector. The

Government and non-government agencies may train construction workers in short courses approved by the Technical Education Council, to meet the demand of skilled workers. Gradually, such training may be made mandatory and structured for regular skill upgradation.

CONCLUSIONS

An independent rural housing policy should help in the creation of housing stocks that would not only be affordable but also adequate. Homestead land for the landless farmers needs to be provided through the government initiative and the housing policy should facilitate the adequate flow of funds to support the poor and the marginalized sections in the rural areas. India has committed to fulfill sustainable development goals and housing is one of its components. For a planned rural habitat development with civic amenities and livelihood infrastructure, a separate housing policy, therefore, is desirable.

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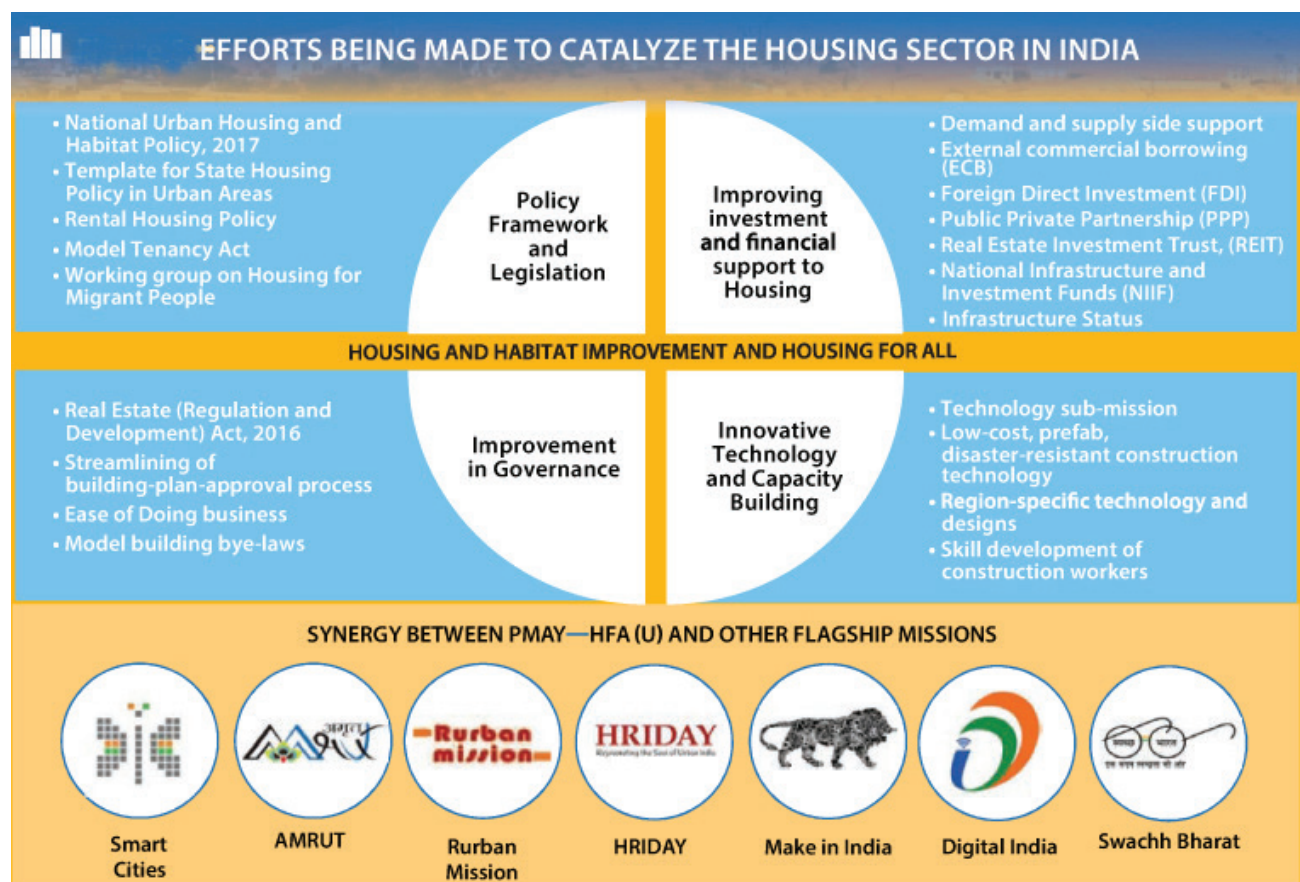
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Expert Views of Dr. M Ravi Kanth on

AFFORDABLE HOUSING IN INDIA AND ROLE OF HUDCO

Dr. M Ravi Kanth, IAS (KL:86) is Chairman & Managing Director (CMD) of Housing and Urban Development Corporation Limited (HUDCO). Prior to this, he was CMD of Projects & Development India Limited (PDIL) and has held the positions of the Principal Secretary to Government of Kerala and Joint Secretary, Ministry of Power, Government of India, New Delhi. He is M.A. (Economics) and Ph.D. (Agri-Exports) from Andhra University, L.L.B from Delhi University and MBA (Finance) from Melbourne, Australia.

Dr. M. Ravi Kanth has served in various positions in Government of India including Dy. Chief Executive, Nuclear Fuel Complex, Dept. of Atomic Energy, Hyderabad, Director, APEDA in Ministry of Commerce & Industry, Chairman & Managing Director, National Handicapped Finance & Development Corporation in Ministry of Social Justice and Empowerment. He has also held several positions in the State Government of Kerala.



Q. This year's World Habitat Day theme is "Housing Policies: Affordable Homes". How do you see the significance of this theme, especially in the context of the housing scenario in our country?

The choice of the theme for this year's World Habitat Day highlights the importance and role of inclusionary government policies for facilitating access to affordable homes for citizens, and reiterates the urgency of making safe and affordable homes a reality, at the earliest, by putting in place supportive programmes, policy and finance. Housing is a basic necessity after food and clothing. As per the Report of The Technical Group, on urban housing shortage, for the Twelfth Plan, the housing shortage in 2012 was 18.78 million units. Three-fourths of this shortage is in the economically weaker sections of society. If left unaddressed, this could have a serious repercussion on the economic development of the nation.

India is the 7th largest nation in the world, with about 7 lakh villages, and we should avoid being only metro-centric or city-centric. We should focus more on small towns & backward villages, especially SC hamlets & ST habitats. We need to provide affordable finance and a mix of housing options, rental housing for migrants, slum redevelopment and housing for urban destitutes and homeless.

To reduce the housing shortage in the country the government plans to build around 20 million urban homes and 30 million rural homes by the year 2022, under the "Housing for All" Mission, which is among the most ambitious initiatives by the Hon'ble Prime Minister Shri Narendra Modi. An attractive subsidy scheme has also been launched to make housing loans more affordable, and to make the dream of

owning a house a reality. Union Budget of 2017-18 has granted infrastructure status to affordable housing, thereby empowering the affordable housing sector with all the benefits that usually accrue to the infrastructure sector. For the first time, affordable housing projects will be identifiable based on the criteria of apartment sizes and location of projects and affordable housing production is being incentivised with interest subvention schemes. All these steps, combined with the Real Estate (Regulation and Development) Act 2016 (RERA) and the Goods and Services Tax (GST) will pave the way for a paradigm shift in the Indian housing sector.

Q. Now that RERA 2016 has been implemented in the country, and quite a few states have already set up Real Estate Regulators, do you think this will help increased delivery of 'affordable homes' in the country?

In a developing country like India, a sizable percentage of Indian population is still living in less than desirable living conditions, and therefore there is a huge demand for affordable housing in the country. People who have migrated to big cities find it hard to own a house. Affordable housing allows them to find a house, which is near their work place and within their budget. To make this a reality, the Government has been taking lot of initiatives and RERA is a crucial step in this direction.

RERA was published in the official gazette on 26th March, 2016 for public information and, was completely implemented from May 1, 2017. Each State and UT is supposed to have their state rules notified, have the State Regulatory Authority (RA) and appellate authority established and also set up the state-specific RERA website for public viewing, of all real estate projects for which registration has been given. Each RA in the state will have the responsibility to register and regulate real estate projects and real estate agents registered under this Act. Currently, 18 States and 7 UTs have notified the rules and some have also established the Authority.

The implementation of RERA is expected to bring a change for both the buyers and builders. RERA seeks to protect the interest of consumers in the real estate sector by ensuring sale of plot, building/apartment, or real estate project in an efficient and transparent manner and establishing a process for speedy dispute redressal. One of the key provisions that will directly impact the house owners is the definition of the size of residential unit that shall be measured by considering the "carpet area" and not the "built-up area", which is the current practice. It also seeks to bring a uniformity and a chain of fair practices that would protect the interests of buyers and take firm decisions like imposing penalties on builders in case of sub-standard quality of

construction or inordinate project delays. Moreover, RERA will address issues like price, quality of construction and other changes that will protect home buyers from unethical players.

The builder is required to transfer a minimum of 70 percent of the money received from buyers to an escrow account. This rule simply means that the builder cannot use one's money to build someone else's house. The developers need to provide necessary clearances like financial statements, legal title-deed with supporting documents, before selling a project. With such positive changes for homebuyers, RERA will definitely boost demand for affordable housing, but over a period of time. Many of India's big developers have already moved into the affordable housing domain because of the massive market base it represents, even if profit margins are smaller. The government is determined to make its vision of 'Housing for All 2022' a reality, and RERA is one such mechanism that will act as a catalyst to make this vision a reality.

Implementation of RERA by states will bring back the consumer confidence in the market and accelerate the market sentiments. Additionally, developers will start focusing on timely project completion, and complete information on the project and amenities promised. Like I already mentioned, RERA and PMAY combined with the incentives announced in the Union Budget,

bode well for affordable housing in India.

Q. HUDCO has been a key player in the provision of affordable housing in the country, both in urban and rural areas. How do you see HUDCO's emerging role for delivery of 'affordable homes' in the context of GoI's flagship programme of PMAY-Urban & Gramin?

The Housing & Urban Development Corporation was set up in 1970 by Government of India, to fund housing and urban development programs to accelerate the pace of housing and urban development in the country. HUDCO is mandated to provide long-term finance for housing projects in the country, especially for EWS & LIG segments of society. With its pan-India presence, HUDCO has emerged as a major player in housing finance over the last 47 years, offering a wide range of financing options for housing activities, such as urban, rural & staff rental housing, sites and services projects, slum upgradation, disaster rehabilitation, women's condominiums, land acquisition schemes etc., undertaken by the state development bodies and housing boards, housing projects under social housing schemes of the Government of India, viability gap funding for meeting the state/ULB contribution in government schemes, as well as retail financing to individuals. HUDCO has contributed immensely for developing housing in the

country, by extending financial support to the tune of Rs.60,579 crore (sanctions) and Rs.44,004 crore (disbursements), upto August 2017, in both rural and urban areas.

Under the Pradhan Mantri Awas Yojana - Urban (PMAY-U), HUDCO has been appointed as an appraisal agency for three programme verticals, i.e. in-situ slum redevelopment (using land as a resource), Affordable

disbursed Rs.820 crore. In this financial year alone, HUDCO has appraised 57 projects with a total project cost of Rs.2815.86 crore and central share of Rs.1010.12 crore for construction of 0.69 lakh dwelling units, covering 56 cities/towns. In this context, HUDCO has also undertaken the revision of income ceiling, loan ceiling and cost ceiling for EWS & LIG category of houses, as per the scheme guidelines.

“ HUDCO has been assigned the dual role of being a Central Nodal Agency (CNA), as well as a Prime Lending Institution (PLI) for the Credit Linked Subsidy Scheme (CLSS) component of the Affordable Housing Mission. To successfully carry out this responsibility, we have already executed Memorandum of Understanding with 64 Banks/ Prime Lending Institutions (PLIs) for EWS/LIG and with 54 Banks/ PLIs for MIG-I and MIG-II.

Housing in Partnership (AHP) and Beneficiary Led Construction (BLC) projects. HUDCO supported effective implementation of the PMAY (Urban) programme by providing loan assistance towards viability gap funding to meet the State/ULB share of the project cost. During 2016-17, HUDCO sanctioned 5 projects in 4 states, viz. Tamil Nadu, Jharkhand, Uttarakhand and Andhra Pradesh with a total loan assistance of Rs.2748.60 crore for taking up 2,01,446 housing units and

HUDCO has been assigned the dual role of being a Central Nodal Agency (CNA), as well as a Prime Lending Institution (PLI) for the Credit Linked Subsidy Scheme (CLSS) component of the Affordable Housing Mission. To successfully carry out this responsibility, we have already executed Memorandum of Understanding with 64 Banks/ Prime Lending Institutions (PLIs) for EWS/LIG and with 54 Banks/ PLIs for MIG-I and MIG-II. We have received & disbursed a

subsidy claim of Rs.16.79 crore from (EWS/LIG) beneficiaries, till 31st August 2017.

It is noteworthy that out of the total sanctioned amount this year, Rs 5334 crore has been towards the housing sector, for facilitating housing for 8.26 lakh households. The major projects sanctioned under housing include projects under PMAY (Urban) and Gramin, especially in the states of Uttar Pradesh and Andhra Pradesh.

The future growth path for the housing portfolio of HUDCO is evident in PMAY. Considering the housing deficit, and the need for concerted efforts to achieve the objective of Affordable Housing for All by 2022, HUDCO is fully geared to take up the challenge of social housing delivery in the country. HUDCO's focus is to support the government in creation of affordable and safe housing stock for the nation and we are constantly striving to 'reach the unreached' sections of the population.

Q. The Ministry of Housing & Urban Affairs, Government of India is in the process of formulating a new National Urban Housing & Habitat Policy 2017. Do you think this is a positive step and what would you suggest should be the key focus areas of this Policy?

Indeed, revisiting the 2007 policy is a positive step that is required to address the changing urban scenario in the country and meet the global commitments, like the

Sustainable Development Goals (SDGs) and New Urban Agenda of Habitat III, to which India is a signatory. There is an urgent need to address the housing shortage in the country and a comprehensive, facilitative policy framework would go a long way to catalyze the housing sector in our country and help in achieving the national goal of 'Affordable Housing for All by 2022'. In fact, there was a quantum jump in the supply of affordable housing stock in the country after the formulation of National Housing & Habitat Policy 2007, through a series of housing programmes such as JNNURM, RAY and the latest flagship programme of PMAY-Housing for all (Urban), as well as a plethora of fiscal incentives. However, in spite of all these initiatives resulting in substantial increase in the housing stock, the urban housing shortage remains a concern area.

I would like to see renewed focus on innovative financing mechanisms, appropriate land management techniques, urban & regional planning approaches, and innovation in building design to make housing affordable, durable, and sustainable. The Policy should focus on developing different affordable housing choices/ options for different categories of population, both on ownership as well as rental basis. There is also a need to focus on habitat aspect by focusing on providing affordable infrastructure and urban services to make the houses habitable.

Q. Do you advocate a similar policy for rural areas as well, keeping in mind the huge rural housing shortage in the country?

As per the estimates of the Working Group for 12th Five Year Plan, the rural housing shortage in 2012 was 43.13 million units, which is quite huge compared to urban housing shortage. The characteristics and requirements of addressing rural housing are different than those of urban housing. In view of this, I do feel there is a need for a Rural Housing Policy, to provide a focused approach to ameliorate the rural housing shortage. The focus of such a Policy should be to create an enabling rural habitat environment to reduce rural poverty, create innovative financing mechanisms for rural housing, appropriate institutional mechanisms and above all, making rural habitats safe and resilient. HUDCO has been a key player in providing affordable rural housing in the country. However, other HFCs and private players may be incentivized to enter the rural housing market, in order to achieve the targets under PMAY-Grameen, and thereby contribute to achievement of the national goal of 'Affordable Housing for All by 2022'. On behalf of HUDCO, I assure our total commitment for realizing the dream of rural inhabitants for safe and affordable homes, and an enhanced quality of life.

Expert Views of Shri Rajiv Ranjan Mishra on **REAL ESTATE (REGULATION AND DEVELOPMENT) ACT 2016**

Shri Rajiv Ranjan Mishra is an Indian Administrative Service officer (1987 batch), currently serving as Additional Secretary (Housing) in the Ministry of Housing and Urban Affairs, Government of India. A Mechanical Engineer from IIT, Kanpur, Mr. Mishra has in the past looked after various departments at state level, such as Irrigation, Municipal Administration and Urban Development, Infrastructure and Investments, as Secretary/Principal Secretary. He played a pivotal role in the enactment of the Real Estate (Regulation and Development) Act, 2016.



Q. The Centre has come out with the Real Estate (Regulation and Development), Act 2016 which is viewed as a significant step towards cleansing the Real Estate Sector in the country. Could you please shed some light about RERA and some of its salient features?

The real estate sector plays a catalytic role in fulfilling the need and demand for housing and infrastructure in the country. This sector has grown significantly in recent years, however, it has been largely unregulated, calling for more professionalism and standardization. There was an urgent need to infuse transparency and governance in the sector. Also, lack of adequate consumer protection in the sector necessitated the passage of the Real Estate Act. Based on extensive consultations with State Governments, experts and stakeholders, the need for a central legislation had emerged in the larger interests of effective consumer protection; uniformity; and standardization in the real estate sector.

The Act extends to residential and commercial real estate and covers sale of real estate by both private developers and public entities. The Act mandates registration of real estate projects above 500 square meters or more than 8 apartments with the Regulatory Authority. The Act also mandates registration of Real Estate Agents who intend to sell any plot, apartment or building (registered under the Act) with the Regulatory Authority.

In order to infuse transparency, the promoter is required to make disclosure of all relevant project information for public view such as - layout plan, land status, statutory approvals, number of parking, time period for project completion etc., proforma of agreements, names and addresses of agents,

contractors, architect, engineer etc. This will help the consumers in making an informed choice.

The Act mandates that the promoter shall comply with the following namely - adhere to approved plans, obligations regarding authenticity of advertisement/prospectus, rectify structural defects, refund money in cases of default, deposit 70% of amount realized from allottees in a separate account for the purposes of construction and land cost. In order to provide oversight and ensure implementation the Act provides for establishment of Regulatory Authority in each State/UT. It also allows States the flexibility of setting up more than one Authority or in case of smaller States/UTs they can come together and set up one single Authority.

The Regulatory Authority is required to act as the nodal agency towards implementation of the Act, co-ordinate efforts regarding development of sector; and render necessary advice to the appropriate Government. For the purposes of streamlining and fast-tracking adjudication of disputes the Act provides for appointment of one or more adjudicating officers by Regulatory Authority, based upon need - to settle disputes and impose compensation and interest. The Appellate Tribunal is also to be established to hear appeals from the orders of the Regulatory Authority & adjudicating officer.

Q. While RERA became operational on May 1, 2017 and states are in the process of implementing it, what is the big change it has brought?

RERA is aimed at infusing governance in a sector that has hitherto been unregulated. It has brought about a paradigm shift in consumer empowerment. The buyer shall now be able to make an informed choice before buying a house, which is the single largest investment in one's life time. The Act has mandated disclosure of 'carpet area' for sale which shall help curb unfair trade practices. The bane of one-sided agreements is a thing of the past as all future purchases are to be based on a Model Agreement which would end consumer exploitation and power asymmetry prevalent in the sector. The biggest bottleneck in the real estate sector has been fund diversion. With specific provisions in place i.e. the requirement of creating a separate account, time and cost overruns due to fund diversion will be controlled, thus protecting buyer investments, which in turn will ensure timely completion of projects.

Q. How many states have taken steps to operationalize the Act including setting up of Real Estate Regulator, Tribunal, real estate portal, etc.?

The Act is applicable to 35 States/UTs, except the State of J&K. Out of these, 6 North Eastern States have some Constitutional issues relating to land belonging to community and autonomous councils and these are under examination. Out of the remaining 29 States/UTs, a total of 25 States/UTs have notified Real Estate Rules under the Act. Other 4 states have drafted the rules but have not yet notified. 6 states/UTs have established permanent Real

Estate Regulatory Authority and 18 states/UTs have established interim Real Estate Regulatory Authority. In Gujarat, Appellate Tribunal has been set up and 10 States/UTs have appointed interim Appellate Tribunal under the Real Estate Act. As of now eleven States have made web-portal functional, thus all registration is online. However, it is pertinent to mention that for the first one year registration can be both online and offline, though online registration is desirable.

Q. It is believed that many real estate developers are against the Act. How does RERA affect the builders?

That is not correct. Most builders have welcomed the Real Estate Act. The Ministry is in constant dialogue with industry representatives from various associations mainly NAREDCO and CREDAI and the feedback is the industry has already adapted to the requirements under RERA. In fact it is because of RERA being in place that Affordable Housing has been given infrastructure status and a slew of other fiscal incentives have been provided. The real estate industry has now matured on the lines of other sectors with the advent of regulations, which was hitherto not available.

Q. What is the punishment prescribed for non-compliance of the orders of the Appellate Tribunal by the promoter and/or Allottee?

Sections 64, 66 and 68 of the Act provides for penalties for violation / non-compliance of the

orders of the Appellate Tribunal by the promoters, agent and allottee, respectively, which ranges from monetary penalty to imprisonment, at the discretion of the Appellate Tribunal. It is important to appreciate that the Appellate Tribunal is a quasi-judicial body, which is headed by a Judge of the High Court. Its orders are sacrosanct, unless in appeal at a higher forum. It is thus necessary to provide for stringent penalties to ensure compliance of the orders / directions of the Appellate Tribunal.

Q. Post RERA the general view is that the sector is going to be more buyer friendly and large cap real estate sector. What is your view on the impact of RERA on housing prices in India?

There are apprehensions that RERA might lead to price increase in the short run, though I do not subscribe to that view. Even if we assume, there would a slight increase in prices, I am confident the buyer would be more than willing to bear that little burden, which in turn ensures his money is not diverted and projects are completed on time. In the long run, even the sceptics agree that prices would rationalize with the implementation of the Act.

Q. What is the difference in scenario before and after the implementation of RERA? What are the trends and feedbacks you are receiving after the implementation of RERA?

The Act has already infused positive sentiment across various stakeholders. The buyers feel

more confident about real estate purchases and also foreign investment in the Real Estate sector has shown renewed interest.

“The Real Estate Act is aimed at bringing about a paradigm shift in the functioning of the Real Estate Industry. This brings the industry at par with other sectors such as securities, banking, insurance, telecom etc. The Act is going to see a sea change in the way the sector is perceived by various stakeholders including banks and financial institutions and foreign investors.

All this together will help achieve the objective of Government of India to provide ‘Housing for All’ by 2022.

Q. From the Central Government’s perspective, what are the steps you would like the States to take for effective implementation of the Act?

For now, it has been our endeavour to work with the States to ensure timely implementation of the Act. The Ministry had notified the Rules for Union Territories way back on 31st October 2016, which have been shared with the States as a Model. We have also set up a team of IT experts in the Ministry to handhold the States towards setting up their web-platform. Many States have taken advantage of this, resultantly having a functional website without any costs. However, in addition we have shared the codes for the web-portal for the UTs with all the States for use as per their need. I would

urge the States to immediately establish the Authorities and the Appellate Tribunal and also have a functional website in place

as soon possible for timely and effective implementation of the Act.

Q. What are the changes that you would expect from the real estate industry? And what is the kind of exit do you see happening from the real estate industry?

The Real Estate is aimed at bringing about a paradigm shift in the functioning of the Real Estate Industry. This brings the industry at par with other sectors such as securities, banking, insurance, telecom etc. The Act is going to see a sea change in the way the sector is perceived by various stakeholders including banks and financial institutions and foreign investors. The only exit I would perceive happening in the sector, is the disappearance of fly-by-night operators. This is a moment of churning for the industry and is going to see it grow from strength to strength.

Expert Views of Shri Sriram Kalyanaraman on

TRENDS IN THE HOUSING FINANCE SECTOR IN INDIA

Shri. Sriram Kalyanaraman is currently the Managing Director and Chief Executive Officer of the National Housing Bank, New Delhi. He is a banking veteran and has over 25 years of experience in retail banking and SME's in the financial sector. Mr. Kalyanaraman has significant experience in sales management, credit bureaus, business development, rural banking and micro finance. Academically, he has earned his MBA from Bharathiar University, Tamil Nadu in the field of finance and marketing.



Q. What are the key lacunae in the housing finance sector in the country and how do you plan to transform the sector?

Currently, the housing sector is poised for a higher growth. With the grant of infrastructure status to affordable housing and the implementation of RERA and GST to bring in more transparency to the sector, we foresee buyers showing a higher intent to buy a house, which would spur towards a greater need for home loans due to the fact that the affordable segment is under-served. However, high-interest rates along with lack of loan history for most of the buyers and issues pertaining to lending to informal sector borrowers are deterring the industry from its growth.

The RBI, in its Second Bi-monthly Monetary Policy Review on 07-06-2017, has reduced risk weights on individual housing loans above Rs. 30 lakhs and has also reduced provisioning on standard assets from 0.40% to 0.25%. This would result in reduction in overall cost and better margins for the lending institutions. This might not result in immediate reduction in interest rates. However, in the long run, as a larger portion of the portfolio comes under this regime, some rate cuts might be possible.

We are also looking to use technology and big data to help smaller borrowers with zero digital footprint and no documentation, gain access to formal channels of banking. More than 50 percent of Indians in need of money do not get access to funding because they don't have a borrowing history. But there is huge data availability and we are looking to experiment alternate credit data to try and collect psychometric data in order to assess the credit profile of such customers.

Q. What is the progress on the Housing for All' mission? Do you see a contradiction in your role as the central nodal agency for the mission while also being regulator of the housing sector?

Under the Housing For All 2022 mission, the Ministry of Housing and Urban Affairs (MoHUA) has so far approved construction of 23.92 lakh affordable houses for urban poor with an investment of Rs. 1,27,480 crore. For building these houses, central assistance of Rs. 37,270 crore has already been approved.

No, we don't see a contradiction to our role as central nodal agency while also being the regulator of the housing sector. Being a regulator gives us a unique insight within the sector which in turn helps us to address the government schemes in an efficient manner and also frame specific regulations for the healthy growth of the industry.

Q. Is the subsidy for MIG category reaching the targeted population? Do you think it is feasible to extend the subsidy for MIG category beyond one year?

As of now if you see in the segment, we could look at much-much higher amount definitely and we shouldn't be worried about extension. It is an immediate budgetary allocation and if the scheme takes off really well, I think the government would look quite favourably at the allocation. If we see CLSS 1 for example, we

have now disbursed Rs 1007 crore of subsidy amount and the initial allocation was Rs 50-75 crore. The government is committed to housing for all and as the players, the financial intermediaries, the institutions get their act together

“Most of the housing finance players have put in place systems for e-payments and e-receipts resulting in greater transparency in property contracts, which will also bring in greater professionalism in the industry. As a result, the latent demand, particularly in the affordable segment is expected to revive, thereby increasing sales.

and start disbursing, we are sure the money will flow but we are putting the cart before the horse by saying that there won't be budgetary allocation or any extension. Let's exhaust it or at least approach near exhaustion levels and then go back to the government.

Q. How can the affordable housing sector be made more attractive to encourage private developers, to be able to achieve the numbers required for achieving the mission?

Now that the government has provided several incentives such as higher allocations for affordable housing development vis-a-vis FY 2016-17 under the Pradhan Mantri Awas Yojana (PMAY), extending the Credit Linked Subsidy scheme to loans

of value up to Rs 12 Lakh and granting affordable housing segment infrastructure status, we think it is the right time for a paradigm shift in the construction sector and this makes it a lucrative segment for them to invest in.

Q. There has been a lull in the real estate market, following the demonetisation drive. When do you expect a correction and stabilisation of prices and revival of the market to happen?

Housing finance is a long term requirement, and the demonetization exercise has further improved the use of e-transactions and reduced cash dealings benefiting both consumers and the industry. Most of the housing finance players have put in place systems for e-payments and e-receipts resulting in greater transparency in property contracts, which will also bring in greater professionalism in the industry. As a result, the latent demand, particularly in the affordable segment is expected to revive, thereby increasing sales.

The housing prices have already witnessed a correction by 15-20% in some segments. But we do not think it is a gloom and doom scenario. On the contrary, with a dip in prices and higher transparency in dealings, demand will pick up in the medium to long term.

Q. What kind of regulations do you enforce to control housing price, bring discipline in the housing sector and to ensure flow of cheap funds to keep the sector growing? What has been the impact of RERA and GST on housing prices?

NHB has released its revamped Residex in July 2017, which is a set of benchmarks that enables the policy makers, banks, housing finance companies, builders, developers, investors, individuals, etc., to track the movement of housing prices across different cities in India on quarterly basis.

The new Residex will be having both evaluated value and registered value of a particular house as well and now captures trends in 50 cities spread over 18 states and UT's. NHB is also working on two more indices which include rental index and building and construction material index. We have roped in the realty research firm *Liases Foras* for providing us inputs.

With the RERA (Real Estate Regulation & Development Act, 2016) provisions being implemented by various State

Governments, new customer centric, transparent, stable and viable housing & finance ecosystem is evolving. GST itself is expected to further contribute to India's gross domestic product providing a substantial boost to the economy. If our economy does well, there will be an increase in demand for housing, and it will be a boost for the sector.

Q. What has been the impact of the grant of infrastructure status to the affordable housing segment?

With the grant of infrastructure status to affordable housing, there will be increased transparency in the housing sector with clear guidelines and simplified approval process for Affordable Projects. The developers who earlier used to face a liquidity crunch will now have access to cheaper sources of funding, including external commercial borrowings (ECBs). The housing market could also attract debt and Pension Funds to invest in the affordable housing segment.

Q. Do you think the focus on ownership housing is realistically achievable given the limited supply of land in the country? Also with the increasing mobility of the workforce, should the focus of the government not be on increasing the rental housing stock?

Affordable housing has been a priority area for the Government of India since independence,

but providing housing to all on ownership basis is difficult and or may not be feasible. Currently, poor households live in congested conditions indicating that housing is still unaffordable, be it ownership or rental. Even after interventions such as subsidies for housing loans and tax concessions, this segment cannot afford to own a house due to low disposable income, irregular income, ever increasing real estate prices etc. In the absence of affordable rental housing options, growing families are forced to live in overcrowded houses which lead to slum like situations.

On one side, we have a huge housing shortage (urban) and on the other side there are huge stocks of vacant houses. As per our Census 2011 data, 11.09 million houses are vacant in our urban areas. If these vacant housing stocks are made available for rental housing, then some of the urban housing shortage could be addressed. Rental housing can provide an opportunity to the tenants as well as enable a steady source of income to the owners by converting urban land into an investment.

The Ministry of Housing and Urban Affairs (MoHUA), had constituted a Task Force on Rental Housing (TFRH) to suggest measures to give a fillip to rental housing. The task force had given thirteen recommendations which have been considered in formulation of the National Urban

Rental Housing Policy (draft), 2015.

Q. What are the key challenges faced by NHB as the regulator for housing finance companies?

As on date, 89 housing finance companies have been granted the certificate of registration under Section 29A of the National Housing Bank Act, 1987. The micro housing finance companies will have the thrust to focus on housing for all. All HFCs will undertake the responsibility for the mission. Based on the business plans submitted by some of the HFCs, our understanding is that new HFCs are planning to cater

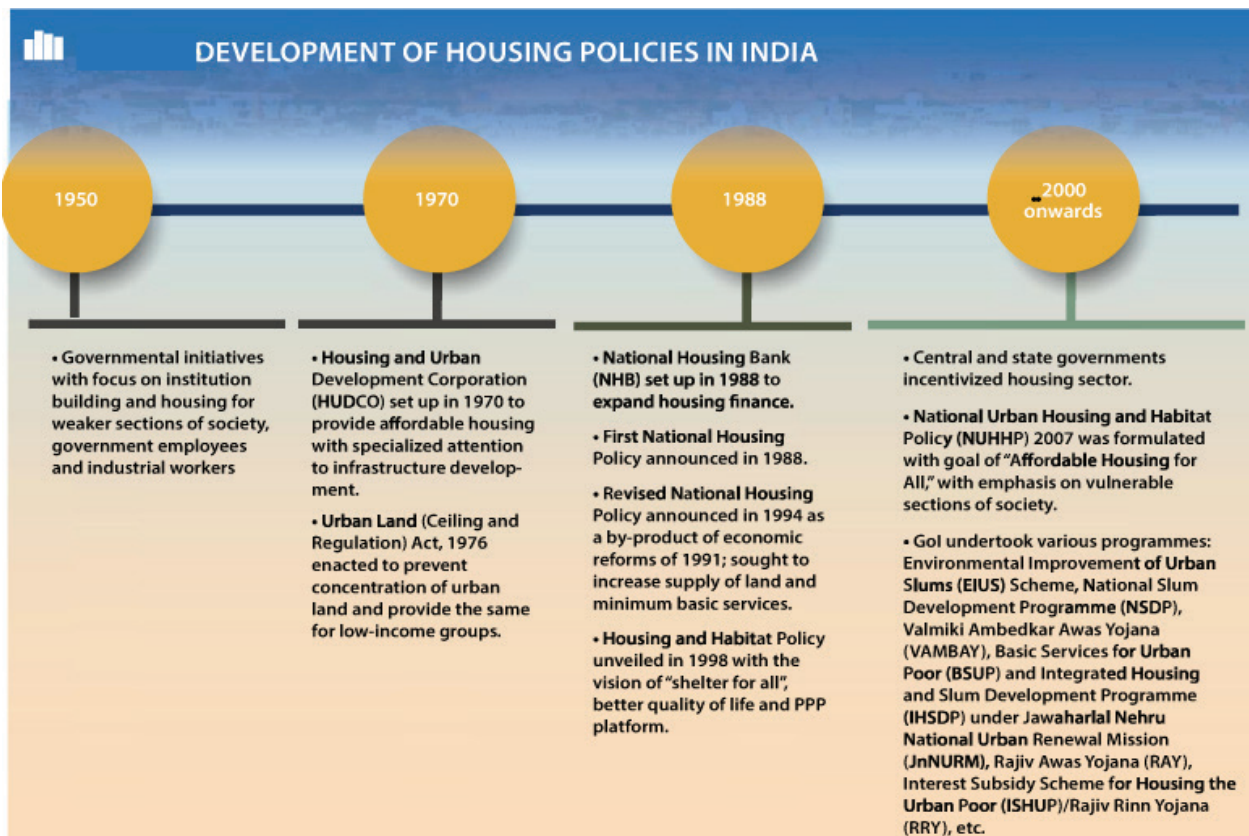
to low-income segment borrower. NHB has taken initiatives in promoting rural HFCs and we are also working on methodology to fund the smaller and newer HFCs.

We are watching the space of balance transfer, where lot of direct selling agents are involved and working on industry-wide data and we will look at inputs from credit bureaus to check whether any mis-selling is happening.

Also, many borrowers do not have previous banking transaction records and, for the self-employed, they do not disclose their incomes or file tax returns. As such, the formal documentation or records needed to verify income and the ability to service loans is absent.

In this context, the underwriting practices of lenders – housing finance companies (HFCs) – are vital to controlling credit risk. HFCs have started using e-KYC - using online verification to help them minimize the risk of identify fraud and document forgery.

All in all, we see the housing finance sector becoming stronger, more vibrant and more responsive to the emerging needs of the market, and this should definitely translate into deeper penetration, both geographically and socio-economically as well as greater integration of housing finance into the overall financial ecosystem of the country.



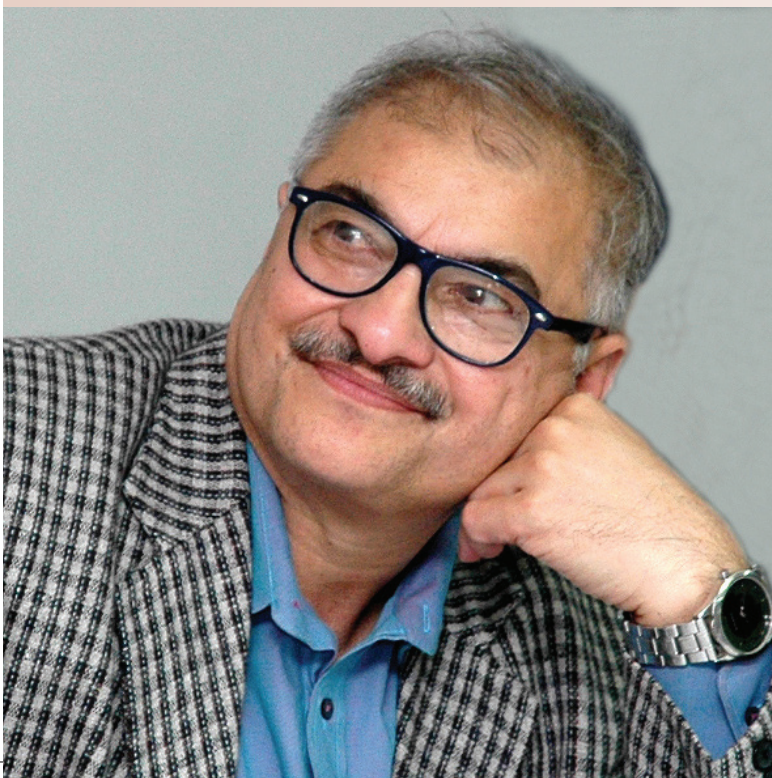
Source : India Habitat III National Report 2016

Expert Views of Prof. Chetan Vaidya on

ROLE OF URBAN PLANNING

IN DEVELOPING SUSTAINABLE AND INCLUSIVE CITIES IN INDIA

Prof. Chetan Vaidya is an Architect-Planner with over 30 years experience. He is Independent Director HUDCO and was Director of the School of Planning and Architecture (SPA) New Delhi till recently. He is also the Chairman of Planning Education Board of AICTE. He was the Melbourne-Asia visiting fellow for 2014-15 and was former Director of the National Institute of Urban Affairs (NIUA) New Delhi.



Q. You have often talked about urbanization being messy and hidden in India. Can you please elaborate on this? How do you think cities in India are gearing up to manage urbanization?

In India, there is an increasing realization that urban areas need to improve to achieve fast and sustained economic development in the country. Hidden and messy nature of urban growth is because of what we call urban. The official definition of urban puts India's urban population at about 31 percent and, as per World Bank report of 2015, this does not capture almost another 25 percent of the population living in urban like characteristics in the peripheries because of what is defined as urban. This therefore hides the total magnitude of urban and the ambiguities and jurisdictional gaps that emerge at the boundaries of what is termed as urban. Urbanization is also messy because a large proportion of this population lives and works in areas that lack basic amenities, are vulnerable but continue to provide economic and residential opportunities for marginalized groups.

Mission mode of various programs of the Central Government acknowledges the critical role of cities and intends to address this complex nature of urbanization process. In 2005, Jawaharlal Nehru National Urban Renewal Mission (JNNURM) aimed at providing incentives to cities to undertake reforms and to improve services. Building on this mission, several urban missions, introduced by the current government in 2015 have sharpened the focus on

cities and urbanization. These four urban missions are Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Smart Cities Mission, Heritage city development and augmentation Yojana (HRIDAY) and Housing for All (Urban). RURBAN mission attempts to deal with the urban peripheries.

The Government of India, thus, has put in enabling provisions as well as funding which would pave the way for urban reforms and enhanced investments in infrastructure. There are examples where urban reforms leading to more effective governance has provided opportunities to urban local bodies to leverage market-based funding such as municipal bonds and private investments.

In my view, a more integrated urban planning approach in these missions would improve their efficacy. For example, area based re-densification, re-development and green projects should not be seen as isolated project based approach but embedded in city level plans that provide a long term framework. The proposed approach would ensure integrated, high intensity, flexible and inclusive development. This implies development where land uses are integrated with public transport corridors. Mix of uses as well as higher, variable and marketable FSI would ensure development responding to and shaping land markets. Recent report on Three Year

Action Agenda for India (2017-18 to 2019-20) by NITI Ayog has recommended that available urban space can be expanded manifold by relaxing the permitted FSI. The market will be balanced by providing reservations for affordable housing for groups who for various reasons remain unable to access the benefits of economic growth.

One of the major challenges, however, for successful implementation of these missions continues to be lack of capacity at national, state and local government levels as well as private sector.

Q . The nations across the globe have adopted the New Urban Agenda- a new framework that that lays out how cities should be planned and managed to best promote sustainable urbanization. In this context, what are your thoughts on the state of Indian cities today and both in terms of urban planning and management?

The New Urban Agenda is the outcome of the Habitat III cities conference in Quito, Ecuador, in October 2016. Though not legally binding agreement, New Urban Agenda does provide guidance on urbanization and sustainable development. It offers enablers that can integrate urbanization and sustainable development. This includes, on the one hand, “development enablers” that seek to harness, — national urban

policy; laws, institutions and urban economy. “Operational enablers”, on the other hand, aim to promote sustainable urban development. The Agenda underscores three operational enablers, also called three-legged approach: local fiscal systems, basic services and infrastructure and urban planning. As explained below all three are part of our national missions.

As far as Local Fiscal System is concerned, in AMRUT mission, state governments and cities have to implement 11 reforms including improvement in revenues. It should focus on local resource mobilization like property tax, fees for services like water supply, registration fees, etc.

For improved service levels, thrust areas of the AMRUT mission are: water supply; sewerage facilities and septage management; storm water drains; public transport and non-motorized transport (walking and cycling); and green spaces and parks especially for children. Many of the projects under Smart City Mission are related with city infrastructure.

Since one of the major challenges of the cities in India is sustainable urban development and management, all the government missions emphasize effective urban planning as one of the key factor to achieve this. For example, AMRUT Mission guidelines require preparation of city development plan, and

simplification of building bye laws. Similarly, Smart City Mission guidelines advocates mixed use compact city planning approach. Cities under HRIDAY Mission are required to prepare Heritage Management Plan as part of the overall urban planning process. Housing for All Mission, requires earmarking areas for affordable housing in Master Plans. However, all these missions emphasize only one aspect like heritage or housing specific to that mission or at the most identify certain projects for implementation. Different aspects in all four urban Missions need to be embedded in a more comprehensive and integrated urban planning frameworks.

Q. The Smart City Mission has highlighted the role and importance of technology in improving and facilitating urban development and management. However, not much of the discussion is about the importance of rational, sensitive and inclusive urban and regional planning. What is your take on the role of planners in achieving smart cities?

I sincerely believe that we should not make a distinction between AMRUT and Smart City Missions. At State and City levels both have to be integrated together. To some extent this integration will be achieved through preparation of Annual Action Plans for funding and plans for Service

Level Benchmark at state level linked with plans prepared by the ULBs. Importance of rational, sensitive and inclusive urban and regional planning should be part of AMRUT mission reforms. Unfortunately, we changed focus of AMRUT reforms during 2017-20 on trust and verify, land titling, value capture finance and professionalization of municipal cadre.

Technology has become all pervasive in our lives and Smart City Mission is underpinned on the use of technology. Focus of Smart City Mission is to develop sustainable and inclusive development, and create compact and replicable models. There has been some criticism about the big gap between the current realities of Indian cities and the aspirations of the Smart City Mission. However, one of the distinctive features of Smart City Proposals has been 'citizen engagement'. Use of technology has allowed large number of people to become aware of the mission and also participate in framing of Smart City Proposals. Undoubtedly, there is a lot of work to be done there but today it is also possible that responsible use of technology can help decision makers access collective voices of the people, which has the potential to lead to more citizen centric, inclusive and sensitive development.

To understand the role of planners in achieving Smart Cities it

would be useful to look at the kind of proposals that have been approved under the Smart City Mission. The Smart City Proposal includes a pan city proposal and area based approach. Typical features include: promoting mixed land use in area based approach, inclusive housing, walkable localities, developing open spaces, promoting transit oriented development (TOD), giving citizen-friendly governance, and giving an identification of the city. Area based projects cover retrofitting and redevelopment. Main focus of Smart city is now focusing on implementation and it creates an SPV to fast-track implementation. A quick review of ongoing projects in Smart City Program reveals predominantly transport, infrastructure or environment projects like public bicycle sharing; adaptive traffic signal control system; smart roads; GPS-based vehicle tracking and monitoring system (for solid waste management); solar rooftop; mobile app; transport command and control center; e-Toilets; multi-level car parking; and rejuvenation of lakes. Most of these proposals have been prepared by planners employed by large private consulting firms. In all these projects, urban planners could have a major role. But urban planners will have to go beyond limited physical planning skills to develop community participation and project oriented skills focussing on finance, institutional

structuring, project management, PPP implementation, improved access to poor, etc.

Q. In your view, what would be the key milestones that the country must accomplish on its journey towards achieving SDG 11?

Objective of SDG 11 goal is to make cities and human settlements inclusive, safe, resilient and sustainable. I believe that by 2030, urban India would introduce all enabling provisions and be able to: (a) ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums; (b) provide access to safe, affordable, accessible and sustainable transport systems for all; (c) enhance capacity for participatory, integrated and sustainable urban planning and management; (d) Strengthen efforts to protect and safeguard the world's cultural and natural heritage; (e) reduce the adverse per capita environmental impact of cities; (f) provide universal access to safe, inclusive and accessible, green and public spaces; and (g) Support positive links between urban, peri-urban and rural areas. However, as mentioned earlier, major challenge is inadequate capacity at all levels in public and private sectors.

Q. Is greenfield development of cities feasible in India- both financially and environmentally- when both land and financial resources are in short supply?

Which international urban development models have the most relevance for India? Which initiatives or models in the field of urban development are you most excited about?

After independence of India, development of new towns was one of the key strategies in achieving industrialization. Many industrial towns were built particularly within the initial two decades after independence. It might be useful to revisit the experience of these developments.

The green field development does offer more flexibility and opportunity to be smart and sustainable as compared to existing cities. Though greenfield developments are likely to contribute very little to accommodate additional urban population, but many of these developments become identifiers of a particular era in the history. In the fifties Chandigarh, Bhubaneswar and Gandhinagar along with many industrial towns became the identity of modern India. In the seventies Navi Mumbai (CIDCO) and later on NOIDA and GNOIDA in the eighties were some of the successful greenfield developments of that period. Current phase of technological change in the society would also lead to some such new developments.

Some key examples of greenfield

city development in today's context could be Dholera city, Gujarat; GIFT, Ahmadabad; Magarpatta, Pune and Naya Raipur, Chattisgarh. International good examples of green city are Masdar City, Abu Dhabi and Songdo International Business District, Korea. There are few issues faced by Indian cities that need to be addressed: Problem of obtaining suitable land for developing new city; financing new cities; appropriate governance model; land use zoning and building by-laws; and inadequate technical capacity.

Greenfield city development initiative is an opportunity for planners to transform upcoming Indian cities into world class cities which are sustainable, smart and futuristic cities and improve the quality of life of Indians. Such Green field cities in India should consider conservation of natural resources, use of clean technology, model for financing of cities, preparation of city level financial operating plans (FOPs), appropriate governance model with focus on information communication technology.

Q. Please elaborate on some of the key concerns confronting planners and architects today? What message would you like to give young planners and urban managers about their role in shaping a sustainable and inclusive urban development in India?

Focus of planners and architects in India is still predominantly on physical planning. In today's context where the pace of change is rapid and problems are complex, the need for planners and architects to be able to successfully work in an interdisciplinary environment with diverse teams is important. Secondly, there are many emerging areas that did not exist few decades ago that need attention of planners, for example energy efficiency, climate change, food security, urban economics, urban finance etc. Thirdly, planners and architects will have to increasingly operate in an environment requiring continuous engagement with citizens and community groups. This would require skills for facilitation of citizen engagement, conflict resolution, etc. These are interesting and challenging time for young professionals. Many

Greenfield city development initiative is an opportunity for planners to transform upcoming Indian cities into world class cities which are sustainable, smart and futuristic cities and improve the quality of life of Indians. Such Green field cities in India should consider conservation of natural resources, use of clean technology, model for financing of cities, preparation of city level financial operating plans (FOPs), appropriate governance model with focus on information communication technology.

possibilities exist for them that were not available earlier. I am convinced that urban missions and other programs offer opportunities to young planners and architects to set up start-ups for providing various building and urban services. In the end, I have two messages for young planners and architects in India.

First, they are fortunate to be in India as most of construction and redevelopment is going to take place in South Asia and this offers a great opportunity to them. Secondly, to be successful they need to have passion, focus and hard work.



Source : India Habitat III National Report 2016

Expert Views of Prof. Vinod Kumar Sharma on **DISASTER RISK REDUCTION AND INDIAN CITIES**

Prof. Vinod Kumar Sharma is currently Senior Professor, Disaster Management / Consultant at Indian Institute of Public Administration; Vice Chairman, Sikkim State Disaster Management Authority, Govt. of Sikkim and Adjunct Professor of Disaster Management, Amrita University. He is member of UN ISDR Asia Science, Technology and Academia Advisory Group.

Prof. Sharma has served in a number of Universities in India and Middle East before joining the Indian Institute of Public Administration. He is founder Chairman of a non-profit organization, SEEDS India and member of executive committee of Sphere India (a network of NGOs and UN organizations working in disaster management).



Q. The Sendai Framework for Disaster Risk Reduction 2015–2030 was adopted by UN Member States in 2015. What are the key features that make the Sendai framework advancement on the Hyogo framework? As a signatory state, what initiatives, if any, have been taken by India so far to implement this framework?

The Yokohama conference in 1994, Hyogo Framework in 2005 and later Sendai Framework in 2015 are continuation of UN efforts for involving member states in Disaster Risk Reduction. It made significant impact on member states and has made marked change in the relief centric approach towards preparedness and mitigation. The Yokohama conference in 1994 was mid review of UN International Decade for Natural Disaster Reduction which could sensitize and generate lots of awareness in member countries about Disaster Preparedness, mitigation and their importance for developing countries. In India, setting up of National Centre for Disaster Management in 1995 in IIPA was one good initiative of Government of India in Capacity Building in DRR. The next decade was follow up of the similar UN agenda by setting up of UN International Strategy for Disaster Reduction (ISDR). The Hyogo Framework for Action 2005-2015 was basically to build the Resilience of Nations and Communities to Disasters. HFA is the first plan to explain, describe and detail the work that is required from all different sectors and actors to reduce disaster losses. It was developed and agreed on with all stakeholders needed to reduce disaster risk - governments, international agencies/UN agencies,

disaster experts, academic institutions and many others - bringing them into a common platform for better coordination. The HFA outlines five priorities for action, and offers guiding principles and practical means for achieving disaster resilience. Its goal is to substantially reduce disaster losses by 2015 by building the resilience of nations and communities to disasters. This means reducing loss of lives and social, economic, and environmental assets when hazards strike. Whereas the Sendai Framework is with the set goals/ objectives and goals with a timeline of 15 years. India is one of the pioneer in implementation of activities of DRR and making significant efforts through NDMA and SDMAs to achieve all seven goals within given time frame. National Platform for DRR and Prime Minister's 10 point programme is in line with four objectives and seven goals of Sendai Framework.

The Government of India is fully committed to achieve seven goals of Sendai Framework. Some of the states like Sikkim, Gujarat, A.P., Assam, Tripura, Bihar and many others have taken measure to achieve the overall goal of Disaster Risk Reduction in their respective states. The National Disaster Management Authority has come out with National Disaster Management Plan. Almost all states have developed State level Disaster management Plans as well as District Disaster Management Plans. India is

using Science and Technology in disaster preparedness and response. UN has recognized Mr. Kiran Rijju, Hon'ble Minister of State for Home as 'Champion of Disaster Risk Reduction', which is a unique recognition of United Nations to India.

Q. What is the role of disaster risk reduction in terms of achieving the Sustainable Development Goals and the Paris Agreement on climate change?

Though, all the seventeen Sustainable Development Goals (SDGs) are directly or indirectly leads to Disaster Risk Reduction

developing country including India. India is signatory of all the three agreements and making all sincere efforts to achieve their goals and objectives. It can be achieved if it is implemented in holistic manner. Unless, all concerned ministries and departments make a single integrated action plan and make joint efforts to implement the three agreement, we can not achieve the fundamental goal of 'Sustainable Development'. Secondly, only national efforts are not sufficient for achieving such big targets and goals, equal involvement of states and private sector,

“ In any disaster, housing sector is badly affected. With the type of development, urban risk is increasing and most of the economic losses are because of urban property loss in urban floods or earthquakes. There is a strong need to have urban planning according to vulnerability of the city and region.

(DRR) but five are directly related to DRR. The integration of poverty alleviation with saving human lives and livelihood from natural disasters will lead to sustainability to the greater extend. Sustainable Development Goals, Paris agreement and Sendai framework, all the three international agreements are from 2015-2030 and can not be treated separately. They all are interwoven and interconnected. All leads to Sustainable Development, which should be priority of any

academic institutions and people is essential, which is a difficult task. India is making significant progress in this and sensitising all concerned stakeholders and states to achieve the desired targets.

Q. How is India working to mainstream disaster risk reduction in developmental planning? What is the role of urban and regional planning in disaster risk reduction?

India is leading in efforts of mainstreaming DRR in

development planning. All the concerned ministries have been requested to make their own specific plan for DRR. The National Platform for DRR is involving all ministries, state governments and various stake holders to make culture of Disaster Risk Reduction. In any disaster, housing sector is badly affected. With the type of development, urban risk is increasing and most of the economic losses are because of urban property loss in urban floods or earthquakes. There is a strong need to have urban planning according to vulnerability of the city and region. Urban planning has most important role in overall DRR plan of the country. In annual meetings of Bihar State Disaster Management Authority, Hon'ble Chief Minister used to invite all of his Cabinet Ministers and Secretaries so that the agenda of DRR can be well explained and accepted by all departments.

Urban and regional planning has vital role in scientific management of risk reduction. Any national, state or district disaster management plan can not be prepared without proper regional and urban planning. Recently, many mega-cities had suffered enormous life and economic losses because of urban flooding which could have been minimised if there is proper urban development planning. Each mega city should have their respective plans with details of its physical, social and economic vulnerability.

Q. What risks do you anticipate for mega cities like Delhi, Mumbai, Chennai & Kolkata in view of the change in weather patterns and increase in extreme weather events. How well prepared is India for meeting climate induced disasters?

As stated above, all the mega-cities of the country are facing major problems of urban flooding, building collapse and vulnerability of old buildings from natural disaster like earthquake. The impact of climate change cannot be ruled out in increasing of extreme weather events which are causing unprecedented losses in these cities. Not only Mumbai, Chennai, Kolkata, Delhi but Srinagar, Ahmedabad, Bangluru and many other cities have faced unprecedented floods causing enormous life and economic losses. India is not prepared for such disasters. The unplanned growth of cities, encroachments, old building stocks, ignoring building codes/norms by the citizens, unplanned building stocks in low lying areas by builders and development authorities are some of the major reason for increasing urban risk in mega-cities. There is need of city level plan to meet such disasters involving city municipal-corporations, civil society, academic institutions and other stakeholders.

The Building Material Technology Promotion Council (BMTPC) and UNDP with the guidance of Department of Housing,

Ministry of Urban Development has prepared a hand book for urban authorities providing them with guidelines for urban risk reduction.

Q. Every year about 1,500 people die due to floods in India, mainly because they get cut off from land and are swept away. Apart from this there is the loss of livestock and cattle. Do you think the linking of rivers, is a solution that can address the problem of recurrent flooding?

The linking of rivers is not a new concept. It was thought earlier about four decades ago in seventies but seeing the cost of the project, it could not be implemented. There are some simple solutions given by 'Flood Commission' long back in 1978 but no state could follow the recommendations of the commission. In case we can do water conservation by reviving the ponds, lakes, rivers and other water bodies in each village, town and cities, we can conserve lots of water. Water table will improve in every states, drinking water problem can be solved. It is one of very simple method of flood mitigation. In structural mitigation, river linking is one of option but very costly. If the country has required funding, river linking is long term flood mitigation measure.

India's major problems are floods and droughts, which can be solved by water conservation. The farmers need timely irrigation to the crops, which is possible

if 100% land is irrigated land which is possible by river linking. Government of India and few states have started face wise implementation of this mega project. There are environmental issues involve with river linking but economists can find out with cost-benefit analysis. Hon'ble Prime Minister has asked for setting up a holistic research study to study solutions of annual flooding in India. After Flood commission report in 1980 (Badh Ayog Report), this will be next such study in India.

Q. What are the efforts in India, to sensitize and build capacities of the community about its role in disaster management and rehabilitation effort, since the community is the most affected and it is also the first line of response?

Disaster awareness, education, sensitisation and capacity building of all role players are important aspect of Disaster Risk Reduction. The best example of sensitization, capacity building and creating mass awareness in communities

about safe construction is Sikkim reconstruction and rehabilitation after 2011 earthquake. The state trained 3000 masons, 300 engineers and all concerned officers in earthquake resistant technologies. The beneficiaries were also trained in earthquake safe construction. The state used total transparent method of providing relief and rehabilitation assistance to the affected communities. The money was given in four installments by making sure that they are using earthquake resistant technology and their houses will not be affected by another earthquake (if any in future). After completion of house, it was delivered to the beneficiary on 18th of that month by inviting the whole village. This celebration was to create awareness among villagers that the newly constructed house is earthquake resistant. The beneficiary used to explain the earthquake resistant features to his neighbors and other villagers present at the event. This process was continued till last house was handed over to the beneficiary. It created awareness in all the

affected villages about the earthquake resistant housing technology in the state. Every year on 18 September, state level workshop is being organised since 2012 to create awareness in the state. The SSDMA has State Platform for Disaster Risk Reduction on lines of national platform to mainstream DRR in the state.

After each mega disaster, state become more active in preparedness, mitigation and building capacity for immediate response. Our experience in Orissa (after 1999 super cyclone), Gujarat (after 2001 earthquake), Sikkim (after 2011 earthquake) Uttarkhand (after 2014/2015 floods,) is that state did exemplary work after the disaster. There is need that we are sensitive for DRR actions before any big disaster. The Hon'ble Prime Minister's 10 point formula (at Asian Ministerial Conference at New Delhi) is blue print for DRR, not only for India but for all Asian countries.

Expert Views of Shri. Manu Bhatnagar on

HERITAGE CONSERVATION AND CITIES

Shri. Manu Bhatnagar is an urban and environmental planner with over 2 decades of experience in the environment sector. He currently heads the Natural Heritage Division at INTACH as Principal Director. Besides a Masters Degree in Urban & Regional Planning from Cornell University, he has qualifications in Strategic Environmental Assessment, Ecology and Habitat Management, Environmental Law, Conservation of Rivers and Lakes, Disaster Management from prestigious institutes.

At INTACH he has authored water policy for Delhi, led programs on sustainable agriculture, geo-heritage documentation, nature and culture issues, landscape ecology.



Q. Urbanisation is on the rise and consequently the rise of construction activities. A major impact of this has been the depletion and disappearance of small and large water bodies of any settlement that are getting filled up for construction purposes. The consequence of this is being experienced now with urban flooding and drying up of water sources. How can this issue be addressed by planners and policy makers?

Pattern of rainfall has now changed from long drawn events to brief intense and even extreme events. Extensive concretization and inadequate soft surfaces leave the water no place to percolate. So while the aquifer depletes due to over exploitation, on the surface damage to property, life and economic losses occur.

Water bodies and low lying areas moderate floods while simultaneously storing the monsoon bounty as a local resource and adding to the quality of life. In this era where India is transitioning from a predominantly rural to an urbanized country powerful lobbies see lands with high ecological and hydrological values in terms of real estate values based upon their proximity to existing developments and infrastructure. They frequently get their way.

Planners too, in general, have little knowledge of water body processes. Merely marking a blue blob on the land use map is not enough to save a water body for a water body cannot be seen in isolation of its catchment. Urbanization is the process of colonization of the natural watershed. The hydrological processes in the landscape must be understood and respected by planners. Planners also need to pay heed to National Disaster Management Authority's guidelines on urban flooding and desist from allowing construction in low lying areas.

In these times of increasing water scarcity, planners in local planning authorities need to assert the hydrological values of lands, based upon inputs from hydrogeology and topography. Meandering natural

drainage channels, waterbodies need to be respected and protected in the urban landscape. Lineaments and paleochannels [identified through remote sensing] should remain unbuilt upon as groundwater recharge gateways. Thus, the watchword should be hydrological sensitivity in landuse planning. This will also bring a measure of reliance upon local resources in a world where the water resource, is increasingly contested - witness interstate and intersectoral conflict, as well as anaemic rivers.

Policy makers need to revisit 'Report of Sub-committee for Development of National Sustainable Habitat Parameters on Urban Storm water Management' in order to enhance the availability of local water resources. The report recommends that at least 2% - 5% of urban land may be earmarked for water storage. Increasingly this may not be enough and percentages may be raised to offset the increasing runoff from increased hard surface cover. Waterbodies and low lying lands would thus store the water as a resource which is otherwise seen as a bane in terms of waterlogging and flooding.

Q. Crores of money has been spent over the decades, on river cleaning action plans. But our rivers are still extremely polluted and in some cases on the verge of drying up. Since cleaning the rivers require huge infrastructure in terms of interceptor sewers and treatment plants, how can we mobilize the required funds to meet these costs? How do we address the cultural and behavioural characteristics of

the population using the rivers, as also the current landuse along the entire course of the river, which contributes to a large part of the pollution?

The assumptions loaded in the question are questionable. Do we need vast investments in sewerage and sewage treatment plants? Do we need to "change public behaviour towards using the rivers" or do we need to change the pattern of abuse to which our local bodies have subjected the rivers? The fact is that the approach towards rivers in India has been determined by the hydrocracy and public utilities which are driven by an engineering and capital intensive approach. The heavy and fruitless investments are a milch cow for

As an example let us take the case of Yamuna River. As the river comes into the plains, the Tajewala barrage diverts the waters into the East and West Yamuna Canals leaving little flow into the river channel. At Delhi significant amount of water is abstracted at Wazirabad barrage. At Okhla barrage water is diverted into Agra Canal and Gurgaon Canal. All that is left in the river is the sewage and industrial effluents much of which is untreated.

Rivers lean season flow also consists of seepage from aquifers. However, with overexploitation of the groundwater the falling water tables are unable to augment lean season flow in the river. 80% of water used in India is going to irrigation - the productivity of

As an example let us take the case of Yamuna River. As the river comes into the plains the Tajewala Barrage diverts the waters into the East and West Yamuna Canals leaving little flow into the the river channel. At Delhi significant amount of water is abstracted at Wazirabad Barrage. At Okhla Barrage water is diverted into Agra Canal and Gurgaon Canal. All that is left in the river is the sewage and industrial effluents much of which is untreated.

many and these authorities are least interested in low cost and low time lag solutions which encroach upon their turf.

Why is there low flow situation in our rivers? Why are summer seasons witnessing dried channels even in major rivers like Godavari? This is because we are abstracting excessive amounts of water from the rivers as well as from aquifers.

irrigation water in India is a fourth of the USA and half of China. Our domestic and industrial usage has also plenty of scope for efficiency. As an example, Tata Steel has reduced their water consumption in steel production from 14 tons to just 6 tons of water per ton of steel. In domestic usage low flow taps, atomizers, dry toilets can bring down water demand drastically. Efficiency combined with recycling

of treated water [Singapore even treats sewage to potable levels] urban and industrial demand can enormously reduce its footprint on the rivers and aquifers.

Reduced water demand would reduce impact upon water tables, and enable aquifers to restore lean season flow to rivers.

With urban efficiency reducing demand, the overall sewage generation would significantly reduce. With recycling, most sewage would become a resource and not be thrown into the river. Dry toilets, decentralized sewage treatment [constructed wetlands, soil bio-technology, bioremediation, advanced septic tanks and baffle reactors] would curtail the flow of sewage to rivers.

Given the vast array of options which can be deployed quickly, pollution in rivers can be reduced significantly in double quick time and with vastly reduced capital and O & M costs. Policy makers need to lay out directives freezing capital and energy intensive centralized technologies in favour of decentralized demonstrated and proven technologies to obtain expeditious results on river pollution.

Q. Tourism is often considered a channel for economic development and growth of a town/region. Do you think that we have not adequately assessed the flip side of the growth of tourism and are therefore now facing the consequences, especially in the hilly areas of the country? Should India also consider imposing limits on tourism, as is being demanded in some parts of Europe?

Balance needs to be struck between quantity and quality. Excessive numbers damage the fragile ecology of hill areas. Revenue generation alone cannot justify the cost benefit analysis. The cost side does not show the unmonetized costs to the ecology. Nainital, for eg., a town of 50,000 is receiving 40,000 visitors per day, in the season, along with 10000 cars. The High Court has directed a fixed number of vehicles only to be permitted and hotels without parking facilities to be shut down. Uttarakhand has also regulated the number of visitors to the Char Dhams. Shimla, Panchgani, Darjeeling are all reeling under tourist stress. So definitely time has come to impose limits to the number of visitors and disperse them to new locations and attractions.

Q. Do you think it is time to move from urban planning to introduce planning norms for rural areas, since the rural areas form a major part of the catchment areas of rivers, and are also severely affected by floods and droughts?

Villages are towns in embryonic form. Timely planning can help them become well planned towns. Disaster zoning would be especially important in flood prone areas.

Q. Rainwater harvesting has been made mandatory in some states. What have been the definite benefits of adopting rainwater harvesting? Has the availability of water resources and water management been better in these states in comparison to the other states?

Urban water harvesting has yet to show significant results. This is because small water harvesting pits are ill-maintained. Area based water harvesting at colony and campus level can show better results. Simply keeping large surfaces soft or under porous paving can yield good recharge. Water harvesting through large depressions, waterbodies and lakes can show excellent results. Restoration of ponds in rural areas of Maharashtra [such as Latur] and Rajasthan has resulted in significant decline of distress calls for tankers.

Q. Non revenue Water is significant in large cities, while small cities face water scarcity. How would you like this issue to be addressed? Is water metering one of the solutions? What could be the options for improving universal access to drinking water?

The issue affects the economically weaker sections. This segment actually uses available water with utmost efficiency. Under Article 21 Constitution of India human right to water is recognized and India is also a signatory to UN resolution guaranteeing water for all. The state has to step in to provide 50 litres of water per day, per capita, in slums and EWS and LIG areas, while reducing distribution inequities. In Karnataka pilot projects have curtailed distribution losses and provided slum areas with 24 x 7 water supply, against payment, successfully - clean water supply at the doorstep has significant offsets in terms of health costs and opportunity cost.

Opinion of Prof. Om Prakash Mathur on **INDIA'S URBAN TRANSITION** **BETWEEN THE HABITAT II AND HABITAT III**

Prof. Om Prakash Mathur is Senior Fellow at the Institute of Social Sciences, New Delhi. He was previously Director, National Institute of Urban Affairs, New Delhi and held the IDFC Chair in Urban Economics at the National Institute of Public Finance and Policy. Currently, he is a member of the GIZ-ADB Sponsored City Development Initiative for Asia (CDIA) and the City Indicators Programme, hosted at the University of Toronto.



India's urban transition between the Habitat II and Habitat III was an exceptionally important 20 year period which witnessed, globally and within India, unprecedented changes in matters of urbanization and cities, urbanization pushing itself aggressively into the developing world, new challenges that accompanied the urbanization process, the global community rising collectively to address the urban challenges and chart a new path for it to tap the vast economic and social potential, that urbanization holds.

This period, let me begin with the knowns, saw the world becoming 50% urban; in February 2008 the United Nations demographers predicted that within the year, the millennia-long project of settling the planet would move into its final act suggesting and I quote – “the world population will reach a landmark in 2008, for the first time in history the urban population will equal the rural population of the world” (World Urbanization Prospects, The 2007 Revision). In the end, it took slightly longer than the original forecast. By the spring of 2009, as Townsend noted, “most likely in one of China's booming coastal cities or the swelling slums of Africa, a young migrant from the hinterland stepped off a train or a jitney and tipped the balance between town and country forever”. With this, he continued: we would give up the farm for good, and become a mostly urban species (Townsend: 2014).

A second known - this period saw the global community come together to consider what it meant for the world to be 50% urban: can it be business as usual, transiting from one decade to the next one without any change in the narrative, or does it need to be looked upon with a different lens and

addressed with a different vision, and a set of new goals and strategies. In 2015, the United Nations adopted the Sustainable Development Goals (SDGs), and dedicated goal 11 to making cities and human settlement inclusive, safe, resilient and sustainable and followed it up with the Paris Agreement on Climate Change, that carried a blunt message: cities cannot continue on a consumption

WHAT HAS CHANGED IN INDIA BETWEEN THE HABITAT II AND HABITAT III ?

India's urban transition, over the period 1996-2016, whichever way it may be assessed, is no less noteworthy and in many ways, dramatic as well. The year of 1996 and the advance work that preceded the Habitat

Habitat II to Habitat III is not just a change in how India approaches urbanization- this period has seen in India historic changes in the way urbanization has unfolded itself in recent years.

spree- cities must agree to reduce energy consumption and bring it down to stay within the prescribed limits in order to forestall the dangers and risks of climate change. In 2016, the United Nations (UN-Habitat) expanded and deepened the sphere of global benchmarks, calling upon the member countries to work with cities in order that cities become competitive, efficient, transformative, participatory, inclusive, just, safe and most importantly, sustainable and resilient! The urban world cannot live the way it has thus far; it must move in directions as laid down in the new urban world order. The New Urban Agenda signals a different world, it is a new agenda to think about, to aim at and plan for .

II, brought to the country's attention the compelling need to move away from its wholesale reliance on public delivery of housing solutions and of social infrastructure and services towards alternative institutional arrangements. Public delivery systems, it was posited, were limited in their reach and impact. The India National Report 1996, prepared for the Habitat II, for instance, stated that India needed a holistic approach which should embrace ownership housing, rental housing, housing via upgradation and renewal, and improvement of informal settlements, all aimed at improving the housing conditions of the vulnerable sections of the urban population . The canvas of operations was extensive.

Triggered by the call given by the then Executive Director of the UN-Habitat for creating “ *Cities without Slums*” with ambitious strategies for improving the lives of the slum dwellers, India developed a few years hence, its own version of the global initiative, under the banner of *Slum-free Cities*. Slum-free Cities constituted an extraordinarily important shift in the way slums had historically been looked at and approached in India-from the Slum Areas (Improvement and Clearance) Act, 1956 to the proposed draft Model Property Rights to Slum Dwellers Bill of 2011. No other shift in urban policy is as dramatic as this one, that provides for a de jure cover to tenure and universalization of services, the two main ingredients of the slum upgradation strategy. The Slum-free India envisaged inclusive and equitable cities; it provided for security of tenure for slum dwellers, assigning to them a legal document of entitlement, and limited tradeability of dwelling spaces.

2016 heralds a new vision for urban development in India. It has shed the 1996 approach to urban development where it equated the urban challenges with the provision of housing and urban services and enhancing access of the deprived section of the urban community to basic urban services, and replaced it with an agenda that aims at transforming India, with emphasis on economic growth, productivity, inclusive development, quality of life,

and sustainability. This agenda specifies levers of change: harmonizing agglomeration economies, harnessing the urban-rural continuum, promoting inclusive and sustainable development, and empowerment of municipalities. These hold, according to the India National Report 2016, the key to India's transformation.

Habitat II to Habitat III is not just a change in how India approaches urbanization- this period has seen in India historic changes in the way urbanization has unfolded itself in recent years.

First : for the first time, some day in 2012 or early 2013, the annual

increment to urban population equaled with the increment in rural population, a milestone in itself given the country's obsession with the age-old adage- India lives in villages-and propelling urbanization into a new development trajectory. It has come about, interestingly, not with any demographic restructuring, but with a geographic change and acquisition of an urban status by a large number of rural settlements. This phenomenon, on the one hand, has added a dynamism to India's urban transition but cast, on the other hand, uncertainty in the future of the country's urbanization process. This change has come with a string

of consequential movements in the governance and financial frameworks e.g, the emergence of quasi-public institutions, public-private sharing of city spaces, special purpose vehicles, technology - driven service delivery and management, capital and debt markets, philanthropies, and more recently , the Ola - Uber type of financing vehicles- whose significance and relevance are still in infant stages.

What does it all add up to –some see it as an exercise in futility as these do not cohere, others, may view it an exercise in intellectual discourses!

SALIENT FEATURES OF NEW HOUSING POLICIES OF STATES OF ODISHA AND RAJASTHAN

Policy for Housing for all in Urban Areas Odisha, August 2015

Objective is to meet the requirement of construction of 0.1 million dwelling units over the next five years for EWS and LIG households. It offers seven models for development in convergence with PMAY.

1. Mandatory development of EWS housing
2. Incentives for market-based development of EWS and LIG Housing
3. Development of affordable housing projects.
4. In-situ slum redevelopment.
5. Beneficiary-led individual housing construction or enhancement
6. Relocation and rehabilitation
7. Rental housing

New initiatives under Odisha Policy:

- Single-window clearances by the authority
- Online registration of applicants/ beneficiaries along with biometric details to be followed by social audit of all submitted documents
- Facilitation Centres to be set up by Odisha Housing Mission to aid applicants who do not have access to computer and internet
- Beneficiaries to be members of Slum-level Registered Society

Chief Minister's Jan Awas Yojana Rajasthan, September 2015

Objective is to implement the government's effort to address 1.05 million housing shortage. Provisions framed in convergence with PMAY:

1. Mandatory provisions for residential schemes of ULBs / UITs /Development Authorities /RHB/Private Developers/ proposed industrial Areas
2. Development of affordable houses by private developer on private land in partnership
3. Construction of EWS/LIG houses on government land on pre-decided ratios on basis of allotment or auction

New initiatives under Rajasthan Policy:

- Incentives for developers and subsidies for beneficiaries
- Intelligent management of FAR through development control regulations
- A mix of strategies involving non-cash incentives and revenue-forgone incentives to the private sector
- Indicative building plans of EWS and LIG flats included in policy document
- Fast track approval to the projects provided within 60 days

Source : India Habitat III National Report 2016

Opinion of Prof. Jagan Shah on

HOUSING FOR ALL NEEDS PLANNING FOR ALL

Prof. Jagan Shah is Director, National Institute of Urban Affairs, New Delhi. He has 20 years of professional work experience in various aspects of urban development in India. He studied Architectural Design from School of Planning & Architecture, New Delhi and Architectural History & Theory from the University of Cincinnati and Columbia University, USA. He has served as the Director of Sushant School of Architecture, Gurgaon, Faculty at the School of Planning & Architecture, New Delhi and Chief Executive of Urban Space Consultants. He has authored books on 'Contemporary Indian Architecture', 'Building Beyond Borders'. He is also a founding member of the Modern Asian Architecture Network (MAAN).

In its report of 2012, the 'Technical Group on Urban Housing Shortage (TG-12) constituted by the erstwhile Ministry of Housing and Urban Poverty Alleviation included a concluding section with recommendations "for strengthening the system for collecting housing statistics and developing a national database for urban areas." It is remarkable that the recommendations do not touch upon any aspects of urban planning; data regarding land and location are conspicuously absent. The reduction of all aspects of housing to numbers and the negation of spatial logic and physical planning are symptomatic of an approach to the housing sector that needs revision in light of the new paradigms being promoted by the Ministry of Housing & Urban Affairs, such as e-governance, smart city planning, value capture finance and the 'trust and verify' principle.

Numerous urban housing programmes have been devised by the Government of India over the past six decades and implemented either through the

mass production of new houses for the urban poor or the *in-situ* amelioration of degraded environments in which urban poverty exists. The shifting sands of India's political economy are amply evident if we compare the targets and purposes of the Integrated Subsidised Housing Scheme of 1952, the LIG Housing Scheme and Slum Improvement/Clearance Scheme of 1956, the Environmental Improvement of Urban Slums of 1972, the National Slum Development Program of 1996, the Scheme for Housing and Shelter Upgradation of 1997, the Night Shelter scheme of 1988-89, the Two Million Housing Programs and the Valmiki Ambedkar Awas Yojana (VAMBAY) of 2001-02.

In 2005, the National Urban Renewal Mission and its sub-scheme Basic Services for the Urban Poor (BSUP) brought housing provision for the poor and vulnerable under the purview of the City Development Plan, a progressive approach that integrated the provision of housing with the planning and provision of infrastructure and



basic services. However, ever since the first National Housing Policy was announced in 1988, the value of urban land had become the primary concern for policy makers and land owners alike, and the urban poor living in slums had been firmly relegated to the category of squatters. When the Policy was revised in 1994, it included the repeal of the Urban Land Ceiling and Regulation Act and promotion of Foreign Direct Investment (FDI) in real estate. A new 'National Urban Housing & Habitat Policy' was announced in 2007, seeking to promote various types of 'public-private partnerships' for achieving the goal of 'Affordable Housing for All'. The policy emphasized the earmarking of land for the EWS & LIG groups in new housing projects. While the Rajiv Awas Yojana further entrenched the belief in social categories, the Rajiv Rinn Yojana tried to expose the 'affordable' sector to the housing loan market.

The overall ineffectiveness of government response to housing over the past six decades is quite remarkable. As per the 68th round of the NSSO, only 24% of the slums in India benefited from welfare schemes or other schemes for improvement of slums. As per the Census of India 2011, slum areas have been reported in 2613 towns spread across 31 states & union territories. A total of 65.49 million inhabitants living in 13.9 million households have been enumerated, representing 17.4% of the total urban population of

the country. Several cities have more than 25% of their population residing in slums: Jabalpur tops the list with 45%, followed by Vishakhapatnam (44%), Meerut (42%), Mumbai (42%), Raipur (39%) and others. Between 2001 and 2011, more than 13 million persons have been added to the slum population of the country, a dramatic decadal growth of over 25 percent. Despite an extraordinarily large increase in the urban share of GDP, from 41 percent in 1980-81 to 51.7 percent in 1999-2000, and currently estimated at about 60 percent, the numbers of the urban poor have continued to rise.

Although we now claim a "paradigm shift" from Government being 'provider' to Government as 'facilitator', the scale of the challenge might require more radical shifts than signified by these tame words. At the heart of the reformed approach being suggested here is the proposition that 'housing for all' and 'slum-free city' are synonymous and can only be achieved if the spatial and physical reality of slums is dealt with through new methods of analysis and intervention.

The traditional methodology adopted for formulation and implementation of housing programmes has been the estimation of shortages or gaps in supply and to assume that it constitutes the demand for housing units. This is a vital flaw in the logic, as it forces the Government into a corner

whereby it must "fill" the gap or else admit failure. It even overlooks the manifest perils of such projection, which has led to a surplus of 11.07 million houses in the HIG (higher income group) segment lying vacant in 2011 – while the EWS and LIG categories suffer a 95% deficit in supply. This paradigm usually starts with the projection of India's urban population, which, at an annual growth rate of 2.76% in 2011, is estimated to grow to 814 million people by the year 2050.¹ Without any correlation with anticipated or planned urban densities or the carrying capacity of existing urban land and infrastructure, this population projection is used as an overall basis for projecting demand. The Technical Group of 2012 estimated a shortage of 18.78 million housing units.² Of these, the economically weaker section (EWS) accounts for 10.55 million units (56.2% of total shortage) and the low-income group (LIG) requires 7.41 million housing units (39.4%). The middle and high-income groups have a deficit of 0.82 million units (4.4%). Although the 'Housing for All' mission was originally meant to cover EWS³ and LIG⁴ segments, it now includes the middle-income

¹ United Nations, DESA, The 2014 Revision

² These estimates are based on Census & NSSO 65th Round results on Housing conditions and Urban Slums (July 2008-June 2009) with based on obsolescence factor, congestion factor & homeless households.

³ Households with annual income not exceeding Rs. 3 lakhs.

⁴ Households with annual income not exceeding Rs. 6 lakhs

group (MIG)⁵ as well, thus defying the assumption that beneficiaries are from socially and economically weak sections of society. By August 2017, approximately 2.4 million houses were 'approved' and construction had started for approximately 1 million houses. These achievements suggest that the goal of Housing for All by 2022 may require radical solutions.

It is significant that the ten states that together contribute to 76 per cent of the urban housing shortage – Uttar Pradesh, Maharashtra, West Bengal, Andhra Pradesh, Tamil Nadu, Bihar, Rajasthan, Madhya Pradesh, Karnataka and Gujarat – also dominate the list of states that have the maximum number of slums. 65 million people lived in slums in 2011, constituting 17% of the urban population of India. There were 13.7 million slum households, accounting for 17.3 per cent of the total households. It should not be difficult to surmise that the shortage of housing units is primarily linked with the households living in slums. However, the 'Housing for All' Mission does not perceive the challenge in these spatial and physical terms but in purely numerical terms.

LOCATING THE CHALLENGE OF 'HOUSING FOR ALL'

In 2015, the Prime Minister of India vividly described how

⁵ MIG - 1 households with annual income between Rs.6,00,001 to Rs.12,00,000 and MIG -2 households with annual income between Rs.12,00,001 to Rs.18,00,000.

cities “digest” poverty, giving the poor an opportunity to find employment and self-fulfillment. This compelling image of the role of cities in the national economy must become the central thrust and commitment in 'housing for all'. Slums are the locations where poverty is presently being “digested”; slum settlements are the physical manifestation of poverty in urban areas and the visible evidence of social exclusion. Physically and spatially transforming the slums is the route to providing housing for all. While this may seem to be the professed goal of current efforts in the sector, it needs to be understood that the implementation is entirely focused on individual beneficiaries – represented solely as individual numerical entities

“ If slum houses need to be transformed into modern houses, then the planning and financial management of the area covered by the slum should become the primary purpose of the housing Mission.

– whereas slums need to be dealt as communities and collectives with distinct spatial and physical characteristics.

UN-Habitat defines a slum as a run-down area of a city characterized by substandard housing and squalor and lacking in tenure security. The Cities Alliance describes slums as “the neglected parts of cities where housing and living conditions are appallingly poor; slums range

from high-density, squalid central city tenements to spontaneous squatter settlements without legal recognition or rights, sprawling at the edge of cities.” The 2011 Census of India defines slums as “areas where dwellings are unfit for human habitation by reasons of dilapidation, overcrowding, faulty arrangements and design of such buildings, narrowness or faulty arrangement of street, lack of ventilation, light, or sanitation facilities or any combination of these factors which are detrimental to the [sic] safety and health”.

If slum houses need to be transformed into modern houses, then the planning and financial management of the area covered by the slum should become the primary purpose of the housing

Mission. There is a significant difference between investing in the location where the urban poor are living and investing in the construction of buildings. While it is desirable that the government should withdraw from active intervention and allow market forces to operate, marked by its role as 'facilitator' rather than 'provider', it can be suggested that the facilitation cannot be restricted to providing subsidy

and enabling the participation of the private sector. In fact, the largest gap in the ecosystem for housing provision is the lack of capacities for providing the detailed and site-specific planning and financial management that each slum requires.

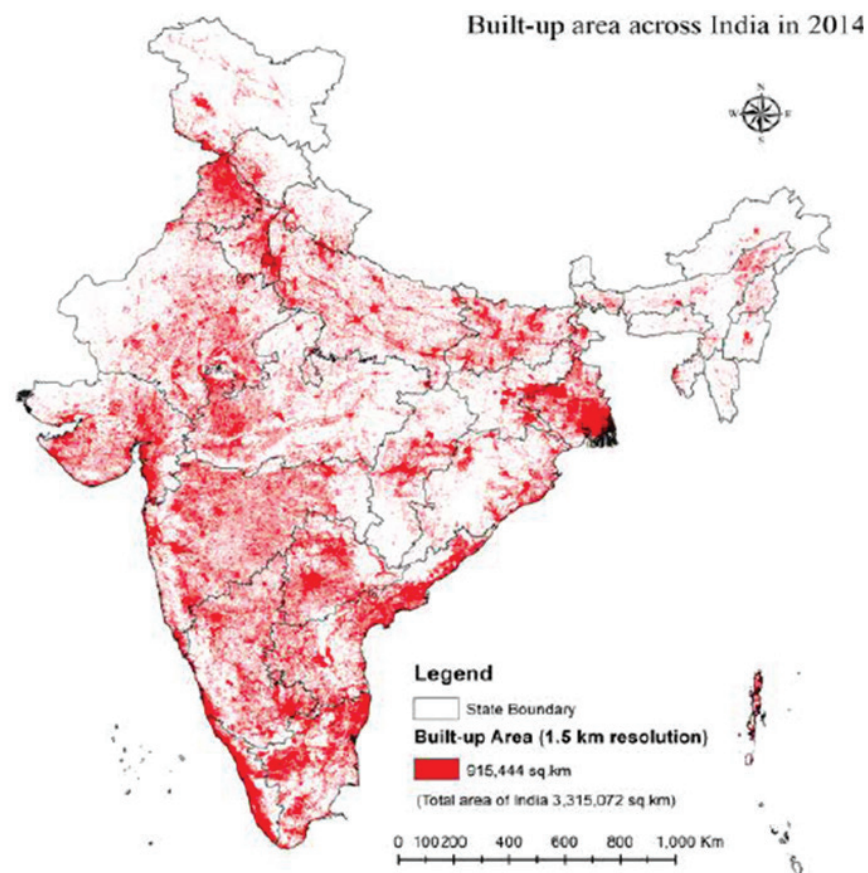
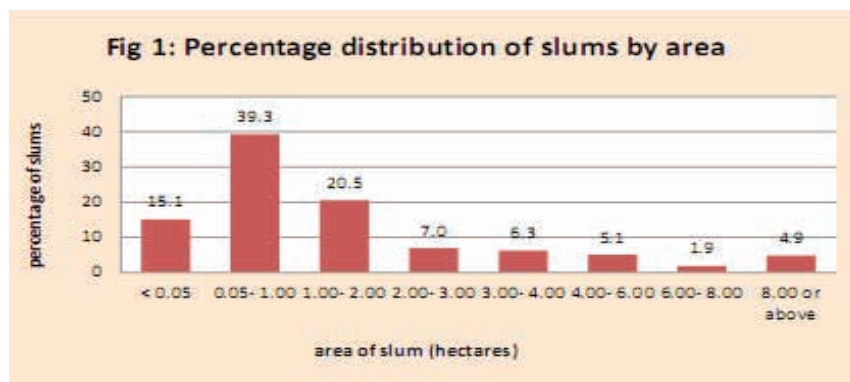
The 68th round of the NSSO gives us vital information about the locations of slums. Across the country, in terms of ownership, 44% of slums are situated on private land, whereas 37% are situated on land owned by local bodies, 12% on other types of public land and 6% on railway land. In terms of physical location, 30% of India's slums were located in open space or parks, while 23% were located along nallahs or drains, 9% along railway lines and 27% elsewhere.

The 69th round (2011-12) of the NSSO, titled 'Condition of slums', reveals an even more significant aspect: the amount of land occupied by slums. At all-India level, about 75% of the slums occupied an area less than 2 Ha and about 39% of slums had an area ranging between 0.05 to 1 Ha. Another 21% were in the 1-2 Ha range, and 15% were less than 0.05 hectares in size. In most States, the 0.05-1.00 Ha range contained the largest proportions of slums.

The approach to 'Housing for All' needs to start with an analysis of the land covered by slums in each city. The physical and spatial characteristics of slums are the primary data on which the mission and its approach

ought to be framed, because of the crucial role that land plays in the various equations that govern the successful implementation of the Housing for All mission. Introducing a spatial logic into the Mission would also rid the

Mission of a nefarious assumption: that sufficient land is available for the relocation of slum dwellers and the building of new houses. The recent Economic Survey (2016-17) has included a section titled 'How Urban is India?' that



argues that “India was 63% urban in 2015 – more than double the urbanization rate estimated by the 2011 Census.” An analysis of satellite images establishes that the built-up area of India is 915,444 sq km, out of a total area of 3,315,072, which suggests that cities might occupy close to 27% of India’s landmass, whereas the more popular thumb-rule in the urban sector places the figure at 3 percent! A similar insight was gained in the World Bank’s assessment of night-light data derived from satellite imagery, which reveals an 80% increase in the spatial expanse of urban areas over a single decade.

FINDING AN APPROPRIATE PHILOSOPHY

The ‘Housing for All’ mission can learn from the efforts of Mumbai’s Slum Rehabilitation Authority (SRA), which has mapped and geo-tagged 2400 slum clusters in the city, covering a total area of 33139656.57 sqm (approx. 33.14 sq km). A combined map of the slum clusters and the other non-slum built-up areas of the city reveals a close relationship between the established work centres of Mumbai and the largest concentrations of slums at Saki Naka (next to a large commercial and industrial hub), Bunder (near the centre of trade and logistics), Deonar (next to the largest landfill), Bandra and Dharavi (in the cusp between the island city and its sprawling suburbs).

The fact that slums develop close to the livelihoods of the poor

is only one of the axioms that now inform the global wisdom about cities. Other axioms are that slums are ‘vote banks’ that represent collective political clout, that they suffer from lack of infrastructure and services, that they mostly contain hazardous inhabitations and that their existence at prominent locations in the city ensure that they are occupying high-value land. Even if we disregard the other complex realities of slums, it is evident that the only effective tool for harnessing the value of land covered by slums is the tool of physical and spatial planning. It is therefore not surprising that the SRA has been using advanced planning tools and financial models for dealing with its slums. However, it is not only the techniques but also the philosophy of the SRA that needs emulation in the ‘Housing for All’ mission.

In 1995, recognizing the startling fact that more than 55% of Mumbai’s population stays in slums, the Government of Maharashtra appointed a committee chaired by its Chief Secretary, Shri Dinesh Afzulpurkar. The Committee estimated that for close to 80% of the slum settlements, in-situ rehabilitation was feasible, and it stated a philosophy that can appropriately guide the pursuit of ‘housing for all’:

The slums and hutment dwellers... undoubtedly have a share in the growth, status and prosperity of this great city... A large percentage of

them belong to the scheduled castes and scheduled tribes. We cannot be oblivious of the fact that slum-dwellers have not willingly chosen their shanty structures and unhygienic environment but have been driven to this option due to compelling circumstances as they were thrown out of the formal housing sector, the latter being unaffordable and much beyond their income levels. It is imperative to enhance their standard of living and for which an authorized dwelling unit is a first step in the right direction. This, in turn, will bring about a marked improvement in their hygiene and health as well as raise the level of public hygiene, which has fallen to very low ebb. For lifting them from their present levels, cross-subsidization of the cost of their dwelling units and allotting them free of charge, though not supported by housing philosophy, had become a necessity and a cure in the given situation. The slum-dwellers deserve this preferential - probably unequal - treatment to bring them into the mainstream of social, cultural and economic fabric of this pulsating City.

If the PMAY verticals have to become effective in the slum lands of India, then the schemes have to be placed squarely in the enabling paradigm of self-help, cooperation and partnership rather than the current paradigm of the benevolent state trying to urge the poor to release urban lands. The release of urban land needs to be viewed as a mutually agreed outcome of the enabling process rather than the (scarcely) hidden agenda. This objective can only be achieved if each slum can be dealt with as a unique

situation, with the final solution on the site being selected from a set of optional models.

ENABLING 'HOUSING FOR ALL'

An alternate way to achieve 'Housing for All' is outlined below. Firstly, the Ministry of Housing & Urban Affairs has to address the need for scale and the need for speed, which can only be satisfied by harnessing the huge professional capacity required to plan for each slum in 2613 towns of the country. Such an endeavor will require an army of urban planners, architects, engineers, development experts and data scientists. These individuals and groups can provide their services for payment or *pro-bono*. They must be equipped with tools like satellite maps, computers, and have assured access to data like updated land registers. The provision of technical assistance as a subsidized or free-of-cost service – enabled through the involvement of individuals, civil society organizations and educational institutions – will be the necessary condition for this model to work. It will benefit the beneficiaries as well as the ULBs, which are expected to prepare an integrated, city-wide 'Housing for All Plan of Action', in accordance with the City Development Plan. The SECC data of 2011 show that 27.20 percent of the surveyed population are either illiterate or has education upto primary level, while over 1 percent are disabled. These are unlikely to be

able to participate in a housing programme that requires the presentation of construction drawings, specifications and clearances.

Rather than State Level Sanctioning and Monitoring Committees, the Mission should be executed through a state or ULB-level SPV and could be dovetailed with the provision of Finance Commission grants. The guaranteed subsidy amounts from various housing programmes should be agglomerated by the SPVs, as funds that they can leverage to raise bonds or loans. The SPV can provide different design, technology, repair & maintenance solutions, possibly assisted by the kind of 'Nirmiti Kendras' or 'building centres' created by HUDCO in the 1980's.

If we trust that each of the 13.7 million slum households in the country is eligible to receive at least 1.5 lakh rupees as subsidy for a new housing unit, we are envisaging a start-up corpus of around Rs. 20.55 lakh crores (34.25 billion USD). Until August 2017, the All-India investment in Housing for All has been around Rs. 1.3 lakh crores, including Central Assistance of Rs. 37270.84 crores. This amount has been sanctioned for 2.4 million houses. The above amounts do not take into account the convergence of funding for water supply & sanitation and other infrastructure like power supply and transportation that may be directed towards the slums from

other Missions and programmes of the Government of India and state governments.

The SPVs and their technical teams would be at liberty to work with the local communities to identify the particular solutions or combination of solutions that will be accepted by the residents of the slums, the landowners and the developing entities who will build new houses or upgrade old ones. The current options of the 'Housing for All' mission – after the removal of various definitional, practical and technical flaws⁶ in their design – should be seen as a core set of options in a larger menu available to the implementers of slum rehabilitation. Thus, the basic options are:

1. In-situ slum rehabilitation with participation of private developers using land as a resource
2. Credit subsidy⁷ to EWS, LIG and MIG segments on loans taken for new construction or extension of existing homes.
3. Financial assistance of 1.5 lakhs per unit for construction of affordable housing projects through partnership with private sector
4. Subsidy for beneficiary-led individual house construction /enhancement

While the Mission should define the minimum area for the houses to meet basic standards of habitation, it should leave the size to match

the existing space occupied by the beneficiary, the need for workspaces within the house and community, the collective choice of beneficiaries, the capacity to pay, and the sustainable density on the available land.

To the existing options can be added the innovative solutions that have been executed by organizations such as Kudumbashree in Kerala and Shelter Associates and Mashaal in Pune, which show the immense potential in beneficiaries forming cooperatives and constructing their own housing settlements. Ahmadabad has hosted successful private-led slum-networking projects. Even the sites-and-services approach of the early 1980's can be an option, as much as the incremental housing model developed in Indore in the 1990's. Tried and tested models from the global South, from countries such as South Africa, Chile, Mexico, Brazil, Colombia and Venezuela, can also contribute to devising local solutions.

The pursuit of transformative solutions and transparency and efficiency in execution, using the latest digital and

geo-spatial technologies, can result in a radical approach to providing appropriate housing for all Indians who suffer the deprivations of living in slums. While this rethinking is grounded in Indian and global models and good practices, it can radically alter the country's attitude to the housing crisis and can enable practical and effective solutions that speed up and expand the scope for creating slum-free and poverty-free cities in India.

⁶ Examples of the revisions required: In the spirit of the 'trust and verify' reform in e-governance, the overly elaborate and invasive SECC-linked documentation currently required should be replaced by transacting through the Adhaar-linked bank account of the beneficiary. Similarly, the burden of risk should not be placed on the shoulders of the beneficiary. The Beneficiary-Led Construction option stipulates that the last installment, a significant 20% of the subsidy, is disbursed only after the completion of the house, forcing a beneficiary to bear the risk of delay in reimbursement and exposing them to rent-seeking from local operatives, even though SECC data reveals that a significant share of beneficiaries are engaged in daily wage labour and other insecure livelihoods.

⁷ For those in the EWS and LIG category who avail a loan of up to Rs 6 lakh, an interest subsidy of 6.5 per cent for tenure of 15 years is provided. The interest subsidy on loans upto Rs 12 lakh will be 3 per cent.

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GIVING MIGRANTS THEIR DUE

**DR. PARTHA
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Often migration has been seen as a symptom of distress and something to be forestalled. However, it can equally be an instrument of economic and, especially in India, social emancipation.

In India, the constitution guarantees freedom of movement and migrants are an integral part of India's workforce, across a range of sectors. However, they remain unable to access many benefits that are due and owed to them, even as our social protection architecture is becoming stronger. Some element of portability and convergence is being introduced, but many benefits continue to be place-specific, notably food security provided through the targeted public distribution system (TPDS). Based on the migrant-inclusiveness of social protection schemes we suggest that clearer legal articulation, inter-state collaborative frameworks, sensitisation of the ground level bureaucracy and involvement of civil society organisations are all necessary to address this issue. We conclude with specific recommendations for the construction sector.

INTRODUCTION

According to the Census of India, the number of migrants has doubled in the period 1991-2011, currently standing at 454 million, i.e., about 37% of the country's population. This migration is a complex phenomenon, comprising

different streams, across different distances and durations of time. While in the past, rural to rural migration was dominant, the initial data from Census 2011 - detailed migration data is yet to be released - indicates that urban to urban movements are increasing. Concomitantly, there appear to be a shift in reasons for migration as well, with work and employment being replaced by family related reasons. The Working Group on Migration (MoHUA, 2017) has interpreted this as a possible sign of households consolidating in urban areas. There is also significant movement from city to rural areas. In 2011, while 32.1 million persons moved from rural to urban areas, 11.5 million persons moved in the other direction, consistent with a phenomenon of return migration.

MIGRANTS AND WORK

The Constitution of India guarantees freedom of movement to all citizens (Box 1). It is thus not surprising that migrants are an integral part of our workforce. While the latest Census data on migrant workers is still awaited, in 2001, they were 35.5% percent of the workforce -- important contributors to the economy.¹

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They are well represented across sectors, in manufacturing, construction and modern services², and ubiquitous in the informal sector. Work related migration is often inter-state, though there is substantial movement within districts also. While the improvement in transportation infrastructure, including the Pradhan Mantri Gram Sadak Yojana (PMGSY) has facilitated commuting, which accounts for over 10% of our urban workforce (Chandrasekhar & Sharma, 2015), our data collection systems are not designed for capturing short-distance and short-term migration, which are largely for work. The NSS in 2007-08 estimated short-term migration to be about 13.6 million, while Srivastava (2011: 422) guesstimates that “[c]onservatively, 40 million labourers could be seasonal migrants”. The Economic Survey 2016-17, notes that using changes in same-age cohorts “yields an annual inter-state migration of about 5-6.5 million between 2001 and 2011 [while] Railway passenger data analysis suggests an annual inter-state migration flow of close to 9 million” over 2011-16. (Government of India 2017, p. 264). Other studies have suggested even higher numbers, up to 100 million (Deshingkar and Akter, 2009). A related phenomenon is the use of migration by households as a risk distribution strategy, whereby some members of the household migrate (to cities or other rural areas) while others remain in the village. But, even

as they contribute to building India, migrants are often unable to access the benefits that are due and owed to them.

Box-1 : The Economic Advantage of Freedom of Movement

From time to time, the question is raised as to whether restricting migration is good policy. However, the Constitution of India guarantees freedom of movement to all citizens. This is enshrined in clauses 19(1)(d) and 19(1)(e) of the Constitution; in addition, Article 15 prohibits discrimination on basis of place of birth, among other criteria, and Article 16 guarantees equality of opportunity for all citizens in matters of public employment and prohibits the denial of access to public employment on the grounds of place of birth or residence. This constitutional right to free movement contrasts sharply with the formal Chinese system, which has used the concept of *hukou*—a place-based household registration system that links social benefits like education, healthcare and employment rights to place of registration—to restrict movements within the country till about 1980. However, since then, it has been relaxed and de facto, there are now over 200 million migrant workers, from interior provinces to the coastal regions, in China, who are working outside their place of registration. It is they who power the export-led economic growth model. China is currently reforming its *hukou* system to provide more access to social services for migrants and mitigate the inequalities that it generated. Restrictions on migration are thus not only unconstitutional, and wrong in principle, they also hurt economic growth.

SOCIAL PROTECTION AND MIGRANTS

India has, in the recent past, established a growing architecture of social protection. This ranges from the employment guarantee scheme (MGNREGS) in rural areas, to health insurance under Rashtriya Swasthya Bima Yojana

(RSBY), the right to education, the right to food security to an expansion of old age pensions and social security for unorganised workers. But the integration of migrants into this architecture is far from seamless. Some aspects of social protection, like education and health, are philosophically agreed upon as universal in coverage, while others like the targeted public distribution system (TPDS) are designed to be household-specific and are delivered in a place-specific manner, and need to be made portable. For such services, a further challenge is delivery of benefits when only some members of a household migrate. In this section, we look at how migration could affect access to key social services and the challenges of implementation of social protection schemes (Box 2).

Health

Our public health system is accessible to all, but is heavily overburdened, especially in cities. It has been supplemented by the RSBY, which provides insurance coverage for some key health conditions. The architecture of RSBY is among the few that has tried to incorporate portability at both levels. Persons enrolled under the scheme can use their smart cards in any empanelled hospital across the country to avail treatment and further, individual members of the household can avail services at different locations. This is a useful model to study for replication in other schemes.

Child and Maternal health

The Integrated Child Development Services (ICDS), which focuses on maternal and child health, has no restrictions of domicile, thereby easing, at least in principle, the access to benefits by migrants. However, district administrations need to ensure that additional services necessary for migrant families are budgeted for in their annual planning exercises and anganwadi workers and ANMs need to be sensitised to expand their outreach to migrant women and children.

Education

In education, a similar situation prevails. The Right of Children to Free and Compulsory Education Act 2009 reinforces the access to schooling for all children. Indeed, recognizing that special efforts are required towards the education of migrant children, the Sarva Shiksha Abhiyan (SSA) provides for flexible institutional arrangement facilities under the Education Guarantee Scheme (EGS) and Alternative and Innovative Education (AIE) components. Migration intense districts can therefore utilize these components, but, in practice, local action is required to access funds and operationalise these efforts. For example, the Department of Education, Government of Gujarat has worked to integrate children of seasonal migrants in schools via the Migration Card initiative, enabling intra-State child migrants to avail of hostel facilities at source and inter-

State child migrants to avail of temporary schools set up near their parents' worksites. A similar initiative involving Education Guarantee Cards (EGC) for migrating children and support for hostels, food, etc. for children whose parents have migrated has also been implemented in Maharashtra, as a pilot by UNICEF.

An additional aspect in providing education to migrant children at destination is the language of education. Inter-state collaborations to provide education in the mother tongue for migrant children is being explored by some states, e.g., through an inter-state memorandum of understanding (MoU) such as one between Odisha and erstwhile Andhra Pradesh. Volunteers trained in Odiya have helped to bridge the language gap for children of brick kiln workers in Andhra Pradesh.

Food

India's Public Distribution System (PDS) is the largest food security system in the world. While the National Food Security Act 2013, integrates the legal framework for access to food under a single legislation and places no bar on portability, the identification of beneficiaries is still carried out by individual states and these beneficiaries are further attached to specific Fair Price Shops. While there have been some attempts at portability of PDS within states, these have remained sporadic. Entitlements are individually

specified and it is currently not possible for individuals to be delinked from their households when they migrate. This is true a fortiori for inter-state migrants. *Enabling migrants to access their rights to food security thus remains a major challenge.*

Benefits related to social deprivations

A number of benefits are available related to housing, skill development, employment, etc. to persons from specific social categories, such as Scheduled Castes (SC), Scheduled tribes (ST) and Other Backward Classes (OBC) in different states. These lists are prepared at state level and inter-state migrants from these groups stand to lose access to them if their status varies across states. Indeed, because of these issues of classification, the Census of India does not record any inter-state migration by social category and one curious outcome of this is the absence of any person classified as belonging to a scheduled tribe in the census population of Delhi!

Political inclusion

Elections in India are a place-based activity. Migrants are legally entitled to transfer their voting rights to their destination, but many may not choose to do so, given the nature of migration in India, where only a part of the household may migrate and migrants thus remain linked to their place of origin. If they want to exercise their franchise in their place of origin, they would have

to physically travel back to do so, since there is restricted access to postal ballots, primarily for members of the armed forces. The Election Commission has been looking into this issue and some studies have been commissioned in this area.³

Housing

Migrants, especially those in low-skilled low-wage work, can often afford to stay only in inadequate housing. Many live in informal settlements, where insecurity of tenure affects both the quality of infrastructure as well as investment by landlords. Renters are additionally vulnerable on account of the informal nature of their tenancy contracts, which are usually oral agreements. They are also at a disadvantage when it comes to accessing public sector rehabilitation and redevelopment schemes for slums, because of the use of 'cut-off dates' in many urban areas. The upgradation of slum infrastructure on the lines of earlier schemes such as the Environmental Improvement of Urban Slums (EIUS) and the Bustee Improvement Programmes could be a useful strategy in this area.

CONCLUSIONS

Often migration has been seen as a symptom of distress and something to be forestalled. However, it can equally be an instrument of economic and, especially in India, social emancipation. This role becomes predominant as the transition out

Box-2: The Challenge of Implementation

Even when there is an adequate legislative framework and funding available, inclusion is not automatic. Under the existing legislative framework, States must establish a Building and Other Construction Workers' (BOCW) Welfare Board with representation from workers, employers and the government.⁴ This Board manages a BOCW Welfare Fund, which receives a cess of 1 percent levied on the value of all construction projects above Rupees 10 lakhs. The Board has to register workers in construction and allied sectors like brick kilns and promote their welfare through facilities.

Despite its promise, most of the states were tardy in forming the BOCW Welfare Board (Roy, Manish, and Naik, 2017). Registration, a prerequisite to accessing benefits, varies widely by state. Accounts from civil society organisations reveal a low level of awareness among officials at the district level and there is not much effort to spread awareness among construction workers themselves. In some cases such organisations have made it possible for migrant construction workers to register and get benefits, e.g., in Ghaziabad, the Sahbhagi Shikshan Kendra (SSK) convinced the district level labour department to permit workers to submit self-certified affidavits for the purposes of registration and organised registration camps with the department officials to cut down processing time for registration and access to benefits. Such efforts remain sporadic, and expenditure in most states remains low, with a total unused corpus across states of over Rupees 22,000 crore as of October 2016.⁵

This shows that in order to include migrants within the ambit of social protection schemes it is necessary for state level rules and institutions to be unambiguous on the language of inclusion, and district officials need to be adequately trained, sensitised and willing to reach beneficiaries, e.g. through aggressive outreach and partnering civil society organisations.

of agriculture, whose workforce share is reducing at about 1% per year, accelerates. This is a phenomenon that must be embraced and managed, even as safety nets are put in to mitigate distress migration. This shift in attitude can be seen in the recent report of the Working Group on Migration and the latest Economic Survey. There appears to be increasing awareness both of the numbers and types of mobility and of the contribution of migrants to economic growth.

At the same time, with the improvement in digital databases, including the use of Aadhaar,⁶ India is moving to portability and/or universality in social

protection architecture, making it easier to include migrants. It is possible for state governments to demonstrate this shift to a more migrant friendly outlook through concrete actions. One low hanging fruit is the utilisation of the money in various BOCW Welfare Funds. About 10% of non-farm migrant workers and about 40% of all short-term migrants work in construction. Many live in wretched conditions on work sites (Figure 1a). The considerable unused funds could visibly improve on-site housing for such workers, something akin to the pre-fabricated construction dormitories (Figure 1b) that are the norms for Chinese construction sites (Wang, et. al.



Figure 1a : Construction worker housing in India (image authors)



Figure 1b : Construction worker housing in China (image Tao Wang)

2016).⁷ A beginning can be made in large public sector projects of NBCC, the various Metro Rails, etc. This can spur similar efforts in providing accessible housing to migrant workers in other sectors, especially labour - intensive manufacturing. This would truly be a signal that migrants are finally being given their due and also be a visible contribution to improved habitat.

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NOTES

- ¹ The National Sample Survey (NSS) 2007-08 estimated that migrants comprised 28.3% of the workforce.
- ² See Table II.4 of the *Report of the Working Group on Migration* for a break-up of the share of migrant workers in the total workforce by major sectors
- ³ See *Inclusive Elections in India: A Study On Domestic Migration And Issues In Electoral Participation*, a report submitted

by the Tata Institute of Social Sciences, Mumbai to Election Commission of India November 6, 2015 accessed at http://www.shram.org/reports_pdf/eci_report.pdf

⁴ This legislative framework is defined by the Building and Other Construction Workers (Regulation of Employment and Conditions of Services) Act, 1996 and the Building and Other Construction Workers (BOCW) Welfare Cess Act, 1996. However, many have constituted the board much after the Act was passed.

⁵ See answer to Unstarred Question No. 2509 in the Rajya Sabha on 7 December 2016 (session 241) accessed from <http://164.100.158.235/question/annex/241/Au2509.pdf>

⁶ Aadhaar is a scheme to provide every Indian resident with a unique biometrically verifiable (using fingerprints and iris scans) numeric identification number.

⁷ Migrant construction workers' quarters in China are usually made of polystyrene board, steel board, wood board, and a steel frame. A typical unit is approximately 12-30 sq. m, containing three to eight bunk beds. Such prefabricated units are colloquially called K-houses and cost around Rupees 300 to 350 per square foot. The material can be reused multiple times.

CHILD RIGHTS AND URBAN PLANNING

MS SIMRANDEEP KAUR
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Specifically in the urban context, children can be vulnerable in terms of their safety, whether on roads, homes or in schools, In terms of infrastructure, there is a need for day care and children related infrastructure, and also a need for spaces for free play of children. Planners and urban managers need to be aware of the issues where the rights of children need to be protected through the process of planning, design as well as management of urban spaces.

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Children are a substantial percentage of urban population globally. In India, they represent about a third of the total population. Yet, they have not been recognised as stakeholders in the development processes of cities in India. While there is an understanding of children's needs, the idea of child rights is relatively new to an urban planner's vocabulary.

This paper explores the idea of child rights, its historical origins and background, and attempts an analytical look at the issues related to children, child rights and the urban development scenario to understand how child rights could possibly impact urban policies and implementation of SDGs, especially Goal 11, which relates to cities. It also suggests strategies to make cities more responsive to the needs and rights of the children.

INTRODUCTION

Over centuries, the definition of who is a child has undergone

a sea change. In olden times, as soon as a child came out of infancy, he was treated as a young adult. Over the passage of time, the way childhood was viewed has changed, along with change in societal values. In the Victorian era, Children were “seen and not heard”, as per a popular phrase of the time. It was in the nineteenth century that awareness began to set in for improving the conditions of children. This was in the wake of the industrial revolution, which saw widespread exploitation of young children as workers in the factories. The movement which developed as a reaction to this situation saw emergence of orphanages, the birth of child saving movement and the emergence of child protection legislations. (NHRC, 2006).

In 1924, the League of Nations brought out for the first time, a



declaration on “ the rights of the child”. This founded the basis of modern thought, recognizing child rights for the first time.

India is a young nation. The Indian constitution contains provision for survival, education and protection of children, both under fundamental rights as well as directive principles of state policy. The Indian Government has a scheme for child welfare, going back to the first five-year plan. India adopted a national policy for children in 1974, declaring children to be the country’s most precious asset. The Govt of India has ratified the UN Convention on the Rights of the Child (CRC) in 1992. The Indian policies toward children have gradually shifted from a “needs based” approach to a “rights based” approach (NHRC, 2006).

However, the focus on children in an urban context remains low, despite numerous urban problems lending greater urgency to the need for protection of children in the city. There is need for child centric planning at all levels, especially in urban areas.

CHILD POPULATION IN INDIA

The National Plan of Action for Children (NPAC) has defined a child as having age between 0-18 years. As per NPAC, based on census data 2011, India is a country with 472 million children. Children in the age group 0-18 years constitute 39 percent of the country’s total population. The majority of India’s children (73

per cent) live in rural areas.

By the census 2011 definition, children constituted about 40% of the population, which is substantial. In urban areas, the child population is around 27%, which constitutes about a quarter of the city. An analysis of age - wise distribution of population in various age groups shows that nearly 30 % of population is under 14 years of age.

Despite the numbers, child population continues to be among the most voiceless and vulnerable population groups in India.

VULNERABILITY OF URBAN CHILDREN

As per UNICEF, out of the 128.5 million children residing in urban areas, close to 7.8 million children under the age of 0-6 years still live in abject poverty and poor conditions in informal settlements.(UNICEF, 2017). Urban children, particularly from the disadvantaged sections, are highly prone to lack of secure housing, ill-health, poor access or lack of water and sanitation facilities, insufficient education and lack of protection and safety.

Children can be defined as vulnerable from the perspective of age or on the basis of social marginalization- based on class, ethnicity, religion, etc. Thus every town and city would have its own pattern of social vulnerability, based on local contexts and trends of political and social prejudice. Illness, disability or social situation, such as homelessness also makes the child ‘vulnerable’.

The design and management of urban areas can influence children strongly. For example, it is often seen, even in middle class and upper income neighbourhoods, having nice landscape parks, restrict entry of poor childrens, forcing them to play on the roads. An article in Hindustan Times (August, 2017) highlighted the decision of the judiciary in supporting children’s right to parks in a recent judgement. This is one example of how children’s issues can affect use and design of urban areas.

Specifically in the urban context, children can be vulnerable in terms of their safety-whether on roads, homes or in schools, In terms of health, reflecting a

Table 1: Percentage distribution of population by broad age groups to total population

	Broad age groups (years)					
	0-14			15-59	60+	
	0-4	5-9	10-14	0-14		
Total	9.7	9.3	10.5	29.5	62.5	8.0
Rural	10.3	9.6	11.0	30.9	61.0	8.1
Urban	8.2	8.3	9.0	25.5	66.6	7.9

(Source : Census of India, SRS tables, 2011)

need for day care and children related infrastructure, and also a need for spaces for free play of children. Planners and urban managers need to protect the rights of children through planning and design interventions.

MEASURES AND POLICIES DIRECTED TOWARDS CHILDREN IN INDIA

After independence, India has adopted a National Policy for Children in 1974, asserting that children are the most valuable assets of the nation. A little earlier to the Fourth Five-Year Plan, children found their place in national development plans, but did not get attention and finance for improving the situation. Post the 1990 World Summit for Children, the Government of India adopted a National Plan of Action for Children in 1992, with decadal goals. The same year, it also ratified the CRC and thereafter has also addressed and highlighted the measures taken for ensuring children's rights in its Periodic Country Reports submitted to the UN Committee on the Rights of the Child. These Reports and the India Report on the World Summit for Children undoubtedly record some positive changes in the situation of children in India. But, there are significant problems and performance gaps too (NHRC).

The National Policy for Children 2013 was adopted by the Government of India on 26th April 2013. It adheres to the

Constitutional mandate and guiding principles of UN CRC and reflects a paradigm shift from a "need-based" to a "rights-based" approach. It emphasises that the State is committed to take affirmative measures to promote equal opportunities for all children, and to enable all children in its jurisdiction to exercise all the constitutional rights. The guiding principles of National Plan of action are reiterated in the draft National Plan for action for children, 2016.

The focus on the guiding principles of the National plan is on the rights of children, and the recognition of children as stakeholders. In order to understand the implications of child rights from urban planning point of view, it is necessary to understand what child rights mean.

WHAT ARE CHILD RIGHTS

Human rights are those basic rights and standards that are essential for every person to live and develop in dignity. The rights and duties with respect to children are contained within the framework of human rights. As part of the framework of human rights law, all human rights are universally inherent and undeniable to every individual and are interdependent and interrelated with each other.

The Universal Declaration of Human Rights, which was adopted in 1948, constitutes

the international human rights framework, along with six core human rights treaties, one of which is the Convention on the Rights of the Child.

Human rights being applicable for all age groups include, within its ambit, children too. In 1989, there was a realization for a special convention targeting just children, recognizing that children often require care and protection that adults do not. Further there was a need to make the rest of the world recognize that children have human rights as well. The United Nations Convention on the Rights of the Child (UNCRC) defines **Child Rights** as the "minimum entitlements and freedoms that should be afforded to every citizen below the age of 18 (Article 1) regardless of race, national origin, colour, gender, language, religion, opinions, origin, wealth, birth status, disability, or other characteristics (Article 2). The Convention on the Rights of the Child (CRC) is the first international instrument incorporating the full range of human rights, including civil, cultural, economic, political and social rights for children (UNICEF).

THE UN CONVENTION ON THE RIGHTS OF CHILD

The United Nations Convention on 'Right of the Child' is one of most ratified human right treaty in the world. The Convention was adopted and acceded by the

United Nations General Assembly on November 20, 1989 and it came into force on September 2, 1990, with 20 countries being part of it. As of 2012, 193 countries are part of it, including every member of the United Nations except the United States.

The Convention is made up of 54 articles, each detailing a different right and not ranked in order of importance, and two Optional Protocols. The Optional Protocols deal with 'involvement of children in armed conflict, sale of children, child prostitution and child pornography'.

Every right avouched in the Convention is with respect to the dignity and the comprehensive development of every child. Rights under these UNCR articles (refer Box 1) are commonly grouped under four themes—survival, development, protection and participation rights. These have been outlined below, along with the major rights falling under these broad themes.

RIGHTS OF CHILDREN IN A CITY AND TO THE CITY

As per the UN convention on child rights, as well as the National plan of action for children, two rights

directly relate the child to the city, the development related rights and the right for participation, or the right to be heard.

A child requires an adequate liveable environment which can fulfil its all rights, specified in the convention and laid by the government, irrespective of whether he or she lives in an urban or rural area. In the urban context, it can be interpreted that the children have rights in the city, which includes rights for safety, protection, against exploitation etc, and the rights to the city, which includes rights to public spaces and infrastructure.

Specifically in the urban context, inadequate living conditions affect the development related rights. The lack of decent and secure housing and infrastructure such as water and sanitation systems makes it so much more difficult for children to survive and thrive. Other than this, in particular their rights to health; water, sanitation and hygiene; education and protection, safe recreational and public spaces and safe transport has to be given prior importance by the city planners and policy makers.

The rights of the child in its connotations and limitations are a subject, which requires greater research and understanding, especially in our cultural contexts in India. e.g. A child has a right to get an education, but not to get an education cannot be considered a right! A child's right to play in the park is beyond question, but a right to play the blue whale

challenge, which can endanger the safety of children, cannot be considered.

SUSTAINABLE DEVELOPMENT GOALS (SDGs), GOAL 11 AND CHILD RIGHTS

The 2030 agenda for sustainable development includes 17 global goals addressing its social, economic and environmental dimensions, adopted in September 2015. There are 169 concrete targets associated with these goals, measured by 230 specific indicators, 50 of which are directly related to children. (UN)

The aspects of urban development covered by the target of Goal 11 are universal. Safe housing, public spaces, safer and better transport and infrastructure improves the lives of everyone, including children. The goal specifies the following target;

- By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.
- By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities.



The Goal 11, specifically through the above two targets, or implicitly through its various other targets, recognises children's needs in the city and their role as a vulnerable group. However, mere recognition of the children as a vulnerable group will not, in itself, lead to a better world for children. We need to recognize children as a stakeholder group in our cities, with rights as well as needs. Child friendly urban plans and policies can contribute to achievement of the targets for SDG 11, by including some of the aspects covered in the next section.

NEED FOR CHILD FRIENDLY POLICIES AT THE CITY LEVEL

i. Inclusions in Urban Development Plans and Policies

India, having ratified the UNCRC since 1992, is expected to witness some progress in the status of child development and address the child specific issues as a priority area. It is also expected to make some provisions and policies targeting children when considering development of the nation as a whole. However most of our recent development guidelines seem to overlook many of these issues.

The guidelines of recent Urban Development Programmes such as smart cities and AMRUT do not have any specific mention of child rights. URDPFI guidelines, 2016 have touched upon 'women and child development' and have propounded norms and

Box-1 : Major Rights Under UNCRC

1. **Survival rights:** These include the child's right to life and the basic needs essential for existence such as nutrition, shelter, an adequate living standard, and access to medical services.
 - Right to life, survival and development (Article 6)
 - Health and health services- All children have a right to good health and good quality health care- should have clean water, nutritious food and a clean environment so they stay healthy. (Article 24)
 - Disabled children- either mentally or physically, have a right to special care and support and all rights in the Convention, to lead full and independent lives. (Article 23)
 - Adequate standard of living. The Government should help families who cannot afford to provide this particularly with regard to food, clothing and housing. (Article 27)
2. **Development rights:** include the right to education, care, recreation, play, leisure, cultural activities, etc
 - Right to education- All children have the right to a primary education, which should be free (Article 28)
 - Goals of education- Children's education should develop each child's personality, talents and abilities to the fullest. (Article 29)
 - Right to leisure, play and cultural and recreational activities (Article 31)
3. **Protection rights:** ensure children are safeguarded against all forms of abuse, neglect and exploitation, including special care for refugee children;
 - Protection from all forms of violence. Governments should ensure that children are properly cared for and protect them from violence, abuse and neglect by their parents, or anyone else who looks after them. (Article 19)
 - Child Labour- The government should protect children from work that is dangerous or might harm their health or their education. (Article 32)
 - Drug abuse- Governments should use all means possible to protect children from the use of harmful drugs and from being used in the drug trade. (Article 33)
 - Right to be protected from all forms of sexual abuse and exploitation- to be ensured by the government. (Article 34)
 - No child should be punished in a way that humiliates or hurts them. (Article 37)
4. **Participation rights:** encompass children's freedom to express opinions, to have a say in matters affecting their own lives, to join associations and to assemble peacefully. As their capacities develop, children should have increasing opportunity to participate in the activities of society, in preparation for adulthood.
 - All children have a right to be able to give their opinion when adults are making a decision that will affect them, and adults should take it seriously. (Article 12)
 - Right to freedom of expression (Article 13)
 - Right to freedom of association (Article 15)
 - Right to freedom of thought, conscience and religion (Article 14)
 - All children have the right to privacy. (Article 16)
 - Right to access to information, mass media (Article 17)
 - Children who are refugees or asylum seekers in another land have the right to special protection and all rights as children who were born in that country. (Article 22)

Source: *Convention on Rights of the Child, UNICEF*

policies for Anganwadi, crèche, child welfare, children and amusement parks etc. But these norms and policies are formed keeping in focus infrastructure development and not with the motive of betterment of the plight of children in India and ensuring each child his/ her basic rights.

Urban schemes need to ensure that it addresses child- specific

needs and allocates sufficient budget for them.

ii. Recognition of Children as a Stakeholder Group for Safe and Adequate Housing

Every child requires a safe environment and housing. A report by UNICEF on SDGs and Child rights mentions, "A safe environment with access to essential services is central to a child's health

and happiness. Each child has the right to housing and to the living conditions necessary for their development. Safe, affordable and reliable transportation helps ensure access to education, health and work. Public spaces in which a child can study, transport through and gather are also vital”(OWG, UNICEF, 2016).

iii. A Child’s Need to Safe Roads and Transport

Safe transport for children is a huge concern. Safe, adequate and efficient transportation systems are essential to ensure children’s access to health and education facilities. The transportation plans of cities must lay special emphasis on this aspect.

Pedestrian safety is also an aspect of concern. Indian cities have never really tried to provide safe pavements for pedestrians, causing people, including children, to walk on the carriageways of the roads. Pavements in Indian cities have never been designed keeping the concerns of mothers pushing strollers, or the elderly on wheel chairs in mind. This can be easily done through simple design interventions of providing ramps. These measures need to be made compulsory to ensure children’s safety on roads.

iv. A Child’s Need and Right to Health, and Education

In India, health care facility caters to much larger population than is proposed for a standard number of people. Due to this, there has been reduction in the

mortality rates from the previous decade. But there is still scope of vast improvement in childhood mortality indicators. Infant mortality rate is of particular concern, varying widely across cities, ranging from 28 per 1,000 live births in Chennai to 63 per 1,000 live births in Meerut.

In the context of urban areas, the limited ability to pay for healthcare and overcrowding in government hospitals, forces the urban poor to go to unlicensed and untrained private providers that are more affordable. Better neo-natal health care facilities for the urban poor and in slums through local free clinics can help protect children. There is also a need to ensure safety of children, through setting up of network of crèches and day care centre.

For urban planning, the implications are the needs to provide adequate numbers of schools as envisaged in the right to Education Act 2009.

v. A Child’s Need for Day Care and Child Friendly Infrastructure

In western countries, childcare is given a lot of importance as it is considered a state’s responsibility. In India, it is still the primary caregiver’s responsibility, whether a father, mother or a grand parent. As planners, provisions for day care centres should be in-built in the masterplans and zonal plans of cities, as well as in slum redevelopment plans and projects.

Provision of housing should also include the provision of child

friendly infrastructure such as day care/ crèches, neighbourhood play schools, parks with free play spaces and neighbourhoods based on “eyes on the streets” concept.

vi. A Child’s Need for a Safe City

In terms of safety, India has seen much concern in recent years over women’s safety. Child safety and protection issues in the city, have recently been much discussed.

As individuals and as a society, we have become increasingly worried whether it is safety of children in traffic, or within schools, or within our homes. But can urban policy makers actually contribute to this goal? Can design of spaces contribute to making a safer city for children?

Urban planners also cannot brush these issues aside as social issues, but need to look for innovative ways to contribute in this regard by better design of public spaces, and transport measures to ensure safety of children.

Natural disasters and extreme climates have an adverse impact on children. As per a Save the Children 2008 report, ‘more than 50% of those affected by natural disasters worldwide are children’. Every year, between 2000 and 2009, 8.45 million children under five years of age were affected by disasters in India.

The Disaster Management Act does not make any references to vulnerable groups, such as children. Children’s active participation in resilience

building, prioritisation of school safety are some measures that can be adopted.

vii. Child Friendly Urban Development Processes

For an overall, holistic city development, an inclusive and child friendly planning process is essential, to allow children to address challenges that they face and in providing solutions to facilitate integration and incorporation of child development within government schemes and policies. Our ULBs also need to be sensitised to child rights and needs, through capacity building processes.

viii. A Child's Need for Clean Water and Sanitation

Urban Water and Sanitation Programmes need to recognise children as a priority group. Hygiene education needs to be proactively promoted. The urban water and sanitation policies should highlight the impacts specifically on children and should ensure measures to rectify the issues for instance construction of proper toilets in schools and ensuring a clean drinking water facilities.

CONCLUSIONS

Few policy makers have considered the rights of children, both individually and as a group during the formulation of an urban development policy or plan. Children have been considered in development scenarios more as a group whose needs are to be fulfilled. The rights of a child have been less talked about.

The UNCR was ratified in India in 1992, however international law does not automatically become law in India and needs to be translated into national law that must be backed by law, policy programme and schemes. Although there have been legal provisions such as the Right to Education Act, 2009, most development related documents do not specifically highlight ways of tackling child specific issues. This lacunae needs to be addressed by recognising Child rights, and understanding their legal implications and limitations.

In the context of both SDGs as well as city planning, it is important to understand the context and limitations of children's rights while incorporating provisions related to Child rights e.g.. how would a child's right to adequate housing be addressed and defined? More research is required on the theme to understand how child rights can be addressed and how they can be related to city planning and management measures.

Urban policies need to recognise the rights of children and include aspects which deal with upliftment of the status of children in India and bring each and every child to a more equitable position in terms of access to basic services, education, protection from abuse and neglect etc recognizing their survival, development, protection and participation rights. As planners, our job is to anticipate the future and provide for adequate provisions for their needs.

In this regard, a citywide strategy should be developed to make the cities child friendly. There should be a specific focus within the plan for providing crèches, schools, children's parks, playgrounds, recreational areas and special nursing homes and trauma centres for children keeping in view their development rights, especially the disadvantaged sections. A comprehensive database needs to be maintained regarding indicators dealing with children and child-friendly.

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TRANSFORMATION OF HOUSING TYPOLOGIES IN ORGANIC AND UNPLANNED SETTLEMENTS:

A STUDY OF URBAN VILLAGES IN DELHI

DR. RUCHITA GUPTA

Rapid urbanisation and inflow of people from the hinterland lead to an increase in the demand for low cost and affordable rental accommodation. These urban villages provided cheap and affordable rental accommodation to such a population who could not afford to live in the neighbouring planned localities. The original inhabitants of the villages now became the landlords providing affordable and low cost rental accommodation. Rental income substituted their income from farming.

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Over the years Delhi's population has grown considerably attributable largely to the continuous inflow of migrants resulting in an increase in urbanisation. The scale of urbanisation has put tremendous pressure in terms of housing and infrastructure provision. Planned development in Delhi has been rather slow. This along with the high cost of housing (both rental and ownership) in planned colonies along with landlords' preferences on the type of tenant force people to look for affordable options in other settlements in the city, which are largely unplanned. There is, therefore, enormous pressure on unplanned subsystems to cater to the housing needs of city's growing population. This also provides an opportunity to the landowners in such settlements to earn money through rental income. Over the years, rampant construction in unplanned settlements has completely transformed them. This paper focuses on one such subsystem in Delhi, the urban village. It examines the transformation that has happened in urban villages and how it has completely changed the social and cultural fabric of the settlement.

INTRODUCTION

Around one-third of Delhi's population lives in sub-standard housing, which includes squatter settlements or Jhuggi Jhopri (JJ) clusters, JJ Resettlement colonies¹, Unauthorized colonies (UCs), Unauthorized Regularized colonies, Urban Villages and the Old City or the Walled city and walled city extension which has been notified as Slum area under the Slum Act.² These settlements often lack safe and adequate housing, and basic services. The distribution of population living in different types of settlements in the city in 2000-01 is presented

1 JJ Resettlement colonies or Resettlement colonies came up, between 1961 and 1977, at 44 different locations across Delhi, mostly on the periphery to resettle JJ clusters.

2 The Slum Act or the Slum Areas (Improvement and Clearance) Act, 1956 defines slums as 'any area (where) buildings in that area (a) are in any respect unfit for human habitation; or (b) are by reason of dilapidation, overcrowding, faulty arrangement and design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light or sanitation facilities, or a common combination of these factors, are detrimental to safety, health and morals'. Areas notified under Slum Act are the walled city, walled city extension and parts of East Delhi

Table 1: Type of Settlements

	Type of Settlement	Percent of estimated population
1	JJ cluster	14.8
2	JJ Resettlement Colonies	12.7
3	Unauthorized Colonies	5.3
4	Unauthorized Regularized Colonies	12.7
5	Slum Designated Areas	19.1
6	Urban Villages	6.4
7	Rural Villages	5.3
8	Planned Colonies	23.7
	Total	100.00

Source: Economic Survey of Delhi, 2008-09

in Table 1. The trend is the same even today, which indicates that a sizeable percent of Delhi's population continues to live in unplanned settlements. As per the latest information, around 49 per cent of Delhi's population lives in (notified) slums, UCs and JJ clusters.³

From Table 1 it is evident that 23.7 per cent Delhi's population lives in planned colonies. Around 4 per cent of the planned housing is employer housing provided mostly by central and state governments and quasi-government organizations while the remaining 19.7 percent are private ownership housing. All the other types of settlements are unplanned in nature.

³ Based on a note filed by the three municipal corporations of Delhi before the Supreme Court on the management of municipal solid waste (Times of India, 2012).

Over the years Delhi's population has grown considerably. Delhi's urban population has registered a sharp increase from 2.36 million in 1961 to 16.33 million in 2011, growing at an average annual rate of 3.95 per cent. The level of urbanisation increased from 88.72 per cent to 97.50 per cent during this period. The rapid pace of urbanisation is attributable largely to the in-flow of people from the hinterland. In 1991, migrants accounted for about 39.5 percent of Delhi's population which in 2011 increased to 45.7 percent. In fact in 2011, Delhi as a city, excluding the rest of the National Capital Region, had more migrants than any other state in the country (IIHS, 2012).

The Delhi Development Authority (DDA) which is responsible for planning and development have failed to provide adequate housing in the city. Since 1969

DDA has constructed 4,13,883 flats,⁴ building an average of 8,622 homes every year. The number of flats constructed by it in the last 48 years is little more than the number of people added to Delhi's population each year (Hindustan Times, 2017). In contrast, Delhi's population has increased by 1.56 crore with an average annual rate of 3.26 lakh people in the same period. Hence, lack of adequate developed land at affordable prices to different categories of residents and continuous in-flow of migrants to the city have over the years led to the emergence of unplanned settlements in the city (Economic Survey of Delhi).

Planned colonies are built and developed as per the land use plan, following norms and standards for infrastructure (both social and physical) and amenities and other development controls mentioned in the Master Plan. The buildings are constructed in adherence to the prevailing building bye-laws taking care of design and quality of life in terms of natural light and ventilation, structural safety and protection measures against fire, etc. Planned development, therefore, is not only time intensive but requires considerable space (i.e., land) and money/finance. The entire process

⁴ Besides constructing flats, DDA has provided plots to individuals to build houses and land to cooperative societies to build apartments. If one takes into account these activities, the number of housing units provided by DDA would be around 14 lakhs.

starting from acquisition of land to its development, laying of physical infrastructure, allocating spaces for social infrastructure and constructing houses as per the prevailing building bye-laws is carried out beforehand and people start inhabiting the settlement only after it is fully constructed.

In Delhi more than three fourths of the population lives in sub systems that are unplanned, where some of the steps of planning are either skipped or missed and often people come to occupy first and later other developmental activities including provision of services like drainage, water supply, electricity supply etc. takes place. In such settlements, development takes place in an incremental manner and buildings are often constructed without adhering to building bye-laws and other standards. Moreover, many of these unplanned settlements have come up in total violation of the city master plan.

The cost of owning and renting property in planned localities is very high vis-à-vis unplanned subsystems. Moreover, in the absence of adequate housing opportunities in planned settlements at affordable prices to different categories of residents a large section of the migrant population gets excluded from accessing accommodation in such colonies. The demand supply

mismatch also provides an opportunity to the landlords in such colonies to choose tenants as per their preferences in terms of caste, religion, occupation, gender, family size and composition thereby further excluding a section of the population from accessing housing in these colonies.

High cost of housing (both rental and ownership) in planned colonies along with landlords' preferences on the type of tenant force people to look for affordable options in other settlements in the city, which are largely unplanned. There is, therefore, enormous pressure on unplanned subsystems to cater to the housing needs of city's growing population. This also provides an opportunity to the landowners in such settlements to earn money through rental income.

Over the years, rampant construction of dwellings in unplanned settlements completely transformed them. This paper focuses on one such subsystem in Delhi, the urban village. It examines the transformation that has happened in urban villages of Delhi and how it has completely changed the social and cultural fabric of the settlement.

URBAN VILLAGES

Urban villages are residential areas of those rural villages that are located within the urban boundaries of Delhi. Over the

years as Delhi grew its boundaries extended and the adjoining agricultural land was taken up for urban development. The agricultural land of the rural villages were acquired by the government and the residential areas (locally known as abadi areas) became part of the city and came to be known as urban villages. When Delhi had its first master plan (1962), 20 villages located within its urban area were declared as urban villages. At present there are 135 urban villages in Delhi spread across the city. Fig 1 shows the location of urban villages in Delhi. As per recent estimates, urban villages in Delhi accommodate around 1.21 million people.

Over the years several planned colonies came up on the agricultural land that was acquired by the government. Both planned colonies and urban villages co-exist adjacent to each other. Planned colonies largely cater to the middle and high income population while people providing services to the residents of the planned colonies (like drivers, cooks, domestic help, security guards, carpenters, masons, plumbers, electricians etc.) live in the nearby urban villages as they provide affordable rental housing. Urban villages also provide housing to single men/women, students, nurses, call-center workers, industrial workers working in nearby

industries and also construction workers.

Rapid urbanisation and inflow of people from the hinterland lead to an increase in the demand for low cost and affordable rental

accommodation. These urban villages provide cheap and affordable rental accommodation to the population that can not afford to live in the neighbouring planned localities. The original inhabitants of the villages have

now become the landlords, providing affordable and low cost rental accommodation. Rental income substituted their income from farming.

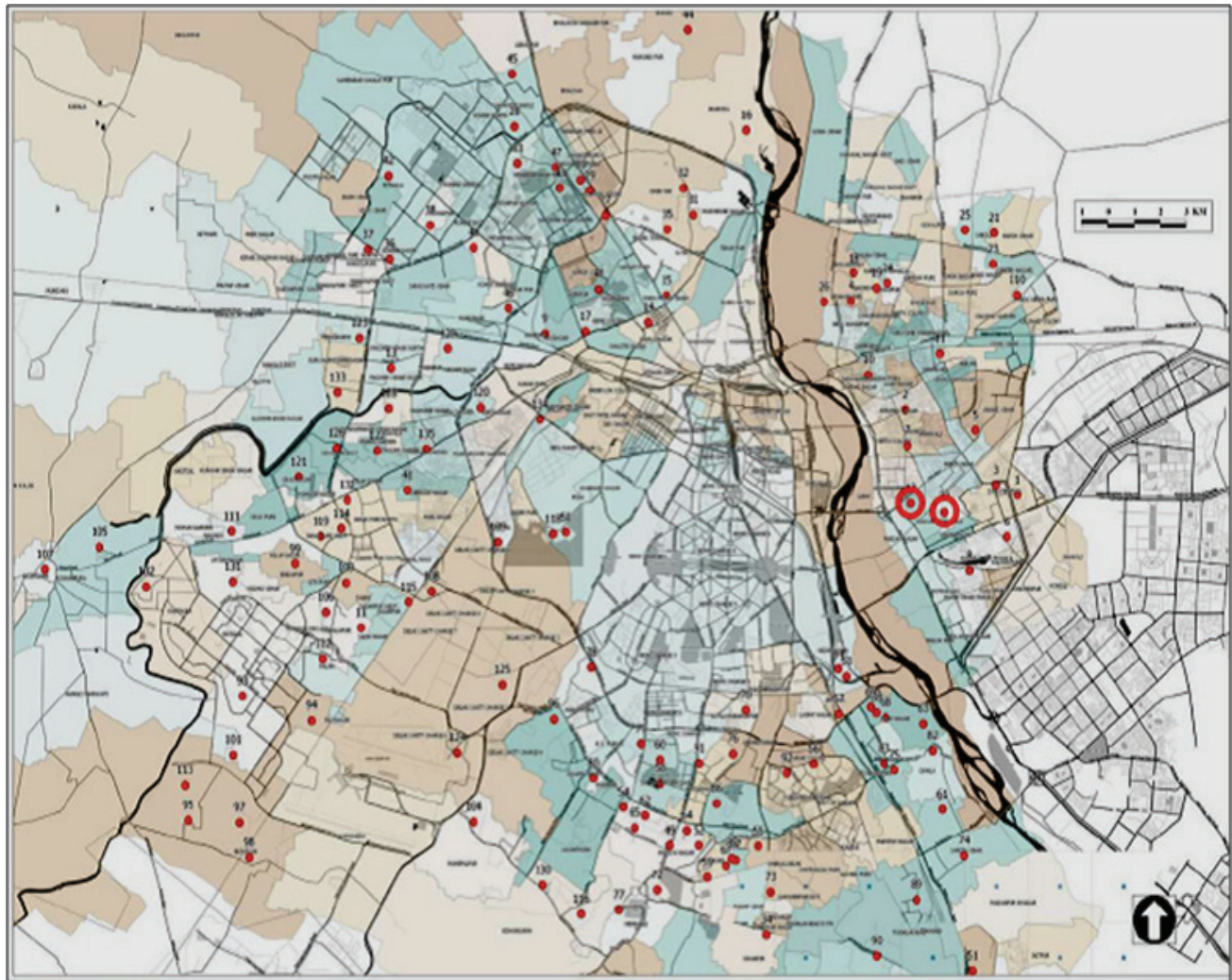


Figure 1: Location of Urban Villages in Delhi

The plot sizes in these settlements range from 40 square yards (locally called Gaj) to 150 Sq. yards, mostly in the upper range of 100 to 150 yards. There are a few larger plots varying between 400 to 500 sq. yards.

TRANSFORMATION OF HOUSES IN THE URBAN VILLAGES

Let us now examine the transformation in the houses that has taken place in the urban villages over the years starting from the decade of 1980s. Fig 2 shows the plan of two houses in

an urban village in Delhi during early 1980s. In general the houses were single storied structures built from brick and mud. The basic typology of houses was courtyard planning or having big open space (i.e., verandah) in front of the house. The courtyard/verandah had trees and was used for daily activities like sitting, bathing, animal/cattle shelter, sleeping spaces for men etc. The kitchen was also in the courtyard/verandah in the open where the chula/oven was placed and family members used to sit around and have food. Streets were kutcha

with brick paving. Very few houses had toilets and people would normally defecate in open in the nearby agricultural fields.

By the end of 1980's, both because of the increase in the family size of the landlord and also to earn more income from letting out dwellings to the migrating population, there was a need to expand the built-up area of the houses. Moreover, with the government acquiring most of the agricultural land, income from agricultural activities declined and was supplemented by income from rent which gradually became their only source of earning.

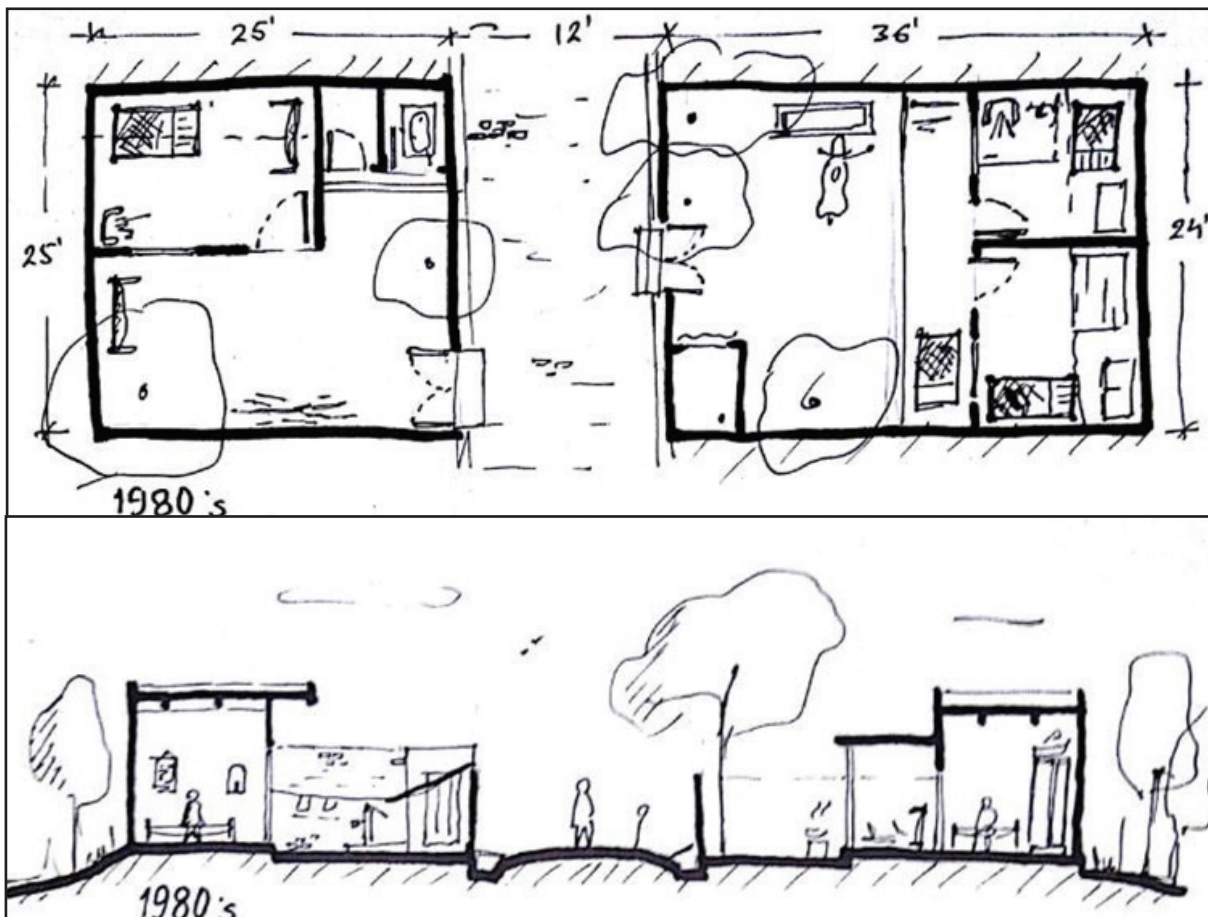


Figure 2: Plan of two houses in 1980s

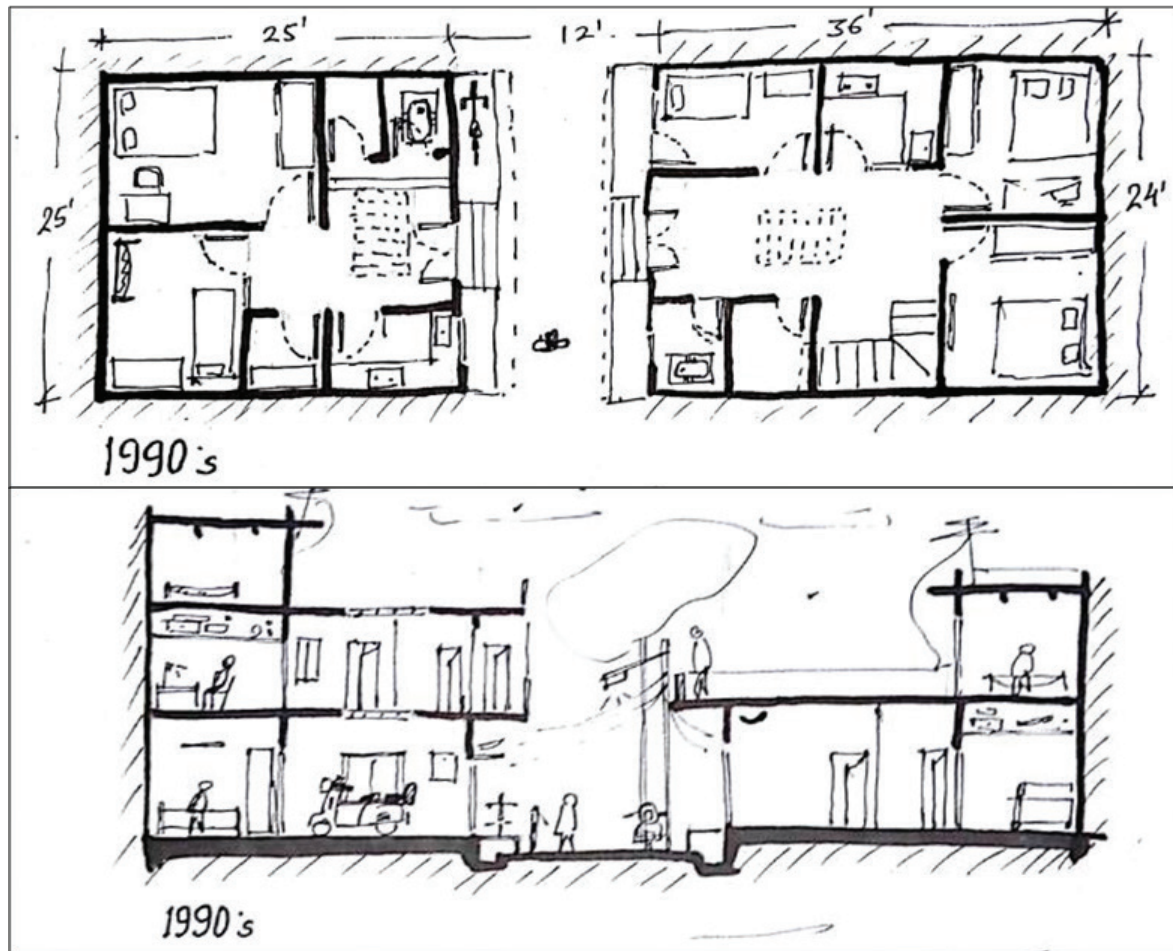


Figure 3: Plan of the houses during the 1990s

During the early 1990s and late 1980s, landowners began to expand their houses, initially covering up all the open spaces, and with time the courtyard/verandah got converted into rooms. Newer rooms were constructed for the purpose of letting them out on rent. Gradually the entire plot was covered leaving no open space in the house. Since every landowner in the village was constructing new rooms, the adjoining plots also got transformed into built-up spaces. The plots got covered on all sides leaving very little light

and ventilation. The only source of light was a small cut/slit in the roof which was covered with iron mesh (locally known as Jaal). Construction was not limited to the ground floor only. People started constructing rooms on the first floor. The built form of the village was changing and single storied houses with open spaces soon got converted into two or more storied houses with no open spaces. Openness, tree cover and greenery in the settlement was giving way to concrete structures as is evident from the plans in fig 3.

The expansion was mostly incremental in nature. As and when the landowner managed to have sufficient/adequate savings, s/he would construct additional room(s) to let out and earn more rent.⁵ In this process of expansion they not only encroached upon the streets in the settlement but also through projections on the first and second floor. As a result the streets not only became narrower but because of the projections

⁵ Access to institutional credit was very limited and was very difficult to get. So people used their own savings to expand their houses.

on first and second floor, very little sunlight percolated, thereby making them narrow and dark as evident from the photographs.

To attract tenants, people started constructing toilets in their houses. A part of the house or a room was given on rent and the landlord would share most facilities like entrance, staircase, and even the toilets with the tenants. In the process the tenants became part of the extended family of the landlord, sharing space and facilities together with very little privacy. As these structures were built indiscriminately without following any building bye-laws not only are they unsafe but the quality of life in these units is

sub-standard in the absence of adequate light and ventilation.

At the same time no attention was paid for creating or preserving basic physical and social infrastructure in the settlements. Also the roads in these settlements have become dark and narrow leaving very little or no space for the movement of vehicles like fire tenders, ambulances etc. People were more interested in expanding their houses to maximise their rental income. The parks in the settlement were gradually being converted into parking lots leaving no places for the children to play forcing them to spend most of the time either indoors or play on the streets.

In the decade of 2000 and the period till date, one finds a trend towards subdivision of plots largely due to the division of the family with large families breaking into smaller/nuclear families and in some cases, due to financial problems, a part of the plot being sold.

The other phenomenon that is being observed in urban villages is that the landlords are redeveloping by themselves, their old incrementally built houses, in a more systematic manner by demolishing them. These new constructions also do not adhere to the building byelaws. The redeveloped houses are designed to accommodate not only their



Figure 4 & 5: Photographs showing dark and narrow streets in urban villages due to encroachment

own family but also for rental purposes. These new structures are mostly four to five stories high with the landlord occupying the ground floor unit while the rest are given on rent. For example, on a plot of 84 square meters the landlord would normally construct 10-12 dwelling units which are a mix of one and two room units, accommodating 60-70 people. All the newly constructed units will have separate kitchen, toilet and entrance. These newly constructed dwelling units would fetch higher rent as compared to those in the old incrementally constructed houses. Such investment by landowners results in a substantial increase in the rental income. However, the higher rent for the newly constructed units makes them unaffordable for the existing tenants.

There are many who do not have resources to rebuild their houses on their own. They would either enter into an agreement with the local builder who would demolish the old house and construct a new building in its place. In such cases the construction cost is borne by the builder and in return he gets to keep a couple of floors for himself which he can sell in the open market while the landowner gets the remaining floors and some lump sum money in cash from the builder. In this kind of arrangement the landlord foregoes the ownership of his land as the builder would either sell his share of flats in the open market or give them on rent. In an alternate

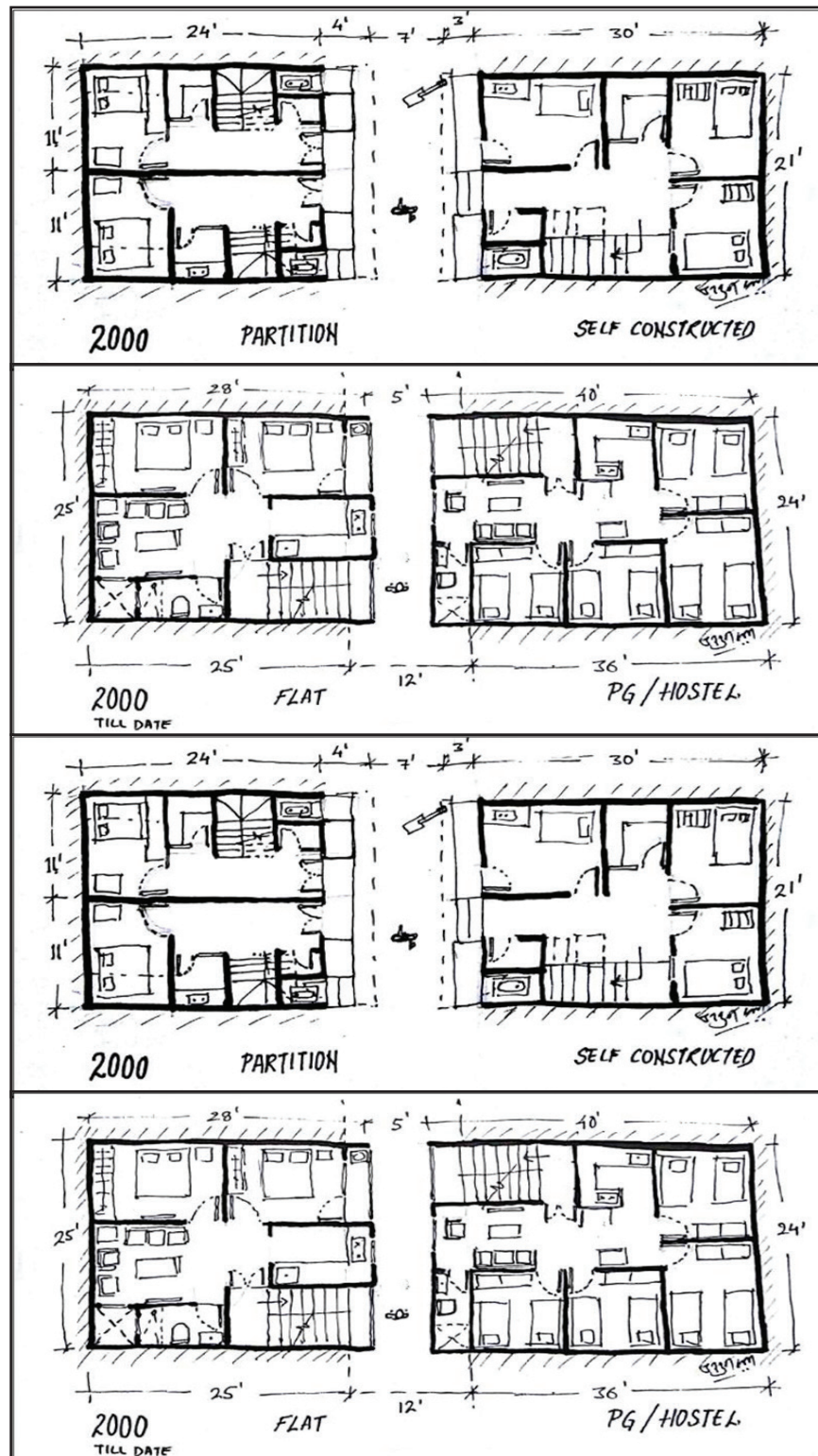


Figure 6: Plan of houses during 2000s

set of arrangement, the landlord instead of giving floors to the builder subdivides his plot into two. The builder gets to keep the flats constructed on his portion of land while the landowner gets the flats built on his portion of land. In this arrangement the landlord still owns a portion of his plot which is now smaller in size.

In recent years with the growth of private educational institutions in the city there has been an influx of student population. They too prefer to live in urban villages and other unplanned settlements in the city as the rentals are relatively low. In order to cater to the student

population many of the landlords have converted their houses into private hostels or Paying Guest (PG) accommodations. In many instances, it is seen that the landlord instead of managing the hostel by himself would rent it out to another party.

The housing typology that exists in urban villages in the current period are (i) Paying Guest/Hostel accommodation, (ii) one room with shared facilities of entrance, staircase, and toilet, (iii) one room with separate kitchen and toilet, and (iv) 1-BHK, 2-BHK units. The monthly rent varies from Rs 6,000 for 1-BHK to Rs 12,000 for 2-BHK

rental units. In the inner lanes of the urban village which are dark and narrow and lack basic infrastructure the rent of a 1-BHK unit would be a little lower, say around Rs 4,000.

The plans of the different housing typologies in urban villages in recent years are shown in fig 6.

The sketch in fig 7 depicts the gradual transformation that has taken place in the houses in urban villages in Delhi over the decades while Table 2 provides a snapshot of the transformation of houses and the associated changes in the rental income since 1980s in urban villages in the city.

Table 2: Typology of Houses in Urban Villages and Associated Rentals

Sr. No.	Decade / Year	Plot size	Built up (sq m)	Dwelling Units	No. of people	Total Monthly Rental Income (Rs.)	Typology
1	1980s	84 sq m (900 sqft)	42	3	10	600-800	Original house-Ground Floor
2	1990s	84 sq m (900 sqft)	196	5	20	2000-3000	Incremental housing - G+2 structure
3	2000s Option-1	84 sq m (900 sqft)	336	9	40	30000-36000	Incremental housing - G+3 structure
3a	2000s Option-2	84 sq m (900 sqft)	168	7	30	20000-24000	Incremental housing - G+3 structure
3b	2000s Option-2	42 sq m (250 sqft)	168	7	30	20000-24000	Incremental housing - G+3 structure
4	2017	84 sq m (900 sqft)	504	12	54	60000-70000	Redevelopment (Builder flat/Self constructed) - G+5 structure

Note: Most of the plots are of 900 sq.ft. (or 100 square yards or 100 Gaj in local terminology)

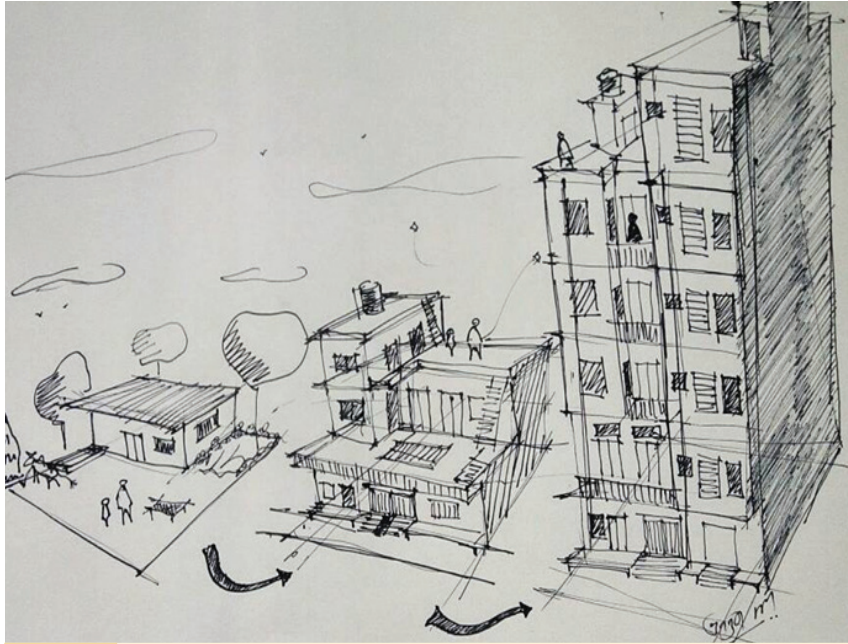


Figure 7: Transformations in the Urban Villages from 1980s to 2017

CONCLUSIONS

The urban villages are old organic settlements, which over the years have developed without following any planning norms, developmental controls or building byelaws. They are well connected by public transport. They have mixed land use character with commercial shops located on the ground floor and residential units on the upper floors.

These settlements (i.e., urban villages) provide rental housing at affordable rates to the migrating population in Delhi. A large section of the migrants settled in

the urban villages as they provided cheap rental accommodation to them. As a result of this, over the years one can see that there has been a transformation in urban villages, which has completely changed the original character of these settlements. People have indiscriminately constructed houses on an incremental basis without adhering to developmental controls and building byelaws in order to maximise their rental income. The population density in these settlements has increased manifold, while basic social and physical infrastructure has not kept pace with the development, or

is completely neglected. Greenery and open spaces have given way to multistoried buildings.

ACKNOWLEDGEMENTS

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PILGRIM CUM CULTURAL CENTRE, NAMCHI, SOUTH SIKKIM

An Example of Sustainable Landscape & Architectural Design

MS. USHA P MAHAVIR
MS. POOJA NANDY

The project was challenging by virtue of its remote location including varied and difficult terrain. HUDCO accepted the challenge, and developed the design of the complex, which has received considerable appreciation

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Sikkim, a small state in north-eastern India, has an international presence for its spiritual awareness and Buddhist monasteries as well as hindu temples. A pilgrim cum cultural centre was designed by HUDCO's Design and Development consultancy at Namchi, Sikkim.

The centre was built in over 7 acres of hilly tract and completed in 2011. The comprehensive landscape design for the pilgrim and cultural centre was also provided by HUDCO. The pilgrim complex was built in the first phase and includes Lord Shiva's 108 feet high statue, replicas of twelve Jyotirlingas, four Dhams and the effigy of Lord Kirateshwar. The cultural centre, which was the second phase of the project, includes a security block, an auditorium for 200 people, a V.I.P. guest house and a hundred bedded Yatri Nivas. The landscape design for the project is conceptualised based on the site and slope analysis. The cues from the site and surroundings dictated the landscape plan of the complex, the main and subsidiary axes, spatial organisation and the grading of the land. It includes design for the pedestrian circulation for ambulatory paths and universal access, shaded pavilions, heavy plantation with local

tree species, shrubs and flowering plants. The architecture imbibes the traditional temple architecture in the design of the Jyotirlinga and replicas for the Char Dhams. 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 design process was refined to conserve site habitat, minimise interference and retain slopes, vegetation and drainage lines. Local materials were used for the project and wood was used selectively and effectively so as to give comfort in the interiors. 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 statues sheen and longevity.

The inauguration was graced by the Shri Jagadguru Shankaracharya Swami Swarupananda Saraswati Maharaj on 8th Nov 2011. It is now a popular tourist site in Sikkim.

INTRODUCTION

Sikkim, a small state in India, has an international presence, and is known for its buddhist monasteries as well as hindu temples. It is one of the most picturesque states in India. The state, located in the himalayan mountains, has India's highest mountain Kanchenjunga, at 8586m. It has four distinct regions - North, East, South and West, with varying heights above mean sea level. The district of South Sikkim lies at the lowest altitudes, varying from 400m to 2000m msl. The district headquarters of South Sikkim are at Namchi, which is at an elevation of 1850m. Namchi is a beautiful place, with enchanting views of snowcapped mountains and vast stretches of valleys.

In order to tap the tourism potential of Namchi, the Government of Sikkim had commissioned the design and development of a pilgrim cum cultural centre, as part of the state's tourism and culture development efforts. The Government of Sikkim approached HUDCO for seeking Comprehensive landscape design solution for its pilgrim centre. The project was challenging by virtue of its remote location including varied and difficult terrain. HUDCO accepted the challenge, and developed the design of the complex, which has received considerable appreciation.

As per the Sikkim tourism website, "This pilgrimage centre has been dedicated and designed to place Sikkim in the very conscience, heart

and minds of the citizens of India and beyond. Apart from providing a unique religious and cultural ambience, the pilgrimage-cum-cultural centre established on a grand scale, hereafter, ought to be a tourist attraction at the national as well as international level. The existing linkages have been explored and the tourist activities targeted are pilgrimage, cultural activities, seminars, religious discourses, nature study and passive recreation". (www.sikkimtourism.gov.in)

The design of the project has also won an award by Indian Building Congress under its "Award for Excellence in Built Environment 2011" for the pilgrim centre, Sidheshwar Dham, Namchi, Sikkim. The Project was completed in 2011.

PROJECT SITE

The pilgrim cum cultural centre is located on top of the hill at Solophuk, which is 5 Kilometer away from Namchi town. Located atop the Samduptse Hill, (6 km from Namchi) in South Sikkim is a tall statue of Guru Rinputche. The aerial distance between these two hills is about 1.5 km. The site is accessible by motorable road in N-E direction.

SUSTAINABLE PLANNING AND DESIGN OF THE PROJECT

The first stage of the design process included a site analysis to determine planning determinants. The slope analysis and topography

mapping of the entire site was done on LANDCADD.

The slope analysis shows that the peak of the hill was gradually sloping towards S-E direction and slightly steeper afterwards and also the buildable area was identified on the basis of the slope analysis for the pilgrim cum cultural centre on other sides. The hill top site of 15 hectare was an excellent backdrop for the pilgrim and cultural centre seen in Figure 1 wherein the landscaped area in pilgrim centre is 10 hectare and the remaining area is of cultural centre. The buildings and terraces were sited along the contours as per the green building requirements to minimise cut and fill.

The salient landscape planning and design imperatives included:

- Siting of important structures, linkages within and without, pedestrian circulation, pilgrims' parikrama and spatial layout of congregational spaces.
- The main axis linking the Kirateshwar statue and Lord Shiva Statue was the main organising line around which the twelve Jyotirlingas and Char Dham were symmetrically located. This pedestrian spine was named Ganga Vithi (path) and the Ganga Dhar (water channel) emerging from the locks of Shiva flowed in the middle of this path gradually as it stepped down along the topography.



Figure 1 : The Pilgrim and Cultural Centre

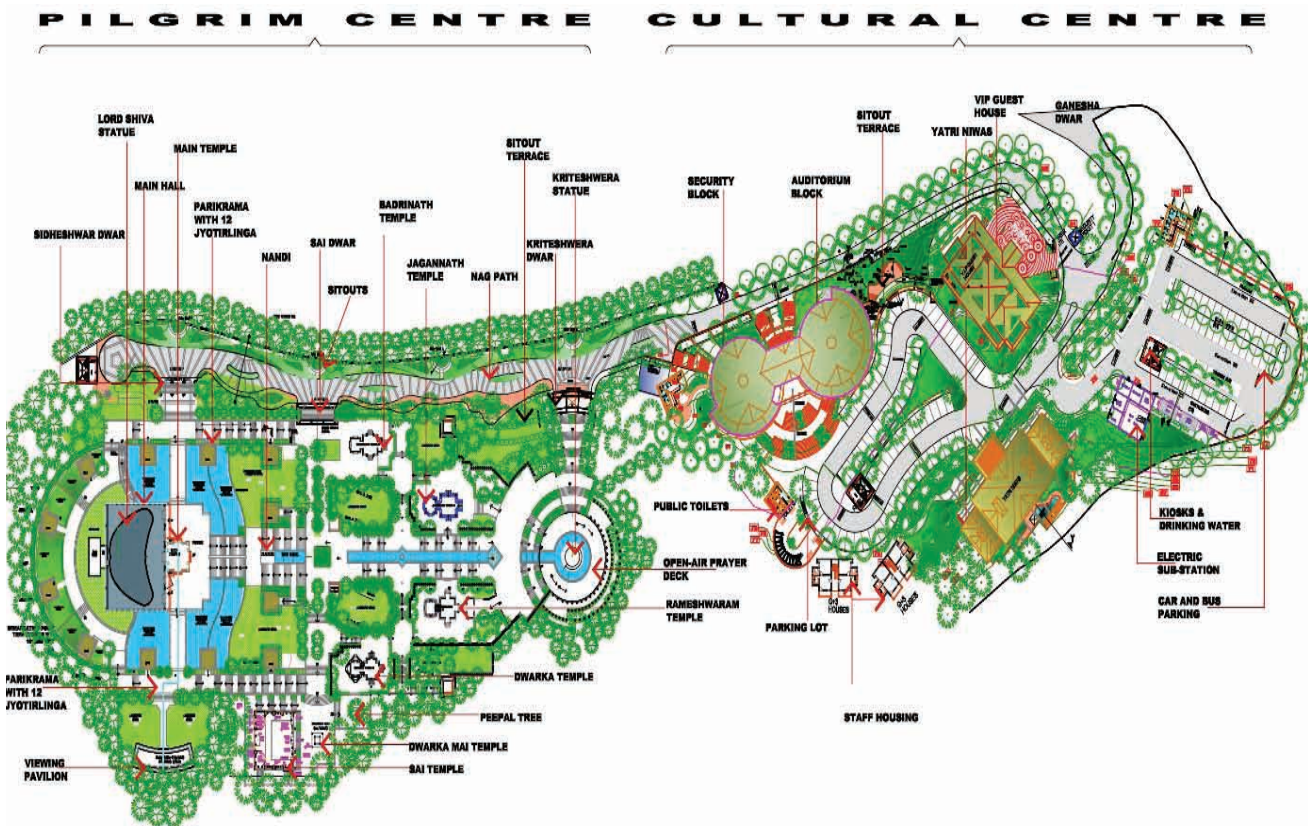


Figure 2 : Landscape plan of Pilgrim and Cultural Centre

- The landscape treatment to the entire complex is designed in such a manner that it blends the man made features and the natural surroundings. The plantation species have been selected in order to enhance the serenity and harmony of the complex.
- The flora and fauna are planted to suit the climatic zone that is Montane and sub- Alpine.

The layout plan at Figure no.2 shows the spatial layout of the entire pilgrim and cultural centre and the various components, facilities and features are labelled accordingly. The hierarchy of spaces and the flow of movement lines along the axis and access can be visualised clearly. All the structures are surrounded by open spaces landscaped with green mounds and berms suited to the topography. The vegetation design uses indigenous species and contributes to the environmental and visual quality of the spaces.

DESIGN CONCEPT

Main Components: This complex covers two broad components – the pilgrim centre & the cultural centre. The architecture imbibes the traditional temple architecture in the design of the Jyotirlinga and replicas for the Char Dhams.

Architectural Features: The local architectural features of the Tibetan monastery style were incorporated in the design for buildings, pavilions, gates, and shelters. The structures are designed with high safety and earthquake resistant features.

Materials: Exposed random rubble stone masonry (local stone) has been used for retaining walls. The local building materials were also used extensively in the building construction and interior furnishings. Wood was used effectively so as to give comfort in the interiors. The ancient technique of plastering with hydrated lime was revived for the Lord Shiva statue with local admixtures to give the sheen and longevity. The carvings, ceilings,

temple shikharas, wall and column sculptures and decorations are in fibre glass as seen in ceiling of main prayer hall in Figure 3 and Shiv purana wall murals in Figure 4. The external finishing of the structures was metalising to withstand the climatic conditions, minimise maintenance costs in annual painting and appear aesthetic as seen on external walls of prayer hall in Figure 5 and the Jyotirlingas in copper metalising in Figure 6.

Levels: The grading was worked out with the existing contours, the layout was designed to ensure minimum cutting and filling. Thus the natural slopes and topography were maintained and the natural vegetation retained as far as possible. Moreover retaining walls were constructed wherever necessary to ensure that proper drainage and soil conservation ensured slope stability and minimised erosion. The level differences are graduated to ensure unobstructed view of Lord Shiva statue during



Figure 3 : The Pilgrim and Cultural Centre

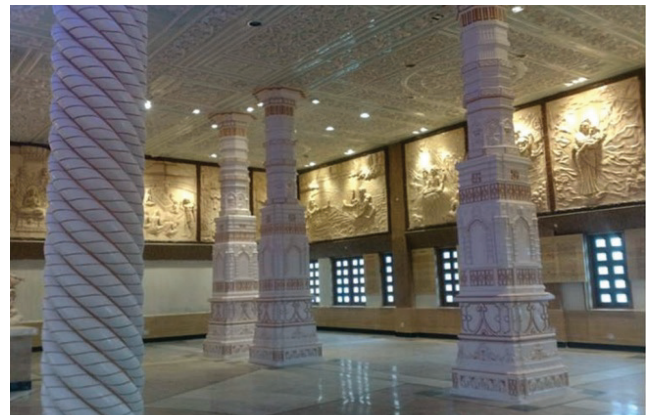


Figure 4 : The Pilgrim and Cultural Centre



Figure 5 : Prayer Hall with Silver Metalising



Figure 6 : Jyotirlinga with Copper Metalising

the transition and from all over the complex. The Parikrama path is also meticulously laid out and oriented to provide access to the twelve Jyotirlingas as it climbs up gradually to the highest level.

Access: The three entry points to the pilgrim complex are planned out aligned with the Nagpath as seen in Figure 7. The first Entry gate is the Kirateshwar Dwar, the second is the Sai Dwar and the third main entry gate is the Sidheshwar Dwar as seen in Figure 8. The access to the main temple in front of prayer hall is disabled friendly.

Main attractions: The statue of Lord Shiva is the main attraction. Apart from this Sai temple, Nandi statue, Ganga & Yamuna statues and prayer spaces are also provided. The Sai baba idol may be seen in Figure 9 and the Nandi statue in Figure 10.

Main Spaces: The spaces are organised along the main linear lines named after various aspects of Lord Shiva's divinity. The main axis is the Ganga vithi which gradually climbs up from the prayer space around Lord Kirateshwar statue upto Lord

Shiva statue. It is intersected by the linear path with the char dhams located on either sides. Thereafter it is intersected by the Sai vithi (path) seen in Figure 11 which leads to Sai Dham and has four Jyotirlingas located on Western side. Within the parikrama path eight Jyotirlingas, main temple and Lord Shiva statue are enclosed and remaining four Jyotirlingas are located on the external edge of the parikrama path on the western side having higher elevation. One of these Jyotirlinga may be seen in Figure 12.



Figure 7 : Nagpath, Motorable Access Road



Figure 8 : Sidheshwar Dwar, Main Entry Gate



Figure 9 : Sai Dham Interiors View of Statue



Figure 10 : Nandi Statue in White Marble with Black Granite Base

DESIGN EXPRESSION:

The Pilgrim Centre

The pilgrim centre is primarily proposed as a hindu pilgrim destination of Shiva worshippers but also houses the Char Dhams and Sai Dham. The design is steeped in the symbolism of Lord Shiva's mythological legends and various shlokas of Shivapurana which is the ultimate treatise of Shiva's legends and rituals are not only related but also denoted in the murals or idol type sculptures on the internal walls of the prayer hall.

The focus of attraction is 108 feet high statue of Lord Shiva (in sitting posture), that is surrounded by 12 Jyotirlingas & 4 Dhams wherein the Shiva statue is located at the highest level in the west direction and facing east. The main Shiva temple is placed in front of the prayer hall and the presiding deity 'shivalinga' as seen in Figure 13 is established here by "praanpratishthan".

Main structure of statue was in RCC with shell of 150 mm thick around structure upto nearest possible profile of statue and steel dowels provided as per requirement to give final shape to

statue. The Ganga path climbs up to Lord Shiva. The lighting for the steps, more than 500 in numbers is done with 1 watt LED for Energy efficiency. Running parallel to this pedestrian spine is the serpentine motorable road finished in washed grit finish.

In the foreground to the prayer hall and main shiva temple is a large water body with musical fountains that display a beautiful light and musical show after dark as seen in Figure 14.

Temple profile of Char Dhams are built of size 8mx8mx9m height approximately except for



Figure 11 : Sai Dham with Jyotirlingas



Figure 12 : Jyotirlinga along external parikrama



Figure 13 : Main Temple Shivalinga



Figure 14 : Lit up Musical Fountains Gate

Rameshwar for which the height is around 12 m. The Dwarka Dham, Rameshwaram Dham, Jagannath Dham and Badrinath Dham may be seen at Figure 15, 16, 17 and 18 respectively.

Through the main pathways, while climbing upwards one is able to slowly experience the visual element of surprise. The difference in treatment of surroundings and the scale of two statues have been handled sensitively and the scale conflicts have been minimised by plantation around, which subdue the dramatic visual scale and set in the entire complex in the natural terrain.

The Jyotirlingas are RCC framed structure – 5mx5m in area and about 7.0 m height. RCC murals, small shikhras, idol like figures adorn the Jyotirlinga which are metallised in copper golden shade.

The construction materials, the treatment of different surfaces and architectural forms selected will have the blend of both the local architectural style as well as the ancient temple architecture.

THE CULTURAL CENTRE

The cultural centre houses the security cum auditorium block with information centre,

exhibition area, audio/video studios/ performing halls, an auditorium, main cafeteria etc., the VIP guest house and the Yatri Niwas. The sloping roof forms reflect the traditional architectural style and are adapted to the high rainfall climate of Sikkim.

Security cum auditorium block is designed as a symmetrical composition of two circular buildings, joined by the connecting podium on the ground floor and bridge on the first floor. It provides for various services for the pilgrims and tourists apart from being the Entry gateway to the pilgrim centre.



Figure 15 : Dwarka Dham



Figure 16 : Rameshwaram Dham



Figure 17 : Jagannath Dham

Yatri Niwas is a 100 bedded facility for the pilgrims and tourists, with rooms giving views across the mountains and fields. V.I.P. guest house has been designed to hold important government meetings as well as provide comfortable accommodation .

The signage was designed to provide directions as well as information to facilitate visitor movement. These were conceived as elliptical back lit volumes that were aesthetically designed and executed.

Shaded seating was provided



Figure 18 : Badrinath Dham

along the Nagpath and in rain, shelters provided in the Pilgrim Centre. Viewing decks were strategically located at periphery to provide gorgeous views, of the mountain ranges and valleys surrounding the Solophok hill. from the Pilgrim centre Anodised steel railing has been provided along the steps and paths for ease of circumambulation and security of visitors.

CONCLUSIONS

The Himalayas are known to be the abode of Lord Shiva and Sikkim is ideally suited to

replicate Lord Shiva's temples. The sensitive handling of the hilly and verdant Solophok hill combined with a design suiting the sacred theme, beautifully sculpted statues and depictions has led to the creation of an aesthetic and functionally viable pilgrim and cultural complex. The Hindu belief of the creation, preservation and destruction of this universe is symbolised here and it forms the central theme of the pilgrim centre.

This theme is related in various aspects of the architectural and landscape design in the form of the planning, articulation and detailing of the layout and the structures. All these elements have contributed to making the pilgrim and cultural centre one of the finest contributions of HUDCO Consultancy, to an innovative, aesthetic and sustainable built environment.

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www.sikkimtourism.gov.in

INITIATIVES TOWARDS ZERO WASTE MANAGEMENT IN TAMIL NADU

BACKGROUND

Inappropriate waste management in towns and cities is a cause of concern, due to the impact on the environment and citizen's health. Tamil Nadu is one of the most urbanized states in India with 44.04 percent of its population living in urban areas. The population of the Tamil Nadu Town Panchayats (TPs), which is the third tier of urban administration, is 80,74,628 as per census 2011. The total area under the TP is 6388.20 Sq.km which constitutes 62.56% of the total urban area of the state. Guided by the Government of India Vision 2023 and Swachh Bharat Mission, the Directorate of TPs is implementing the Solid Waste Management Rules 2016 in its towns. Achieving the status of zero waste towns for this volume of people and space requires convergence of the will of people and the Government. The Directorate of TPs has demonstrated this will. Through technological support and behavioral change strategies for the citizens, commendable progress has been made in waste management in 528 towns of Tamil Nadu.

PROCESS

A logo has been created for the campaign and is being used by all TPs. It symbolizes not only waste management and plastic avoidance, but also rain-water harvesting, renewable energy, sanitation, as well as tree plantation. As a logical consequence of the 4Rs (reduce, reuse, recycle, recover), it is ensured that domestic, commercial and institutional waste generators are encouraged to undertake decentralized waste management. Zero Waste House is being encouraged by adopting backyard composting as well as



Primary Collection

backyard kitchen garden, home composting and roof-top kitchen garden. Gaps in the infrastructure and manpower for collection, transportation, and processing have been identified and interventions are being executed

in a phased manner.

The steps adopted by the Directorate to implement solid waste management in its jurisdiction are:

- i. Waste reduction by adoption of 4 'R' Principles
- ii. Decentralized waste management
- iii. Collection, transportation and processing.
- iv. Research inputs for problematic waste.
- v. Welfare of workers and worker motivation
- vi. Communication strategy for community based campaign
- vii. Regulatory framework and enforcement

The program is being funded by a special solid waste management fund created under central and state mission programs.

The three steps process for waste management include:

- i. **Collection:** A push-cart is provided for every 150 households to ensure 100% door to door collection in residential areas, as well as from commercial establishments. Further, one worker is provided for

every push-cart and each waste collector has been given a route chart and the list of the house-holds/commercials/ institutions, to systematically collect and monitor segregation of waste. About 10049 SHG members are involved in this process and they have been issued proper identity cards by TPs. In addition, 6686 sweepers are engaged for street sweeping/ collection of solid waste in TPs. Out of 8288 wards, 6175 wards are covered under door to door collection.

ii. Transportation: The segregated waste from commercial areas and bulk producers of organic waste is taken in a separate trip to the Resource Recovery Park (RRP) for processing. Similarly, the door-to-door waste collected from residential areas, in containerized push-carts, is taken to the RRP without mixing, through secondary transport vehicles.

iii. Processing: Composting is the most commonly used waste management approach, including windrow composting and vermi-composting. The finished result can be used as fertilizer for agricultural use.

OUTPUTS & OUTCOME

i. Waste segregation: 2100 MT garbage is generated per day in TPs, out of which 966 MT is organic waste, 747 MT inorganic waste and the

remaining 387 MT is silt waste. The per capita generation of waste varies from 250 grams to 300 grams per person per day.

ii. Bio composting: Bio composting is being successfully done in 466 TPs. Every day 100.17 MT of bio compost is produced and Rs.39.42 lakh is earned by TPs



Vermi Composting



Secondary Collection

iv Land Recovery: TPs have now initiated efforts to recover land from the landfill sites. In this regard, S. Kannanur TP is practicing a scientific solution (bio-mining) and has recovered 0.80 acres of land. In addition to this, Chitlapakkam TP is also practicing bio-mining activity to recover land from



Windrow Composting



Vermi Composting

every month as sale proceeds.

iii. Vermi composting: Vermi composting is also being done successfully in 188 TPs. Every day 16.21 MT of vermi compost is produced by TPs and Rs.10.29 lakh is earned every month by selling vermi compost. In addition, vermi wash being produced in few of the TPs, is currently very much in demand.

dumpsites.

v. Income generation: To generate additional income, livelihood generating activities are being undertaken in resource recovery parks under solid waste management. Action is being taken by the Executive Officer's of TPs, in co-ordination with the agriculture department, for

selling the bio/vermi compost to the farmers through identified agencies.

- vi. **Bio-methanation:** Food waste to energy projects has been implemented in 5 TPs. The energy of the plant is being utilised every day for street lights and cooking purposes by SHG members. Small bio-methanation plants that produce bio-gas, are also functioning in 11 TPs, which is being used for cooking by SHG members.

The Directorate of TPs has been able to progressively increase its outreach. Certain categories of waste such as multilayered packaging, sanitary napkins, diapers etc., which cannot be reused or recycled, are constantly audited and studied to find innovative solutions. To encourage up-scaling, measures towards welfare of workers and worker motivation, regular health check-ups, provision of workers safety equipment, incentivizing performance, and fair wages are being ensured

KEY TAKEAWAYS

- i. **Communication Strategy for Communitybased Campaign:** Information, Education and Communication (IEC) is a necessary but not a sufficient tool to bring about a lasting behavioural change. To translate the knowledge gains of IEC campaign the main strategy used in the TP included- imparting leadership training to the

key players and opinion makers in the community. These leaders include Chairman, Vice Chairman and councillors of Town Panchayat Council, leaders of SHGs and its federation, members of Residents Welfare Associations, traders associations, schools/colleges Eco club members and

campaign mode. Others require law enforcement by empowering the local body. TPs are therefore encouraged to pass appropriate resolutions and enforce the above strategy in a phased manner. A comprehensive Zero Waste Resolution is being adopted by the TPs and fines are imposed on



Bio mining

HM/principals, formal and informal leaders. Thus, in all 528 TPs 530 “Swachhagrahis” are involved to run the IEC campaign. However, these efforts are supplemented by other forms of mass communication such as use of social, electronic and print media, incentives and disincentives etc. for desired behavioural response.

- ii. **Regulatory Framework and Enforcement:** It is realized that 70-80% of stakeholders can be changed through

defaulting behaviour such as use of banned plastic carry bags, littering, dumping, non-segregation of waste. Similarly, awareness and enforcement of other laws such as Bio-medical Waste Management Rules, E- Waste Management and Handling Rules, Hazardous Waste Management Rules and Plastic Waste Management and Handling Rules, is being increased through continuous training programmes.

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