

READERS VOLUME ON HOUSING



JIT KUMAR GUPTA

READERS
VOLUME ON
HOUSING

FOR STUDENTS OF ASSOCIATE
MEMBERSHIP BY EXAMINATION IIA

JIT KUMAR GUPTA

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By 2030, UN-Habitat estimates that 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. Additionally, an estimated 100 million people worldwide are homeless and one in four people live in harmful conditions that to their health, safety and prosperity. Access to housing is a precondition for access to employment, education, health, and social services. In order to address the current housing challenges, UN has mandated that all levels of government should put housing at the centre of urban policies by placing people and human rights at the forefront of urban sustainable development.

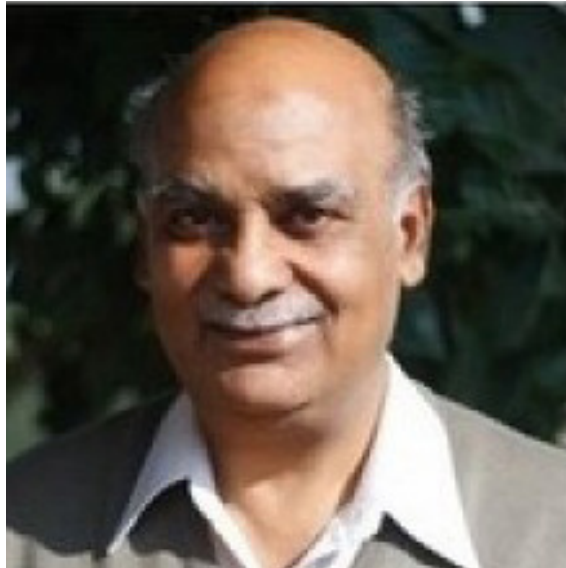
Looking at the role and relevance of housing in human living, Reader Volume written by Ar. Jit Kumar Gupta, Chairman BOE&AE, IIA, has come out at a most appropriate time as a study material for the students undertaking the IIA Studentship exam. I hope students taking up the examination will take full advantage of the volume for understanding the complexities involved in the planning and designing of housing

I would like to take this opportunity to thank Prof Jit Kumar Gupta, for taking out time to write this book on housing for the benefit of not only student community involved with IIA but also for those who are undergoing learning in architecture in the regular mode in different institutions imparting architecture education in the country.

Considering the vastness and the contents of the Reader's Volume, I hope it will also empower professionals working in the domain of planning and designing shelter to understand and undertake the cause of making available housing for all forward, to make our cities clean and green, free from the malaise of the slums and sub-standard living.

Looking at the galaxy of professionals available with IIA, I hope many more architects will come forward to write more such books for the benefit of students and professionals, to make value addition to the architectural education and profession for making it more qualitative and redefine the context, role and relevance of architecture in ushering an era of sustainability and making this world a better place to live in.

Ar C R Raju,
President
Indian Institute of Architects
May 31,2023.



Writing a book on any professional subject always remain different , difficult and a challenging task, particularly when the book is to be tailored as per the syllabus prescribed for the course . With no dedicated written text available for the students, undergoing Associateship Examination of the Indian Institute of Architects, it was thought prudent that Reader Volumes must be prepared on different subjects of study, based on the syllabus prescribed for empowering the community undertaking the examination. The current Reader's Volume on housing is a humble attempt in this direction.

Completing the first Reader Volume on Housing is like a dream come true for me, being integral part of IIA system of examination. This volume relates to Part-IV A of the current syllabus for the subject of Housing. This volume is an endeavour on the part of Indian Institute of Architects, to make the learning in the subjects more qualitative and productive by making available the latest material on the subjects of the study. Preparation of Reader's volume was taken up on the analogy and extension of the Reader Volume prepared for the students undertaking the Associateship examination of Institute of Town Planners on the subject, Housing and Habitat Planning.

Housing, as a subject of study' and professional practice, remains highly relevant for the students of architecture and the professionals engaged in the art and science of designing buildings, because majority of buildings designed

by them invariably falls under the category of housing. Accordingly, it becomes relevant for both students and professionals to learn the intricacies of planning, designing construction and managing housing which will make housing, more qualitative and productive.

In search of appropriate options to make housing more qualitative and productive, Reader volume looks holistically at the entire gamut of housing and its implications for humanity and society, in terms of socio-economic, physical, environmental and cultural impact on communities and human living. Looking globally and locally, it can be observed that major challenge which existing human settlements are facing, remains the ever growing/widening gap between demand and supply of housing. Growing number and volume of slums in all cities clearly indicates that majority of urban residents remain marginalized and muted, so far as availability of appropriate housing is concerned. .

Looking at the fact that housing demand and supply is always evolving, devolving, never static and never finite, this Reader's volume tries to look into the length, breadth and depth of the complexity of the shelter and look for appropriate options which can make appropriate housing a distinct reality for all households. Looking at the ever-widening gap between demand and supply, volume looks at the option of bridging these gaps rationally and realistically. In the process, Volume looks holistically at the entire gamut of planning, designing, construction and management of housing to make it cost-effective, safe against disasters and time-efficient besides making human living more qualitative.

Text covers large number of topics related to housing which, it is hoped will remain useful for both students, faculty, policy makers, practitioners and researchers working and operating in the domain of housing. This Readers Volume, compiled in the form of a book, is the 16th book in the series, which I have been able to write and complete since the dawn of pandemic COVID 19. I hope book will provide an insight to the complexity of the subject matter of housing and possible options suggested in the book, to overcome the challenge posed by rapid and massive urbanization,

I would like to express and place on record my gratitude to Ar. C R Raju, President Indian Institute of Architects for his valuable and unqualified support in completing this task. I would like to place this book at the command and disposal of Indian Institute of Architects for publications and making it available to all the stakeholders, within and outside the profession

I would like to dedicate this book to the sacred memory of my mother, Late Smt. Leela Gupta, who as a teacher, made me where I stand today in my life, despite all odds and hardships she faced in bringing me up and making me educated to the extent possible; and to my father, Late Sh. Ved Parkash Gupta, whose benevolence I was deprived of, in my early childhood. I would be failing in my

duties, if I don't acknowledge the valuable and unqualified support given by my wife Alka Gupta and my Children Akhil, Nikhil, Sapna, Aparna, Shubham Anushka, and Neha, who have always supported me in this endeavour of writing the Reader's Volume.

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May 30, 2023

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PART-I

1.1 Role and importance of Housing.

Housing is valued universally and globally, for providing safety, security, identity, space for social interaction for families to live, learn and grow together. Housing is also considered major determinant of quality of life besides major propeller of industrial and economic development. Large number of crimes happening in society can also be attributed to the manner in which majority of people are made to live and work in adverse conditions in urban areas. Considering the multiple implications/connotations of housing,- providing appropriate / affordable housing for all, has been considered vital and crucial for any society, community and nation to grow and prosper, rationally and realistically. Considering the critical role and importance for housing in social, economic, physical and environmental development, United Nations, has also mandated providing, ' **housing for all** ', as the basic agenda of growth and development for all member nations.

However, despite occupying critical role in human living and national development , providing adequate housing to all remains a major issue/ challenge, both in terms of quality and quantity. Dynamic nature of housing demand makes provision of **housing for all**, the most difficult and challenging for all agencies involved in providing shelter, for the reason housing need and demand never remains static and also never defined. It is always evolving, devolving, never finite and never finished. Considering multiple implications of housing in terms of land, resources, finances, materials, technologies, manpower and management, providing housing remains the most challenging job for individuals, communities and nations.

Shelter being a basic human necessity, there's nothing more critical and fundamental in human living than having a pucca roof over a person's head. As per Menon, in his foreword to " Making Affordable Housing A Reality in Cities"- A world in which only a few can afford housing is not sustainable. Everyone deserves a safe place to live: it can transform the quality of life of individuals and families. Today, however, most cities around the world are facing major challenges in providing safe and adequate housing for their people, especially cities that are growing rapidly and where the affordable housing options are limited'.

According to UN, only 13% of the world's cities had affordable housing (UN Habitat, 2016). In 2014, McKinsey estimated that 330 million urban households were living in substandard housing or were financially stretched by housing costs (McKinsey Global Institute, 2014). This number is projected to rise to nearly 440

million households, or 1.6 billion people, by 2025 – and 2.5 billion people by 2050. In Africa, over 50% of the population lives in substandard conditions; whereas in India and China, nearly a quarter of the population live in informal settlements (Florida, 2017). Studies have shown that cities in less developed countries are found to be significantly less affordable (28% less affordable) than cities in more developed countries. (Kallergis, et al., 2018). Looking at the global canvas, providing affordable shelter to all its residents remains the greatest challenge/task for all governments. Cities and state are increasingly realizing the need for rapid action and innovations to increase the supply of affordable housing for bridging the ever-rising gap between demand and supply.

In 2016, Habitat III in Quito, adopted the New Urban Agenda, requiring states to promote “national, sub-national and local housing policies that support the progressive realization of the right to adequate housing for all by 2030. Agenda encourages the adoption of an integrated and inclusive approach to housing that interlinks education, employment, health , basic and social services, through collaboration among governments, civil society organizations, major interest groups and the private sector, both nationally, internationally and regionally. It is well recognised that well-being of both individuals and families, is substantially impacted when the need for satisfactory housing is not met. Access to adequate housing has long been viewed as a basic human right and is considered to be an integral factor for the enjoyment of other economic, social and cultural rights. According to the United Nations (UN) Committee on Economic, Social and Cultural Rights, satisfactory housing consists of:

- legal security of tenure;
- availability of accessible services, facilities and infrastructure;
- habitability;
- accessibility (e.g., access to employment, health services, schools, etc.);
- cultural adequacy; and affordability.

For a shelter-less person, getting a house is known to bring about a profound social change in his/her status, safety, security and welfare, endowing them with an identity and integrating them with social milieu. As provider of social security, distinct identity and assured quality of life, securing ownership of an appropriate home has emerged as the lifetime ambition of every individual and family. Spending more than one-third of its life within four walls of the home, housing has emerged as the major determinant of quality of life, health ,hygiene and social development. Besides physical, social and health connotations, housing has major economic implications for both human beings, communities and nations. Being one of the key promoters of industrialization, with more than 290 industries involved in producing materials, goods and services, used in the construction, housing has been found to be one of the largest contributors to the economy besides providing large employment to both skilled and unskilled manpower. Considering its multiple connotations and distinct advantages, providing housing has emerged as priority for both society and nation.

As per UN , Fact Sheet No.21, The Human Right to Adequate Housing;- the right to adequate housing forms a cornerstone of the Global Shelter Strategy. The right to adequate housing is universally recognized by the community of nations. This can be seen from the fact that...

- All nations without exception, have some form of obligation in the shelter sector, as exemplified by their creation of housing ministries or housing agencies;
- by allocation of funds to the housing sector; and
- by policies, programs and projects focussing on housing.

All citizens of all States, however poor as they may be, have a right;

- to expect that their governments should be concerned about their shelter needs and
- to accept a fundamental obligation to protect and improve houses and neighbourhoods, rather than damage or destroy them.

Adequate housing is defined within the Global Strategy in terms of:

- adequate privacy,
- adequate space,
- adequate security,
- adequate lighting and ventilation,
- adequate basic infrastructure and
- adequate location with regard to work and basic facilities all at a reasonable cost.

Considering the role and relevance of housing in human living and development and international mandate to focus on providing adequate housing for all, housing sector is being given high priority and accordingly ranks high on the agenda of state and central governments. Accordingly, for achieving the objectives, number of steps have been taken by the Government of India which include and involve, putting in place National Housing Policies to define the national agenda for accelerating the delivery of affordable housing in the country.

- First Housing Policy was positioned on the national portal in the year 1988, after a gap of 41 years of gaining independence, which aimed at providing shelter to all, with the objective that every family must have a dwelling unit of appropriate quality and space, duly supported by basic amenities of life.
- Second National Housing Policy, launched in the year 1994, focused on transition of public sector role from provider to facilitator. The policy also enlarged the scope of housing by making it integral part of neighborhood. Both these policies focused on addressing the issue of housing in the urban and rural areas.
- National Urban Housing and Habitat Policy 2007, was the first policy, which made urban housing as the agenda and the theme, emphasizing the need for providing and promoting housing on a large scale in urban areas with priority going to EWS and LIG categories.

- June 25, 2015, marks a watershed in the history of urban housing with Prime Minister of India launching Pradhan Mantri Awas Yojana-Urban (PMAY-U), to provide housing to all urbanites by the year 2022, when India completes 75 years of independence. The objective of the Yojna is to utilize the national policy framework, not only to provide just shelter for the urban poor and meet the Habitat goal of **slum-less cities** but also to provide healthy and enabling urban environment, to help, enable and empower marginalized section of society to come out of the poverty.

Looking at the entire context of making housing for all a distinct reality, it has been observed that all developing countries face enormous challenge of meeting housing demand in urban areas for reasons of large-scale migration, which continuously happen between rural and urban areas. Role of rural-urban migration has been found to be critical in widening the gap between demand and supply of the housing in urban India. Studies made have shown that migration constitutes fair proportion of urban population growth. In India, majority of migrants to urban areas from rural India, belong to lower economic strata of financial pyramid with poor capacity and ability to rent a house in urban areas, due to high prevailing rents, which makes securing appropriate shelter for majority of urban residents both cumbersome and difficult. Considering the prevailing high rents in urban areas, it becomes impossible for the lowest-income seniors, people with disabilities, families with children, and low-wage workers to pay rent and make ends meet, harming low-income people disproportionately. In addition, looking at the ever-rising land and building material prices besides large financial resources required for creating appropriate shelter through legal means, the poor urban residents and rural migrants have no option but to encroach upon available public and derelict land in the city to create temporary and makeshift arrangements due to poor financial capacity. This leads to mushrooming of slums, Jhuggi- Jhompris and shanty-towns in urban areas. This pattern of urban growth has high visibility in large urban centers with 54% of population living in slums in Mumbai whereas Kolkata's share is placed at 33%. In India more than 60 million people were residents of slums and shanty towns in the year 2011. The proportion and magnitude of such migrants is increasing rapidly over a period of time with their curve going north.

It needs to be understood and appreciated that makeshift shelter, lacking in the basic necessities of life and proper air, light and ventilation leads to poor health and hygiene, with poor quality of life emerging as the natural corollary of urban living for these migrants. With shelter made on the encroached public/private land, poor are said to be under perpetual fear of being displaced by the parastatal agencies with possible destruction of makeshift shelter. The fear of demolition acts as a major deterrent for poor to improve their shelter, with savings available at their disposal, leading to ever increasing housing shortage with gap between demand and supply getting wider and wider. Accordingly, providing adequate shelter for all, in the urban areas including urban migrants becomes all the more critical, for providing appropriate quality of life and ensuring orderly development of urban areas, making urban centres more liveable, habitable

productive and sustainable. No city and country on this planet earth can hope to become sustainable, if it fails to bridge the gap between demand and supply and provide adequate , qualitative housing to all its residents, including poorest of the poor.

To conclude, role and importance of housing lies in the facts that Housing ;

- Remains closely associated and positively linked to the process of overall socio-economic development.
- Provides shelter and raises the quality of life.
- Generates conditions which remain congenial to the achievement of social objectives such as health, sanitation and education.
- Provides employment opportunities to the rural and urban people.
- Provides, security, safety and raising the quality of life
- Generates and creates supportive conditions which are considered human centric
- Access to adequate and satisfactory housing has long been viewed as a basic human right and is considered to be an integral factor for the enjoyment of other economic, social and cultural rights.
- Satisfactory housing consists of; legal security of tenure; availability of accessible services, facilities and infrastructure; habitability and access to employment, health services, schools etc. (United Nations Committee on Economic, Social and Cultural Rights).
- Acute shortage of affordable home for the low-income families, adversely impact their productivity, quality of life, economic growth and active participation in the welfare programs launched by various local, national and international agencies.
- Safe, accessible and affordable housing remains major propeller for empowering poor and securing their active participation in national building for both physical, social and economic growth besides taking care of major urban ills related to infrastructure, services, healthcare and unplanned development.
- Failure to settle the problems of land distribution and housing in the world's cities threatens not only . . . the developing world — it also threatens world stability.
- People with appropriate housing are known to perform better and have higher order of protection against health hazards and pandemics as compared to those without housing.
- Housing is known to reduce pressure on healthcare services by senior citizens, when having access to affordable housing with supportive services; as against those who don't have access to housing with the same amenities.
- Housing quality remains vital for the rational growth and orderly development of a society. Housing quality is closely linked to quality of prevailing physical conditions, quality of the social and physical environment in which the home is located besides quality of air, home safety, available space per occupant and housing design, which are considered vital for human growth and development

- Housing critically linked to productivity, operational efficiency, economic development and is known to significantly impact national and local economies in several ways besides making major contribution to annual GDP.
- While good and adequate housing can enhance economic performance and promote competitiveness, poor housing can lead to segregation, exclusion, poor environment and spatial concentrations of poverty.
- Housing considered/ treated as an economic commodity, with property acting as an asset accumulating passive wealth for the owner, invariably leads to emergence of perpetual housing shortage; pushing many individuals, to seek shelter in the informal markets.
- Affordable housing is known for its capacity to provide safety, security, identity, space and opportunity to children in low-income households to, maintain their health and well-being; achieve financial goals and reducing costs to society by improving and succeeding academically.
- Housing remains central for healthy growth and development of children/ family. Poor housing is known to leave its mark on mental health of the occupants for years to come.
- Housing besides providing shelter and raising quality of life is known to be closely associated with process of overall socio-economic development, generating employment, promoting industries and creating conditions which remain supportive to the achievement of social objectives involving, sanitation and education.
- Housing remains key to provide large scale employment opportunities to the rural and urban workforce, both skilled and unskilled.
- Housing essentially provides quality and valuable space for family to be together, for interacting, playing, studying, for entertainment, learning about family culture and traditions besides learning behavioural pattern and for sleeping.
- With more than 290 different types of industries involved in producing components used in the construction of buildings, housing remains major promoter of industrialization in any country,
- Investment in housing is known to have multiplier effect of; generating wealth, promoting economy and employment in any city/region.
- Housing is universally valued by all nations for its capacity, role and importance in promoting the public good and to create a healthy, vibrant and productive society.
- Housing is known to have great role in shaping any society, its quality, culture and economy.
- Right to adequate housing forms a cornerstone of the Global Shelter Strategy.
- Indivisibility and interdependence of all human rights find clear expression through the right to housing. Having access to adequate, safe and secure housing substantially strengthens the likelihood of people being able to enjoy certain additional rights. Housing is a foundation from which other legal entitlements can be achieved. (UNH)

- Shelter offers the best option for survival in times of crisis or displacement. It also holds key to restoring personal security, self-sufficiency and dignity.
- Adequate housing is universally viewed as one of the most basic human needs. Adequate housing is known to be the index, used for assessing the growth, development and welfare of a society.
- Adequacy of housing and living conditions remain closely linked to the degree to which the right to environmental hygiene and the right to the highest attainable level of mental and physical health can be enjoyed.
- Housing is the single most important environmental factor associated with disease conditions and higher mortality and morbidity rates. (WHO)
- Housing is the space where more than one-third of human life span is spent
- During the current pandemics, Covid-19, the role and function of housing as a space for mere living, has undergone total change with the addition of functions like, working, care of body and spirit, education, healthcare etc. being done from the same space.
- Housing remains the major planning, development and management component in a city, occupying largest proportion of the land and having largest count among buildings in the city, besides defining its personality/culture.
- Demand for housing is never static. It remains dynamic, ever evolving and
- devolving, impacted by large number of social, economic, cultural, physical, economic factors, peculiar to a place and society. .
- Housing accounts for the largest proportion of the investment in any city.
- Majority of intra-city travel and trips originate from and terminate in housing. Housing remains the focus of all human activities.

1.2.Types of Housing and Criteria governing such typologies-comparative advantages and disadvantages.

India, as a nation, ranks high among the global communities, which are known for their love and value, which they attach ,to own, possess and live in an appropriate house/shelter during their life span. Indians are known to value the ownership of the house , for the reason house is considered as the provider and promoter of high degree of safety, security, identity and status in society and community besides being hallmark of quality of life. House, besides providing social and physical security, is also considered as a valuable asset and investment, providing high degree of economic safety to owner/family, during the hour of crisis. Owning house is considered as lifetime ambition for every Indian /individual/family. Unless pushes/ compelled by circumstances, house is rarely sold/transferred in normal circumstances and accordingly, privately owned house has very low order of mobility. Houses,- which remain on sale in market, in majority of cases, are the houses constructed by the builders,

developers and promoters for making it available to people for purchase and ownership.

Constructing house remains highly cost-intensive and resource intensive activity requiring considerable planning, time and resources for making it a distinct reality. House remains largely choice based of the owner/ family. Accordingly, owning house largely depends upon large number of personal, technical, financial, physical, social and economic factors including the availability of resources, choices available ; capacity , income, saving and affordability of the individual; prevailing cost of land; cost of construction; size of family and requirement of living space; place of current employment; growth potential of the city and area; policies of the government; market demand and supply; sources available from the financial institutions; prevailing rate of interest on housing loans; tax incentives given by the governments; options available in the housing market; cost/availability of building materials; local climate, prevailing culture, safety, security, available construction technologies, geographical factors; political agenda/approach/policy framework put in place by the government for /promoting shelter; amenities & infrastructure options for housing provided by the various parastatal agencies engaged in providing shelter; quality of life etc. Considering large number of variants, factors and choices guiding the individual houseowner, accordingly over a period of time, large typologies of houses have emerged in the urban market.

The housing market remains primarily dominated by the private sector because creation of majority housing stock remains largely a private initiative. It is only recently government has undertaken the construction of houses, on a large scale falling in the categories of affordable housing/ EWS/ LIG categories, under the ,'Prime Minister Awas Yojna"- both in the urban and rural areas. The housing market is , primarily and essentially, composed of two distinct players-involving private sector and public sector housing , differentiated by tenure, ownership , occupation, private rented accommodation

Housing Typologies Existing in India;

Looking at the entire context, there exist numerous typologies of housing catering to the needs of diverse cultures / communities / individuals / lifestyles / income groups, in terms of architecture, building quality, materials, aesthetics etc.; ranging from Palaces to Huts ; Houses to Apartments, Bungalow to Affordable Housing ; Pucca to Katcha housing etc. Common typologies of houses existing in India are defined below. (*Yashavi, By Zricks.com; Satyavarma Dantuluri*);

- **Palaces;** Indian society is known for its feudal system headed by Rajas and Maharajas, who were known for their wealth and prosperity, living a lavish life. In order to showcase their wealth, resources and keep their dominance , they constructed large sized structures, as their residences .These palaces, in addition to housing the maharajas/rajas also provided space for living to large number of manpower engaged in their security and persons required

to serve them and maintain the services and buildings. Considering the fact that India was spatially divided and being ruled by large number of Rajas/ Maharajas; accordingly large number of palaces came into existence in various parts of the country, ruled by these maharajas. Located in different parts of the country, these magnificent palaces also stand testimony to rich cultural heritage of India. With the dawn of independence and merger of more than 600 Riyasts in India, these structures, constructed in isolated/elevated places, representing the luxurious living habitat of these Maharajas, lost their relevance, glory and dominance. However, these palaces still continue to exist. Considering the large resources required to operate and maintain these large palaces, in majority of cases these palaces have been transferred/ leased/sold and put to alternate uses like, hotels, museums and tourism etc. These houses remain both large and costly, containing all the possible luxuries, representing the past glory and heritage of India.

- **Havelis;** Havelis are another kind of luxurious structures constructed by the Zamindars, owning large chunk of land, for their residential purposes. Like palaces, Havelis are also large sized structures, though much smaller in size and short of amenities and services, when compared with the palaces. These Havelis have been constructed by people who served the rajas/ Maharajas. Havelis are spread over the entire agricultural landscape in the country. These residences also remain isolated and constructed on elevated places. They provide spaces for both personal and public use and contain adequate provisions of privacy and safety. Majority of these havelis still continue to be used for residential purposes by the present generations. Few of these Havelis, located at commercially viable places, are being used as hotels, marriage palaces etc.
- **Villas;** Villas, following the pattern and style of plotted development, are considered and fall into the category of high-end homes, with variable sizes having small/medium/large plot area. Villas remain exclusive but distinguished by large footprints of houses having dedicated lawns, gardens swimming pools and driveway. However, over a period of time private developers have also started offering villas which remain affordable by providing and sharing common amenities like driveways, gardens, golf course, and backyard/lawn. Having suburban location, villas remain the preferred choice for home buyers those who want to enjoy all the basic amenities of urban project without compromising with the privacy.
- **Bungalows;** The bungalow is another form of housing used by an individual family as a single unit. It normally belongs to high-end housing, constructed on a large sized plot. In majority of cases, it remains a low-rise structure, constructed up to a single story, having sufficient open space around the house, which is used by the family as garden/open spaces/lawn etc. With the increase in family size and higher demand for living space, Bungalows are also being constructed by adding more floors. These houses remain largely family owned and can be found both in urban/ sub-urban areas of India.

- **Duplex House;** A duplex house provides options for two separate units within the same designed structure. In such houses, units or apartments may be stacked one atop the other on separate floors, or they may be placed side by side with a shared wall. A duplex may also be called a multifamily dwelling, because more than one family can live in this type of building. Each of duplex floor plan provides for living and renting out. These houses provide broad choice/ options with garages, courtyards, single and multi-story living. A duplex house remains a popular option for people who want to keep family members nearby or who want steady income from renting property that's not too far away to manage. It can also be a great real estate investment or a creative option for a first-time home buyer, under the right circumstances. It remains both cost-effective and operationally efficient.
- **Apartments/Flats;** Apartments are the current pattern of houses which are being constructed on large scale in urban areas to meet the demand of housing large population. Apartments are housing units located in a residential building, which is multi-storied and has number of such units on each floor in the same building. Each unit remains self-contained and independent, provided with universal access. This kind of housing is the outcome of high cost of land, which remains unaffordable for majority of urban residents. It comes in different sizes ranging from small units to large number of rooms. Apartments offer distinct advantages, that one can get a built house ready to occupy. Apartments are generally promoted by co-operative societies and private builders, who construct such houses for allotment to members/buyers. Apartments share common services like lifts, staircases etc. All apartment complexes provide, large open spaces as gardens/parks and for creating public utilities. These apartment complexes, known as Group Housing, provide adequate space for parking, community facilities, limited number of shops for meeting day-to day needs of the residents. Apartments are considered safe and are valued for community living. Apartment owners do not have any independent land earmarked with the unit they own. All apartment owners are required to pay service/maintenance charges on monthly basis, which add to the cost of living. This pattern of living has distinct advantages and dis-advantages.
- **Penthouses;** Penthouses are another typology of apartments but located at the top floor in an apartment building. Penthouses are generally large in area when compared to other apartments in the building. Penthouses remain exclusive and fall under the luxury category. Such units have large independent and exclusive terraces, having distinct advantages in terms of having overview of areas around the building, large space for outdoor living and number of rooms, which make them really expensive
- **Studio Apartments;** In the parlance of houses, studio Apartments is a newer concept which is gaining high degree of popularity, globally. Such units remain small in area and effectively cater to the needs of the younger households. Having no specific and dedicated separate bedroom, studio apartments are generally rented by the young working individuals who

wish to stay in a little cosy space with all the amenities put in place. Studio Apartments are designed as free flowing spaces without any barrier of walls /divisions, giving flexibility to occupant to use the space as bedroom and living room. .

- **Farmhouses** ; Farmhouses are houses made in the rural areas by the farmers for their living. However, in the parlance of urban living , farmhouses are on the pattern of plotted development , which have location in the rural context and is constructed and owned by people living in urban areas. Such houses are owned by families having large financial resource and preference for living in open areas as compared to congested urban areas. Farmhouses are generally used as space for occasional living. However, in case of convenient locations, these houses also serve as the permanent residence. These houses have urban ownership, which are constructed by individuals by buying land in the rural areas. Such houses remain in demand and create premium when located in the close vicinity of large urban areas. In fact, these houses are located in the peri-urban areas, where land in bulk can be purchased at an affordable price. Located on undeveloped land having no/limited urban services, various supportive urban services like water supply, sewerage etc. are created and provided by the owner to make house self-contained and self-sustaining. Farm houses are invariably located on large parcel of land , with limited built-up areas. They are used occasionally during vacations or for hosting parties. Considering the large demand of such houses many builders are offering such houses in the close vicinity of urban areas. In many cases minimum area limit for such houses remains 2000/4000 sqm, as defined in regulations made under development plans. These houses invariably remain expensive and include facilities such as swimming pool, small play areas, space for outdoor sitting. In addition, such farm houses also include space for workers employed for maintenance/ upkeep/services. Chandigarh evolved a well-defined policy regarding the construction of the farm houses in the periphery of the capital city, defining minimum land area; area which can be constructed; height of the building; setbacks to be provided and minimum requirement of the access road.
- **Huts** ; Huts are believed to be lower end of houses constructed in the rural setting and in the slums prevailing in urban areas. Huts are the first typologies of houses built by human beings. Huts are tiny simple shelters, which are mostly made of natural and locally available materials by local manpower. In fact, these are one of the most simple, swift and cheap houses to build. Huts are common in big cities, can only be seen in the slums of India. Hut is a category of house constructed using readily available waste/ natural material like wood, leaves, branches, hides, fabric, bricks, plastic/ metal sheets or mud using building techniques, passed down through the generations
- **Marla houses**; This typology of houses is known to have been provided in cities like Chandigarh on large scale for allotment to people who wish to

own/build the house. It refers to houses which are like plotted development having small area. They are planned as row housing, having limited height up to three floors, with air, light and ventilation available from front and rear only. They are provided as developed plots made available to the people, on which construction is made by the owner after getting the building plans approved. In addition, to providing space for the residence of the owner, it also provides opportunity for renting out the space available at higher floors. Thus, these houses remain a mix of both owner and rental occupation, providing large stock/space of housing in the city for leasing on rent. Large stock of housing in Chandigarh belong to this category. These houses are known to provide high residential density due to having small area but large built-up area. These houses do also have open spaces in the front and the rear of the built-up space for parking and creating green space.

- **Habitat Houses:** These are the house created in Kerala by the famous architect Lauri Baker, made of mud and mud bricks. These houses are known for its economy, low-cost, efficiency, sustainability, use of waste and quality of construction. Every house remains distinct and unique, blended with nature and ecology. These houses are known for quality living, efficient use of available material and highly economical to maintain and operate. These houses constructed in rural/urban areas also provide space for working in addition to living, besides providing space/option for making house larger, both horizontally and vertically, without impacting the existing structure for meeting the future/growing needs of the family.
- **Kutcha Houses;** These houses are made of wood, straw, mud and dried out leaves. These houses remain vulnerable to disasters and require considerable maintenance and upkeep on regular basis. They remain small in area, lower in height, having limited area for living. These houses are generally constructed by people who have limited resources to spare for construction and generally houses people belonging to economical weaker sections of the society. These houses invariably lack basic amenities and provide poor quality of living.
- **Detached house;** This typology of house remains physically detached, sharing no walls and remain separate from neighbouring property on all sides. Located on large sized plots, they have setbacks on all four sides of the plots and accordingly provide open space on all the sides of the house. They remain exclusive and expensive to construct, maintain and operate and generally fall in the high-end category of housing. These houses also remain highly land inefficient largely characterized by low-density with limited social interaction among the community.
- **Eco-friendly/Green Homes;** With more and more people becoming aware about impact of residential houses on the climate change, global warming and rising level of carbon, making houses eco-friendly and designing houses with nature is gaining high degree of acceptance. Accordingly, demand for green homes, especially in big cities is increasing rapidly. These houses combine the concept of sustainable living. An eco-friendly house, is

based on passive design ,making provision for rainwater harvesting, solar panels, wind turbine, biotic waste management plant, and power-efficient appliances, etc. Green homes/eco-friendly homes are becoming increasingly popular because they are known to be cost-effective and energy efficient and remain economical to maintain and operate with lower consumption of water and energy over the entire life span of the building. Green homes are also known to provide highest quality of indoor air, making people happy, healthy and more productive. Green homes are known to create win-win situation for both owners, occupants and tenants. These houses are also economical to operate because of lesser operational and maintenance costs. Making homes green invariably revolve around state of art planning/ designing, energy efficiency, water efficiency, materials, indoor air quality. Exclusive rating are available in India, for rating houses as green.

Housing Typologies—Plotted Development (PD) and Flatted Development (FD)

Housing, because of its magnitude and quantity, remains the major and important component of any city. Occupying largest proportion of urban land, housing is also known to be the definer of the personality of the city. Urban housing comes in number of variants and typologies. However, these variants can be divided into two broad categories- ***plotted development and flatted development***. There is a third variant, which is a mix of plotted and flatted development. These categories have their own advantages, disadvantages, limitations and implications. Issue has been debated by professionals, to understand the context of these typologies in terms of physical, social, economic and environmental implications including cost-effectiveness and utilization of land. Accordingly, attempt has been made to understand the context of these broad typologies of housing in terms of; economy, cost-effectiveness, operational efficiency, utilization of land, creating housing stock, pattern of development, land ownership, safety, security, socialisation, managing services, amenities etc. as detailed below;

- **Note;** **PD** stands for Plotted Development; whereas; **FD** stands for Flatted Development
- **Pattern of Development**

PD- Involves pattern of development, comprising of sub-division of land into plots having variable sizes- both smaller and larger

FD- Involves pattern of development, comprising of sub-division of land into plots having much larger area when compared to plotted development

- **Pattern of Land Ownership**

PD- Land ownership pattern based on individual/ joint ownership, in the name of family, to promote individual housing

FD- Land ownership pattern based on joint ownership involving all the stakeholders,

- **Pattern of development- Height**

PD- Low rise— construction of building going generally up to 3 stories

FD- High rise – construction of building generally going multi-storeyed.

- **Pattern of Land Utilisation**

PD- Less Efficient- low level of land utilisation -with larger area going under roads, opens spaces and community facilities

FD- More efficient -with high land utilisation—with smaller area going under roads, opens spaces and community facilities

- **Pattern of Population/Housing Density**

PD—Low density and less population— due to individual ownership, depending on size of plots carved. Smaller the size of plots, higher will be the density and population. Population/density also varies depending upon individual capacity, resources or willingness to construct entire or part of building

FD- High density— due to joint ownership, involving combining resources and effort of all stakeholders for providing dwelling to all, using full density and floor area ratio.

- **Pattern of Open Spaces**

PD- Small in area - Open spaces available within plots and held in private ownership with use limited to only owners- involves increased need for provision of large common open spaces at the neighbourhood/sub-sector/sector level for the use of community.

FD- Large in area- held in joint ownership and used by all the residents. Helps in reducing provision of large open spaces at the sector level.

- **Cost of Construction**

PD- Generally high—being independent , standalone and low- rise construction

FD- Generally low— due to multiple and repetitive design of dwelling units with sharing foundations, walls and open spaces etc

- **Social Sustainability**

PD- Low social sustainability— due to limited social interaction promoted by individual living

FD- High social sustainability— due to larger social interaction based on community and co-operative living

- **Safety and Security**

PD—Low order of safety and security - due to individual living

FD- High degree of safety and security—due to community and co-operative living

- **Pattern of Living**

PD- Promotes individual living- leading to anonymity and exclusion

FD- Promotes community living- leading to higher social interaction and inclusion.

- **Design of Unit**

PD- Offers higher flexibility in design- based on owner's choice—due to independent and standalone ownership

FD- offers limited flexibility in design — based on common consensus- due to multiple units held in joint ownership leading to repetitive nature of design of dwelling units

- **Cost of Maintenance of Services**

PD- Invariably High— due to individual maintenance. Expensive considering life-cycle cost of building.

FD- Invariably low- due to collective maintenance undertaken by society created by the flat owners. Monthly maintenance charges paid by each flat owner. Cost- effective considering life –cycle cost

- **Creation of Housing Stock**

PD- Low and limited- due to non-construction on plot in one go leading to lower land utilisation

FD- High- due to construction of all flats in one go – leading to higher land utilisation

- **Affordable Housing**

PD- Makes cost of housing high and unaffordable— due to land cost and cost of construction— Inefficient method to create large affordable housing stock

FD- Makes housing cost-effective and affordable— due to shared land cost and lower cost of construction, best method to create large housing stock

- **Technologies**

PD- Offers limited options for using state of art construction technologies and minimising the cost of housing

FD- Offers large options for using state of art construction technologies to promote cost efficiency

- **Green & Energy Efficient Buildings**

PD- Offers limited effective /efficient and cost-effective options— for promoting energy efficiency, rain water harvesting, ground water recharging and solid waste management

FD- Offers large effective/efficient and cost-effective options—for promoting energy efficiency, rain water harvesting, ground water recharging and solid waste management- based on community living

- **Ground Coverage**

PD- Ground coverage generally higher— as compared to flatted development Ground coverage and FAR inversely related to size of plot and accordingly varies and becomes lower with increase in plot area. Number of development units and population density not generally defined for plotted development

FD- Ground coverage generally low as compared to plotted development. Ground coverage and FAR do not change even with increase/decrease in plot area. Development largely governed by pre-defined density, floor area ratio, height, ground coverage, number and size of dwelling units.

- **Parking Norms**

PD- Parking norms - generally not defined for plotted development.

FD- Parking norms -clearly and precisely defined—for flatted development, depending on the size and category/number of dwelling units.

- **Rate of Return**

PD— Offers better internal rate of return for developers/owners- due to higher demand from investors, clear land ownership and faster disposal. Popular in small and medium towns.

FD - Offers comparatively lower internal rate of return for developers/owners – due to lower demand from investors, no defined title to land and slow disposal. Most popular in large size/metro cities, where land prices are high.

- **Completion of Project**

PD—Faster Completion of projects as compared to build up flats

FD—Takes large time for completion of project- due to scale of project and large numbers of houses to be constructed and problem of co-ordination and co-operation among members of society.

- **Disposal of plots**

PD—Lower risk- due to individual ownership and faster disposal,

FD—High risk- due to multiple approvals, joint ownership and slow disposal, with higher risk due to large scale construction

- **Affordability**

PD—Plots are less affordable — due to individual ownership and individual responsibility of payment for cost of land. However, plots offer limited flexibility based on affordability and resource available with the owner.

FD—Flats are generally more affordable— due to joint ownership of land and collective responsibility to pay for cost of land and cost of construction- offers higher flexibility of ownership

- **Acceptability**

PD—Plots have more acceptability and preference by buyers even in adverse market conditions due to human psyche of owning land. Plots are universally accepted both in large and small towns.

FD—Flats have less acceptability —particularly in the adverse market conditions. Flats have least acceptability in small towns and are generally favoured in the large towns.

- **Developer's Preference**

PD- Plotted development —has always been first choice of developers having large chunk of land and resources— due to early exit and making large profit with minimal effort

FD—Flatted development— has generally been preferred by small developers having smaller chunk of land with limited resources.

- **Land Cost**

PD- Prevailing cost of land when low- in majority of cases promotes plotted development with large plot area. Plot size and land cost are negatively correlated with plot size going small with increase in land prices.

FD- Prevailing high cost of land generally discourages plotted development but leverages flatted development. Land Cost and building footprints are negatively co-related **with** flat size reducing with increase in land prices.

- **Housing Stock**

PD—Plotted development –worst and most inefficient option for creating large housing stock

FD—Flatted development—best and most cost-effective option to create large housing stock at most affordable price

- **Living**

PD- Plotted development –best option for individual based/ family living

FD—Flatted development—best option for living in case of individuals, young working/old age couples etc

- **Self- sufficiency and Sustainability**

PD- Plotted development –less self-sufficiency-high dependence on neighbourhood level facilities

FD- Flatted development—More self-sufficiency- due to provision of common facilities- parks, shops, community spaces, crèche, school etc within the society/group housing complex

Looking at context, social, physical, economic and environmental impact / implications detailed above, it can be observed that plotted and flatted development have distinct advantages and disadvantages. If plotted development gives more flexibility in terms of ownership, sale, purchase, disposal, design, construction, operation, maintenance, making addition and alterations to the house, it also has the limitations of locking and freezing the land based on whims and fancies of the individual owner. Plotted development remains more expensive and less land efficient when compared to the flatted development. It has also been seen, that plotted development is not a preferred option for creating large housing stock and has limited applications, while providing housing in the affordable categories. Socially ,plotted development is found to be at discount when compared with flatted development for reasons of safety and security. Flatted development is known to offer distinct advantages in terms of efficiency in land use, creating large stock of housing, both in general and affordable categories; promoting economy and cost-efficiency in construction, operation, maintenance of housing besides offering large choices in the housing stock. Flatted development offers ready to occupy options of house ownership which remains conspicuous by its absence in the plotted development. Flatted development also remains the best option for the individuals who are unable to spare time and supervise the house construction. In addition, flatted development offers the best option to offer variety of house ownership involving penthouse, studio apartments, bachelor housing etc.

Which does not find space in the plotted development. Flatted development is also known to make cities more compact, more liveable and sustainable. It is also known for its distinct advantage of promoting water efficiency, capturing solar energy and ensuring rain water harvesting. Flatted development is also recognised for its distinct merits of making city development both economical and cost-effective, rationalising the traffic on the roads and making urban governance much faster and effective. Flatted development also helps in involving communities in the art and science of planning, development and management of communities and cities and accordingly helps in achieving the mandate given in SDG 11.4, involving making cities and communities safe, resilient, inclusive and sustainable.

1.3 Preparing and Conducting Demographic, Socio- Economic and Physical Surveys to identify problems and evolving solutions,

- ***Demographic survey;*** A demographic survey aims and focuses on collecting, analysing and comprehending data about the basic characteristics of the population surveyed. It provides information and produce statistics that describe populations and their characteristics, such as age, education, housing and income. Data is collected by asking each and every household, to provide information about the people who live in the house/ apartment/ group housing etc., in order to generate the requisite data. U.S. Census Bureau conducts more than 130 surveys each year, including nation's largest household survey, known as the American Community Survey. The Indian Census is recognized as the most credible source of information on demography ;population characteristics; economic activity, literacy & household amenities, urbanization, fertility and mortality, scheduled castes and schedule tribes, language, religion, migration, disability and many other socio economic factors pertaining to India and Indians.

Beginning in the year 1872, under Viceroy Lord Mayo, first complete demographic Census for India was taken in the year 1881. To be conducted after each decade, Census is mandated by the 1948 Census of India Act. So far, 16 times decennial Census have been conducted in India. Post 1949, it has been conducted by the Registrar General and Census Commissioner of India under the Ministry of Home Affairs, Government of India. The 1948 Census of India Act does not bind the Union Government to conduct the Census on a particular date or to release its data in a notified period. The last census was held in 2011, whilst the next was to be held in 2021. But it has been postponed due to the COVID-19 pandemic in India. Demographic data remains critical because it details out number of people and distribution of population over different regions ;showcasing population growth rate of different regions, prevailing trends of urbanization in the country and its distribution, proportion of population belonging to different castes, prevalent

level of literacy etc. When compared with data of last conducted Census, it helps in marking changes, both positive and negative, taking place in the demographic character of nation/ region. It also helps in comparing different states of the country and their relative performance and status based on various parameters. Data remains valuable for all decision making and policy formulation at the state and national level. (*Wikipedia*).

- **Socio- Economic Survey**

Word Socio- Economic remains a combination of two factors namely social and economics. Accordingly, Socio-economics as a social science and a branch of economics ,focuses on the relationship between social behavior and economics of human beings in a society. Referred to as socio-economics, it primarily involves interplay between social processes and economic activities within a society. Social economics may attempt to explain how a particular social group or socioeconomic class behaves within a society. In addition to income, socio-economic status is also impacted by factors like education, family structure, occupation, and membership of certain ethnic minority groups. According to the American Psychological Association, socio-economic factors may reveal inequalities surrounding wealth, education, or status. These background factors may play a critical role in a person's life decisions, such as their career or family choices. Some of these socio-economic relationships are explained below:

Families; There exist strong correlations between socio-economic status and family structure, as well as other outcomes such as parenting practices and childhood development. Single-parent households are more likely to be low-income, and low-income households are also known, more likely to suffer from domestic violence and child neglect.

Education; Children with lower socio-economic status tend to enter school with lower levels of reading and linguistic development, as well as lower social skills. In later years, these deficiencies may manifest themselves in lower levels of academic success and, ultimately, in lower incomes, when they reach adulthood.

Ethnic and Minority Status; There exists strong correlations between socio-economic status and membership in indigenous or other ethnic minorities, particularly those who have historically suffered from discrimination. Membership of some minority groups may correlate to higher levels of unemployment or substance abuse, as well as poorer mental and physical health.

Violence; Interpersonal violence can occur at any socio-economic level, yet, people from lower socio-economic backgrounds tend to have greater exposure to violence, especially in their formative years. Exposure to violence can negatively impact a person's academic and employment outcomes. Domestic violence is also a major cause of homelessness.

Looking at the above narratives, Socio-economic and demographic surveys are used throughout the world to collect data on the population's characteristics for demographic and economic analyses, educational and manpower planning, poverty studies, and assessing *progress toward national objectives and generally include*; changes in the income pattern, sources of income, asset ownership, depth and severity of poverty and associated social characteristics of the households in the targeted programme districts & changes occurring in the targeted households' access to and use of basic social and public services, such as access to water and sanitation, education, health, registration etc. These surveys remain critical for assessing/determining status of the population being surveyed, to assess their social and economic status, availability of activities generating income; economic status; level of education/literacy; availability of housing; access to basic amenities and infrastructure; which helps state and national governments to evolve strategies, policies, programs and options to improve the economic status and empowering communities so as to have access to essential basic embrasures for quality living, growth and development.

- **Physical Survey;**

Physical surveys in the parlance of housing remain important and vital for the reasons that such surveys depict and showcase the existing status of housing/services with regard to its quality of construction, accommodation available, number of rooms in the house along with number of toilets; number of people living in the house; per capita space available in the house; availability of basic infrastructure in terms of water supply, sanitation, sewerage, lighting ; number of vehicles; parking space; status regarding use of the house; violations, encroachments and misuse of premises. Physical survey helps in defining the quantitative and qualitative aspect of the existing housing stock both individually and in the community and remains a useful tool in defining the strength and weaknesses of the houses/communities, along with the available opportunities and threats in the domain of housing. Physical surveys remain vital in assessing the status of the housing which need replacement or upgradation; where congestion exists and where basic services need to be provided. Surveys help in identifying area under sub-standard housing/slums , their impact on human health and urban environment. Physical surveys along with socio-economic surveys and demographic surveys, remain potent instrument in assessing the housing shortage existing in various categories of the economic pyramid and in a given location. Such surveys form the basis of understanding the problems faced by the residents/communities with regard to housing and also helps in making assessment regarding how many people actually are living without any shelter and have made streets/ bus- shelters as their homes. Formulating realistic housing related policies and programs will also require the support of such surveys, in order to achieve the objective of *housing for all*. However these surveys need to be carried out with care and caution so

as to reflect the ground reality in a realistic and rational manner because in many cases such surveys remain manipulated to serve individual or political/ vested interests.

• **Population Census**

Population Census, normally refers to the total process of collecting, compiling, evaluating and disseminating demographic, social and other data covering all persons in a country or in a well-defined part of a country. Census remains a major source of social statistics, with its obvious advantage of providing reliable data – that is, unaffected by sampling error - for small geographic units. Census is an ideal method for providing information on size, composition and spatial distribution of the population, in addition to socio-economic and demographic characteristics. In general, the census collects information for each individual in every household and each set of living quarters, usually for the whole country or for a well- defined part of the country.

Basic features of a traditional population & housing Census, which normally are conducted after a defined period of 5/10 years, include and involve;

- Enumerating and recording individually and separately social , economic and physical characteristics of each resident/house of the area.
- Covering entire population housed in a clearly defined territory.
- Include every person present and/or usually resident, depending on whether the type of population count is de facto or de jure.
- Census remains the only source for providing statistics in the absence of comprehensive population/ administrative registers
- Having distinct advantage of enumerating simultaneously entire population and dwellings in the country with respect to the same reference period.

Uses of Census data;

- Having wealth of data , related to a country, Census remains the most potent and useful data bank for any Government/external agencies, for understanding the socio-economic, demographic and physical status of the housing/people/area/state/region in the country along with understanding the existing dichotomies and contradictions prevailing in the growth and development of the nation/region. Because of its unparalleled geographical coverage it is usually a major source of baseline data on the characteristics of the population.

Population Censuses have been carried out in many countries during the past few decades. For example, about 184 countries and areas have conducted censuses during the 2000 round during the period spanning 1995-2004. However, Census remains useful for;

- Providing information on size, composition and spatial distribution of population together with demographic and social characteristics.

- Source of small area statistics.
- Major source of sampling frames for household surveys.
- Used as auxiliary information for stratifying samples and for improving household surveys.

Limitations of Census

- Unable to cover many topics with appreciable detail.
- May not be most ideal source of detailed information on economic activity, which requires detailed questioning and probing.
- Being having large reliance on proxy respondents, it may not always capture accurate information on characteristics which only an individual might know— occupation, hours worked, income, etc

Household Surveys;

Household surveys are among three major sources of social and demographic statistics in many countries. It is recognized that population and housing censuses are the key sources of social statistics but they are conducted, usually, at long intervals of about ten years. The third source is administrative record systems. For most countries this source is somewhat better developed for health and vital statistics, however, for social statistics, household surveys provide a cheaper alternative to Censuses for timely data and a more relevant and convenient alternative to administrative record systems. These surveys are used for collection of detailed and varied socio-demographic data pertaining to conditions under which people live, their well-being, activities in which they engage, demographic characteristics and cultural factors which influence behaviour, as well as mapping social and economic change. This, however, does not preclude the complementary use of data generated through household surveys with data from other sources such as Census and Administrative records.

Data sources

The major sources of social and demographic data are population and housing Censuses, administrative records and household sample surveys. When these three sources are well-planned and well-executed in an integrated programme, data collection and compilation become easier, simpler, qualitative and productive. Globally, it is understood and appreciated that Social and Demographic statistics are essential for planning and monitoring of socio-economic development programmes. Statistics on population composition by age and sex including geographical distribution, are among the most basic data necessary to describe a population and/or a sub-group of a population. These basic characteristics provide the context within which other important information on social phenomena, such as education, disability, labour force participation, health conditions, nutritional status, criminal victimization, fertility, mortality and migration, can be studied.

Conducting Sample Household surveys

Household sample surveys have become a key source of data on social phenomena in the last 60-70 years. They are ranked among the most flexible methods of data collection. In theory almost any population-based subject can be investigated through household surveys. It is common, for households to be used as second-stage sampling units, in most area-based sampling strategies. In **sample surveys** - part of the population is selected from which observations are made or data are collected and then inferences are made for the entire population. Since in sample surveys, there are smaller workloads for interviewers and a longer time period assigned to data collection, accordingly majority of subject matter can be covered in greater detail than in Census. In addition, since comparatively less manpower is needed, in such cases more qualified individuals can be inducted/recruited who can be trained more intensively than what is possible in a census operation. In reality, it is impossible to meet all the data needs of a country through census-taking; therefore, household surveys provide a mechanism for meeting the additional and emerging needs on a continuous basis. The flexibility of household surveys makes them excellent choices for meeting data users' needs for statistical information which otherwise would not be available/sufficient.

Procedure for conducting Survey- using Questionnaire.

Designing a Questionnaire.

- Once the survey objectives and tabulation plan have been determined, the relevant questionnaire can be developed. Pre-requisite for conducting household surveys would require preparing a well-thought-out questionnaire, containing questions, requiring answers for sourcing all the information required.
- The questionnaire plays a central role in the survey process in which information is transferred from those who have it (the respondents) to those who need it (the users). Questionnaire is the instrument through which the information needs of the users are expressed in operational terms, as well as the main basis of input for the data processing system for the particular survey.
- The size and format of the questionnaire need serious consideration. It is advisable to design questionnaire at the time of planning for the survey.
- If the questionnaires have to be mailed to respondents, they have to be attractive and simple. This may increase the response rate. On the other hand when a questionnaire is to be used in the field for recording responses by interviewers, it should be sturdy/capable enough to survive the field handling.
- The questionnaire designed should be ideal in facilitating the collection of relevant and accurate data. For enhancing the accuracy in the survey data, special consideration should be made in ordering the sequence and in the wording of questions in the questionnaire.

- The respondent has to be motivated for sharing information. The questionnaire has to be well spaced to facilitate easy reading of questions either by the respondent or the interviewer. Every questionnaire should be supplemented with clear instructions.
- Special care, should be taken by the survey team in giving precise definitions of the data to be collected and the translation of data requirements and related concepts into operational questions. Pre-testing of the questionnaire becomes a necessary , unless it has been fully validated in prior surveys.
- In summary, a good questionnaire should: Enable the collection of accurate information to meet the needs of potential data users in a timely manner; Facilitate the work of data collection, data processing and tabulation; Ensure economy in data collection by avoiding collection of any non-essential information and Permit comprehensive and meaningful analysis and purposeful utilization of the data collected.
- Accordingly Survey questionnaires must be developed carefully and thoughtfully, so as to yield information of the highest quality, with special emphasis on relevance, timeliness and accuracy. , minimizing the cost involved in the provision of the necessary information.

Question construction

- Both open and closed-ended questions should be used in sample survey questionnaires. In an open-ended question, the respondent gives his/her own answer to a question. On the other hand, a closed-ended question restricts the respondent to select answers from a list already given by the survey team. The advantages of using closed-ended questions are that: they yield more uniform responses and are easy to process. The main limitation of such questions is that; the designer of the survey has to structure carefully the possible answers.

Question wording

- The questions should be clear, precise and unambiguous. The respondent should not be left to guess what the interviewer wants out of him/her.
- The use of definitions and concepts may seem obvious to the survey manager while this may not be so to the respondent. – which may lead to using discretion when answering questions for avoiding proliferation of non-sampling errors in survey results.

“Loaded” Questions

- Loaded questions often persuades a respondent to answer a question in a certain way. This means that the question tends to be biased in favour of a certain answer.—: “How many days in a week do you drink more than two bottles of beer”? This question courts the respondent into admitting that he/she drinks beer, above all, not less than two bottles a day. Such questions tend to bias answers of respondents.

Relevance of Questions

- The purpose of a questionnaire is to source correct information that would be used in studying the situation. It is therefore imperative for the survey organization to ask relevant questions in order to obtain a true picture of a particular situation under study. The questions included in a questionnaire should be relevant to most respondents. For instance, it is pointless to administer a questionnaire cluttered with questions on individual achievement with regard to higher university education in a typical rural environment. Similarly, it is not appropriate in a fertility survey to include females of, say, age 10 or under, and ask them questions on number of children ever born, whether married, divorced or widowed. These questions would be relevant to females above a certain age, but not to girls who are less than child bearing age.

Question sequence ;.

- The order of items in a questionnaire should try to motivate , facilitate and help the respondent to solicit accurate information. Initial questions should be easy, interesting and not sensitive, for building confidence of the respondent to carry through the interview
- Surveys must begin with questions that identify - address, followed by details of household and the individuals in the household/ demographic characteristics and finally, detailed questions that constitute the main subject of the survey .Sensitive questions must be among last questions to ask

Tabulation and Analysis plan

- Useful technique to assist the designer in bringing precision to the user's need for information, would be producing tabulation plans and dummy tables. Dummy tables need to be drafted which may include everything except the actual data.
- The importance of a tabulation plan can be viewed from a number of perspectives. Production of dummy tables will indicate; if data to be collected will yield useable tabulations. They will not only point out what is missing, but also reveal what is superfluous.
- There also exist close relationship between the tabulation plan and the sampling design employed for a survey. Sample size may make it necessary to limit the number of cells in the cross-tabulations to avoid tables which are too sparse. Analysis plan should also be the reference point to guide the analysis of the survey results.

Implementation of field work

- In most countries, the implementation of field work is often seriously constrained by lack of resources. However, if a survey is to be carried out field work should be properly organized and implemented in order to efficiently utilize the limited resources available with the survey team

- For the survey operations to succeed, the conceptual aspects of the survey should be clearly understood by those involved in designing the survey operations. Interviewers must thoroughly master the practical procedures that may lead to the successful collection of accurate data. Successful realizing the result, would need the support of a well-organized and effective field organization.

Equipment and Materials

- It would be essential that, equipment such as vehicles, boats, bicycles, etc are made available in working condition along with necessary spare parts. Vehicles and bicycles facilitate quick mobility of team leaders and supervisors/interviewers, respectively.
- Adequate materials, like folders, clipboards, pencils, pencil sharpeners, notebooks and fuel (for vehicles) should be made available for use during the survey operations.

Management of Survey operations

- A large-scale sample survey remain always demanding and complex operation. Therefore the need for judicious, effective and efficient management of activities at various levels cannot be overemphasized
- There must be a clear and well-defined line of command from the survey manager to the interviewer. Control system created for monitoring progress of the survey have invariably yielded dividends.

Publicity

- Some surveys have had limited success partly due to non-response owing to refusals. It is, therefore, incumbent upon survey organizers to mount some publicity campaigns for the survey.
- Experience has shown that publicity plays an important role in soliciting cooperation from respondents, even though some funding organizations/agencies consider expenditures on publicity as a waste of resources.
- Different approaches to publicity can be adopted depending on prevailing circumstances. In urban areas radio, television and newspaper messages can complement posters. While in the rural areas, radio messages and posters could be used.
- Arranging meetings with local opinion leaders in selected areas for briefing people helps in achieving the objectives of the survey. Local leaders should be requested to persuade people to provide requisite information to the interviewers.
- Before going into the field it is important that the relevant legal provision for conducting the survey be published. The announcement should, include survey objectives, duration and topics to be covered

Selection of interviewers

- An interviewer is at the interface with the respondents. He/she is the representative of the survey organization who is always in contact with the respondent. This is a clear indication, why an interviewer's job is so crucial to the success of the survey programme.
- The selection of an interviewer should, therefore, be given great consideration and care. An interviewer should be capable of effectively communicating with the respondent. He/she should have qualities of enlisting all the information with accuracy within a reasonable given time.
- Depending on the type of survey, an interviewer should have an adequate level of education. In addition, an interviewer should be able to record information honestly, without "cooking figures".
- The selected interviewers should follow instructions and use definitions and concepts as provided for in interviewer's field manual. A well-defined, transparent and objective selection procedure may assist in selecting suitable interviewers:

Training of interviewers;

- The selected interviewers should be thoroughly trained before being sent into the field. The main purpose of a training programme is to bring about uniformity in the interviewing procedures of the survey. This is necessary avoid differing interpretations of the definitions, concepts and objectives of the survey by interviewers and hence to minimize interviewer bias.
- Qualified instructors should be made responsible for the training. Such instructors must obviously be well versed in the aims and objectives of the survey. Preferably, they should be made part of the survey team carrying out the survey. The interviewers should be carefully instructed on the purposes of the survey and how the results are going to be used.
- Interviewers must be properly apprised of the objectives of the survey; they have to be well trained in the concepts and definitions used in the questionnaire. As part of the training process, the interviewers, in the presence of the instructor, should take turns in explaining to others the various items in the questionnaire. Practical sessions should be arranged both in class and in the actual field situation.
- The instructor should always be present to guide and correct the interviewers. After the field interviews, the trainees should discuss the results under the guidance of the instructor. The training programme should result in a decision by the survey manager of which trainees may require additional training and whether any of them IS entirely unsuited for the job.

Field supervision

- It is generally agreed that training is a precursor to effective and successful field work. However, training without proper supervision may not yield the

desired results. The success of field work requires dedicated, continuous and effective supervision by superior staff that are more experienced and better qualified than interviewers. Supervisors should undergo training in all aspects of the survey.

- It cannot be overemphasized that the supervisor is an important link between the data gathering organization and the interviewer. The supervisor is supposed to organize work for interviewers by determining field assignments and locations. The supervisor reviews completed work and maintains a high level of commitment to the survey programme by the interviewers.
- If possible, there should be a relatively high ratio between the supervisory staff and the interviewers. The ratio of one supervisor to four or five interviewers has been suggested as ideal for most household surveys. However, this is just a guide.

Follow-up of non-respondents

- In most surveys, there are bound to be cases of non-response. Some respondents refuse to co-operate with the interviewers, while in some cases, certain items in the questionnaire are not attended to.
- When a non-responding unit is reported to the supervisor, he has to contact the sample unit and try to solicit the information, owing to his better qualifications and more experience.
- Since an operational goal in any survey is to achieve the highest possible response rate, it is recommended to collect information from a sub-sample of the initial non-respondents. In this case, the survey effort is then re-directed to the sub-sample preferably using supervisors as interviewers.

Reducing non-response

- It is important in designing and executing a household survey to develop good survey procedures aimed at maximizing the response rate. It is important to have well-defined procedures in place to reduce the number of refusals, by arranging to return to conduct an interview at the convenience of the respondent.
- Objectives and uses of the surveys should be carefully explained to reluctant respondents to help win their cooperation. Assurance of confidentiality can also help alleviate fear respondents may have about the use of their responses for purposes other than those stipulated for the survey. Repeated call-backs should be made when no one is at home. These should be done at different times of the day. It is recommended that as many as four call-backs should be attempted.
- It is also important to avoid the problem of inability to locate the selected sampling units, which can be an important source of non-response. This problem is best addressed by using the most current sampling frame as possible.

1.4 Methods of conducting Surveys.

Housing surveys remain the most vital and potent method of collecting data pertaining to living of particular community in a defined space. Data remains important for determining the status of housing in both qualitative and quantitative terms; understanding the amenities and services available; challenges and problems faced by the residents, which remain valuable in understanding the status of housing in a given place. Data, thus sourced, remains valuable in quantifying the issues and framing realistic and rational policies and program besides allocation of resources to overcome the prevailing problems of housing.

Considering the role, importance and relevance of data, method deployed for conducting surveys for sourcing data has to be selected with care and caution so that it accurately reflects the needs of the people being studied. In any survey, there are different actors involved which include; agency for and behalf of which data is being sourced; households identified from which data is being sourced and the agency involved/engaged for sourcing data. All three actors have to be brought on same platform and actively engaged in sourcing accurate data.

For sourcing and collecting data, number of methods are used but most important and common methods used for sourcing household data include;

- **Observation;** Direct Observation and Measurement Method
- **Questionnaire;** Mail Questionnaire Method
- **Interview;** Telephone and Personal Interview Methods

All three methods deployed for carrying out household surveys, have their distinct advantages and disadvantages as detailed below;

i. **Direct Observation and Measurement:** For collecting information regarding various things surrounding us, the most common method remains is to observe and study the things around us. The various processes related to things also need to be studied and observed. Hence, it is safe to say that observation acts as the primary and fundamental method to collect information just about anything. Sometimes, when researchers use observation, they use it scientifically for various research works, but it should be kept in mind that only some observations are scientific and not all.

Direct method involves sourcing data right from the household by the person carrying out surveys who remains personally in touch with the household being studied. This method is used commonly and remain ideal for the reason it remains focused and objective while collecting data. Method is considered free from the malice of memory lapse and subjectivity of both respondents and interviewers. Like any other method this method also has advantages and limitations, as detailed below

Advantages;

- *Naturalistic observation allows for a more accurate depiction of behaviour*
- *Observations can be conducted in real-world settings, providing a more realistic understanding of behaviour*
- *Observation can be a non-invasive research method that does not require participants to self-report or reveal sensitive information*
- *Observation can be used to study a wide range of behaviours, including those that are difficult to measure through self-report or other methods.*
- *Observational data can be used to validate or complement other research methods, providing a more comprehensive understanding of behaviour*
- *Observational data can provide rich and detailed information that cannot be obtained through other research methods.*

(<https://www.aplustopper.com/advantages-and-disadvantages-of-observation-method/>)

Disadvantages;

- *Observer bias may influence the accuracy of observations*
- *Observer effect may occur, where the presence of the observer may alter the behaviour being observed.*
- *Observations can be time-consuming and may require multiple observers to ensure accuracy.*
- *Observer reactivity may occur, where participants modify their behaviour due to being observed.*
- *Observational data may be difficult to analyse and quantify, making it difficult to draw clear conclusions.*
- *Observational research may raise ethical concerns if participants are unaware, they are being observed (<https://www.aplustopper.com/advantages-and-disadvantages-of-observation-method/>)*
- *Process remains expensive, both in terms of resources and time.*
- *Experience has shown that method of direct observation and measurement tends to be useful and practical when the sample size or population to be studied are relatively small.*
- *Quality of data sourced depends upon the knowledge, understanding, experience and commitment of the person sourcing data.*

ii. Mailed Questionnaire Method: In this method, for sourcing data, a questionnaire is prepared in advance, based on which the data is sourced. Questionnaire is framed based on the type of data to be collected and accordingly should remain relevant and critical for the quality of data to be sourced. Questionnaire method offers flexibility in terms of sourcing data. Questionnaire can be either mailed to the person from whom data is to be sourced and accordingly does not involve any direct contact between the person sourcing data and person from whom data is being sourced. In the alternative Questionnaire can be made to fill in person by going to the households from where data is being collected. Now a days

technology can also be leveraged to get the questionnaire filled through mail, provided the person being asked has internet facility available. This method remains cheapest, quickest and least time consuming. The use of mail questionnaires is fairly cheap and quick. The major cost component at the data collection stage is postage. In this case the respondents are assumed to be literate as they are expected to fill the questionnaire on their own. This may be an erroneous assumption especially in developing countries where literacy levels are still low. Major issue remains the poor response to the questionnaire, which may require some reminders to be sent to non-respondents. However, it is advisable to select a sub-sample of the non-respondents and cover them by the personal interview method. This may be necessary because the characteristics of the non-responding units may be completely different from those that responded. In such cases the responding and non-responding units must be treated as two post-strata that have to be differentially weighted when preparing the estimates. Despite offering distinct advantages in sourcing data, method has also disadvantages when questionnaire is mailed by post. The strength and major weaknesses of this method include;

Advantages:

- *It is cheaper;*
- *Sample can be widely spread;*
- *Interviewer bias is eliminated;*
- *It is quick , simple, cost-effective*
- *Providing possibility of a covering large sample and large geographic range,*
- *Providing convenience of response*
- *Providing advantage of uniformity of questions being asked and data being sourced.*

Limitations:

- *Non-response is usually very high; which may be due to the complexity of questionnaires used. However, apathy cannot be completely ruled out.*
- *The answers to the questions are taken at their face value, since there is no opportunity to probe;*
- *If it is an attitude survey, it is difficult to ascertain whether the respondent answered the questions unaided;*
- *The method is useful only when the questionnaires are fairly simple, and, therefore, it is not a suitable method for complex surveys.*
- *In some cases when there is good response to questionnaire it may be missing response to vital questions.*
- *Applicability limited only to literate respondents ; those who understand and value the surveys for sourcing data.*
- *Answer to the questionnaire may be based on impersonal feelings*
- *Suffers from the Inability to interact with respondents,*
- *Lack of assurance as to the actual respondent.*

Methods for improving response; Studies have shown that response rate to questionnaire can be improved both qualitatively and quantitatively by adopting following options;

- *Making questionnaire attractive, short and simple, to the extent possible.*
- *Sending periodic reminders*
- *Enclosing stamped and self-addressed returns for questionnaire to be returned*
- *Updating the addresses of the respondents*
- *Creating sampling frame that is as current as possible.*
- *The survey organization must also be convinced that respondents are capable of completing the questionnaires on their own.*
- *Undertaking personalized correspondence*
- *Adopting special delivery mailing,*
- *Emphasising on benefit to the respondent*
- *Design of the questionnaire, clarity of instructions, simplicity of response, and quality of cover letter considered vital and important for good response*
- *Conducting pilot test of the questionnaire to detect possible problems*

iii. Personal interview method:

Method of personal interview is the most common method used in collecting data through large scale sample surveys in developing countries. It refers to face to face discussion for the purpose of sourcing data between interviewee and interviewer. Here interviewee refers to a person from whom data is being sourced whereas interviewer refers to a person who conducts the interview. Apart from obtaining usually high response rate resulting from personal interviews, the method is considered valuable and appropriate because of the prevailing high illiteracy rates in some of the area of the country. This method involves and entails the process of interviewers going to selected respondents and collecting information by asking questions. In the system, both the subject and objects involved in survey, remain in direct touch and operate in same space.

The main advantage of this method of sourcing data include;

- *Sourcing good response from the respondent by persuading/motivation to answer questions*
- *Clearly explaining the objectives of the survey.*
- *Showcases greater potential for collecting statistical information on conceptually difficult items which are likely to yield ambiguous answers in a mailed questionnaire*
- *Yielding high percentage of quality data.*
- *Yield an almost perfect sample because practically everyone can be reached by and can respond as compared to the questionnaire approach, which is severe limited by the fact that only the literate persons can be covered by it.*

- *The information secured through interviews is likely to be more correct compared to the one secured through other techniques*
- *Interview offers much more flexible approach, allowing for posing of new questions or check-questions if such a need arises.*
- *Presence on the spot, enables interviewer observe the facial expressions and gestures etc., of the informants. Such observations helps the interviewer to evaluate the meaning of the verbal replies given by informants.*
- *Ensures greater number of usable returns compared to other methods.*
- *Ensures control regarding which person or persons will answer the questions.*
- *Enables interviewers to catch the informant off his guard and thus securing the most spontaneous reactions than would be the case if mailed questionnaire were used.*
- *Facilitating the adoption of language of the interview appropriate to the ability or educational level of the person interviewed.*
- *Makes comparatively easy to avoid misinterpretations or misleading questions.*

However, following are some of the limitations in using the personal interview method:

- *It is both cost and time intensive. Adding travel and transportation cost and the time required to cover addresses in a large area as also possibility of non-availability or 'not at home', may make the interview method both un-economical and often in-operable*
- *Requires trained manpower to conduct the survey.*
- *Organization required for selecting, training and supervising a field staff is more complex*
- *Quality of data sourced depends upon commitment, sincerity, understanding of the interviewer- may cause serious non-sampling errors in surveys.*
- *Brings in the possibility of subjectivity/ interviewer bias of the interviewer- Different interviewers may give different interpretations to the questions, thereby introducing bias in the survey results . In the process of probing, some interviewers may suggest answers to respondents.*
- *Personal characteristics of interviewers may influence attitudes of respondents, for example, age, sex at times even race;*
- *Interviewers may read questions wrongly because of the divided attention of interviewing and recording.*
- *Costs involved per interview are higher when field investigators are employed; especially when the area to be covered is widely spread out*
- *Personal interview remains usually time-intensive ; may sometime last for hours when interviewer cannot check the free flow of the respondent's replies for fear that it may disrupt the 'rapport.*
- *Effective interview pre-supposes proper rapport with the respondent and controlling of interview atmosphere in a manner that would facilitate free and frank responses, which remains difficult to achieve sometimes.*

- *Interviewing may also introduce systematic errors, considering the time of interview. For example, if the interviews are conducted at their homes during the day, a majority of informants will be housewives, which may not be useful and relevant for the surveys.*

Following points should be taken into consideration when asking questions to respondents to make Questionnaire method more rational, effective and efficient;

- *Ensuring clear understanding on the part of interviewer about the intent and purpose of each question, as briefed in the manual.*
- *Making interviewer follow the sequence of questions defined in the questionnaire; for motivation of respondents, linkage of topics, facilitating memory of the respondent's past events, while remaining careful about the most sensitive questions.*
- *Refraining from suggesting answers to respondents.*
- *Asking questions in a manner so as to minimise non-response. In case of any question not being relevant to a particular respondent, comment for that should be included, for ensuring that all questions included in the questionnaire remain administered.*

1.5 Housing Standards, Codes and Practice

Norms and standards are integral part of the planning process. No physical planning of any area, place, community and city can be made rational, unless supported and based on the rational, realistic, effective and efficient system of well-defined and well-articulated norms and standards, related to various amenities and facilities to be provided. These norms and standards try to bring objectivity by avoiding subjectivity driven by whims and fancies of planners and other stakeholders. They are also known to promote optimum utilization, cost-effectiveness and efficiency of the available resources by avoiding over and under-provision of basic essentials for any project. They remain demand driven, catering to basic human needs of the residents. These norms and standards remain valuable for serving the larger public interest and making sure that development remains relevant to the purpose of making human settlements, sustainable, equitable, inclusive and people centric. These standards are used while carrying out the planning, sub-division of land and preparing layout of any area or defining the future fabric of the city. They are in the form of codes or regulations put in place by statutory authorities, pertaining to defining space requirement, population served, usages permitted, facilities to be provided etc. They generally remain population, area and location specific. They form integral part of the legal system/framework, regulating and guiding the development of the area so that communities residing in the area remain self-contained and self-sufficient in the basic day-to day human needs. They are defined following a hierarchy of facilities to be provided in the city and remain relevant to the levels; they are supposed to serve.

Providing access to basic services and promoting social well-being, remains the primary and essential duty of every physical planner, engaged in undertaking the planning of any area. No social well-being can be ensured and achieved without making adequate provision of supportive facilities, amenities and infrastructure in the human settlements. Norms and Standards, defining the essentials for human living in that physical space, remain relevant for improved performance and quality of life in the area besides providing measurement for the provision of social services and public facilities. They also serve as a guide to planners, promoters and developers by defining amenities and services to be provided and included, besides serving as a ready-reckoner for the authorities for evaluating any planning proposal, with regard to adequacy of amenities and services in the area proposed for development, before granting statutory approvals.

According to, 'International Standards Organization', norms and standards are documents that provide requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose. Norms and Standards allow technology to work seamlessly and establish trust so that process of planning is able to promote state of art development of any area. Standards ensure consistency of essential services, such as quality, equity, accessibility, ecology, safety, economy, reliability, compatibility, interoperability, efficiency and effectiveness. Standards codify the latest technologies and remain invaluable source of essentials for the physical planning process.

Norms and standards never remain static. They are always evolving and devolving in order to remain relevant to the prevalent culture, changing needs of the community, technological innovations, socio-economic and cultural development of the area and community. They remain relevant and connected to the size of the city, number of people to be served, services to be provided, prevailing densities, permissibility with regard to build-space, floor area ratio, height, existing physical terrain, physical limitations, available land and legal framework guiding, regulating and defining the social, physical, economic fabric and structure of development. Norms and Standards and their developmental framework, invariably impact and guide, almost all areas of human living and physical planning.

"Norms" have also been defined, in the parlance of planning, as the socially or institutionally set of values which shape and govern the behavioural pattern of human living including physical and social relations in a given space, "Standards" have been defined as level and quality of infrastructure services that would be required to make the built environment liveable, sustainable, functional and desirable.

Physical planning of cities, towns including their different uses/components, as a process, has been integral part of human history. In large majority of cases, these plans have never been on the same wave-length and platform, because

norms and standards defining the land-uses and providing basic infrastructure and services were conspicuous by its absence. Accordingly, many such plans failed on the altar of providing adequate and supportive infrastructures and services to the communities, for which they were planned. Communities and cities accordingly, suffered enormously due to inadequate availability of essential and basic services. Planning and development intervention failed in the process to provide an appropriate level of quality of life and also failed to quantify, provide and meet the long-term demand /needs of the essential services for the cities. Accordingly, formulation, defining and detailing of the Planning Norms and Standards became necessary and assumed importance, to manage effectively the urban environment, improve the economic efficiency and the quality of life of urban area.

The main objective of this planning norms and standards remain centric to;

- Facilitating urban designers, planners and policy makers to identify and forecast essential infrastructure needs of an urban area; as well as help prepare rational and realistic urban plans and programs.
- Enriching understanding of urban form and land use to create synergy and balance between them.
- Guiding the development and management of physical, social and economic infrastructure services in a planned manner.
- Working as a tool for standardizing the planning of urban development projects.
- Defining, qualitatively and quantitatively, norms and standards for land use, physical, economic, social, environmental infrastructures.
- Ensuring conformity of planning with specified standards of development
- Acting like a *control mechanism* to make physical development process compliant with the needs of population of the area.
- Promoting spatial equity.
- Focusing on existing and future growth potential.
- Leveraging private sector.
- Avoiding overlap, duplication and wastage of resources
- Defining hierarchy of utilities/spaces/ levels of services
- Removing mismatch between equality and equity.
- Making planning people and community centric.
- Categorization of urban spaces
- Ensuring safety, security, health, comfort, quality of life to the community served and quality of environment.
- Ensuring adequate provision of the physical, social and economic infrastructure and services on the prescribed and specified norms.
- Ensuring equity-based access to even the poorest of the poor of the citizens to the basic and essential services and amenities.
- Making development sustainable and eco-friendly.

Defining norms for social infrastructures

As already stated, housing does not imply and remains confined to four walls enclosing the social space for a family, but has much wider connotations for human living, growth and development. Accordingly housing needs to be supported with all physical, social and economic amenities and services so that all four basic human needs of living, working, culture of body & mind, and circulation are appropriately met with and provided for, as integral part of housing. Such services include; water supply, sewerage, roads, sanitation, drainage, electricity, healthcare, education, leisure, open spaces, parks, play grounds, shopping, security, fire services etc. Since they are to be provided as integral part of the planning process, accordingly, it will be logical and rational, that they are appropriately defined and detailed. These amenities are generally defined in two distinct terms for housing.

Firstly, these norms are defined in terms of housing as a structure, which aims at make house a home and a healthy and happy place to live besides making it secure and safe. This will include, site, location, materials used in construction, technology used in construction, provision of services, air, light, ventilation, promoting structural safety, availability of adequate living space, minimum standards of rooms for human habitations, public health services, circulation, both mechanical & human driven, fire/earthquake safety, water supply/efficiency, sewerage, drainage, landscaping, rain water harvesting, solar energy, set-backs, height, coverage etc.

Secondly, in the larger context, house is seen as integral part of community, neighbourhood and the urban habitat, where it is located. Accordingly, house will have to be supported by amenities which remain relevant and essential for human living and development. These amenities are treated as social amenities/infrastructures and are defined in terms of norms and standards for healthcare, hospitals, dispensaries, education both at school and higher level of technical education; entertainment, leisure, shopping, parks, open spaces , play grounds, fire station, police stations, disaster centres etc. Few of these have been defined below. However, these norms and standards are defined basically on the following broad parameters considering the level / of city where they are provided. These norms are defined to minimize the use of land; optimize the use of available land; promoting cost-effectiveness; promoting equitable spatial distribution; promoting equity; ensuring universal accessibility; considering basic human needs; prevailing culture; socio-economic status; existing physical terrain; physiography etc. These norms and standards are specified based on following considerations;

- ***Population Threshold*** (both minimum and maximum); population proposed to be served.
- ***Capacity*** – number of users which can be accommodated

- **Density** defined in the Development Plan
- Maximizing overall **Accessibility**
- Achieving **affordability**
- Achieving **equitable access** to minimum level of services/economic and business opportunities/recreational facilities/range of transport options/shelter etc
- **Threshold of Area** proposed to be served
- **Hierarchy of the infrastructure**- city/sub-city/district/NH/housing cluster
- Distance required to achieve the **minimum population** to be served
- **Services** to be rendered and amenities to be provided
- **Number of beds** required- in case of healthcare
- **Covered/ built area** and open space requirement
- **Parking** space required
- **Siting** of the facility
- Achieving **gender equality**
- Achieving **multiple usage**
- **User's perception**
- **Choices available**
- Looking at **sustainability**
- Looking at **prevailing culture**
- Ensuring **cost-effectiveness**
- Making **optimum utilization of land**
- Making optimum utilization of **available resources**
- **Minimizing travel and traffic**
- Age, **socio-economic status** of the beneficiaries
- **Area of the Site**
- **Development controls**; permitted height, floor area ratio, height etc.

However, there exists no uniformity in norms and standards, specified and they continue to differ from state to state and even city to city, in intent, content and scope. However, National Building Code; and Urban and Regional Development Plans Formulations and Implementation guidelines (URDPFI), framed by the Ministry of Urban Development, Government of India, has made an attempt to bring uniformity in the planning related norms and standards in the country, but the objective of uniformity remains elusive. Most of the planning norms and standards detailed out in the URDPFI guidelines have their genesis and basis in the norms and standards specified in the Delhi Master Plans and remain Delhi centric. To what extent these are based on research, study and analysis, remains a moot question. However, Delhi, being the National Capital, has a different context. Delhi cannot be taken as a role model of planning norms and standards and they should not be blindly copied and pasted.

Planning norms need to be defined by each state, logically and rationally, considering their culture, pattern of development and needs of the community. Planning norms will be different for hill states of India and cities having hilly

terrain. Planning norms should also be defined for the rural settlements, making provision of the essential services on the prescribed norms so as to promote quality of life in these settlements and allowing states to assess the liveability in the rural settlements by quantifying the infrastructural gaps existing in these settlements.

Planning norms and standards defining the infrastructures, amenities and services required, as a part of the planning process, remain valuable, essential and critical and they need to be quantified both in terms of quantity and quality, to rationalize the planning process and make it effective, efficient and community centric. Since all amenities and services are essentially consumers of land, accordingly they need to be made land efficient. Since India already suffers from low per capita availability of land (2.4% global land holding 17.7% of global population); accordingly it will be both relevant and rational, to optimize the available urban land, treating land as the most valuable resource and a gift of nature to mankind and not treating it as a commercial commodity for sale and speculation.

Further, since creation of urban amenities consumes a lot of financial and other resources, accordingly, it will be logical and essential to make provision of amenities /infrastructure, both cost-effective and efficient. Cost-effectiveness can be easily achieved, if the available facilities are put to multiple use. Like running schools/educational institutions in double shifts instead of single shift, which can help in minimizing the number of such facilities by half; lowering the cost of amenities and lowering the cost of imparting education, to make it affordable and cost-effective for the majority of Indians. School grounds can be used by the community, as play spaces in the evening, can eliminate the need of providing separate playgrounds at the local level.

Since cities are large consumers of energy and resources besides generating a lot of waste, accordingly, planning norms and standards must be defined in such a manner so that cities consume minimum non-renewable resources and promote urban sustainability. Further rationalizing of planning norms can go a long way in reducing the carbon footprints of the city. It calls for redefining our approach and strategy of evolving all planning norms and standards, so as to make them urban sustainability-centric and promoters of zero- energy; zero-carbon communities/cities.

This would involve undertaking a detailed study and analysis of the existing framework and rationalizing it to make them more productive and community focused, requiring least cost. Planning schools and professional institutes and state Departments of Town Planning /Urban Development working jointly can take up this challenge and help redefine the planning norms and standards for making them more rational, realistic, effective and productive.

Norms and Standards of Social Infrastructure (Source; URDPFI Guidelines 2014— Ministry of Urban Development)

A. Educational Facilities Pre-Primary to Secondary Education

1. Pre- Primary/Nursery School

- one school for a population of 2500
- Site area — 0.08 hectare;
- location- near a park.

2. Primary School (class I to V)

- one school for a population of 5,000
- Capacity- 500
- Site area - 0.40 hectare;
- Building area-0.20 hectare
- Play field area -0.20 hectare
- minimum size of 18 x 36 m to ensure effective play

3. Senior Secondary School (VI to XII)

- Capacity——1,000
- one school for a population of 7,500
- Site area — 1.8 hectare;
- Building area- 0.60 hectare
- Play field area – 1.00 hectare
- Parking Area — 0.2 hectare

4. Integrated School— without Hostel Facility (I to XII)

- Capacity——1,500
- One school for a population of 90,000- 1,00,000 persons
- Site Area — 3.50 hectare;
- Building area- 0.70 hectare
- Play field area – 2.50 hectare
- Parking Area - 0.3 hectare
- Location- near sports facility

5 Integrated School— with Hostel Facility (I to XII)

- Capacity——1,500
- One school for a population of 90,000- 1,00,000 persons
- Site Area — 3.90 hectare;
- Building area- 0.70 hectare
- Play field area – 2.50 hectare
- Hostel area — 0.40 hectare
- Parking Area - 0.3 hectare
- Location— near sports facility

6. School for Physically Challenged

- Capacity—— 400
- One school for a population of 45,000 persons

- Site Area — 0.70 hectare;
- Building area- 0.20 hectare
- Play field area – 0.30 hectare
- Parking Area - 0.20 hectare
- Location near Park; non-noise polluting zone
- All schools should face service roads and roads with less traffic intensity

7. Technical Centre and Coaching Centre

- Area — 0.3 hectare;

B. Professional Education

1. Engineering College

- Capacity——1,500
- One College for a population of 10,00,000 persons
- Site Area — 6 hectares;

2. Medical College

- One College for a population of 10,00,000 persons
- Site Area — 15 hectares;
- Area of site to include space for a General Hospital

3. Other Professional Colleges

- Capacity——250 to 1,500
- One College for a population of 10,00,000 persons
- Area of site — 2.0 Hectare—for a student strength of 250
- Additional Area @ 0.50 Hectare- for every additional student strength of 100 or part there of up to a strength of 1000
- Area of Site - 6.00 hectare for student strength of 1000-1500.

4. Nursing and Paramedical Institutes

- One College for a population of 10,00,000 persons
- Area of site — 2000 Sqm (Subject to the norms prescribed by Nursing Council of India/ Ministry of Health)

5 Veterinary Institute;

- Area per norms as prescribed by Veterinary Council of India-
- India- Subject to availability of land.

C Healthcare Facilities

1. Dispensary

- Number of beds —Nil
- Population served—15,000
- Site Area — 0.08-0.12 hectare

2. Nursing Home, Child Welfare and Maternity Centre

- Number of beds —25- 30
- Population served —45,000 to 1 lakh
- Site Area — 0.20-0.30 hectare

3. Polyclinic

- Number of beds — Some observation beds
- Population served— 1 lakh
- Site Area — 0.20-0.30 hectare

4. Intermediate Hospital- category B

- Number of beds — 80 beds; Initially 50 beds may be provided including 20 maternity beds
- Population served— 1 lakh
- Site Area — 1.00 hectare
- Hospital – 0.60 Ha & Residential Accommodation- 0.40 Ha

5. Intermediate Hospital- category A

- Number of beds — 200 beds; Initially 100 beds may be provided
- Population served— 1 lakh
- Site Area — 3.7 hectare
- Hospital – 2.70Ha & Residential Accommodation- 1.00 Hectare

6. Multi- Specialty Hospital

- Number of beds —200 beds; Initially 100 beds may be provided
- Population served— 1 lakh
- Site Area —9.00 hectare
- Hospital – 6.00 Ha & Residential Accommodation- 3.00 Ha

7. Specialty Hospital(NBC)

- Number of beds — 200 beds; Initially 100 beds may be provided
- Population served— 1.0 lakh
- Site Area—3.7 hectare
- Hospital – 2.70 Ha & Residential Accommodation- 1.00 H

8. General Hospital(NBC)

- Number of beds — 500 beds; Initially 300 beds may be provided
- Population served— 2.5 lakh
- Site Area — 6.00 hectare
- Hospital -4.00 Ha & Residential Accommodation- 2.00 Ha

9. Family Welfare Centre

- Number of beds—As per Requirement
- Population served— 50,000
- Site Area—500-800 Sqm—

10. Diagnostic Centre

- Number of beds - Nil
- Population served— 50,000
- Site Area—500-800 Sqm

11. Veterinary Hospital for Pets and Animals

- Number of beds—Nil
- Population served—5 lakh
- Site Area—2000 Sqm

12. Dispensary for pet Animals and Birds

- Number of beds — Nil
- Population served— 1lakh
- Site Area — 300 Sqm

13. Rehabilitation Centre

- Number of beds — Nil
- Population served— Not Specified
- Site Area — As per Requirement

Hierarchy of Organized Greens;

1. Housing Cluster

- Population served/unit — 5,000
- Area Requirement — 0.50 hectare
- Number of Green spaces—3-4 local parks & playgrounds

2. Neighbourhood

- Population served/unit — 15,000
- Area Requirement — 1.00 hectare
- Number of Green spaces—3-4 local parks & playgrounds.

3. Community Centre

- Population served/unit — 1 lakh
- Area Requirement — 5.00 hectare
- Number of Green spaces—2-3 community level parks & open spaces

4. District/Zone

- Population served/unit — 5 lakhs
- Area Requirement — 25.00 hectare
- Number of Green spaces— One district level park; & Sports Centre ; Maidan

5. Sub- City Centre

- Population served/unit — 10 lakhs
- Area Requirement — 100.00 hectare
- Number of Green spaces— One city level park; Sports Complex, botanical/zoological garden ;Maidan.

Notes;

- Open Spces should be spatially distributed over the entire area and put to multiple use
- Open spaces must be provided, for recreational purposes, in any sub-division/planning of any area exceeding 0.3 Ha or more, located in the residential/commercial zones —
- Minimum area of recreational space should not be less than 450 sqm
- Minimum average dimension of the recreatishall not be less than 7.5 m
- length of open space shall not exceed 2.5 times the average width.
- Each recreational area/structure on it shall have an independent means of access.

- Building line to be at least 3 m away from the boundary of recreational open space.
- Zoological garden to be as per provisions of Central Zoo Authority
- Green areas and other associated / non-commercial economic activities should be preferably proposed on Government reserve land .
- In case the open/green spaces, which do not generate income, are proposed on privately-owned land, then local authority , preparing the plan shall part with a fair compensation as per, 'The Right to Fair Compensation and Transparency in LARR Act, 2013' to the land owner.

E. Sports Facilities

1. Residential unit play area

- Population served per unit- 5,000
- Land area required - 5,000sqm

2. Neighbourhood play area

- Population served per unit- 15,000
- Land area required - 1.5 ha

3. District Sports Centre

- Population served per unit- 1 lakh
- Land area required - 8.00 ha

4. Divisional Sports Centre

- Population served per unit- 10 lakh
- Land area required - 20.00 ha

F. Safety Management- Norms for safety facilities

1. Sub Fire Station / Fire Post

- Distribution of Population— Within 3-4 km radius
- Area Requirement —0.6Ha (with essential residential Accommodation)

2. Fire Station

- Population — 2 lakh or within 5-7 km radius
- Area Requirement —1.0 Ha; (with essential residential Accommodation)

3. Disaster Management Centre

- Population — one in each administrative zone.
- Area Requirement —1.0 Ha; along with suitable open area or —2.0 Ha; if soft parking, temporary shelter, parade ground etc., included.

4. Fire Training Institute /College

- Population — City level- one site in urban extension
- Area Requirement —3.0 Ha

G. Norms for Police, Civil Defence and Home Guards

1. Police Post

- Population — 40,000- 50,000 (area not served by PS)
- Area Requirement —0.16 Ha (inclusive of essential residential Accommodation)

2. Police Station

- Population — 90,000
- Area Requirement —1.5Ha; (Area inclusive of essential residential Accommodation) —0.05 Ha, additional area provided for civil defence and home guards

3. Traffic and Police Control Room

- Population — as per requirement

4. District office and Battalion

- Population — 10 lakh
- Area Requirement —4.8Ha; (District Office=0.80Ha; Battalion=4.00 Ha)

5. Police Line

- Population — 20 lakh
- Area Requirement — 4.00 – 600 Ha

6. District Jail

- Population — 10 lakh
- Area Requirement —10.0 Ha;

7. Civil Defence and Home Guards

- Population — 10 lakh
- Area —2.00 Ha

8. Police Training Institute/ College

- Population — City level- to be located in fringe area
- Area — 5.00 Ha

9. Police Firing Range

- Population — City level- to be located in fringe
- area — up to 10.00 Ha

10. Police Camp including Central Police Org/Security Forces(CSF)

- Area — up to 10.00 Ha

11. Police Booth

- Population — City level- at Major Road intersections
- area — 10-12 sqm(to be provided by transport planners

H. Hierarchy of Commercial Spaces

1. Housing Cluster

- Commercial space—Convenient Shopping
- Population - 5,000
- Area - 1500 sqm
- Number of shops—1 for 110 persons

2. Neighbourhood

- Population served/unit — 15,000
- Commercial space— Local Shopping including Service Centre
- Area Requirement — 4600 sqm
- Number of shops — 1 for 200 persons

3. Community

- Commercial space—Community Centre
- Population served/unit — 1 lakh
- Area Requirement — 5.00 hectare
- Number of shops— 1 for 200 persons

4. District/Zone

- Commercial space—District Centre
- Population served/unit — 5 lakhs
- Area Requirement — 40.00 hectare
- Number of shops— 1 for 300 persons

5. Sub- City

- Commercial space— Sub-city Centre
- Population served/unit — 25-50 lakhs
- Area Requirement — As Per Requirement

6. City

- Population served/unit — 50 + lakhs
- Commercial space — City Centre
- Area Requirement — As Per Requirement

7. Local Wholesale Market /Mandi

- Population served/unit — 10 lakhs
- Area Requirement — 10 hectares

8. Weekly Market

- Population served — 1-2 locations for 1-2 lakh population
- Area Requirement — 0.40 hectare per location

9. Organised Informal Eating Spaces

- Population served — 1 lakh
- Area Requirement — 2000s

Norms for Informal Units for Urban Street Vendors

1. Retail

- Number of Informal Units- 3-4units /10 formal shops specified in norms

2. Government and Commercial offices

- Number of Informal Units- 5-6 units /1000 employees

3. Wholesale Trade & Freight Complexes

- Number of Informal Units- 3-4 units /10 formal shops

4. Hospitals

- Number of Informal Units- 3-4units /100 Beds

5. Bus Terminals

- Number of Informal Units- 1 unit /2 Bus bays

6. Primary School

- Number of Informal Units- 3-4 units

7. Senior secondary/integrated school

- Number of Informal Units- 5-6 units

8. Regional/district Parks

- Number of Informal Units- 8-10 units/ major entry

9. Neighbourhood Parks

- Number of Informal Units- 2-3 units

10. Residential

- Number of Informal Units- One units/ 1000 population

11. Industrial

- Number of Informal Units- 5-6 units/ 1000 employees

12. Railway Terminals

- Number of Informal Units- to be based on survey conducted at the time of preparation of the project;

J Cremation /Burial Grounds/Dhobi Ghat**1. Electrical Crematorium**

- Population served — One for Town
- Area Requirement — 2.00 Hectare

2. Cremation Ground

- Population served — 5 lakhs
- Area Requirement — 2.50 Hectares

3. Burial Ground

- Population served — 5 lakhs
- Area Requirement — 4.00 Hectare

4. Dhobi Ghat – with arrangement for water supply/drainage

- Population served — 1 lakh
- Area Requirement — 5,000 sqm

Note; For details of the other Social Infrastructure; please refer to para 8.4 of the URDPFI Guidelines

Haryana Town Planning Norms- Parameters for Grant of License:

(Source; website Haryana Department of Town and country Planning; <https://www.tcpharyana.gov.in/FunctionAndPolicy.html>)

State of Haryana, remains a pioneer, front runner and ranks high among states in the country in the domain of; involving private sector on large scale in the urban development process; making experimentation, innovations in the art and science of the town planning; giving recognition to the profession of town planning and generating large amount of revenue for the state besides promoting orderly and planned growth of urban and rural settlements.

Haryana model remains unique, distinct and most innovative model of town planning in the country. Model works on the premise that no two settlements are same and each settlement has its specific potential of growth and development. Considering the potential of different settlements/areas, Haryana Town and Country Planning Department has divided the state into three distinct zones. Division of the state into three zones is used for the purposes of physical planning; licencing of colonies; defining area norms, fees and charges to be levied for different purposes while licencing colonies. Three distinct zones into which state of Haryana has been divided include **-Hyper/ High Potential Zone; Medium Potential Zone and Low Potential Zone**. The parameters prescribed for licencing of each category of colony are detailed below:-

1. Residential Plotted Colony:-

- *Minimum area of residential colony shall be;*
 - Hyper/ High Potential Zone- 100 Acres
 - Medium Potential Zone -50 Acres
 - Low Potential Zone -25 Acres
- Plottable area/saleable—not to exceed 55% of the total area of colony; inclusive of 4% commercial area
- 45% area— utilized for roads, community buildings, utility buildings and open spaces.
- Sites for community building provided based on prescribe norms
- Norms are population based; worked out on densities defined in the Development Plan
- Minimum width of road — 12 mtrs.
- 20% plots reserved for EWS housing; minimum plot size— 50 sqm .
- 25% of total plots under category of 'No Profits No Loss' plots (NPNL) i.e. at rate prescribed by Director - size of plots ranging between 125 to 225 sqm.
- Population in colony not to exceed densities defined in Development Plan.

2. Group Housing Colony:-

- *Minimum area of Group Housing colony shall be;*
 - Hyper/ High Potential Zone- 10 Acres
 - Medium Potential Zone -5 Acres
 - Low Potential Zone -5 Acres
- Group Housing governed by approved zoning regulations

- **G**round coverage not to exceed 35% of site area
- Floor area ratio (FAR) fixed at 175
- Maximum habitable height is 60 metres
- Area under group housing not to exceed 20% of sector area.
- Community facilities provided on prescribed norms based on population worked out on density defined in development plan, ranging from 100 to 400 persons per acre
- Convenient shopping to occupy 0.5% of the site area with single storey shops and maximum height of 4 metres
- 15% of total number of flats are reserved for EWS
- 10% of the main dwelling units required for service apartments /for domestic help.
- Minimum two-level basement for parking and services
- Compulsory provision of one car space for every flat of housing complexes (except EWS)
- Area for EWS and service apartment to be 200 sq. ft. and 140 sq. ft. respectively.
- Mandatory- to provide 15% organized green space in the group housing complex.

3. Commercial:-

- Private sector permitted development of maximum 50% of designated commercial areas in the development plans. Parameters for licence in residential colonies are as below:-
- *Minimum area of commercial colony shall be;*
 - Hyper/ High Potential Zone- 8,000- 16000sqm
 - Medium Potential Zone -8,000-16,000 sqm
 - Low Potential Zone -4,000- 8,000 sqm
- The commercial colonies licensed for sites falling along the peripheral/ sector road in residential sector of the Development Plan.
- Area under licenced colony in a residential sector not to exceed 3.5% of the sector area, subject to minimum and maximum prescribed area limits
- Site to be along a sector peripheral road within provision of service road.
- Maximum ground coverage allowed is 40%
- Floor area ratio is 150 or 175 as opted by a colonizer.
- Maximum height limited to 60 metres
- Three level basements permitted for providing parking and services.
- No storage allowed in the basement.
- Parking norms — one car space for every 75 sq. metres. covered area.

4. Cyber City/Cyber Park:-

- *Minimum area of Cyber city colony shall be;*

—Hyper/ High Potential Zone- 50/5-15 Acres

— Medium Potential Zone 50/5-15 Acres

— Low Potential Zone 50/ 5-15 Acres

- Location —Site located on the sector peripheral road in residential or industrial sector in the Development Plan.
- In case of residential sectors, the permissible area for IT Park/ Cyber Park not to exceed 5% of the sector area.
- The permissible ground coverage is 40%
- FAR permitted — 250.
- For cyber cities— 10% of the area of the site can be utilized for Group Housing and 4% of the area for commercial use.
- In Cyber Parks only 4% of the area can be utilized towards commercial uses. No group housing is permissible.
- Parking requirement— one car space for every 40 sq. mtrs of covered area.
- Three level basements permissible for parking and service.
- No storage is to be allowed in basement
- In the area designated for IT activities, no other use is permissible. In case of violation— the colonizer will be required to pay the fee and charges on commercial rates for the area where violation are being committed.
- In case of Cyber City, the colonizer is required to complete at least 30% of the IT area within 5 years of the grant of licence and in case of Cyber Park within three years of grant of licence.

5. Fees and Charges:-

Fees and charges to be paid by colonisers along with its application for grant of licence will include;

- **Scrutiny fees** @ Rs. 10/- per sq. mtrs for the gross area of the colony
- For Group Housing, Commercial and IT, scrutiny fees to be paid based on proposed FAR.
- Licence fee and conversion charges -as prescribed by the Government
- Infrastructure Development Charges -as per rates prescribed in the Schedule in Rules 1976.
- **External development Charges (EDC)**—proportionate cost of development of the town level infrastructure for a town as decided by the development agency(Haryana Urban Development Authority.

Note; Preparing this document is based on the information sourced from URDPFI Guidelines prepared by the Ministry of Urban Development; Government of India and website of Department of Town & Country Planning, Haryana; which is gratefully and thankfully acknowledged

1.6 Housing Demand and Housing Need, Affordability

Housing Need;

As already explained and detailed, housing/shelter has been reckoned to be one of the essential and basic necessity of human living. Housing has numerous connotations and implications for human living, growth and development of communities, states and nations. As a determinant of quality of life, scope and coverage of housing extends to physical, social, economic and environmental dimensions. A decent and affordable place to live is known for its capacity and potential to help families by freeing them from both physical and mental hardships, placing them on a path of new opportunity and increased confidence and self-reliance. Having a stable place to live, helps families to spend time together and promote its culture and share / nourish its good values. A decent roof over their heads establishes home as a place that protects, instead of endangering, their health. Looking at the entire context, role, importance and relevance of housing/shelter, there is an urgent need to empower families to help them acquire necessary access, skills and financial resources to become successful homeowners. Shelter empowers the people and communities and makes them more productive, effective and efficient. Inadequate shelter degrades human living, makes human beings less productive, inefficient and a liability for the society and community. Major crime and prevailing social maladies can be largely attributed to non-availability of the appropriate shelter to human beings/families. Adequate housing has been considered as an index of development of human beings besides placing nations high on the path of rapid industrialisation and economic development. Accordingly, meeting the basic need of shelter should be the focus, aim and objective of any housing policy and program launched by any parastatal agencies. This leads to the conclusion that housing needs must be met for each and every household located in every human settlement for the simple reason that;

- Shelter and quality of life remain positively co-related.
- Shelter helps in achieving larger objectives, related to health, sanitation and education.
- Shelter and employment opportunities hold universal connectivity.
- Security, safety and human identity have genesis in the availability of appropriate shelter.
- Access to adequate and satisfactory housing considered integral factor for the enjoyment of other economic, social and cultural rights.
- Inadequate housing adversely impacts human productivity, economic growth and active participation in the welfare programs launched by various local, national and international agencies.

- Safe, accessible and affordable housing remains major propeller for empowering poor and securing their active participation in national building for both physical, social and economic growth .
- People with appropriate housing are known to perform better and have higher order of protection against health hazards and pandemics as compared to those without housing.
- Housing is known to reduce pressure on healthcare services by senior citizens, when having access to affordable housing with supportive services;
- Housing quality remains vital for the rational growth and orderly development of a society.
- Housing critically linked to productivity, operational efficiency, economic development besides making major contribution to annual GDP.
- Poor quality housing invariably leads to segregation, exclusion, poor environment and spatial concentrations of poverty.
- Affordable housing is known for its capacity to provide safety, security, identity, space and opportunity to children to, maintain their health and well-being; achieve financial goals and reducing costs to society by improving and succeeding academically.
- Poor housing is known to leave its mark on mental health of the occupants for years to come.
- Housing remains closely associated with overall socio-economic development, and creating conditions for achieving social objectives involving, sanitation and education.
- Housing remains key to provide large scale employment opportunities to the rural and urban workforce, both skilled and unskilled.
- Housing remains major promoter of industrialization in any country,
- Investment in housing is known to have multiplier effect in terms of; generating wealth, promoting economy and employment in any city/region.
- Housing is universally valued by all nations for its capacity, role and importance in promoting the public good and to create a healthy, vibrant and productive society besides shaping culture and economy.
- Right to adequate housing forms a cornerstone of the Global Shelter
- Shelter offers the best option for survival in times of crisis or displacement. It also holds key to restoring personal security, self-sufficiency and dignity.
- Adequate housing is known to be the index, used for assessing the growth, development and welfare of a society.
- Housing is the single most important environmental factor associated with disease conditions and higher mortality and morbidity rates. (WHO)
- Housing is the space where more than one-third of human life span is spent During the current pandemics, Covid-19, the role and function of housing as a space for mere living, has undergone total change with the addition of functions like, working, care of body and spirit, education, healthcare etc. being done from the same space.
- Housing accounts for the largest proportion of the investment in any city.
- Majority of intra-city travel and trips originate from and terminate in housing. Housing remains the focus of all human activities.

Affordability and Affordable Housing

Affordability and Affordable Housing, as a concept, approach, strategy and opportunity, has been gaining currency and attracting attention of providers and developers involved in housing because of the focus of the government to create larger stock of housing for the economically weaker sections based on their affordability. However, affordability cannot be precisely defined because of large number of variables and determinants involved into the making of affordability.

Unpacking affordability involves study of large number of factors impacting the issue of supply and demand in the domain of housing. Affordability is not limited to merely the cost involved in being able to afford to buy or rent a house, but also ability to keep the house/ afford to live in it. Financial affordability of the house essentially is said to revolve around four key factors involving not only house purchase price, ability to finance down payment but also involves operational cost of the house and ability to financially service the loan.

Going beyond meeting expenses related to operations and maintenance, affordability also involves access to transport, infrastructure and services. House, even when costing less but located far from livelihood/ opportunities/ amenities, cannot be called affordable because of the cost and time involved in day-to-day travel.

Lack of affordability remains city specific and varies not only from city to city but also location to location within city. Affordability can be largely linked to housing costs, marginalized household incomes, demand outpacing supply of houses, land scarcity and demographic changes involving migration, income, population growth, ageing and changes in household composition.

In order to make urban settlements people centric and supportive of quality of life, cities must act to address issue of affordability if they want to avoid a mass exodus of key workers and other talented individuals. Communities develop only when the needs of all residents are met. Ensuring affordable homes is a critical step in that direction, and provides a holistic perspective on the ongoing discussion about how best to make affordable housing for all a distinct reality (Insight Report on Affordable Housing).

Considering the complexity, affordable housing has been defined differently by different agencies/institutions as detailed below;

- UN-HABITAT, defines affordable housing as *“housing which is adequate in quality and location and does not cost so much that it prohibits its occupants from meeting other basic living costs or threatens their enjoyment of basic human rights”* (UNHABITAT,2011)
- ‘RICS Report on Making Urban Housing Work in India’, defines *affordability as provision of ‘adequate shelter’ on sustainable basis, ensuring security of tenure within the means of the common urban households. Further, Affordable Housing is that which is provided to those whose needs are not met by the open market.*

- KPMG Report on Affordable Housing- A key Growth Driver in the Real Estate Sector' has defined affordable housing *in terms of three main parameters, namely income level, size of dwelling unit and affordability.*
- US Department of Housing and Urban Development defines *housing affordability in terms of expenditure of household on housing as proportion of annual income that should not exceed 30% of the total income.*
- Task Force on Affordable Housing set up by Ministry of Housing and Urban Poverty Alleviation, 2008, has defined affordable housing in terms of, *size of dwelling and household income.*
- JNNURM Mission has defined affordable housing in terms of *size of dwelling units involving super built-up area/carpet area and EMI/Rent not exceeding 30-40% of gross monthly income of the buyer*
- Government of India has put a ceiling of 30 sq.m of carpet area along with other conditions as the limit for EWS category housing under PMAY
- Jones Lang LaSalle has defined *affordable housing in terms of volume of habitation instead of area, provision of basic amenities, cost of the house (including purchase cost and maintenance cost) and location of the shelter.* This definition enlarges the scope and dimensions of the concept of affordable housing by:
 - Adopting volume-based approach instead of area, for the size of the dwelling unit, providing more flexibility in designing the house.
 - Adopting provision of the minimum physical and social infrastructure on prescribed norms, as the basis to ensure appropriate quality of life.
 - Making cost of shelter broad based by including operational and maintenance cost for a reasonable period to the actual cost of the house.
 - Making project attractive and affordable by limiting the cost and travel time between place of work and place of living

Based on the studies made and analysis carried out, highest gap between demand and supply of housing is found to be in the annual income range of Rs 2-3 lakhs because of the limitations imposed by minimum disposable income surplus placed at 30-35%. This considerably reduces the capacity of this income group to own shelter, which is highly cost- intensive. Based on the defined norms and the concept given above, the cost of the dwelling unit in the affordable category calls for rationalization, in order to bring shelter within the affordability limits. The cost of house can be made more rational and affordable; if developer's margin is lowered ; cost of construction is reduced using state of art/ cost effective technologies; using cost- effective local building materials; materials made from waste and production of houses on a mass basis leading to economies of scale. Affordable housing is said to be essentially a volume game and not a margin game. However, location, cost of land, FAR, density, number of dwelling units permitted per unit area and government charges will continue to be major determinants of cost of dwelling unit. Considering the present status, housing can be made affordable by creating enabling environment; using mechanism of cross-subsidization; adopting project-based approach; actively involving beneficiaries; using state of art and innovative technologies; inventing cost-effective materials and putting in place supportive policies of the Government.

Common challenges in housing affordability:

According to *Insight Report on, ' Making Affordable Housing A Realty in Cities*, major challenges facing in housing affordability include;

- Housing costs rising disproportionately to household incomes, particularly in the lower income households of the society in cities with inadequate supply of social/public housing.
- Ever widening gap between demand and supply of affordable housing due to limited incentives available to private sector for developing such housing.
- Scarcity of land for affordable housing due to lack of alignment among cities, states and federal agencies on how land is to be valued and taxed.
- Energy poverty, due to high operational cost and low household income, high energy prices and poor building energy efficiency makes housing unaffordable.
- Demographic changes arising out of, Reduced Household size leading to large increase in the number of households and large housing demand; Rapid Population growth arising out of rapid in-migration, education, better healthcare facilities and better job opportunities; Ageing population, increasing numbers of low-income senior citizens adding to demand for affordable housing, while senior citizens who still reside in large family homes contribute to the suboptimal allocation of housing units.

Housing costs remains a complex issue involving large components including cost of land (costs of purchase, titling, registration duties, obtaining planning approval, and any necessary cost of environmental remediation or relocation); cost of providing infrastructure/services involving water systems, electricity grids, heating and cooling networks, roads, security systems, sanitation systems; and cost of construction of buildings etc.(including labour and materials cost), transportation cost, government levies, management cost and taxes.

Housing Demand

The law of supply and demand is a basic economic principle that explains the relationship between supply and demand for a good or service, and how that interaction affects the price of that good or service. It is well known fact that ;when there is a high demand for a good or service, its price rises. If there is a large supply of a good or service but not enough demand for it, the price falls. The reason is that people will bid up the prices when there is relative scarcity, and there will be unsold items when there is an oversupply.

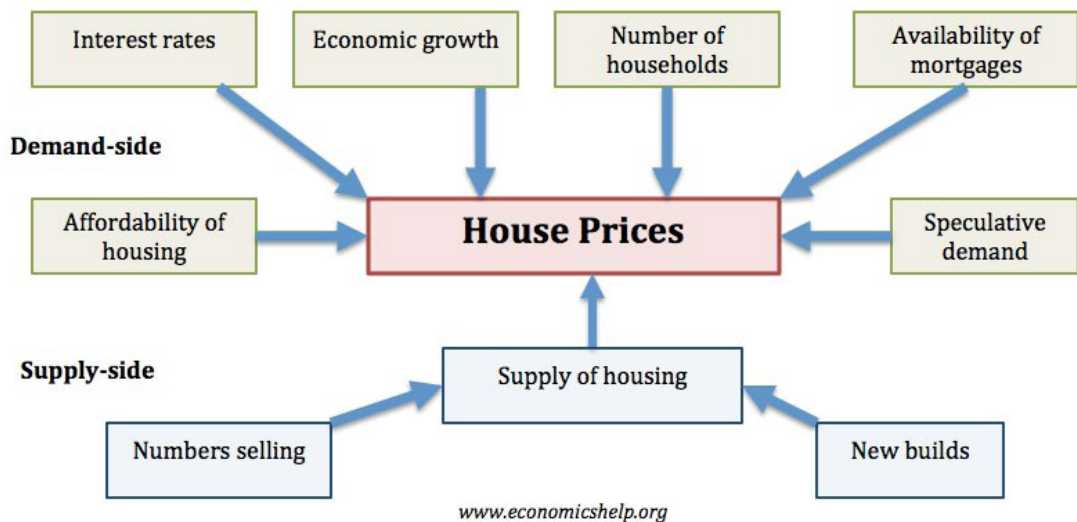
Real estate is a tangible asset made up of property and the land on which it sits, and while it is unmovable, real estate, like other assets, is also subject to supply and demand. This means that the prices of home, depend heavily on the law of supply and demand. More demand, prices tend to rise; more supply, they tend to fall. Housing market is a good example of how supply and demand work within an industry. When the demand for housing is high, but supply is low, home prices often rise. When there is a glut of housing available in a

market, homeowners may lower their prices due to less demand in the market. Demand remains one of the greatest drivers of real estate values in a given market. A balanced market means a healthy supply of and purchase by both seller and buyer. But when that balance gets distorted, it drives prices down or sky-high, like we're seeing today.

Factors Affecting Housing Supply and Demand

- **Prevailing Interest Rates** Lower interest rates increase housing demand because, people are generally willing to take on more debt because they can afford relatively more debt for the same monthly outlay
- **Disasters**; When housing inventory sees decreases during natural disasters such as floods and earthquakes, or when existing properties are demolished, then prices go up due to larger housing. demand
- **Speculation**; Entry of speculative buyers invariably drives up demand for housing besides siphoning off the available housing supply in the market . Accordingly, speculation increases the demand for housing and s increase the price of housing.
- **Household Income**; Income and housing demand are positively co-related. A decrease in the incomes of households leads to decrease in housing demand and lower prices; whereas increase in income not only pushes the housing demand northwards but also the price of the house.
- **Assured future**; If people are sure of good health of economy and better return on investment, housing demand will go up and accordingly housing prices will also increase ; whereas poor performance of economy invariably lowers down the housing demand and the prices.
- **Cost of Rentals**; Higher rentals are known to increase housing demand and housing price for more people opting for house ownership.
- **Interest Rate**; Higher prevailing interest rate always act as a damper on the housing demand and in the process reduce housing demand and housing price. Lower Home interest rate always push up housing demand and the housing price.
- **Social Status**; Societies where house ownership is valued as social status and where culturally people believe in house ownership, demand for housing never goes down.
- **Incentives**; If government provides incentives in terms of tax incentives/ rebates on housing payment; housing demand invariably goes up and people go for house ownership.
- **Supply**; If in any city, supply of housing remains muted and diluted , then in such cities pent up demand due to widening gsp between demand and supply invariably push up the prices of houses.
- **Mega Cities**; Large cities and other cities, known for their rapid population growth ,invariably propels demand for more housing and higher prices
- **Population**; Rising population and higher population growth rate are known to increase the demand for housing and also pushing prices of the houses up.

- **Higher Costs;** Higher cost of housing due to, high land and construction cost, invariably reduces demand for housing, pushing .
- **Employment;** Cities offering higher order of employment and better remuneration in IT/Service Sector, are invariably observed to have high demand for housing- both rental and ownership and accordingly keep housing prices high
- **Changing social structure;** Breaking of the joint families and people moving for education and service to the large city also pents up the housing demand and the housing prices.
- **Increasing life expectancy;** With age span of human living increasing, housing demand ,particularly in the category of senior citizens in increasingly rapidly in urban areas'
- **Spread of Education;** Opening of large number of Private and Government Universities across the country, has led to large scale movement of the students from both rural and urban areas. With many students opting to live out of the campus demand for rental housing has increased considerably in the country.
- **Migration;** Rural- Urban migration remains the major factor in shifting the residence and changing the demand for more housing in the urban sector
- **Factors impacting Housing Prices on the demand side and supply side**



Supply Side Challenge

As per findings of the **Insight Report**; globally investment in housing remains largely contingent upon two major factors; land with a legal title and, security involving tenure and property rights. Sourcing land for affordable housing remains major challenge facing supply side besides rational and optimum use of land for development. *Development controls, land use and zoning regulation* are the other areas which are known for their capacity to adversely impact the

use of land, which would need rationalization for land optimization. In order to ensure supply of adequate housing in the affordable sector, it will be desirable to create an enabling environment which would permit land related challenges faced by the supply side are adequately overcome to enable it to operate at optimum level. Development options and innovative strategies which can be leveraged for making adequate land available for affordable housing besides its optimum utilization would include;

- **Land-pooling-** Innovative mechanism of sourcing land through planning process, where an undeveloped piece of land in an unplanned area is exchanged for a smaller developed piece of land in a planned area.
- **Tradeable Land Quota-** Uses a barter system under which agricultural land on the periphery of a city is permitted to be used/converted for urbanizable purposes in lieu of opening up other parcels of land located beyond the city's boundaries for agriculture purposes.
- **Focusing on ensuring Property Rights** – through prioritizing on right not to be forcibly evicted, rather than formalizing property titles
- **Promoting Partnerships between Community Land Trusts**, which own and steward land on behalf of a community,
- **Municipal land banks**, - Acquiring and preparing vacant land for development
- **Transit-Oriented Development**, which mandates linear development involving expansion of cities , planned around new urban transport infrastructure.
- **Logarithmic Zoning**, with incentives for developers based on assessment of what is needed to maximize the vibrancy of a community
- **Mixed-use Development and Inclusionary Zoning**, to ensure neighborhoods have a mix of income levels and proximity to jobs and services.
- **Taxation solutions**, such as taxing the underlying value of land rather than the value of the property on it, and imposing a tax on vacant land or properties.
- Securing finances for funding the affordable housing through providing **tax incentives, grants or exemptions** for private developers to develop certain types of property or develop in designated areas.
- **Subsidize construction costs:** For rationalizing the construction cost, the Government should provide exemption on taxes and duties on construction materials; provide subsidy to developers for R&D in new low- cost materials and technologies can lower the cost of borrowing for development of affordable housing projects by granting guarantee on the loans etc. Government can provide exemption from sales tax and reduction in stamp duty.
- **Government-guaranteed Bonds** providing cheap, long-term finance to community-based organizations to develop and manage affordable housing.
- **Employing investment models** such as microfinance, real estate investment trusts (REITs) impact investing

- **Design and construction-** Besides land cost other major component of housing cost involves development and construction costs, which sometimes exceed land cost. Construction cost can be reduced and made more affordable through;
- **Minimizing bureaucracy**, reducing fees and costs of complying with complicated building codes to rationalize project cost;
- **Using technology** to provide cost-effective solutions like 3D printing, robot bricklayers, self-driving bulldozers – and solutions related to the internet of things (IoT) and artificial intelligence (AI) that could bring down operational and maintenance costs;
- **Using alternative construction materials** such as fly ash, cement-coated expanded polystyrene panels, glass fiber-reinforced gypsum, cross-laminated timber and compressed earth blocks and
- **Promoting Public-private partnerships** on training to address skills shortages in the construction sector.
- **Single window approval for projects:** Delays in the project approvals result in substantial cost overruns. Single window approach will help the developers reduce delays and costs.
- **Adopting inverse- incentive FSI**, which rewards developers for building smaller apartments by allowing them more FSI to use on larger apartments. Cities set a benchmark apartment size, and developments below this benchmark earn the developer “incentive FSI” based on the difference: For example, if the benchmark is 75 square metres and a developer builds apartments of 50 square metres, it could buy 25 square metres of FSI from the city government at below-market price up to a stipulated limit. It can then use this FSI to construct large apartments. This mechanism ensures a balance between apartments of all sizes (Salgia, 2018).

Demand-Side challenges

Besides making supply side more productive, effective and efficient, it will be critical to address the issues faced by the demand side to overcome the crisis in affordable housing. Basic issue remains, should strategies try to make available housing affordable for everyone, or target assistance at certain sections of the population and how should targeted populations be defined? Demand side challenges essentially involve identifying real-time/deserving beneficiaries through objectivity and transparency, based on well-defined criteria, using indices involving income level, age, number of children, employment. According to ‘*Report on Making Affordable Housing A Reality in Cities*’ meeting demand side challenges should include;

- **Adopting different forms of tenure**— Going beyond a binary choice between rental and home ownership, for offering more options to city residents struggling to afford a house involving *build-to-rent, shared ownership and shared equity ownership*.

- **Rent Controls-** which offer the potential to protect tenants, but must also take care not to restrict the future supply of properties to rent by unfairly disadvantaging landlords.
- **Demand-side interventions** need to guard against the risk of helping in the short term but not the long term. Mechanisms to keep units affordable on resale must include *subsidy* recapture and *subsidy* retention

1.7 Various factors impacting the provision of shelter for the poorer section of the society

India like Britain is a home-owning nation, where housing is considered an investment/ asset for individuals rather than a social asset for society as a whole. Buyers pour their wealth into property on the understanding that they will benefit from rising values. The resulting price distortions has led to – among other things – localized skill shortages as key workers are forced out by rising prices, unable to rent or buy (**The Conversation**), besides creating large number of physical, social and environmental issues. In addition, housing, is known for its peculiarities of being both labour and capital-intensive activity with land, money, materials and construction technologies, constituting major components of housing cost.

Considering the multi-lateral implications of the housing, there exist large numbers of economic, regulatory and urban challenges in developing appropriate stock of affordable housing. Major constraints in providing affordable shelter include; ever rising cost of land and cost of construction as constraints that have emerged on the supply side whereas creating ownership, identifying/quantifying accurately the real beneficiaries and lack of access to home finance, are the major demand side constraint. Based on the existing scenario, major issues identified in developing adequate housing can be enumerated as under:

a) Low availability of developed land

Low availability of developed land remains a major challenge in the domain of creating adequate housing stock in India. With 2.4% of global land and 17.7% of world population, India is under perpetual shortage of land needed to meet the basic requirements of more than 1.21 billion Indians for food, clothing and shelter. With rapid urbanization and industrialization, asking for more and more land to be brought under non-agricultural uses, the pressure on the land is increasing rapidly. With low land-man ratio coupled with ever rising demand and numerous constraints emerging out of speculation, legal framework, planning tools and building bye-laws, the supply of developed urban land is diminishing very fast and accordingly, cost of land rising very rapidly, making the cost of shelter highly unaffordable for majority of urbanites. Major issues leading to shortage of urban land have been identified as:

- i) Excessive parastatal control on the development of land;
- ii) Lack of marketable land parcels;
- iii) High degree of encroachments on public land;
- iv) Poor land information system;
- v) Cumbersome legal and procedural framework for sourcing land;
- vi) Restrictions imposed by the planning mechanism including master plans, zonal plans.
- vii) Irrational building regulations, leading to inefficient utilization of valuable urban land.
- viii) Restrictive government policies and approach.

b) Rising Threshold Cost of Construction

Followed by the cost of land, cost of construction constitutes major proportion of cost of house. Studies made by KMPG regarding cost of housing has revealed that; unlike premium residential projects, where pricing is largely guided by land costs, prices of affordable homes are primarily driven by the cost of construction. Construction costs form nearly 50 percent to 60 percent of the total selling price in affordable housing projects while for luxury projects this figure ranges between 18 percent to 20 percent. However, due to rapidly rising cost of building materials, outdated construction technologies, wastage of materials, cost of labour, lack of skilled manpower, high cost of transportation, multiple government levies, globalization and liberalization of economies, the cost of affordable housing is rising rapidly. Hence, construction cost minimization remains vital and critical in making affordable housing projects viable and affordable. Raw materials, including steel, cement, sand, bricks, etc. have witnessed price escalation ranging from 20-50 percentage in the recent past. Success of the National Rural Employment Guarantee Act (NREGA) scheme, has led to the reduction in availability of labour for construction making cost of construction higher due to considerable rise in wage levels. Contrary to land prices, which decline exponentially as projects move away from centrally located to peripheral areas of a city, construction costs fall at a gradual rate from luxury projects to low-income housing projects. In order to make the housing cost-effective and affordable, it will be critical to minimize the cost of construction with innovations and effective management. There exist enormous scope and opportunities to optimize and minimize the cost of construction.

c) High degree of Government charges

Role of parastatal agencies remains critical in determining the cost of housing due to large number of approvals required for the construction projects and fees to be paid for such approvals. Approvals range before the start of the projects and goes on till the project is completed and, in some cases, sometimes after the projects gets completed and made operational. Charges levied by the parastatal agencies start with granting change of land use, approval of the

layout and building plan, licensing fee, approval for completion and occupation of buildings, internal and external development charges, registration of land and registration charges for the finished house, malba fee, labour cess, fee for environmental clearance etc., which are major contributors to the escalation of the cost of the house. These would need rationalization and brought to the realistic level in order to promote affordability in the housing sector.

d) Rigid land use planning

Existing pattern of urban planning has done more damage than good to the urban fabric. Master Plans, Development Plans, Controlled Area Plans prepared for the rational growth and development of the city and periphery do not provide space for most of the urban residents and migrants. The informal sector and poor find no place in the planning process/strategies. This leads to their exclusion and their demand for shelter and employment remaining unfulfilled. For making affordable housing a distinct reality, mechanism, approach, intent, content and scope of these plans need to be re-defined by making poor and informal sector, integral part of city planning and development process.

e) Irrational Building Bye-Laws

Pattern and extent of land utilization in urban areas is closely linked to the building regulations governing the city/ area. Land-use regulations include size of plot, minimum parking requirements, maximum floor-to-area ratio or floor space index (FSI), maximum height permitted, ground coverage, setbacks, basement, distance between buildings etc. These regulations are known to have considerable impact on the utilization of the land. These can be relaxed or made more rational to address defined housing needs based on city demographic trends. Looking at the prevailing population density, Indian cities are known to have some of the most restrictive FSI in the world (1.5 in Chennai, 3.25 in Bengaluru and 3.5 in Mumbai when compared to 20 in Tokyo and 25 in Singapore (IDFC Institute,2018). Existing Building bye-laws and sub-division regulations are fast leading to emergence of large number of operational inefficiencies in land utilization, poor space utilization, use of cost-effective and state of art building materials and construction technologies. These regulations will need, critical and objective review, revision and redefinition on priority for optimizing land resource, adopting cutting edge building materials and construction technologies.

f) Delayed Project Approvals

Red tape, corruption, complicated building codes and processes involved in the approval of the projects can significantly raise construction costs. Study made of 600 cities in 180 countries of the developing world found that, it takes an average of 16 procedures and five months to obtain a construction permit, costing enormous money and seven steps and two months to register a property,

costing 7% of the property value (Monkkonen & Ronconi, 2015). India is known globally for complexity and multiplicity of laws besides involving large number of agencies governing the system of approvals. Complicated procedures, cumbersome processes, involvement of large number of personnel, duplications of processes/procedures and lack of decentralization of powers, invariably results in delay in approving the projects and building plans (16-24 months), leading to time over-runs and cost over-runs. In India, residential housing projects can require up to 150 approvals from different city, state and national agencies (Abraham, Batra, & Gandhi, 2017). Even a single approval can delay or block a project, and public officials may demand unofficial as well as official payments for these approvals. Delays in project approvals are estimated to add 25-30% to the project cost. For making affordable housing a distinct reality and cost-effective, project approvals must be put on fast track and made time bound. In 2017, India introduced the Real Estate Regulatory Authority (RERA) Act in an attempt to increase transparency and efficiency in the construction sector. However, these provisions have the effect of making it easier for large developers with significant credit reserves to fund housing projects compared to small developers. However, the Act does not have contingencies for delays caused by slow approvals from regulatory bodies (Sinha, 2018)

g) Inadequate Access to Cheaper Housing Finance

Making available adequate funds for constructing affordable housing remains critical because no project can take off without making available adequate resources for the project to go forward. Affordable housing has been suffering from not only inadequate funds but also its access to the beneficiaries along with high cost of funds. Lack of access to cheaper housing finance for low-income groups has its genesis in the non-availability of large number of documentations involved in approvals based on providing securities, proof of assured sources of income and residential address etc. which needs rationalization and simplification for increasing access to such housing.

h) Multiplicity of Agencies involved

Studies made by the KPMG and NAREDCO (2012) has revealed that real estate projects are required to pass through 150 tables in about 40 departments of central, state and urban local bodies before approval is granted which invariably delay the projects and makes housing cost-inefficient. Surely, for making affordable housing a reality, the approval process would require major reforms in terms of redefining and simplification of the approval process and eliminating large number of agencies which have no/little role in the housing sector.

i) Outdated and irrational legal frame work

Existing legal framework has put spokes in creating adequate housing stock in the country. Rent Control Act has emerged as the major road block in creating

adequate rental housing stock. There is a growing need to revisit existing Rent Control Acts, which are proving to be a deterrent in the development of rental housing and redevelopment of areas with old properties. By formulating more clear and defined guidelines within building bylaws and rules for Floor Space Index (FSI), zoning and development plans the local urban authorities in India can reduce the difficulties faced in planning for construction projects in India. Legal framework would need on priority, rationalization, review and revision to make optimum utilization of land and creating a supportive/enabling environment to make housing for all a distinct reality.

j) Marginalizing Private Sector

Considering the magnitude, length, breadth and depth of the backlog; amount of resources involved and spread of the housing shortage, it appears a difficult task for the government to create adequate housing stock of its own. Involvement of all the stakeholders will be critical for achieving the goal of housing for all. Role of private sector, will be critical in creating large housing stock for the poor considering the resources, innovations, technology and operational efficiency available with private sector. 'Thrust on encouraging private sector participation in affordable housing, traditionally the domain of the Government, could provide the answer to India's urban housing predicament. But as things stand, affordable housing remains a challenging proposition for developers. Issues continue to persist in land availability and pricing, project approval processes and other areas which make low-cost housing projects uneconomical for private developers. (KMPG)'. Involving private-sector players will go a long way in keeping abreast with emerging solutions in construction techniques and materials; work with government to ensure an adequate flow of skilled labour and help in finding new solutions for financing and innovative tenure models.

k) Outdated technologies and poor project management

Inefficient project management practices and lack of investment in technology, research and development are known to contribute enormously to low productivity among small and large developers alike. Outdated technologies and conventional methods of construction besides poor project management have invariably led to the promoting wastages, causing delays in construction and raising the cost of dwelling units. Considering the large number of dwelling units to be constructed in the affordable housing category, there exist sufficient options to promote cost-effectiveness by standardization, producing housing components on mass scale, leveraging economy of scale etc. Barcelona, faced a problem of skilled manpower where Barcelona Housing Systems has designed a modular and standardized manufacturing system in which prefabricated components manufactured off-site are assembled by non-skilled workers on-site (Barcelona Housing Systems, n.d.). In California, start-up

Trace Air has developed software that analyses photos from a construction site and compares them with blueprints to determine work progress. In India, Brick Eagle is an incubator for small-scale real estate entrepreneurs, providing venture capital and knowhow to local builders with land in 20 cities (Surendar, 2018; Mitter, 2018).

l) One Solution fit all Approach

Considering the existing scenario, it is observed that present approach to housing shortage does not look at the fine grains of housing typologies required to meet the housing shortage and is limited only to the EWS and LIG housing. Considering the large number of migrants and persons who come to urban areas for working, learning and staying for a short period, formal housing should not be the only choice and option for shelter. For such residents, rental housing, creating temporary shelter and hostel type accommodation would suffice which requires lesser resources and funds for creation. Thus, a variety of living spaces need to be created to overcome the shortage of housing/ living space.

m) Lack of Research and Development

Housing in India suffers from issues related to innovations, quality and productivity for the reason that there is hardly any kind of research being undertaken on various components of housing to make it cost-effective, time-efficient and qualitative. Major cause of housing maladies has their roots and genesis in the absence of adequate studies in the area of housing typologies, building materials, building technologies, standardization of building components, pre-fabrication, pre-casting and other related issues which, if appropriately addressed, can lead to creation of large housing stock on the affordable basis. Few institutions, which exist, have failed to deliver the result due to various internalities and externalities. Despite the fact, Development Authorities and Housing Boards, created in different states, are mandated to promote state of art and cost-effective construction of housing, by promoting research in creating/sourcing new building materials and improving prevailing construction technologies, are known to have hardly done any work in this area. With limited and negligible manpower deployed in these organizations to look at these aspects, innovations in housing remains a distant dream, leading to adoption of traditional, outdated and cost/ labour intensive practices for the construction of housing by these agencies. No separate and specific allocations are made to promote research in the annual budget of these organizations. This calls for reinventing the wheel of construction to make it more cost-effective and time-efficient with least consumption/optimum utilization of the resources and generator of the minimum waste, by promoting appropriate research and development in the area of housing construction. There is an urgent need to focus and accord high priority to research and development in the area

of, building materials , construction technologies and skilling manpower, by creating dedicated standalone institutions at regional, state and national levels, duly supported with adequate resources and manpower, to launch affordable housing on fast growth trajectory

n) Absence of Adequate and Reliable Data on Housing

India, as a nation, is still in search of adequate and reliable data, both qualitative and quantitative, which can realistically showcase existing scenario with regard to housing shortage, existing housing stock, housing need and demand, congestion, derelict housing and housing requiring replacement, up-gradation and improvement. Absence of factual and accurate data has led to creating mismatch in policy framework and ground realities, making policies and program with large number of limitations, inadequacies in —projections made for housing needs at national, state and local level. Creation of adequate and reliable data bank would be critical for making realistic assessment of status of housing and putting in place rational policy framework at local, state and national levels.

o) Absence of Reliable Data about Beneficiaries

In addition to lack of data on the existing housing stock, India as a nation also suffers from the malaise of inaccurate and unreliable count about the demand side. In the absence of which, most of the programs put in place have failed to achieve the objective of creating adequate housing stock. Absence of reliable data about the beneficiaries, has also led to large number of malpractices emerging in the allotment of houses. In large number of cases, it has been found, houses allotted were transferred to higher economic class and housing stock was manipulated, misused, abused and speculated by the allottees. In order to have realistic and pragmatic solutions and approach to affordable housing, accurate availability of data about beneficiaries will be critical.

p) Large number of Vacant Houses

Urban India faces a peculiar problem and dilemma in terms of duality and contradiction, particularly in Metropolitan cities, having high demand for housing and large stock remaining vacant. On one hand India faces a large deficit in housing, whereas on other side large number of built-up houses, ready for occupation , are lying vacant. As per data made available by Census of India for 2011, in Pune every sixth house was found to be vacant (17.87%) whereas in Mumbai every tenth house remained unoccupied (10%). Chennai, among mega cities, was better placed with only 3.32% houses found to be vacant. Jaipur, Kochi, Bhopal and Rajkot were found to have more than 13% housing stock lying vacant. Looking at the entire context, large vacancies existing in housing stock can be attributed to number of factors including; multiple ownership of housing, looking housing as an investment, speculation or legal

framework governing the renting of houses. Accordingly, it will be appropriate to frame realistic policies, programs and operational framework to bring vacant houses into the urban market, to overcome the prevailing acute shortage in housing.

q) Ignoring Rental Market

Globally, Rental housing forms major chunk of housing stock to meet the shelter related demand in the urban settlements. Cities, because of their capacity to create large employment, act like a job market, where people migrate in search for better opportunities and options for better life and livelihood. Cities offer lot of flexibility in sourcing and changing jobs and accordingly known to provide great mobility to people. Accordingly, very few people come to stay permanently in a particular city unless employed in government service or jobs which are stationed at one place. Majority of people who come to cities for education and jobs, look for good options of rental housing for a limited period only. Accordingly, it will be important to create large stock of rental housing in all the urban settlements. Rental housing in India, has suffered largely due to prevalent outdated, obsolete, irrational laws favouring only tenants. This has led to very little stock of rental housing created in the country and where created, owners prefer to keep them vacant due to large number of issues faced in getting the vacant possession or getting increase in rent. Overcoming shelter related problems in the urban context will require promoting rental housing on a large scale.

r) Unskilled Manpower

Shortages in skills are driving up costs in many countries. In a survey by PwC and the Society of Chartered Surveyors Ireland (SCSI), it has been concluded that skill shortage was the single biggest obstacle to construction. Contractors cited lack of skilled labour and the rising cost of staff as a major concern, with bricklaying costs increasing by 25% in six months (PwC, 2018). India's real estate sector continues to grapple with the issue of manpower shortage. This shortage can have an adverse impact on the delivery and cost of affordable housing projects. Despite the fact construction industry remains one of the largest employers of the manpower in the country, deploying one -sixth of the total workforce (35million) and contributing 8-10% of the gross domestic project, still construction sector is manned largely by unskilled manpower. Prime reason of construction industry facing huge shortage of manpower, is the absence of any formal system of skilling the manpower employed. Construction sector remains only option for any unskilled person and rural migrant, to have easy access to employment without any skill. However, deploying large proportion of unskilled manpower has its implications in making construction sector highly inefficient, unreliable and vulnerable. It creates large issues of quality of construction besides theft, loss in material and productivity. All construction

typologies need special and dedicated skill sets to undertake and complete projects within given time frame and defined cost besides ensuring quality of construction. Considering huge investment going into construction sector, unskilled manpower is known to cause major loss in terms of productivity and loss of materials. Since housing forms major component of construction sector, it will be critical to skill the manpower deployed in the housing construction appropriately for making housing qualitative, cost-effective and affordable. There is need to enhance the education and training capacity offered through various schemes to meet the demand of the large percentage of unskilled workers in the construction sector. This calls for creating a pool of trained manpower to bridge the gap between demand and supply to create large housing stock at the most competitive cost within a minimum time frame.

s) Checking Uncontrolled Urban Sprawl.

Urban sprawl, as a phenomenon of development/expanding of cities in India, has done more damage than good so far as land utilization in/around urban areas is concerned. Uncontrolled urban sprawl leads to large scale conversion of valuable agricultural land lying on the fringe of the cities, into non-agricultural uses. Studies have shown that urban land cover has been growing more quickly than the urban population ie. twice the rate of population growth due to decreasing density of the built environment, large scale dependence on personal vehicles, norms favouring low-density housing, adopting pure land-use planning mechanism/approach, economic incentives favouring low-density development, higher property taxes for multi-family units than single family etc. (ULI, 2018). These practices need to be checked on priority, in order to ensure optimum utilization of available land resource.

t) Ignoring beneficiaries;

Creating inadequate stock in the affordable housing category has genesis in the neglect/ non-involvement of the beneficiaries in the entire process of planning, designing, construction and management of housing. Urban affordable housing has, primarily and essentially, emerged as a government-led program rather than beneficiaries-led initiative, with the result in number of cases these housing has low level of acceptability, which has led to failure of the project. Non-involvement of beneficiaries has led to increase in the cost of housing besides delaying the project. Making beneficiaries integral part of the affordable housing, can help in resolving large number of local issues, bringing in more innovations in the planning, designing, construction of houses; bringing in more resources by making use of resources available with the beneficiaries; rationalising the cost of housing; reducing time-span for construction, making housing more qualitative and responsive besides ensuring ready acceptability of the project

PART-II

- 2.1 Housing Policies at National & State level.**
- 2.2 Housing Finance.**
- 2.3 Institutions involved in shelter delivery.**
- 2.4 Factors affecting the cost of Housing.**
- 2.5 Migration and Urbanization-impact on Housing.**
- 2.6 Slums- Origin, Growth, Problems, Issues and Strategies for Slums.**
- 2.7 Neighbourhood Planning – Concepts, Objectives, Principles,**
- 2.8 Sector Planning.**

2.1 Housing Policies at National & State level.

Looking at the entire context of creating appropriate shelter for all ,basic considerations for formulation of appropriate policy and programs should essentially revolve around;

- Realistic assessment of the existing and future housing shortage in the housing sector in different economic strata of society in different regions/ states/cities.
- Defining Vision, Mission, Objectives and Goals, a nation wants to achieve in the domain of housing sector along with timeline for achieving those defined goals.
- Critically evaluating the available manpower, financial , institutional, technical resources and the capacity to create appropriate housing, considering the housing stock to be created.
- Accepting right to shelter for all the inhabitants, as the goal, irrespective of caste, creed, religion, gender, age, socio-economic status, place of living etc.
- Defining role of government as enabler and provider in creating adequate housing stock.
- Providing and creating appropriate/multiple options for affordable housing for all, in both urban and rural settlements.
- Creating an enabling environment for making addition to housing stock and retrofitting the existing housing stock on continued basis.
- Removing all existing roadblocks in creating adequate housing in the region/ country.
- Involving beneficiaries and communities in planning, designing, construction and management and for making addition to housing stock.
- Making construction of houses as people/community- led program rather than government led activity.
- Creating enabling environment for effectively involving private sector in creating adequate housing stock for all sections of community.
- Creating appropriate institutional framework at national/state/local level for evolving policy option and launching programs to promote construction of housing.
- Promoting appropriate construction technologies to make housing cost-effective, qualitative and time- efficient.
- Promoting R&D to make housing sector more rational, effective, efficient and productive.

- Creating appropriate and supportive legal framework for effective regulation, evaluation and monitoring of the housing sector
- Creating an enabling mechanism to grant statutory approvals of the housing projects on time bound basis and its completion within the specified time.
- Creating appropriate network of financial institutions at the national/state/local level to provide adequate finances for purchase of land and construction of houses.
- To create appropriate regulatory mechanism to rationalize and regulate the operation of the private sector to ensure timely completion of housing projects, maintaining appropriate quality and eliminate fleecing of the prospective buyers.
- Creating an efficient and transparent mechanism of collecting housing related data including both qualitative and quantitative, to assess the realistic housing demand at national/state/local level for making rational policies/programs related to housing and to identify right beneficiaries requiring support for creating appropriate housing.
- Creating appropriate mechanism for eliminating speculation in housing.
- Creating multiple options of housing depending upon the income, affordability, family size, duration and purpose of stay at a place
- Creating a national register for housing to document the ownership, structural status, quality, number of rooms, space/accommodation available, number of dwellers, infrastructure/amenities available etc. to eliminating multiple ownership of housing and stopping benami sale/purchase of housing besides formulating realistic housing related policies and programs
- Evolving strategies and creating options for Involving landowners as coparceners in making adequate land available for housing
- Effectively regulating the land market to eliminate speculation and making it more effective , efficient and transparent.
- Creating mechanism, rationalizing norms and standards for promoting optimum utilization of the available land resource.
- To incentivize the industrial sector to produce cost-effective, qualitative and materials from industrial and agricultural waste, for the construction of affordable housing
- Promoting numerous options/incentivizing creation of rental housing at local level on large scale.
- Leveraging the resources and capacity of the co-operative sector& corporate sector for making addition to existing housing stock on continued basis.
- Making available developed land with all clearances on concessional rates to for promoting affordable housing at local level.
- Redefining, revising and reviewing the role of development authorities/urban local bodies/housing boards/improvement trusts in making addition to housing stock at various levels.
- Defining options for skilling the manpower involved in the construction sector to make housing qualitative and cost-effective.
- Creating options for skilled manpower in the project planning, designing,

construction and management of housing.

- Creating a common platform for bringing all stakeholders, including supply side and demand side, to synergies their resources, expertise, knowledge and understanding for resolving problems faced by them in creating appropriate housing.
- Defining mechanism for promoting standardization in housing design/ infrastructures and services used in the construction of houses.
- Creating options and strategies for graduating from affordable housing to affordable living.
- Creating appropriate options for providing housing and not creating ownership in housing.
- Reviewing, revising, redefining planning norms and standards for making optimum use of available land.
- Incentivizing the creation of housing stock at local level/hill states, based on local climate, culture, material and skills available at the local/regional level.
- Mandating to make the existing and new housing stock safe from natural and manmade disasters
- Incentivizing production of materials used in the construction, maintenance and upkeep of existing housing stock to save them from decay and demolition
- Incentivizing the perspective house buyers by providing rebate in income tax on the loan raised for purchase of house and payment of interests on money borrowed.
- Rationalizing taxes, fees, levies and charges levied by the governments at national/state/local level on the land, materials, services and products used in the construction of housing, for making housing, cost-effective and affordable.
- Creating supportive and enabling options for creating affordable shelter for all slum dwellers, with priority going to homeless for providing shelter.

National Housing and Habitat Policy, 2007

Framing policies and programs remain integral part of government commitment, operations, functioning and management. Policies framed always focus on critical issue facing state/country, define agenda and options for approaching them in realistic and rational manner to remove all roadblocks and create supporting/enabling environment, to achieve the goals defined in the said policies. Considering role and impotence of housing in the economic and social development including employment generation, industrial growth, promoting quality of life and welfare of individuals, communities, society, state and nation, providing adequate and appropriate housing for all has been the objective which all governments want to achieve as part of national agenda. However, housing, as one of the three basic necessities of human living, remains most dynamic, always evolving , always devolving , never static and never finite.

Considering the ever- widening gap between demand and supply, due to rising graph of human count; rapid and massive migration of people from one place to

another and from rural to urban settlements; changing family structure; location of educational facilities and jobs in large cities, providing appropriate shelter for all remains most challenging, difficult and important task for all the nations. Considering the criticality of shelter as a major determinant of quality of life, social status, dignity and safety of individuals/ human beings, United nations has mandated all its member states, to consider housing as the basic human right and provide appropriate shelter to all of their citizens on priority. In consonance with the global mandate and issues emerging in the domain of housing, Government of India, took the initiative of framing policies from time to time to address the vital issue of bridging ever widening gap between demand and supply of shelter and to make available *shelter for all*, in both urban and rural areas.

During the last more than seven decades since dawn of independence in 1947, Government of India through the Ministry of Housing & Urban Development/ Poverty Alleviation, has framed four policies at the national level, to address and focus on the issue of housing in the country. These policies were framed in the years 1988, 1994, 1998 and 2007. First policy on housing came as late as 1988, after the lapse of 41 years of gaining independence. However, within a span of ten years two more housing policies were put in place at the national level while the last policy became operational about 14 years back. Out of four policies framed so far, first three policies framed in the years 1988, 1994 and 1998 focused on India as a nation, covering both urban and rural settlements. Last policy, framed in the year 2007, was exclusively dedicated to problems and issues related to housing in the urban India. All policies mandated, '**Housing for All**', as the objective /goal and agenda to be achieved by the states and the nations. Third National Housing & Habitat Policy contained some landmark initiatives calling for; involvement of multi-stakeholders; repeal of Urban Land Ceiling Act; permitting Foreign Direct Investment in housing and real estate sector etc. However, all these policies were generic / applicable to both rural and urban areas.

Considering challenges of shelter / growth of slums, in 1991 India as a nation, chartering a new economic agenda of economic liberalization and globalization, adopted a more 'inclusive' view of economic development by emphasizing that India must integrate with the global economy. Accordingly, India reduced custom duties to welcome Foreign Direct Investment (FDI) in several sectors of the economy. The National Housing Policy, 1994 was a product of this economic point of view. The 1994 Policy in its section on "Goals" sought to increase supply of land serviced by basic minimum services with a view to promote a healthy environment. The National Housing & Habitat Policy, 1998 laid greater emphasis on the aspect of "Habitat" as a supplementary focus to housing. The emphasis on "providing" housing continued in this policy with emphasis on both quality and cost-effectiveness, especially to vulnerable sections of society.

As per National Housing Policy, 2007; various policies adopted by the Central Government, from time to time, were accompanied by initiation of various

programmes and schemes. The National Slum Development Programme (NSDP) had provision for adequate and satisfactory water supply, sanitation, housing, solid waste management, primary and non-formal education. The scheme provided additional central assistance to supplement the resources of the State Government for making provision of basic infrastructure and services in slum areas. The Swarna Jayanti Shahari Rozgar Yojana (SJSRY) was designed to provide gainful employment to the urban poor by encouraging setting up of self-employment ventures and provision of wage employment opportunities for families below poverty line in urban areas. The Two Million Housing Programme (TMHP) was launched with the objective of '*housing for all*' with particular emphasis on the needs of economically weaker sections and low-income group categories. The Valmiki Ambedkar Awas Yojana (VAMBAY) aimed at, providing subsidies for construction of housing and sanitation for urban slum dwellers living below poverty line in different towns/cities all over the country. According to an assessment made, these policies and programmes have yielded fairly positive results in the area of housing and habitat. Some increase has been noticed in the supply of serviced land, shelter and related infrastructure. For example, in the first four years of the 10th Plan period, financial assistance was provided for construction of 4,42,369 dwelling units under VAMBAY scheme. Similarly, total number of beneficiaries under NSDP and SJSRY were 45.87 million and 31.77 million respectively during the same period. The period 1991 to 2001 witnessed a net addition of 19.52 million dwelling units in the urban housing stock (Census: 2001) involving average annual construction of 1.95 million houses. The share of ownership housing in urban areas increased from 63% in 1991 to 67% in 2001 (Census: 2001). It is vital to note that households having one room accommodation declined significantly in urban areas from 39.55 per cent to 35.1 per cent during the period 1991 to 2001. This is a result of upward mobility in accommodation indicating a robust economy and accelerated supply of improved housing stock.

Jawaharlal Nehru National Urban Renewal Mission (JNNURM) supported 63 cities (7 mega cities, 28 metro cities and 28 capital cities and towns of historical/religious importance) across the country in terms of perspective plans called City Development Plans (CDPs) for specifying infrastructure gaps relating to water, sanitation, sewerage, drainage and roads on the one hand and deficiencies in housing and basic services on the other hand. On the basis of City Development Plans, the JnNURM sought to fill up the gaps in infrastructure and deficiencies in housing and basic services through appropriate investments. The Mission approach was reform based with releases made subject to specified reform agenda being implemented. The Mission was reforms driven, fast track planned development of identified cities with focus on efficiency in urban infrastructure, services delivery mechanism, community participation and accountability of urban local bodies (ULBs) to citizens.

JnNURM sought to encourage private sector participation with the Government providing viability gap funding through the Mission for large projects where the

open tendering process shows specific shortage in economic viability. In addition to these 63 cities, urban infrastructure and slums were also addressed in the remaining non-Mission cities through the Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) and Integrated Housing and Slum Development Programme (IHSDP). The Basic Services for the Urban Poor (BSUP) sought to provide a garland of 7 entitlements/services – security of tenure, affordable housing, water, sanitation, health, education and social security – in low-income settlements in the 63 Mission Cities. The Integrated Housing and Slum Development Programme (IHSDP) aimed at providing the aforementioned garland of 7 entitlements/services in towns/cities other than Mission cities.

National Urban Housing and Habitat Policy, 2007

First urban specific National Urban Housing and Habitat Policy announced in December 2007 contained lot of innovative and out of box ideas to promote housing and achieve the goal of, '*Housing for All*', in urban India. It included a preamble defining the need for the exclusive and dedicated policy for urban India. In addition policy comprised of seven chapters highlighting; Need for policy ; Aims of policy; Role of various agencies including government/urban local bodies ; Role of research /development/ standardization /technology transfer by organizations ; Specific areas of action ; Action plan and finally ultimate goal of policy.

The Ultimate Goal

Policy concludes with the ultimate goal in Housing, which it wants to achieve in the urban India. Policy does not merely focus on the housing but looks housing in the larger context and integral part of the settlement structure in which shelter is located. It wants settlements to be sustainable, ecologically well-balanced and providers of all basic amenities critical for ensuring quality of life to its citizens. Accordingly, ultimate goal of the housing policy has been defined as to, "*Ensure sustainable development of all urban human settlements, duly serviced by basic civic amenities for ensuring better quality of life for all urban citizens*, through framing an *Action Plan involving* all stakeholders at the State/ UT level to achieve the objective of *housing for all* ,with focus on social housing i.e. EWS/LIG categories for integrating the lower end of the social/economic pyramid of society into the mainstream of urban development.

Preamble

National Housing Policy 2007, opens with a preamble which defines the overall scenario at the national level related to housing in terms of role and importance of housing; status of housing in the country; quantitative and qualitative issues facing housing and urban settlements; need for promoting sustainable development and providing quality of life to the residents of urban

India; evaluating the non-availability of adequate resources with the parastatal agencies; need for involving all the stake holders including the industrial/ co-operative/ private sector /institutions besides promoting public-private collaboration for making housing for all a distinct reality.

Preamble of the Policy, 2007 defines the intent, content and scope of the policy in terms of;

- *Shelter is a basic human need next only to food and clothing. At the end of the 10th Five Year Plan, the housing shortage is estimated to be 24.7 million. However, urban areas in our country are also characterized by severe shortage of basic services like potable water, well laid out drainage system, sewerage network, sanitation facilities, electricity, roads and appropriate solid waste disposal. It is these shortages that constitute the rationale for policy focus on housing and basic services in urban areas. This policy intends to promote sustainable development of habitat in the country with a view to ensuring equitable supply of land, shelter and services at affordable prices to all sections of society. Given the magnitude of the housing shortage and budgetary constraints of both the Central and State Governments, it is amply clear that Public Sector efforts will not suffice in fulfilling the housing demand. In view of this scenario, the National Urban Housing and Habitat Policy, 2007 focuses the spotlight on multiple stakeholders namely, the Private Sector, the Cooperative Sector, the Industrial Sector for labour housing and the Services/Institutional Sector for employee housing. In this manner, the Policy will seek to promote various types of public-private partnerships for realizing the goal of Affordable, 'Housing For All'.*

● NEED FOR POLICY

In addition to preamble, policy also tries to bring out the need for bringing out specific and dedicated policy for urban housing in terms of ; defining the Role and Importance of housing ; peculiarities of Indian urbanization ; context of cities in the development ; rapid rural- urban migration; need for promoting balanced Regional Development; need for developing green field integrated cities; intensity and density of urban poverty; various housing policies/programs carried out in the past and focus areas.

Policy details out the various factors which warrant the need of housing policy, as under;

- India is urbanizing rapidly in the post-independence period. The process of urbanization in India is marked by increasing concentration of population in comparatively larger cities
- There exists mismatch between demand and supply of housing units with shortage placed at 24.7 mdu at the end of 10th five-year plan with 99% shortage prevailing in Economically Weaker Sections/ Low Income Groups

sectors. Shortage estimated to be to the tune of 26.53 million units for 75.01 million households during the 11th Plan.

- Every fourth poor in India lives in urban areas, the issue of affordability / Social housing assumes priority and remains area of focus in the urban context.
- Growth of the Indian workforce is primarily characterized by an increasing level of urbanization with majority of workforce witnessing a rural to urban shift, making urban areas as their preferred destination. Urban areas remain largest generator of the opportunities of gainful employment as compared to rural areas.
- Rapid growth of informal sector in urban areas leading to strong trends towards casualization and feminization of the urban workforce.
- For developing rural and urban areas in a symbiotic manner and creating a symbiotic rural-urban continuum
- Need to develop a *special focus on the eight States of the North-Eastern Regional Council* due to a lesser level of socio-economic development / highly sensitive ecology of the region.
- 50% of India's population forecasted to be living in urban areas by 2041, need to develop new integrated townships, located at a reasonable distance from medium or large existing towns.
- Large contribution made by Housing Sector (4.5%) to India's Gross Domestic Product (GDP) in 2003-04 at current prices besides employing 16% of the Indian work force in Construction/ Transport Sector
- Multiplier effect on industrial activity and large employment generation in economy based on investment in the Construction/Housing Sectors- eight times the direct employment (IIM Ahmedabad :2005);
- Significant proportion of housing stock characterized by congestion and obsolescence; particularly in inner city slums and peripheral slums holding 23.1% of the urban population with much higher proportion living in slums in metropolitan cities (55% in case of Mumbai).
- Housing in slums largely characterized by; poor quality of housing stock; insecurity of tenure; severe deficiency in basic services including potable water, sanitation, sewerage, storm water drainage and solid waste disposal; poor quality of *urban health and hygiene*.
- Need to improve the quality of life in urban areas/slums through urban renewal; in-situ slum improvement and development of new housing stock in existing cities as well as new townships; and quality provision of basic services to improve safety and productivity of workers
- Working Group on Urban Housing for 11th Plan placing total investment for meeting the housing requirement up to 2012 to be Rs.3,61,318.10 crores involving Rs.1,47,195 crores for mitigating housing shortage at the beginning of 11th Plan and Rs.2,14,123.10 crores for new additions during the 11th Plan period including construction of pucca houses/ upgradation of semi-pucca / kutchha housing units.

- Non-affordability by EWS/LIG families in urban areas and poor access to services in slums with 9% deficiency in drinking water, 26% in toilets and 23% in drainage (2001 census).
- Need for recognizing role and importance of small and medium urban agglomerates/towns for future urban growth to serve as generators of economic momentum & reduce migration to existing large cities.
- To continue the agenda of 1994 and 1998 Housing Policies, to attract Foreign Direct Investment (FDI); to increase supply of land serviced by basic minimum services to promoting a healthy environment.
- Deepening the role of Government as a 'facilitator' and 'regulator' by dedicated marking of land for the EWS/LIG groups in new housing projects for making available affordable housing, considering poor affordability and prevailing high land pricing in urban land
- Focusing on making provision of basic services; providing "Affordable Housing for All", with special emphasis on vulnerable sections of society including Scheduled Castes/Scheduled Tribes/Backward Classes/Minorities/disadvantage and providing access to poorest of poor to reasonably good housing on rental /ownership basis with suitable subsidization.
- Developing innovative financial instruments like development of Mortgage-Backed Securitization Market (RMBS); Secondary Mortgage Market; attract Foreign Direct Investment (FDI) in integrated development of housing /new township development besides providing appropriate fiscal concessions for housing and infrastructure.
- Looking at good practices/ innovations in housing /infrastructure in Public-Private-Partnerships, conservation of natural resources and formulation of environment friendly, investment-friendly and revenue-generating regulations & bye-laws.
- To accelerate construction activities for giving boost to employment for vulnerable sections of society.
- Promoting development of cost-effective, quality approved building materials / technologies for making buildings cost-effective;
- Complementing poverty alleviation and employment generation programmes for achieving objective of "Affordable Housing for All" with sustainable development.
- Dwelling upon the roles of various stakeholders related to Land, Finance, Legal and Regulatory Reforms; Technology Support and Transfer.

AIMS

Aims to be achieved under the policy has been mandated under different contexts of housing in terms of Urban Planning; Affordable Housing; Increase flow of funds; Spatial Incentives; Increase Supply of Land; Special Provision for SC/ST/OBC/Minorities/Disabled; Special Provision for Women; Employment Generation; Public-Private Partnerships; Management Information System and Healthy Environment, as detailed below;

- Reviewing periodically/updating Master Plans /Zoning Plans for making adequate provisions for housing /basic services for the urban poor by the State Governments/ Urban Local Bodies/ Development Authorities.
- Promoting balanced urban-rural planning through Regional Planning under Town & Country Planning Acts.
- Planning Mass Rapid Transit Systems (MRTS) at the Metropolitan Planning Area / Sub-region levels.
- Accelerating the pace of development of housing and related infrastructure.
- Creating adequate housing stock on rental / ownership basis with focus on improving affordability of the vulnerable/ economically weaker sections of society through financial support.
- Leveraging technology for modernizing the housing sector for enhancing energy /cost efficiency, productivity and quality with focus on 'green' and 'intelligent' buildings; making buildings safe against natural/manmade disasters including earthquakes, floods, cyclones, etc.
- Promoting larger flow of funds from governmental / private sources for housing /infrastructure by designing innovative financial instruments.
- Designing suitable fiscal concessions in consonance with the Housing and Habitat Policy with appropriate monitoring to ensure that concessions are correctly targeted/ utilized.
- Removing legal, financial and administrative barriers for facilitating access to tenure, land, finance and technology.
- Shifting to a demand driven approach and from subsidy-based housing schemes to cost-recovery-cum-subsidy schemes for housing through a proactive financial policy including micro-finance and related self-help group programmes.
- Providing spatial incentives in terms of relaxation of Floor Area Ratio (FAR)/ TDR for reserving 20-25 % FAR for EWS / LIG and for clearance of transport bottlenecks in the inner-city areas/ making available additional FAR in Outer Zones for promoting EWS/ LIG housing.
- Reviewing FAR in line with international practices, for optimizing use of scarce urban land /constructing high rise buildings.
- Facilitating accessibility to serviced land /housing with focus on economically weaker sections and low-income group categories; enabling institutions at State /Centre levels/ private sector for increasing supply of land.
- Meeting needs for housing /basic services of; Scheduled Castes/ Scheduled Tribes/Other Backward Classes/Minorities/Disabled persons/Slum dwellers/ Street vendors/ Informal sector workers/other vulnerable sections of society.
- Making women, partners in decision making in formulation / implementation of housing policies and programmes & addressing special needs of women headed households/single women/ working women/women in distress in relation to housing serviced by basic amenities.
- Upgrading construction skills/accelerated development of housing/ infrastructure sectors, for promoting employment generation.

- Forging strong partnerships between public, private/cooperative sectors for accelerated growth in Housing/sustainable development of habitat.
- Creating a Management Information System (MIS) in the Housing Sector for strengthening monitoring of building activities in country.
- Developing healthy /environment friendly cities/towns through the use of renewable energy resources/ effective solid waste management based on recycling.
- Protecting cultural heritage / architecture & promoting traditional skills with suitable adaptation to modern technologies.

Role of Government, Urban Local Bodies & Other Agencies

In the Constitution of India Housing, as a subject, falls under the state list and exclusive domain of the State government under the broader category of property/land. Accordingly, states have the exclusive power and authority to make policies/programs/ laws/ rules and regulation governing the land/property / housing. Since housing remains a basic human issue, having larger connotations and implications beyond the boundaries of states, promoting housing on a larger scale, eliminating shortage of housing; making available housing for all and protecting the rights, duties of the weaker sections of the society; creating uniformity of approach at national level; making adequate resources available for housing; supporting the local initiatives etc., national governments always intervene and support local/state level authorities in creating adequate housing stock in their area of operation. However, taking cognization of the limitation imposed in the constitution, Government of India, while defining the policy, also included defining the specific roles of various authorities involved in housing at the national/state/local level to create adequate stock of housing in country by ensuring that all stakeholders work in tandem, by bringing them on a single platform and preparing annual action plan, to achieve the defined objectives of the policy. Their roles have been defined as under;

Role of Central Government

- To act as a 'facilitator', 'enabler' for creating an enabling environment for facilitating role of State Governments, Urban Local Bodies, Parastatals and Private & Co-operative Sector and Non-Government Organizations in promoting housing in their areas of operation/jurisdiction.
- To advise/ guide the State Governments to adopt/ implement National Urban Housing & Habitat Policy, 2007 in a time bound manner.
- To promote balanced regional development in the country by suitably decentralizing functions relating to development of Housing Sector/ promoting ecologically sound habitat.
- To act as an enabler /facilitator by developing suitable financial instruments for promotion EWS /LIG group housing, serviced by basic amenities.
- To promote Action Plans for creating adequate infrastructure relating to water, drainage, sanitation, sewerage, power supply and transport connectivity.

- To develop economically viable housing promotion models and standards for provision of physical, social/economic services.
- To promote systematic planning at City/Metropolitan Area/ District and Regional levels.
- To encourage adoption of critical urban reforms relating to municipal laws/ building bye-laws/simplification of legal/procedural frameworks/ property title verification system & allied areas.
- To promote policy for safeguarding the rights of street vendors with appropriate restrictions, considering public interest.
- To ensure elimination of ambiguities in conveyance deeds/ lease deeds& property related documents
- To promote / observance of the National Building Code (NBC), 2005.
- To devise macro-economic policies for accelerated flow of resources for housing/ infrastructure sector.
- To incentivize fiscal concessions for promoting housing/ infrastructure with special focus on EWS/LIG beneficiaries combined with a monitoring mechanism for effective targeting and facilitating viability gap funding of integrated slum development.
- To encourage FDI in urban housing and infrastructure sectors.
- To develop convergence between urban sector initiatives / financial sector reforms.
- To develop a National Land Policy for optimal use of available resources including enhanced supply of serviced land for sustainable development.
- To promote appropriate ecological standards for protecting healthy environment/providing a better quality of life in human settlements with focus in coastal areas, to promote fragile ecology; protect mangrove & allied plantations in coastal areas/in high disaster-prone ones; and to avoid loss to life from natural disaster.
- To develop a nation-wide Management Information System (MIS) relating to housing / allied infrastructure for informed decision making.
- To promote Research & Development (R&D) in alternate building materials/ technologies / energy conservation practices in housing
- To promote standardization & quality marking of building materials.

Role of State Government in consultation with Urban Local Bodies:

- Prepare/ implement State Urban Housing & Habitat Policy (SUHHP)
- Act as facilitator/ enabler in collaboration with ULBs/parastatals/ Private Sector/Co-operative Sector/NGOs regarding Integrated Slum Development Projects/Integrated Township Development Projects/ ensuring flow of adequate financial resources/ undertake viability gap funding of large housing / habitat development projects.
- Prepare medium /long term strategies for tackling problems relating to provision of adequate amenities/basic services.
- Promoting/incentivizing/ decentralized production and availability of local building materials

- Preparing / updating Master Plans / Zonal Plans, Metropolitan Plans/ District Plans/ State level Regional Plan with provision of adequate land for urban poor.
- Promoting balanced Regional development
- Reviewing legal/regulatory regime for simplification/ rationalization for giving boost to housing and supporting infrastructure.
- Enable urban local bodies to take up regulatory /development functions.
- Promoting Public-Private Partnerships for undertaking housing and infrastructure projects.
- Encouraging partnership between Cooperative Group Housing Societies/ Employees Organizations/labour housing/NGO/CBO & Urban Local Bodies/ Parastatals, related to housing microfinance and housing development.
- Promoting in-situ slum upgradation by collaborating with Central Government, State Government, Urban Local Bodies, Banks/MFIs /beneficiaries.
- Facilitate training /skill upgradation of construction workers.
- Developing appropriate Management Information System for different level of governance.
- Promoting R&D activities in building materials / technologies in housing and infrastructure projects
- Promoting optimal utilization of land by relaxing FAR for ensuring 20-25% of FAR reserved for EWS/ LIG units or issuance of TDR for clearance availing FAR in outer zones.
- Reviewing/rationalizing/ redefining Floor Area Ratio (FAR) in line with international practice for optimum/ efficient use of scarce urban land through construction of high-rise buildings /densities specified in statutory Master Plans
- Developing Greenfield towns & integrated housing extensions of existing towns with infrastructure /SEZs using FDI and national investments in housing and infrastructure
- Ensuring connectivity of integrated housing projects through MRTS corridors

Urban Local Bodies/Development Authorities/Housing Boards

- Developing capacity building programs at the local level to design/ take up inner-city development scheme/ in-situ slum upgradation projects / slum relocation projects through suitable training programmes.
- Implementing Central/State housing and infrastructure schemes at the city level with provision for EWS/ LIG beneficiaries in Master Plan /Zonal Plans.
- Enforcing regulatory measures for promoting planned development; checking unauthorized colonies; new slums; unauthorized constructions, extensions of existing properties and commercialization of residential areas.
- Ensuring periodic up-dation of Development Plans/Master Plans/ Zonal Plans/Local Area Plans for housing the homeless & slum dwellers.
- Preparing Master Plan/Metropolitan Plans in tandem with District Plan/State Regional Plan.

- Identifying city specific housing shortages & prepare city level Urban Housing & Habitat Action Plans for time bound implementation
- Promoting planning /development of industrial estates duly supported with necessary basic services for labour housing colonies.
- Mending building bye-laws based on model building bye-laws prepared by TCPO & National Building Code with provisions made for energy conservation/ rain water harvesting.
- Promoting participatory planning and funding based on potential of local level stakeholders. Develop suitable models for private sector's assembly/ development of land for housing, as per Master Plan.
- Promoting Residents' Welfare Associations for operation/ maintenance/ management of services and solid waste disposal at colony level.
- Devising innovative housing programmes for bridging housing shortage with focus on vulnerable groups.
- Promoting healthy environment with emphasis on 'green lungs' of the city involving parks, botanical gardens, social forestry and green belts around cities/towns.
- Ensuring Safety in residential/institutional areas with construction of boundary walls and installation of security systems.

Banks and Housing Finance Institutions (HFIs) would:

- Make financial institutions more inclusive for low-income beneficiaries belonging to EWS LIG ; extend coverage in low- income neighbourhoods.
- Promote innovative financial instruments- development of Mortgage-Backed Securitization Market (MBSM), and Secondary Mortgage Market.
- Enhance / strengthen income spread of housing loans portfolio to increasingly cover BPL/EWS beneficiaries by adopting flexible and innovative approach to credit appraisal norms.
- Develop financial products encouraging EWS /LIG housing beneficiaries to take insurance cover.
- Incentivizing the HFIs for ploughing part of resources for financing slum improvement and upgradation programmes.
- Providing loans at concessional rate of interest to specified persons for purchasing house site /house.
- Devising subsidy schemes for housing finance for EWS /LIG housing
- Promote MFIs / Self Help Groups for mobilizing savings; providing housing loans to EWS/LIG segments, as a priority sector.
- Encourage potential EWS & LIG beneficiaries to form Cooperative Group Housing Societies
- Promoting land assembly & development of land to suit client's requirements.
- Involving private sector/cooperatives for housing/ infrastructure development with focus on BPL /EWS and LIG segments
- Undertake land assembly and development with infrastructure; using land as a resource for housing, with focus on urban poor.

- Reducing dependence on budgetary support through better product development and implementation
- Designing innovative public-private partnerships for slum reconstruction using cross- subsidization.
- Augment housing stock on ownership and rental basis for overcoming shortage of EWS/LIG housing units.

Role of Research & Development Standardization and Technology Transfer Organisation

- Undertake research with focus on innovative, cost-effective and environment-friendly technologies based on climate.
- Develop / promote standards in building components, materials, construction methods and disaster mitigation techniques.
- Intensify transfer of innovative technologies/ materials from lab to field.
- Accelerate development to conserve water, stop soil erosion and regenerate tree cover to improve habitat.
- Encouraging Land assembly, development and disposal in public / private sectors.
- Promoting land assembly for specified use, based on Master Plan/ Development Plan of each city/town. Reserving for EWS/LIG housing 10-15% of land in every new public/private housing project or 20 to 25 percent of FAR / Floor Space Index, which is greater, through appropriate legal stipulations/ incentives by Urban Local Bodies and Development Authorities
- Preparing special Action Plan for urban slum dwellers with focus on SC/ST/ OBCs/Minorities/EWS/physically handicapped/Minorities.
- Beneficiary-led housing development encouraged with defined percentage of Public Sector land allocated on concessional institutional rates to Cooperative Group Housing Societies/ Employee Welfare Organizations for providing housing to members on no-profit no-loss basis with special package worked out for Labour Housing.
- A Secondary Mortgage Market and Residential Mortgage Based Securitization (RMBS) promoted to enhance transparency and flexibility in the housing market.
- Model Rent Act to be prepared by GOI to promote rental housing on the principle that rent of a housing unit should be fixed by mutual agreement between the landlord and the tenant for a stipulated lease period taking care of interests of both owner and tenant.
- Setting up of National Shelter Fund under National Housing Bank for providing subsidy support to EWS/LIG housing
- Housing and Urban Development Corporation Ltd. (HUDCO) to encourage EWS/LIG housing.
- Encouraging Foreign Direct Investment (FDI) from Non-Resident Indians (NRIs) and Persons of Indian Origin (PIOs) in the housing /infrastructure.
- Creating suitable fiscal concessions for promoting housing sector

- Central / States/UTs to promote innovative forms of public-private partnerships and develop 10 years perspective Housing Plans with focus on EWS / LIG sectors
- Developing Special financial /spatial incentives for inner-city slum redevelopment schemes / in-situ slum upgradation.
- Rationalizing stamp duty on the instruments of RMBS
- Encouraging Rental housing by preferred lending by financial institutions, for rental housing both by individuals/ companies/ employers for their employee
- Synergizing operation of various schemes and funding sources.
- Promoting Micro-Finance Institutions (MFIs) at State level to expedite the flow of finance to urban poor.
- Model Guidelines developed for regulation of land supply for reducing speculation in land / haphazard development in urban areas/along inter-city transport corridors.
- Repealing the Urban Land Ceilings Act, by the States In line with Central Government's decision
- Adopting single window approach for approval of Building Plans and securing completion/occupation certificates in collaboration with Council of Architects or their State/UT chapters.
- Adoption of the Model Municipal Law prepared by the Central Government with suitable modifications.
- Periodic revision of Master Plans undertaken with wide public participation
- Stamp Duty reforms initiated to bring incidence of duty in all States/UTs at par.
- Property Tax reform based on unit area method encouraged in all States/ UTs and ULBs.
- States encouraged to adopt the Model Cooperative Housing Act; refine/ enact Town and Country Planning Act, to promote Regional Planning at the State/UT level; using Information Technology for maintaining urban land records and providing non-encumbrance certificates on e-enabled data and digitized certification; enact Apartment Ownership Act; undertake urban reforms listed under the JNNURM; developing Citizen's Charter to safeguard the interests of customers of housing schemes offered by both the public and private sector; computerizing / put on Geographic Information System (GIS) land revenue records of the States/UTs; evolving guidelines for promoting environmental safeguards in respect of housing and construction projects.
- Encouraging States to prepare detailed city maps on the basis of the GIS mapping through satellite data, aerial survey and ground verification; using low energy consuming/ using renewal form of energy for construction techniques ; promoting rain-water harvesting technologies; using prefabricated factory made building components for mass housing to achieve speedy, cost- effectiveness and better quality construction; promoting low- cost local building materials based on agricultural and industrial wastes involving, fly ash, red mud and allied local materials;

promoting disaster resistant planning and technologies in different disaster-prone zones; mandating transfer of proven, cost-effective building materials and technologies from lab to land; including new building materials in state schedule of rates; constructing demonstration- houses using cost effective materials and alternate technologies evolved by BMTP.; using Bamboo as a wood substitute and as a general building component as mandated in CPWD manual.

- Encouraging ULBs/Development Authorities to follow Urban Development Plans Formulation and Implementation (UDPFI) Guidelines issued by the Ministry of Urban Affairs and Employment in 1996 to improve the quality of Master Plans/Development Plans, Zonal Plans / Local Area Plans ,of all cities/ towns.
- Developing Mass Rapid Transit System (MRTS) at the sub-regional level around metropolitan cities and developing a 'Habitat Infrastructure Action Plan' for all cities with a population of over 1,00,000.
- Developing Green belts around cities for maintaining ecological balance; green recreational areas like zoo, lakes and gardens earmarked /developed in the Master Plan of each city/town; Water bodies protected, with special emphasis on keeping the flood plains of tropical rivers free from construction or encroachments; protecting large depressions from being filled up for conservation of the total Master Plan area as '*green lungs of the city.*'; Minimizing development of urban sprawls and satellite townships; Reducing rate of in-migration into mega and metro cities through preparation of *Regional Plans* based on fast transport corridors for balanced growth; developing Model bye-laws to promote the use of renewable energy including solar water heating systems in residential/commercial buildings; formulating and implementing poverty alleviation and employment generation programmes, based on skills' training.
- Efforts to be made to provide good quality training to construction workers for improving their skills with technological advancements in the construction sector; upgrading the skills of women construction workers, induct them at supervisory levels and also develop them as contractors; enact legislation on the pattern of the Building & Other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 of the Central Government for ensuring adequate measures by employers for the occupational health and safety of all workers especially women engaged in construction activities; ensure use of modern techniques and modern safety equipment at construction sites with strict penalties for non-compliance.; providing adequate support services like crèches and temporary rest accommodation with appropriate toilet facilities at construction sites enacting legislation on the pattern of the Building & Other Construction Workers Welfare Cess Act, 1996 of the Central Government; ensuring adequate provision for skill upgradation of construction workers; adopting a decentralized pattern of training for ensuring better coverage.

- Promoting pattern followed under Jawaharlal Nehru Urban Renewal Mission for slum improvement / *in-situ* slum rehabilitation based on provision of security of tenure, affordable housing and basic services to the urban poor; launching innovative programs on upgrading of basic services and environment improvement of urban slums with a participative, *in-situ* slum rehabilitation approach; promoting *Inner-city slum redevelopment* programmes for creating a better environment with cross-subsidization and special incentives; Encouraging *Land pooling and land sharing arrangements* to facilitate land development and improvement of basic amenities in slums; Releasing Transferable Development Rights and additional FAR for accelerating private investment in provision of shelter to the poor; involving Community Based Organizations (CBOs), Non-Governmental Organizations (NGOs) and Self-Help Groups (SHGs) in partnership with the Private Sector; ensuring fast and reliable transportation to work sites; creating non-polluting Income generating activities in slums, on a mixed land use basis making them integral part of housing and habitat projects; encouraging formation of Group Cooperative Housing Societies of urban poor and slum dwellers for providing better housing serviced by basic amenities through thrift and credit based CBOs; encouraging preparation of a *State Urban Housing and Habitat Policy* and *State Urban Housing & Habitat Action Plan* through specific Acts by the States/UTs for achieving the housing policy objectives through legal & regulatory reforms, fiscal concessions, financial sector reforms and innovations in the area of resource mobilization for housing and related infrastructure development
- For augmenting/maintaining affordable housing stock along with related infrastructure, Action Plans of States/UTs to focus on accelerated flow of funds for housing and infrastructure; encourage promotion of planned and balanced regional growth; creation of sustainable employment opportunities; protection of weaker sections/ vulnerable groups preferably in their present residential location; conservation of urban environment and promotion of public-private partnership.
- The State Policy and Plan must provide a road map for institutional, legal, regulatory and financial initiatives related to;
 - (i) supply of land
 - (ii) modification of Acts/Bye-laws
 - (iii) promotion of cost-effective building materials and technologies
 - (iv) infrastructure development and
 - (v) in-situ slum development;

making specific provision for use of information technology for planning, MIS and online e-connectivity, in a time bound manner; Policy and Plan to also indicate concrete steps for motivating, guiding and encouraging a participatory approach involving all stakeholders like CBOs, NGOs, State parastatals, ULBs, Cooperative Sector and Private Sector for synergizing community, cooperative and private resources along with Government resources

Action Plan

Policy also mandates preparing an action plan at state level to periodically review/revise/and the policy from time to time in terms of ;

- *“Setting up of a monitoring framework at the State/UT level to periodically review the implementation of the Policy and Action Plan;*
- *Preparing 15-20 year’s City Perspective Plans — City Development Plans with emphasis on the urban poor;* indicating vision based on various levels of spatial plans –

Master Plan and Zonal Plans, Metropolitan Plan, District Plan and State/UT based Regional Plan – along with investment plan for their implementation

Setting up of a High-Level Monitoring Committee at the Central Government level to periodically review the implementation of the National Urban Housing & Habitat Policy 2007 and making amendments/ modifications considered necessary”.

Conclusion

- Looking at the intent, content and scope of the National Housing and Habitat Policy, 2007, it can be seen that policy erred in linking and integrating, creation of large housing stock in urban context with the planned and orderly growth and development of human habitat. However, both remain different in scope, operation and management but Housing Policy, 2007, wants to make them inclusive and totally dependent upon each other. Looking closely at the haphazard and unplanned pattern of development followed by majority of Indian cities, it will be inappropriate to link the two, otherwise much of the housing stock created in the urban areas will be both sub-standard and devoid of all basic amenities and services. Despite the fact housing and cities remain connected to large extent but they need to be delinked for their planning, operation and management for the reasons, agencies dealing them are not the same and scope of city planning differs vastly from creating appropriate shelter. Agencies involved in city development and providing shelter, in majority of cases, remain delinked and un-coordinated. Accordingly, housing and habitat need to be appropriately linked/delinked for achieving the objective of housing for all.
- National Housing Policy, 2007 was framed and made operational about 16 years back. Housing Policy was primarily based on the data/information made available by Census,2001. It is right time that policy needs review, revision and reframing, considering the changes/ transformation which have taken place in the urban/rural areas in last two decades. Launching of Smart City Mission covering 100 premier cities of the country; making operational Prime Minister Awas Yojnas for both Urban and Rural India ; creating large housing stock under these Yojnas; Government commitment to make available housing to all by 2022, when India turns 75 after independence;

making operational new construction technologies; message given by the ongoing pandemic Covid 19 involving locking down of cities and massive migration of work force from cities etc., calls for relooking at the existing Housing Policy and coming out with a new innovative and out of box Housing Policy 2023, which can launch India on the path of self-sufficiency and self-reliance in the domain of providing shelter for all.

- Looking objectively at the contents of the Policy, 2007; one can see large number of repetitions of same text occurring in the contents at numerous places, which could have been easily avoided. Policy tries to focus only on poor and EWS/LIG housing in all paras. Housing needs to be seen holistic for all sections of the society and should provide for adequate housing for all the citizens as the agenda and focus of the housing policy. This calls for having new strategies and options for creating adequate housing stock in the country catering to the need and affordability of all the economic classes covering the entire population of the country.
- Policy looks at the option of planned development through preparation and implementation of the Regional Plans/Master Plans as panacea for creating adequate housing/infrastructure in the urban areas, through the involvement of urban local bodies. Looking at the Indian context, Regional Planning remains conspicuous by their absence in majority of states in the country and Master Plans, for less than 40% of the Indian cities, have been prepared so far. Implementation of Master Plans remains another major issue in the urban context. Further, urban local bodies, don't have the capacity, authority, power, understanding, knowledge, expertise, capability, resources, manpower and will to prepare and implement the master plans and accordingly mandating them to be planning and development agencies has remained both a fallacy and has proved counter-productive for managing habitat and creating appropriate housing. Policy needs to critically and objectively, relook at the option of authorizing urban local bodies to prepare such plans, considering prevailing ground realities at the local level.
- Despite the fact policy provided mechanism for periodic review/revision/ amendment of the policy, it appears that it was never reviewed and revised. Had the policy been reviewed in stages, it could have been more effective, efficient and responsive to the changing housing needs of the society/ nation, as detailed above.
- New Housing Policy to be envisioned and made operational, should inter-alia look /focus at migrating from affordable housing to affordable living; looking at the life-cycle cost rather than at initial cost of the house. Policy should consider moving away from creating ownership of housing for avoiding speculation and resale of affordable houses created for EWS/LIG categories. Government should accept *Right to Shelter* but should never accept- *Right to Ownership of Shelter*. Both need to be segregated for making available housing for all in India a distinct reality. Policy must create large number of housing options catering to individual capacity, preference, resources and need for housing. Rental housing should be made the thrust

areas for creating large stock in the urban context to meet the ever evolving and devolving demand for housing. Developers must be encouraged to create large housing stock dedicated to rental housing. These flats should be incentivized in cities with defined limitations that they cannot be sold/transferred on ownership basis. For promoting rental housing, rent laws need appropriate amendments, based on the Model Rent Act, recently framed by the Government of India.

- In order to create adequate housing, successful model adopted by different countries would need study and adoption with appropriate changes. Transferring land ownership should be considered with care and caution. Land for housing should be leased and not made available on absolute ownership basis. Instead of plotted development, flatted development should be made the option. Restricting the number of ownerships of housing in one's lifetime must be made operational to minimize multiple ownerships. All development agencies operating at state/local level mandated to create large housing stock of rental housing in towns/cities. All urban local bodies must be mandated to create housing on regular basis at local level, through a dedicated provision made in their annual budget for housing, to create large stock of housing in the city. All institutions and industries must make housing for employees as integral part of the project cost. New policy should closely look at the use of innovative, cost-effective, material- efficient and time-efficient construction technologies and materials, which are locally available, evolving materials which are based on agro /industrial waste to make buildings cost-effective. Promoting standardization and pre-fabrication will be critical to shift housing from construction to manufacturing. Making buildings green will help in making housing more sustainable and energy/resource efficient. Effective and efficient Project management should be made integral part of new Housing Policy for bringing innovations and construction of projects without cost/time overruns. Creating dedicated data bank for urban migrants and existing housing stock will be critical to have realistic assessment of housing need of the country/cities. Rationalizing building bye-laws for optimizing the available urban land and using derelict land in urban areas, will be critical for creating adequate housing. Various options for sourcing land for housing at the local level will have to be studied and made operational to create land bank at local level. Slums need to be studied closely with regard to their, genesis, fabric, structure, origin and the residents, before taking a decision for their rehabilitation/shelter. All slums should not to be treated sacrosanct entitling total rehabilitation and rehousing.
- Looking at the entire context, it appears that providing affordable housing can become a distinct reality only if concerted efforts are made in tandem and in a holistic / sustained manner by all the stakeholders including Governments, parastatal agencies, financial institutions, private sector, builders, developers, colonizers, industry, and professionals including

Architects / Engineers/ Planners etc. Appropriate and realistic affordable-housing- friendly policy framework, based on existing ground realities, will have to be put in place on priority by the government, providing required incentives, removing all roadblocks and creating an enabling environment to achieve the desired objectives. Creating enabling environment for affordable housing would require the unequivocal support of right infrastructure, adequate investment and macro-economic policies targeted towards social and financial inclusion. Role of parastatal agencies should be that of facilitators rather than providers, with key responsibility given to the individuals, private, corporate and co-operative sectors. Reform linked policy framework ,calling for making land market effective and efficient; cutting down government levies/fees/taxes; promoting industries involved in producing pre-fabricated components and making building materials from waste; providing housing loans at concessional and affordable rates with flexible options of repayment; making landowners active partners in creating affordable housing on a mass scale and making all stakeholders work in a concerted/committed manner , would be critical in making affordable housing a distinct reality in the Indian context. Considering the ever evolving and ever devolving nature, challenges posed by affordable housing would require not only short-term options but also long-term strategies. Solutions will need to address both the supply side and the demand side issues of the housing market, and involve public-sector, private-sector and non-profit stakeholders. Considering the dynamics of affordable housing, both supply-side and demand-side will have to be brought on same wavelength and platform to address the challenges faced in terms of; acquisition and tenure of land, financing, designing, construction, materials, technologies, approvals ,taxes, levies and development costs on supply side and determining eligibility and number of beneficiaries, tenure of allotment and providing equitable access to credit on the demand side. Reforms are required at each stage of the housing value chain, from securing land, engaging local communities, to building and improving homes that are safe, resilient and sustainable. A multi-stakeholder environment is needed to address and calls for action from all entities involved – government, private sector and civil society. (*Insight Report on, ' Making Affordable Housing A Realty in Cities*).

- Looking at the role and importance of housing, affordable housing needs to be effectively leveraged to create/ expand/sustain large job market for unskilled/semi-skilled rural migrants; revitalize Indian industry; promote economy; achieving high growth rate and marginalizing poverty in urban India. Potential and opportunities offered by affordable Housing as a sector, needs to be effectively made use of/leveraged in making urban centers smart, more productive, more effective and efficient, healthier, better habitable, better organized, well- planned and more sustainable with assured quality of life.

Haryana Affordable Housing Policy 2013

With a view to create adequate stock of affordable housing in the urban areas of the state, Affordable Housing Policy was notified by the Haryana Government in the year 2013, under the Haryana Development and Regulation of Urban Areas Act, 1975. The Director General, Town and Country Planning, Haryana, was made the nodal officer to effectively implement the policy. The intent of the policy was to encourage Group Housing Projects having apartments of pre-defined size made available at pre-defined rate, within a specified time-frame to the eligible beneficiaries in the urban area of Haryana. Group Housing Projects licensed under the scheme were to be completed within a period of 4 years from the approval of building plans or grant of environmental clearance, whichever was later. No renewal of license was to be permitted beyond the stipulated period of 4 years period from the date of commencement of project

Siting Parameters:

In order to integrate the affordable housing projects with the planned development of the urban areas, affordable group housing was allowed only in the residential zone of the notified Development Plans of various towns/cities of the State. In addition, only defined area within urbanizable limits was permitted under the affordable category group housing projects, in different classes of cities, depending upon the estimated demand of such housing. For this purpose, state was divided into three distinct zones. Urban areas falling under high potential zone; mid potential zone and low potential zone. Highest area was provided in the urban centres falling under the high potential zone, whereas lowest area was permitted in urban areas falling in the low-potential zone. In high potential area of Gurgaon, Faridabad, Panchkula, Panchkula Extn, Pinjore-Kalka, area permitted under affordable group housing was limited to 300 Acres; whereas in the mid-potential zone comprising of, Sonipat, Panipat, Karnal, Dharuhera, Bahadurgarh & Sohna maximum area was placed at 150 Acres whereas in case of the rest of urban areas in the state, it was kept at 75 Acres for each town.

The applications for license, under this policy was mandated to be made in the format as prescribed in the Rule 3 of the Haryana Development and Regulations of Urban Areas Rules, 1976 and the said Rules were made applicable *mutatis-mutandis* for processing of the application under this policy. Further, the applications for license received under this policy were to be considered on First-Come-First-Serve basis after the notification of this policy. In order to ensure the rational distribution of affordable housing all over the urban areas of the state, the area permitted for such housing project in any residential sector, was limited to a maximum of 5% of the net planned area under residential zone under this policy. However, in case of residential sector having an area less than 100 acres, only one such project having an area of 5 acres was permitted. Further, maximum net area that was to be permitted under this policy in any residential sector was not to exceed 10 acres.

Applications under this policy for setting up group housing were to be received on an ongoing basis till the availability of area in any specific sector and/or any specific development plan vis-a-vis the area limits prescribed under this policy got licensed. Nevertheless, all applications received within 15 days of the notification of this policy were to be placed sector-wise in order of seniority. If only one application was received in a particular sector in this period, such application was to be considered on merits for grant of license as per minimum and maximum area norms defined. However, if more than one application was received during this 15 days period, then first two eligible applications were to be considered for grant of license for an area of 5 acres each, irrespective of the area applied.

In a subsequent amendment, in any residential sector, not more than 30 acres area under residential zone was to be allowed for projects under this policy. However, the additional limit of 15 acres along with the remaining area, if any, out of the 30 acres area limit, in each sector was to be allotted through a public notice giving window of thirty days' time, inviting applications for remaining area to be made available under this Affordable Group Housing Scheme. If the applications are of area more than the available net planned area in any sector, then draw of lots was to be held to decide as to whom the license was to be granted. Further, in case a portion of net planned area stand redundant due to grant of licenses in total 30 acres, a relaxation of 20% on minimum area norms of 5 acres, which comes to one acre was to be considered. However, the fee and charges was to be levied on total 5 acres but Floor Area Ratio (FAR), ground coverage was allowed on the actual area licensed.

Minimum and Maximum Area: The minimum and maximum area for such projects shall be 5 acres and 10 acres respectively, irrespective of the Development Plan, where such project is proposed

Planning and Area Parameters: In order to ensure the planned, orderly and rational development of the affordable housing colonies on a uniform pattern, well-defined planning parameters for such housing projects were put in place in terms of density, FAR, ground coverage, commercial areas, open spaces, occupancy norms, typologies of apartments, carpet areas etc. as defined below. However, in order to ensure economic viability/sustainability of the affordable group housing projects, policy made specific provision for specifying higher population density and higher floor area ratio, as compared to other housing projects, so as to create larger number of flats within a given area and a commercial area of 4%, for larger revenue generation in the projects.

- Minimum and Maximum density permitted: 850ppa (min) & 900ppa (max).
- Maximum FAR allowed: 225 .
- Maximum Ground Coverage allowed: 50% .
- Maximum area under Commercial Use: 4% of the Net Planned Area at 175 FAR.
- Minimum Area under organized Open Space: 15% of the Net Planned Area.
- Occupancy Norm (for density calculations): 5 persons per flat.

Type of Apartment and Area under such Apartments:

- The apartments of pre-defined sizes were, mandated to be allotted at a pre-defined rate to ensure provision of affordable housing under this policy
- The carpet area of the apartments was given to range from 28sqm to 60sqm in size.
- The term “carpet area” was defined to mean the net usable covered floor area bound within the walls of the apartment but excluding the area covered by the walls and any balcony which is approved free-of-FAR, but to include the area forming part of kitchen, toilet, bathroom, store and built-in cupboard/ almirah/ shelf, which being usable covered area, shall form part of the carpet area.
- No separate EWS category apartments were to be provided to eliminate any cross -subsidy component and to avoid any adverse impact on the affordability of apartments made available under this policy.

Parking Norms:

- The parking space were to be provided @ 0.5 ECS for each dwelling unit.
- Only one- two-wheeler parking site was to be earmarked for each flat, which was to be allotted to the flat-owners. The parking bay of two-wheelers was to measure 0.8m x 2.5m unless otherwise specified in the zoning plan.
- No car parking to be allotted to any apartment owner in such projects.
- The balance available parking space, if any, beyond the allocated two-wheeler parking sites, was to be earmarked as free-visitor-car-parking space.
- Additional parking norms and other planning parameters, if any, to be specified in the zoning plan.

Community Sites:

- The colonizer was mandated to provide the following community sites in the affordable housing project, which were to form integral part of the common areas /facilities, as defined under the Haryana Apartment Ownership Act:
- One built-up Community Hall of not less than 2000 sqft.
- One built-up Anganwadi-cum Creche of not less than 2000 sqft area.
- No other community sites were to be required to be provided in such project

Maintenance of colony

For ensuring proper maintenance and upkeep of the colony for five years by the colonizer, after the completion of the project, commercial component to the extent of 4% was allowed in the project to enable the colonizer to maintain the colony free-of-cost for a period of five years from the date of grant of occupation certificate, after which the colony was to be transferred to the “association of apartment owners” constituted under the Haryana Apartment Ownership Act

1983, The colonizer was not permitted to retain the maintenance of the colony either directly or indirectly (through any of its agencies) after the end of the said five years period. Engaging any agency for such maintenance works was left to the sole discretion and terms and conditions finalized by the “association of apartment owners” constituted under the Apartment Ownership Act 1983.

Allotment Rates ; Allotment & Eligibility Criteria:

In order to maintain parity in the state, regarding cost of the project and to avoid any fleecing by the colonizer of the allottee, policy clearly specified the rate at which flats were to be allotted. While fixing rates, due consideration was given to the prevailing land prices and other factors impacting the cost of construction in different cities of the state. In addition, the rate at which cost of balcony (defined to be min of 5ft clear projection) to be charged from allottee was also defined in the policy. However, area of the cantilevered balconies (unsupported on three sides) was not to be counted in the carpet area and was mandated to be free-of-FAR. The allotment rate for the Apartment units approved under such projects were as follows:

- a. Gurgaon, Faridabad, Panchkula, Pinjore-Kalka; the rate to be charged for the carpet area of the flat was to be @ Rs.4,000/- per sq. ft. plus Rs 500 per sqft against the balcony area, given in a flat up to and limited to 100 sqft, as permitted in the approved building plans.
- b. In Medium Potential Towns; the rate to be charged for the carpet area of the flat was to be @ Rs.3,600/- per sq. ft. plus Rs 500 per sqft against the balcony area given in a flat up to and limited to 100 sqft, as permitted in the approved building plans.
- c. Low Potential Towns, the rate to be charged for the flat was to be Rs.3,000/- per sq. ft. for the carpet area of flat plus Rs 500 per sqft against the balcony area up to and limited to 100 sqft, as permitted in the approved building plans.

Eligibility Criteria:

Eligibility criteria for allotment of flats under affordable housing scheme was detailed as under;

- a. Any person could apply, but among applicants, person, which includes his/ her spouse or his/her dependent children, who do not own any flat/plot in any HUDA developed colony/ sector or any licensed colony in any of the Urban Areas in Haryana, UT of Chandigarh and NCT Delhi, was to be given first preference in allotment of flat. An applicant in a specific colony was permitted to make only one application. Any successful applicant under this policy was not eligible for allotment of any other flat under this policy in any other colony. In case, he/she was successful in more than one colony, he/ she was given choice to retain only one flat. All such applicants were to submit an affidavit to this effect.

- b. Up to 5% of the total number of flats, as approved in the building plans, were permitted to be allotted by a licensee to its employees/ associates/ friends/ relatives etc. subject to the disclosure of their name/address and other identification details to the allotment committee and the allotment procedure for such flats was also to be completed along with the draw of flats for general category flats. The rates and eligibility criteria prescribed under this policy was to continue to be applicable on such preferential allotments also and the allotment procedure was to be completed along with allotment of general category flats. In case less allotments are made for such preferential category flats, the extra availability was to be merged with general category allotment.

Allotment criteria:

- The draw for allotment of apartments was to be held under the supervision of a committee constituted for the purpose by following a transparent procedure defined in the policy.:
- The developer was to invite applications through concerned Senior Town Planner (STP) by advertising at least three times in three newspapers (one leading English National Daily and two in Hindi language having circulation of more than 10,000 copies in the State). The applications were to be invited online by concerned STP of the respective circle and then allotment shall be made by the colonizer. The first draw of lots was to be held within four months from the date of first advertisement and there should be a gap of at least three months between any such two advertisements. After three such attempts by STP, the colonizer will make allotment of flats on 'First come First Serve bases on pre-defined rates
- All flats in a specific project were to be allotted in one go within four months of sanction of building plans or receipt of environmental clearance whichever was later and possession of flats was to be offered within the validity period of 4 years of such sanction/ clearance. Any person interested to apply for allotment of flat in response to such advertisement by a colonizer, was to apply on the prescribed application form along with 5% amount of the total cost of the flat. All such applicants were made eligible for an interest at the rate of 10% per annum on the booking amount received by the developer for a period beyond 90 days from the close of booking till the date of allotment of flat or refund of booking amount, as the case may be. The applicant was required to deposit additional 20% amount of the total cost of the flat at the time of allotment of flat. The balance 75% amount was to be recovered in six equated six-monthly instalments spread over three-year period, with no interest falling due before the due date for payment. Any default in payment was to invite interest @15% per annum. The project-wise list of allottees was to be hosted on the website of the Department.
- The scrutiny of all applications received as per the parameters prescribed in the policy was to be completed by the colonizer under the overall monitoring

of concerned District Town Planner (DTP). The scrutiny of applications by the joint team of colonizer and the concerned DTP was mandated to be completed within three months from the last date of receipt of applications as indicated in the advertisement.

- On completion of scrutiny as above, the concerned Senior Town Planner was to fix the date of draw of lots. Simultaneously the ineligible applications were to be returned within one month of completion of scrutiny by the colonizer indicating the grounds on which the applicants have been held to be ineligible along with the 5% booking amount received from such applicants. No interest in such case was to be paid.
- After fixation of date for draw of lots, an advertisement was to be issued by the colonizer informing the applicants about the details regarding date/time and venue of the draw of lots in the same newspaper in which the original advertisement was issued.
- The allotment of apartments was to be done through draw of lots in the presence of a committee consisting of Deputy Commissioner or his representative (at least of the cadre of Haryana Civil Services), Senior Town Planner (Circle office), DTP of the concerned district and the representative of colonizer concerned.
- Only such applications were to be considered for draw of lots which were complete and which fulfilled the criteria laid down in this Policy. However, it was possible that some of the application forms have certain minor deficiencies, viz., missing entry on the application form, incorrect/missing line in affidavit, illegible copies of certain documents. Such applications could also be included in the draw of lots. However, in case any of such applications were declared successful in the draw of lots, applicants were to be granted an opportunity of removing the shortcomings in their application in all respects within a period of 15 days, failing which their claim was to be forfeited. The said 15 days period was to start from the date of publication of the list of successful allottees in the newspaper marking those successful applications with minor deficiencies for information and notice of such applicants for removing such deficiencies and submit the same to the concerned DTP. The list of such successful allottees was also to be maintained on the website of the Department.
- A waiting list for a maximum of 25% of the total number of flats available for allotment, was also be prepared during the draw of lots who can be offered the allotment in case some of the successful allottees are not able to remove the deficiencies in their application within the prescribed period of 15 days.
- On surrender of flat by any successful allottee, the amount that can be forfeited by the colonizer - shall not exceed the following:- (aa) In case of surrender of flat before commencement of project -Nil; (bb) up to 1 year from the date of commencement of the project:- 1% of the cost of flat; (cc) up to 2 years from the date of commencement of the project: —3% of the cost of flat; (dd) after 2 years from the date of commencement of the project

5% of the cost of flat; The cost of the flat shall be the total cost as per the rate fixed by the Department in the policy as amended from time to time.”

- Such flats may be considered by the committee for offer to those applicants falling in the waiting list. However, non-removal of deficiencies by any successful applicant shall not be considered as surrender of flat, and no such deduction of Rs 25,000 shall be applicable on such cases. If any wait listed candidate does not want to continue in the waiting list, he may seek withdrawal and the licensee shall refund the booking amount within 30 days, without imposing any penalty. The waiting list shall be maintained for a period of 2 years, after which the booking amount shall be refunded back to the waitlisted applicants, without any interest. All non-successful applicants, shall be refunded back the booking amount within 15 days of holding the draw of lots.
- If any successful applicant fails to deposit the instalments within the time period as prescribed in the allotment letter issued by the colonizer, a reminder may be issued to him for depositing the due instalments within a period of 15 days from the date of issue of such notice. If the allottee still defaults in making the payment, the list of such defaulters may be published in one regional Hindi news-paper having circulation of more than ten thousand in the State for payment of due amount within 15 days from the date of publication of such notice, failing which allotment may be cancelled. In such cases also an amount of Rs 25,000/- may be deducted by the coloniser and the balance amount was to be refunded to the applicant. Such flats were to be considered by the committee for offer to those applicants falling in the waiting list.
- The colonizer is to issue advertisements on three separate occasions in case adequate number of applications are not received, after which if the situation continues to persist, the Government shall take a decision on the further continuance of such project on case-to-case basis on individual merits.

Applicable Fees & Charges:

- (i) Keeping into account the fact that a limited number of projects were to be allowed under this policy and the sale is to be affected at a predetermined rate, the license fees and IDC was waived off. However, scrutiny fees and conversion charges at prescribed rates were to be levied.
- (ii) Similarly, in order to minimize the impact of EDC rates on the viability of such a project, the rates and schedule of EDC applicable on plotted colonies were to be levied on such projects. In order to encourage early completion of projects, in case the colonizer completes the project in 3.5 years from the date of commencement of project and applies for grant of occupation certificate in such period, the payment of last instalment of EDC was to be considered for waiver after grant of occupation certificate.

SPECIAL DISPENSATIONS:

- (i) As a matter of security against any possible delinquencies in completion of the project, the coloniser was required to furnish bank guarantee against the total realization from the project at the rate of 15% for areas falling in the Development Plans of Gurgaon, Faridabad, Panchkula, Panchkula Extn and Pinjore-Kalka and at the rate of 10% for rest of the towns to be furnished within 90 days of the date of commencement of the project. The bank guarantee shall be proportionately released against block-wise occupation certificate obtained by the licensee. However 10% of the total bank guarantee submitted shall be retained to be released at the end of 5 years maintenance period.
- (ii) No allotment of flat shall be permitted until the date of commencement of the project. However, the formalities pertaining to the allotment of flats can be initiated at an appropriate date after obtaining the licence to enable the actual allotment of flat immediately after the date of commencement of project
- (iii) Once an apartment is allotted through the procedure as specified above, the same cannot be transferred by the coloniser to any other person by documentation in its records. Such apartments shall also be prohibited for transfer/sale up to one year after getting the possession of the flat to avoid speculation and to provide housing to the genuine persons. Breach of this condition will attract penalty equivalent to 200% of the selling price of the flat. The Penalty will be deposited in the Fund, administered by the Town and Country Planning Department so that the infrastructure of the State can be improved. Failure to deposit such penalty shall result in resumption of the flat and its re-allotment in consultation with the Department.
- (iv) The transfer of property through execution of irrevocable General Power of Attorney (GPA) where the consideration amount has been passed to the executor or any one on his behalf, was to be considered as sale of the property and same was to be counted as breach of terms and conditions of the policy. Penal proceedings as per the prescribed provisions were to be initiated.
- (v) The allotment letter and sale-purchase agreement entered into with the allottees will also include the parameters prescribed under this policy for maintaining complete transparency in the matter.
- (vi) The developer was to disclose in the Application Form. as well as in the advertisement, the complete set of specifications to be adopted for finishing/ fittings to be provided by the coloniser in the flat, viz., Flooring (Rooms, Kitchen, Toilet & Bathroom, Balcony, Common Areas, staircase etc.); Door & Window frame and panel; Kitchen Worktop & Wall finishing; Toilet & Bathroom fittings and wall finishing; Internal Electrical Wiring, fittings, electrical points etc.; Internal public health Services—pipes and fittings, sewerage and sanitary fittings; Wall finishing; Staircase and Balcony railings, etc.

Conclusion;

Looking into the entire gamut of affordable housing, Haryana Policy on Affordable Housing, appears to be a well thought out, well-reasoned and a realistic policy for favouring, promoting and obliging private sector, Policy aimed at incentivizing the private developers/colonizers, who have land available with them and would consider opting readily for the scheme. Scheme does not depend upon those categories of colonizers who were to source land and then take up development of such housing. Scheme, which appears to be tailor made, provided the policy of first come first served for grant of license. Limiting the area in each city and in each residential sector, is primarily and essentially meant to trigger competition/favouring colonisers/ developers to go and immediately opt for the scheme, who had resources and land readily available with them.

- In order to make scheme attractive and financially viable, lot of incentives have been built into the scheme. Scheme provides for liberalized development controls in terms of; density, ground coverage and higher number of dwelling units to make it financially viable and attractive. Scheme also provides maintenance for five years after completion of the colony, by the colonizer, which has been made possible by providing addition of commercial component, made available free of cost, which colonizer can leverage for raising funds for maintenance of the project for 5 years
- Further, the scheme is mandated to be completed within a period of 4 years, without any provision of extension, which is primarily meant for ensuring that project will have completion in the given timeframe and allottee will have the possession of the dwelling unit promised on time. Incentivizing the completion of the projects within 3.5 years instead of 4 years adds another positive dimension to the policy. However, no mention has been made, in case project is not completed by the colonizer within the given time, then how the project will be managed, thereafter.
- Fixing price based on the carpet area instead of covered area, brings transparency into the allotment price of the flat. However, the definition of the carpet area in the policy has been changed to favour the colonisers by including the area under services- kitchen/ bathrooms and circulation- as the carpet area, which entitles colonizer to charge money from the allottee for such areas, which don't form part of the carpet area. Involvement of the officials in monitoring, completion and allotment of the flats has been made, remains a positive aspect of the policy, to ensures the sanctity of the policy.
- Policy has lot of positivity, checks and balances inbuilt but also has number of negativities and limitations. So far so good, looking critically, objectively and rationally, policy at best can also be called self-financing housing policy, because the allottee has to make payment of the entire cost of the flat before taking over its possession and cost of flat is to be paid in 6 equated six- monthly instalments with initial payment of 25% made on allotment. So

the affordability has been limited to the persons, who have the resources available with them for paying the entire cost of the project. Scheme excludes the person who cannot afford to pay the total cost of the flat within 4 years. The cost of houses also remain very high from 12.5 lakh in the lower end to 25.5 lakh in the upper end of High Potential zone, which appears beyond affordability of majority of persons falling in such categories. Further non-payment of six-monthly instalments are mandated to attract high penal interest @ 15% per annum.

- Despite the fact, policy is named as affordable housing Policy, but nowhere in the policy word, “affordability” has been defined, in the absence of which it is difficult to make out who are going to be the beneficiaries under the policy . Looking at the entire context of the Affordable Housing Policy of 2013, it can be concluded that policy remains pro-colonisers, primarily and essentially, to create opportunities for sourcing business for them in lower category housing, by giving large number of incentives, relaxations and opportunities, which normally otherwise are not made available to other licensed residential colonies in the state.

Punjab Affordable Housing Policy, 2020

Introduction; With a view to overcome the existing gap between demand and supply and to ensure adequate supply of affordable housing for the targeted groups of lower and middle income families, living in the state of Punjab, Department of Housing and Urban Development, Government of Punjab, came out with a policy on affordable housing dated July 24,2020, titled as, “ Punjab Affordable Housing Policy, 2020.Policy superseded the previous policy for affordable housing announced by the government on July15, 2020. Policy has a focus limited to affordable housing pertaining to lower- and middle-income categories. Looking at the broad parameters of the norms prescribed for the area of the colonies and plot sizes defined under the policy, it appears scheme aims at attracting small time developers/promoters to plan and develop affordable housing for the lower-and middle-income groups. Policy is said to be based on the state commitment to create adequate stock of housing for lower income strata living in the state.

Operational Domain ;Affordable housing policy,2020, has a defined area for its applicability. Policy extends to three broad area of state, defined as under;

- Areas developed/ approved by Department of Housing and Urban Development
- Area earmarked for the residential and mixed land use zones in Master Plans
- Area falling within 3 km belt around municipal limits, even if, outside Master Plan. (In the policy, Regional Plan has also been treated as Master Plan for all intent and purposes of the policy).

Policy seems to have limitation in its area of operation and does neither cover the entire state, nor all the urban settlements existing in the state of Punjab. It has been made applicable only to those urban settlements, which have approved master plans in operation and appear to exclude, all other cities and towns for which master plans are either under preparation/have not been prepared and notified. Out of 168 statutory towns/cities in the state (2011 census), master plan for only 36 cities have been approved and notified so far, whereas remaining 132 towns of the state, for which master plans are under preparation/have not been prepared so far, remain beyond the operational ambit and framework of the policy. State so far has only one Regional Plan (Mohali Region) prepared and approved under The Punjab Regional and Town Planning Act, 1995. Further, in the cities where master plans have been prepared, affordable housing has been permitted in the area covered by land uses defined as Residential/Mixed land use zones. This has been done to limit the housing only in the conforming land use zones of the city. In case of cities, where master plans are in the process of preparation/ yet to be prepared, policy has limited application covering only that area which have been developed/ approved by the Department of Housing and Urban Development. This area constitutes a small fraction of the total urban area of the state. Further, policy provides for permitting affordable housing within the 3 kilometers belt around municipal limits, even if said area falls outside the master plan area. Provision does not specify, whether it covers the areas of the cities/towns whose master plan have not been prepared and notified.

In the fitness of circumstances, for achieving the objective of creating large stock of affordable housing, policy should have covered and made applicable to all the urban centers of the state, for exploiting the full potential of the scheme and create adequate housing stock in all the urban areas of the state. Under the existing policy, majority of the cities in the state will be deprived of the benefits of the scheme, state wants to provide, for creating adequate stock of affordable housing.

Planning Parameters; Policy contains and also details out various parameters for siting and planning of colonies for affordable housing in terms of; minimum area of colony; minimum right of way for accessibility to colony; allocation of areas under different land uses; maximum permissible saleable area; reservation for EWS; Commercial component permitted ; plot sizes; development controls; competent authorities for granting approvals for the change of land-use, layout plan, zoning plan and granting license to the colonies. Major planning parameters defined in the policy provide for;

- The minimum area of the colony for the plotted / mix of plotted and group housing shall be 5 acres and for group housing colony, minimum area limit prescribed is 2 acres, except SAS Nagar and New Chandigarh. In case of SAS Nagar minimum areas prescribed for Residential/mixed use Colony shall be 25 Acres/10 Acres; whereas in case of New Chandigarh it shall be 100/5 Acres for such colonies.

- Minimum width of existing road providing approach to colony having only plotted development shall be 22 feet to be widened to 40 feet or as per width of the road provided in the master plan, whichever is more. In case of colony having group housing/mixed development, the minimum width of road required shall be 40 feet, widened to width specified in the Master Plan.
- While defining the apportionment of the area under different land uses, policy uses the concept of gross area of the colony and effective area of the colony. Gross area is the total area of the colony, whereas effective area is the net area after deducting the area defined in the master plan for the city green and city roads from the gross areas. All amenities area has been defined on the basis of the effective area and not gross area, which could lead to considerable reduction of area available under different land uses.
- Maximum saleable area in the colony has been pegged at 60% including area reserved for EWS Housing. In case of EWS Housing, reservation has been made not in terms of area but in terms of 10% of total number of plots provided, which factually reduces the number of plots available for such category. Commercial component has been limited to 5% of the effective area which does not include the area provided under parking which is supposed to be not forming part of commercial area permitted, making the commercial component higher.
- Minimum area under park has been kept to be 8% of the effective area of colony with no park having width less than 50 feet. Minimum area under Community centre has been limited to 4% of effective site area whereas minimum internal road width has been defined to be 25 feet. Plot sizes have also been divided into two distinct categories, limited in area of 150/100 sq yards for affordable/ EWS categories. Maximum FAR permitted has been placed at 2.1, with maximum ground coverage permitted to be 70%. Developers have been granted freedom to sell the EWS units without the restrictions of PAPRA and without seeking permission of the competent authority. Construction on plots have been permitted at three levels including ground level construction. In case of independent floor plotted development, three units have been permitted on each plot with minimum area defined to be 150 Square meters. Stilt in such plots have been permitted for providing space for parking.
- Norms have separately been defined for group housing, where effective ground coverage has been limited to 35% of the site area, with FAR of 3 with freedom to have buildings of any height subject to building rules and clearance from the Airport Authority. Building format under group housing has been visioned to be multistoried with minimum of 9 storied buildings to achieve the defined FAR of 3 with maximum prescribed ground coverage. Area under green has been mandated to be 25% Of the plot area, with 15% area provided as composite green. Carpet area for the affordable category has been fixed at 90 Sqm, whereas for EWS category, it is defined in the range of 30-45 Sqm. Reservation for EWS has been kept at 10% of the plots

provided. In addition, parking spaces are required to be provided @1/0.5 ECS for dwelling units having area below 60 Sqm. Saleable component in the colony has been limited again to 65%, excluding the area under parking.

- In case of colonies having both plotted and group housing categories, norms for the plotted development and group housing will be made applicable respectively in the area covered by each of them. However, such development has been permitted to club the area to be provided for common categories of community centres, open spaces and utilities.
- For ease of permitting change of land-use , power of the competent authority is to be shared between Senior Town Planner /Chief Town Planner, of the Town Planning Department , depending on the area of colony. For colonies having area up to 10 acres, STP has been empowered, whereas in case of area exceeding 10acres, power to permit change of land use has been vested with CTP. Similar provisions have been made for approval of the layout plan/zoning plan in case of Plotted development. However, approval of the layout plan/zoning plan ,in case of group housing/ mixed projects having both plotted & group housing development, has been exclusively vested with CTP, irrespective of the area of the colony. Power to grant license to colonies in all cases has been vested with, Director, Town & Country Planning, Punjab; whereas power to sanction building plans has not been changed and remain vested, as mandated in the PUDA Building Rules, 2018.

Policy also provides freedom to developers to sell the EWS housing, without following any restrictions made operational under Punjab Apartment and Property Regulations Act, 1995, which empowers state to fix the price and define the procedure to be followed for fixing the price and allotment of the dwelling unit. Developers have also been exempted from following the density norms prescribed for different areas/cities in the master plans

Looking critically and objectively at the policy framework of Punjab Affordable Housing,2020 defined above, it appears that state feels that facilitating the developers by giving relaxation in the minimum area norms specified for the colonies; easing planning and development norms and enabling developers to have more saleable areas, will help in creating large stock of affordable housing. Policy appears to contain lot of dualities and inherent contradictions in its intent, contents and scope. In its eagerness to promote affordable housing, state is sacrificing all norms for promoting planned and orderly development by reducing the area under roads, limiting the width of accessible roads, excluding healthcare and educational facilities etc. from the ambit of affordable housing colonies.

Policy provides total freedom to colonizers from the densities specified/defined in the master plans. With minimum size of group housing fixed at 2 acres, having unlimited density and unlimited height of buildings, one can clearly foresee and appreciate the quality of affordable housing likely to come up into the cities of Punjab under the given policy. These residential developments are likely

to emerge as island of planned slums in the urban setting. Colonies coming up outside urban settlements/in the rural areas, will surely have implications in terms of accessibility, services, amenities, infrastructure, employment, meeting day-to-day needs of the residents and quality of life, which essentially support the residential components. These need to be addressed appropriately and rationally in the policy framework. In addition, all these colonies must be mandated to have adequate provision for rain water harvesting and generation of solar energy, so as to make them self-sufficient and self-contained in water/energy components. Mandating these colonies to be green rated will help, not only to make them affordable in real sense of the term, but also will help achieve the goal of affordable living, by reducing the energy/water cost for the entire life cycle of the buildings. Making building greens would also help the residents to remain more healthy and more productive.

Present policy, which is called the Affordable Housing Policy, includes two categories of housing i.e. Affordable Housing and EWS housing. How the policy differentiates these categories and does the policy exclude the EWS housing from the ambit of affordable housing for all intent and purposes, by classifying it as a distinct entity, remains unexplained and unexplored. Further, developers have been given the freedom to sell the EWS plots/flats in the open market without following the state policy framed for EWS/LIG housing for their disposal. This will defeat the very intent and purpose of the policy, because competing in the open market will be beyond the capacity/capability and resources of communities/people falling under the EWS categories to source houses in the open market.

Further, on one hand policy has defined a category for EWS housing for creating plots/flats for them, in addition reservation of 10% plots/flats has also been made for them in the policy; it is not known to whom these plots/flats will be made available when developers have been given freedom to dispose off these plots/flats in the open market. Policy also provides option to developers to provide EWS housing in the shape of plots of area 100 Syds. It needs to be examined whether, it be possible for EWS categories to secure these plots in the open market and then construct houses for them. Considering the high price of developed land, prevailing in the urban market, these plots, meant primarily and essentially for EWS categories in all probability, are likely to be siphoned off by the higher income categories. Policy also needs to define the basis and criteria of categorization of affordable and EWS classification in the domain of affordable housing. Policy contains numerous contradictions, inadequacies and deficiencies and it will be a misnomer to call it a policy. Policy does not holistically look at the tenets of National Housing Policy and the framework defined under four verticals of the Prime Minister Shehri Awas Yojna (U), to make it self-contained and innovative.

It will be wrong on the part of state to assume that simply by enabling and empowering private sector/developers, will help state create large stock of

affordable/EWS housing and achieve the national/state goal of '*Providing Housing for all*'. State needs to have a proactive role in the affordable housing category, by rationally framing the policy; defining the eligibility criteria for the section of the society intended to be covered/benefitted under the policy ; identifying/qualifying/ quantifying the intended beneficiaries; identifying places where such beneficiaries are placed; leveraging the setting up of such colonies in these areas; creating appropriate framework for financing of such housing ; defining /limiting the intended cost of such houses/plots to avoid fleecing of the intended beneficiaries; creating appropriate checks and balances for effective implementing of the policy and defining authorities at the local/state level for achieving the defined objectives of the stated policy. Policy also needs to clearly define the concern of demand side, supply side and that of intended beneficiaries and define the ways and means to address them to make the operation of policy seamless. Policy appears to have been lost in the haze of placing total faith/reliance on the private developers. Further state should endeavor and put in place a single policy pertaining to affordable housing covering the entire state, which is missing due to exclusion of large urban area from the ambit of the policy. It would have been better if Department of Local Government was also roped in to frame a single policy for promoting affordable housing in the urban settlements of the state of Punjab.

2.2 Housing Finance

As per information provided by the NSS 69th round (2012), during surveys carried out of the beneficiaries, households recorded ten different types of sources for financing the construction/purchase of house/flats for residential purposes which included; own money and labour; six institutional sources – government, bank, insurance, provident fund (advance/loan), financial corporation /institution and other agencies; and three non-institutional sources – money lender, friends and relatives besides other sources. In India, the predominant source of finance remains own-source which includes own earnings, savings and labour. Nearly 81% houses have been said to be financed by this source, where 82.4% rural households and 71.8% urban household have used this source for their house construction or purchase. Government source of finance was found to be higher in rural areas (9%) than urban areas (3.2%). In the rural areas, SC and ST groups remained major beneficiaries of the government sources. Low-income households have been found to be availing relatively more finances from money lender than the upper income households in the rural areas. Looking at the existing scenario it can be seen that there exists apathy and neglect of rural housing in India. In order to address the roadblocks existing in the rural housing, government will do well to put in a policy framework which puts rural housing at par with urban housing, by making available large financial resources for the rural housing.

Formal and Informal System of Housing Finance in India

Prevailing Financial System in India remains both complex and cumbersome, due to dualities and contradictions inherent in it. Complexity in prevailing financial system involves; network of financial institutions, financial regulators, financial instruments and financial services. Financial system is known to be major determinant and contributor to the effectiveness and efficiency of the operation/functioning of any economy. Besides allowing transfer of resources from savers to investors, financial system also known to mobilize/allocates scarce resources of a country for different sectors. The financial system transfers the financial resources from savers to investors in two ways ; firstly, by mobilizing the savings of small investors to make them available for productive purposes and secondly by acting as intermediary between savers and investors to enable transfer from to investors, who buy physical assets with those savings. In the prevailing financial system, the Housing Finance Companies are non-banking financial companies, whose principal business is to provide housing finance for construction/maintenance/upgradation of houses. They perform vital role in creating/upgrading the housing stock at the local, regional and national level. (Verma Amarjot; *Challenges and Opportunities of Informal Housing Finance in Rural Area of India*

Classification of Indian Financial System; Considering the entire gamut of prevailing financial system ;Indian financial system can be classified into two distinct categories involving; **formal financial system and the informal financial systems. Formal Financial System** comprises of network of banks, other financial and investment institutions and a range of financial instruments. **Informal Financial System** comprises of moneylenders, indigenous bankers, lending brokers, landlords, traders etc. Both these systems have distinct features, clientele, methods of operations, methods of lending; ease of doing business; documentation, procedures, positivity, negativities, strength and weaknesses.

Genesis;

India is passing through an era of rapid and massive urbanization, propelled/driven largely by rapid industrialization including IT/ITES; shifting pattern of employment; prevailing unemployment, disguised under-employment; rural poverty, rural- urban migration; rapid population growth; changing demographic profile and family structure; infrastructure, services, education, healthcare etc., which has led to ever increasing proportion of people opting and making urban areas as their space for living and working. Due to non-availability of sufficient resources; inadequate availability of affordable housing; poor affordability; increasing cost of land; large gap continues to exist between demand and supply of basic services, infrastructures and housing in urban areas. Most pronounced is the existence of acute shortage of housing. Considered as one of the basic human necessity, housing shortage has been found to be dominant, among

the population segment belonging to informal sector workers and households falling in the economically weaker section categories. Housing, remains highly resource intensive activity, requiring large financial and material resources. Failures of market to provide adequate resources for constructing/repair/upgradation of houses at reasonable, affordable and on time bound basis, have emerged as the major roadblock in creating need-based housing stock. Prime reasons for the non-availability of required housing stock has its genesis in the non-availability of adequate finances, which can be largely attributed to; prevailing lack of access to finance; informal employment, limited savings, alternative types of property rights, inefficient housing finance market etc.

Working of Housing Finance System of India;

The prime objective and basic purpose of a housing finance system is to make available adequate financial resources to the buyers for enabling them to purchase the house for sheltering him/her with family, at the defined location. Housing loan is stated to be an amount borrowed by an individual from any financial institution including banks, for a fixed period of time, which the borrower is required to repay along with the agreed rate of interest, within the stipulated time, based on pre-defined terms of loan. For sourcing housing loan from a formal institution *ie* bank, borrower need to provide certain documents and complete certain formalities and conditions, which involve time consuming process before loan is granted. Since housing is valued and considered as one of the basic needs for humans to live, the banks/financial institutions grasped the potential of the business opportunities embedded in the system and started making available housing finance on large scale. All banks are now involved in lending money for sourcing housing by the people and the communities. In fact, there exists a competition among the banks to advance loan, based on the increased demand, considering the fact housing loan remains the most safe and secure pattern of advance given by the financial institutions, where the default is recorded to be minimal. Housing finance is also valued as a catalyst for the growth of industry, because around 290 industries are said to be involved in making products, used in construction of houses.

However, the informal sector, comprising of poor people, working in informal sector, having little access to formal banks system, are invariably forced to tap options available for sourcing housing finance, other than formal system. Informal system, despite having high prevailing interest rate, when compared to the formal system, is preferred by such beneficiaries due to easy availability of loan, fewer formalities to be completed and easy accessibility in place and time, availability of loan whenever required at local level. There now exists numerous formal/informal housing finance institutions providing finance to the individuals, charging high rates of interest. Informal financiers include money lenders, landlords as well institutions such as credit cooperative associations and chit funds societies. Basically, this source is based on personal relationship

with lenders. Informal system of housing finance, is quite helpful for those who are not much literate and cannot go through number of formalities associated with formal housing finance schemes. Sometimes, people use the combination of both means using formal/ informal source for financing their housing requirements/needs.

Differentiating Formal & Informal Housing Financing Systems; Housing Finance market remains considerably large and dynamic, due to ever increasing demand for shelter and its continuous upgradation. Ever increasing human numbers and their changing structure and fabric, makes housing finance market evolving, devolving, never finite and never static. As already defined, housing finance market comprises of two major players/systems involving, Formal Housing Finance and Informal Housing Finance systems. Both of the housing finance systems cater to the housing loan requirement of borrowers but each source has its own characteristics, patterns of lending, clientele, operational system, documentation, cost of money etc. which differentiate the two sources. Major factors differentiating the two systems are briefed below;

- ***Borrowers/Clientele;*** Each source satisfies different categories of borrowers according to the demand of the borrowers. ***Formal source of finance*** is good for urban and regular income holders. Under this system, only those customers or borrowers are granted with credit facility for making home, who are having large scale business and having job in public sector, - good/reputed public enterprise or companies. Only literate clients are entertained. Whereas poor, who are engaged in informal working, are largely not facilitated by formal sources. They invariably remain dependent on informal system of finance. ***The informal housing finance*** institutions provides savings and credit facilities for lower income households and small-scale enterprises in urban areas. Limited/ uncertain source of income and employment, largely on casual basis and non-availability of financial resources due to poverty, economic weaker section and below poverty line, push them to be clientele for informal system.
- ***Documentation;*** Requirement of high collateral securities and complexity of procedures/documentation /securities involved in the loan disbursement are the distinct character of the formal system; However, requirement of formal documentation remains minimal in the ***informal system of housing finance***, involving money lenders, relatives, chit funds etc. In majority of cases of informal housing finance, only little/limited written records of the borrowings/ savings are kept, which makes sourcing of the loan quite simple based on the relationship of client with the association whereas formal sector keeps /maintains detailed written records on the activities of client, although the information recorded may sometimes be irrelevant.
- ***Illiteracy;*** Lack of awareness and prevailing illiteracy about government schemes invariably creates roadblock in grasping opportunities granted by government and formal banks; which makes informal system of housing finance a preferred option for rural and economically challenged households.

- **Procedure;** The procedures involved in the informal system of housing finance remain usually simple, personal, easy, direct and well impregnated with local culture and customs, therefore they are easily understood and appreciated by people opting for informal system of finance. Whereas formal system of finance remains poorly understood and conditions for granting loans remain invariably complex and not easily understandable by large proportion of population or poor savers, which excludes and keeps them away from the formal system of housing finance.
- **Operating time;** In the informal system of finance, time and settlement date for any agreement are operated according to the convenience of the client. Formal institutions are not found suitable by the informal section, due to fixed and inappropriate time of opening/operating these institutions, during which people belonging to the informal sector remain employed.
- **Transaction costs ;** Transaction costs are known to be invariably low in the informal system of housing finance when compared with those involved in the formal system.
- **Repayments rates;** Repayment rates of the loans advanced in the informal system has been found to be quite high; whereas repayments rates are known to be low in the formal system.
- **Amount advances;** Amount advanced as loan remain low in the informal financial system of housing as compared to the amount of loan advanced in the formal system.
- **Processing;** Processing of loan is direct and simple and loan disbursement has minimum delay in the case of informal housing finance whereas; processing of loan remains complex; time consuming and loan disbursement is invariably delayed.
- **Rejection;** Chances of the rejection of loan remain minimal minimum in the case of informal housing finance due to smaller amount and for the reason money is pooled by poor/local people only for getting loan. Rejection of loan has maximum chances in formal system due to numerous formalities/pre-conditions; when not fulfilled, leads to rejection of the loan.
- **Flexibility in Repayment;** In the case of informal system of housing finance, since loan provider is local and invariably is in touch with the person providing loan, who remains familiar with the problems of the members availing loan, therefore they can deal with repayment difficulties and can reschedule the debt period and instalments. However, in case of formal sector, institutions where the relationships are both impersonal and formal, having no close connection with the environment in which borrower operates, invariably leads to prosecuting defaulters, having negative social consequence and creating fear for providing loan to anyone without satisfying all the formalities
- **Security;** In the case of informal system of housing finance collateral security is demanded according to the local conditions and borrowers capacity and options remain flexible whereas in the case of formal system of housing finance, collateral security must match to the situation of relatively well-off

urban dwellers in the shape of deposits or savings accounts in a commercial bank/ property which can be mortgaged

- **Information System;** The informal sector has a good and effective information network existing at the grassroots level for close management and monitoring of borrower activity such as repayment of credit. This contributes to the efficient mobilization of savings and ensures high loan repayment rates. Formal system of finance, being formal, having little familiarity with the local conditions of the client invariably creates uncertainty in getting back loans and increasing the chances of default with risk becoming high for not getting repayment of loans
- **Cost of Money;** In the case of informal system of housing finance, lending rates are invariably high, never defined and never fixed, which makes the cost of money high when compared with the formal system of financing, where the rates remain well defined, generally low when compared with the informal system, varying with the state of economy, position of liquidity, government policies operational in the housing sector and prevailing rate of interest for saving accounts in the market. There also exists the option for switching loan from one institution to other depending upon favourable rates of interest, which makes the cost of money borrowed much less and affordable. At present the interest rates prevailing in the case of formal system of housing finance, are at the lowest level, hovering around 8.50% per annum.
- **Government Intervention;** Informal Housing finance sector is invariably ignored by the government and no grant or financial support is made available/ provided by the government, nor it is funded by any other donor agencies. Formal Housing Finance sector remains highly subsidized and incentivized by the government, with grants provided by the government, and funds provided by the donor agencies.
- **Tax Incentives;** In order to encourage the construction of houses, government in the formal system provides numerous incentives in the form of tax rebates for the loan/interest repaid up to specified limits, whereas no such incentives is available to loan sourced through the informal system.

Strategies and Options for improving the operation of the Informal Sector of Housing Finance;

House, because of its role and importance in human living, safety and security, is always placed higher in the agenda of all the governments to provide shelter to all. However, housing remains perpetually in deficit, particularly in the urban setting, due to rising population and other factors, promoting shift of residence from rural to urban etc. Rural housing also suffers from the problems of quality and availability of space. Poverty and lack of financial capacity limits the effort of majority of poor to source appropriate house. With sourcing loan from formal institutions remaining limited/difficult, due to lack of documentation and appropriate collateral securities, informal institutions provide the space for such

people to source housing loan. Therefore, there is need to empower/focus on the Micro-finance and informal housing sources, so that population living in housing deficit areas could also construct/purchase their houses.

Considering the magnitude of the problem, the central/ state governments have undertaken massive housing schemes/programs through partnering with public and private agencies. PMAY- U/R, have already been launched in the year 2015, to construct houses in the affordable categories to the extent of 38.9 million houses-10 million in urban India and 28.9 in Rural India by the year 2025. With majority of population living in rural India; and rural earning placed at much lower than urban earning in the absence of any regular income; rural/ poor population invariably needs financial support for constructing their houses and for improving the quality of structures from Katcha to Pucca, besides providing basic amenities and facilities as part of house. These, informal or traditional source of finance act as a supporting institution through which they can source housing loan for their shelter.

The Low- Income Housing Finance (LIHF) Scheme- World Bank initiative;

Looking at roadblocks occurring in providing options for securing housing loan, due to problems arising out of undocumented incomes and the nature of property right constraints, World Bank launched, 'The Low- Income Housing Finance (LIHF)' for providing funds to the poor /informal/low-income sections of society, with the objective of providing access to sustainable housing finance for the low-income households to buy, build or upgrade their dwelling. The said project has so far reached more than 15,000 low-income households across 17 states involving 17 primary lending institutions; even serving households headed by women. These informal sector beneficiaries are able to access formal housing finance loan at fully market -based rates. (*World Bank-Housing Poor in India, 2019*)

Under the LIHF, the National Housing Bank of India extends refinance for housing loans to qualified primary lending institutions, such as banks and housing finance companies, for granting sub-loans to urban low-income borrowers. The project applies market principles for lending to help develop housing finance markets. While targeted borrowers under the project can have both *formal and informal sources of income* as well as *collateral /primary security*, the objective is to test sustainable lending models for informal segments, given market failures in access to formal channels for these segments. The project supports upgrading the quality of affordable housing by applying safeguard measures, which helps improve human development outcomes. The project has made valuable contributions in terms of;

- i) inclusion and improved affordability of informal sector households;
- ii) establishing the sustainability of market finance approaches for low-income borrowers to access long-term housing finance; and,

iii) establishing a strong economic case for replication and scaling up.

To foster market development, the LIHF has supported innovations in underwriting and monitoring methods drawing on data analytics, expert systems, and use of alternate metrics (as compared to traditional predictors of default behavior that would have constrained financing for informal households). Successful innovation made in the project has given retail lenders much more confidence, to finance housing against informal incomes, and these lenders have continued offering their products to informal beneficiaries even outside the scope of the World Bank loan. (Shilpa Mishra-*Journal of Advances and Scholarly Researches in Allied Education*)

ROSCAs (Rotating Savings and Credit Association);

ROSCAs is another kind of model/option used/evolved for the rural poor for sourcing housing finance as an alternative to conventional/formal housing finance, based on prevailing social factors deciding and determining the credit-worthiness of participants. People use the system for securing cheaper housing loan, than being provided by other Indian housing finance corporations. The middle classes households are also known to use this option of finance for incremental building. ROSCA works and operates as under;

- ROSCA consists of a group of participants – women, men or even children – who deposit a daily, weekly or monthly fixed contribution in a common pot which is allotted, in part or whole, to each participant in turn.
- Number of participants collect and pool their money and the allocation of the fund is made on a monthly basis, till all participants have received the kitty once.
- In this system, first receiver of the fund obtains a loan from all the other ROSCA participants, while the last receiver in the queue has been saving for the entire cycle. All other participants alternate between the position of debtor and creditor. System remains a very personal intermediary between savers and borrowers where a give-and-take process is involved.
- The fund collected can be distributed by means of; lottery, auction, seniority, negotiation, consensus or the decision of the organizer.
- As a source of housing finance- it is both a short or medium-term finance, with maximum cycle of 50 months. Optimal length of a cycle for registered chit fund is maximum 20 months to maintain the social control mechanism.

Looking at the entire context of housing, it can be seen that housing essentially remains an individual initiative and individual achievement, accordingly, it becomes important that for making *housing for all* a distinct reality, individuals need to be promoted and empowered. For making housing possible for all, it will be vital to provide options for sourcing funds for buying/constructing houses. Accordingly, it will be vital to put in place multiple options for securing funds for housing, considering the nature of employment, prevailing culture, capacity of borrower, sources of income, cost of house, savings and requirement of funds.

Housing finance market in India comprises of two major players, formal and informal. Both are known for their positivity and negativities. Both have their dedicated clientele. Both the systems are serving communities and have helped in providing funds for financing the housing. With government incentivizing the housing sector, commercial banks have emerged the major players in financing housing. However, ticket size of the bank loan has been higher and accordingly, banks have been catering to both salaried and the MIG/HIG groups in funding. Lower prevailing rates of interest of housing loans have also made banks, as the preferred destination for sourcing housing finance.

Government of India, has also made available options for financing the housing created under PMAY, where funds/support to the tune of 1.5 lakh is being provided to low-income beneficiaries in subsidizing the bank interest or as an option for constructing the house and also in the category of in-situ slum upgradation to the tune of rupee one lakh per household constructed. All these resources have been made available through institutions providing housing finance in the formal sector. HUDCO created by Government of India, also provides funds through a formal system of housing finance.

However, despite making rapid strides in formal housing finance system, informal system of housing remains marginalized and diluted. Government should take immediate steps to review, rationalize, redefine, implement and give security to the informal system so that poor people could also make proper use of finances offered by such institutions at reasonable rates to build their home by taking loan. Considering the large proportion of population remaining out of the ambit of formal system, informal systems need also be recognized, rationalized, empowered and redefined on priority to make the availability of housing finance universal, irrespective of area, cast, economic status etc.

Further financial requirement of housing of informal sector remains small and limited when compared to formal system, because poor people also have variety of personal liabilities in terms of domestic expenses; home repairs; wedding and other expenses related to business development and security of earning members etc., therefore government need to develop on priority, new approach/agenda for providing finances for housing granting loan. Micro-finance can be one of the mediums through which supply of loans could be made possible by framing Self Help Groups'. Institutions like NABARD , need also be roped for providing, ROSCA type of system so that guarantee could be given for poor savers and through that they can take loan and built their houses. HUDCO and other NHB must promote SHG's, thrift, ROSCA's and chit funds models to bring and make informal system of financing, integral/accepted pattern of housing finance , both in urban and rural areas.

The objective of the World Bank intervention was to push the frontiers of housing finance markets, understand the limits of this expansion, and thereby redefine the role of public policy. The LIHF provides strong evidence that income *informality* tends to constrain access to formal finance more than *affordability*

and that with the right product design, flexibility, and risk mitigation practices, these constraints can be meaningfully addressed. However, despite distinct advantages, informal housing finance system is invariably plagued with large number of exploitative/ illegal practices , which need to be eliminated to make informal system; transparent, supportive objective, effective and efficient. It needs to be effectively regulated/monitored and made eligible for incentives, made available under the formal system through a well- defined legal framework, made operational on priority.

National Housing Bank-NHB

Adequate availability of long-term financial resources remains critical for creating adequate housing stock . Major roadblock in making *housing for all* ,a distinct reality remains a mirage for people falling in the category of economically weaker section of the society. Accordingly, creating multiple options, for providing finances remain critical and important. Considering non-availability of long-term finance to individual households as a major roadblock in housing; Sub-Group on Housing Finance for the Seventh Five Year Plan (1985-90), recommended the setting up of a national level institution. RBI examined and recommended the setting up of National Housing Bank as an autonomous housing finance institution. National Housing Bank Act,1987 provided the legislative framework for the establishment of bank and made bank operational in 1988. Reserve Bank of India contributed the entire paid-up capital for the bank. The National Housing Policy, 1988 had also envisioned the setting up of NHB as the Apex level institution for housing

National Housing Bank (NHB), remains the apex regulatory body for overall regulation and licensing of housing finance companies in India. It operates under the jurisdiction of Ministry of Finance , Government of India. NHB has been established with an objective to operate as a principal agency to promote housing finance institutions both at local and regional levels and to provide financial and other support. NHB registers and supervises Housing Finance Companies (HFCs), keeps surveillance through on-site & off-site mechanisms and co-ordinates with other Regulators. The Finance Act, 2019 has amended the National Housing Bank Act, 1987 confers the powers of regulation of Housing Finance Companies (HFCs) to the Reserve Bank of India

The Preamble

The Preamble of the National Housing Bank Act, 1987 describes the basic functions of the NHB as –“... to operate as a principal agency to promote housing finance institutions both at local and regional levels and to provide financial and other support to such institutions and for matters connected therewith or incidental thereto ...”

Vision

“Promoting inclusive expansion with stability in housing finance market

Mission

“To harness and promote the market potentials to serve the housing needs of all segments of the population with focus on low- and moderate-income housing.”

Objective

NHB has been established to achieve, inter alia, the following objectives-

- To promote a sound, healthy, viable and cost- effective housing finance system to cater to all segments of the population and to integrate the housing finance system with the overall financial system.
- To promote a network of dedicated housing finance institutions to adequately serve various regions and different income groups.
- To augment resources for the sector and channelise them for housing.
- To make housing credit more affordable.
- To supervise the activities of housing finance companies based on supervisory power derived under the Act.
- To encourage augmentation of supply of buildable land and also building materials for housing and to upgrade the housing stock in the country.
- To encourage public agencies to emerge as facilitators and suppliers of serviced land, for housing.

Major Achievements;

1988-89	<ul style="list-style-type: none"> • Establishment of NHB • Launched Refinance Schemes for housing loans • Launched Schemes for Land Development & Shelter Projects
1989-90	<ul style="list-style-type: none"> • Launched Home Loan Account Scheme • Issued Housing Finance Companies (NHB) Directions
1990-91	<ul style="list-style-type: none"> • NHB notified as a Public Financial Institution
1992-93	<ul style="list-style-type: none"> • Launched Refinance Schemes for Slum Redevelopment Projects
1997-98	<ul style="list-style-type: none"> • Launched Golden Jubilee Rural Housing Finance Scheme (GJRHFS) • Issued Tax Free Bonds to finance GJRHFS

- | | |
|---------|---|
| 2000-01 | <ul style="list-style-type: none"> • First Residential Mortgaged Backed Securitization Issued in the Country • Guidelines issued for entry of HFCs into Insurance Business • Refinance Scheme launched for reconstruction of dwelling units in the • earthquake affected areas in Gujarat |
| 2002-03 | <ul style="list-style-type: none"> • Launched Liberalized Refinance Scheme for Housing Loans |
| 2004-05 | <ul style="list-style-type: none"> • First time provided Corporate Guarantee for RMBS |
| 2006-07 | <ul style="list-style-type: none"> • NHB RESIDEX was launched (residential housing price index) • Reverse Mortgage Loan for Senior Citizens launched • Productive Housing in Rural Areas (PHIRA) launched • Refinance for Top-up loan for Indira Awas Yojana Beneficiaries • Equity Participation in New Rural Housing Finance Companies |
| 2007-08 | <ul style="list-style-type: none"> • Establishment of Rural Housing Fund (RHF) with NHB • Rural Housing Microfinance launched • NHB-UNESCAP Study on pro-poor housing finance: • MOC with UNHABITAT signed for water/ sanitation projects for housing • Home Loan Counselling: Diploma program put in place with IIBF |
| 2010-11 | <ul style="list-style-type: none"> • Collaborated with KfW, Germany for promoting Energy Efficient Housing |
| 2011-12 | <ul style="list-style-type: none"> • Credit Risk Guarantee Fund Trust for Low Income Housing (CRGFTLIH) <p style="margin-left: 40px;">set up to be managed by NHB</p> |
| 2012-13 | <ul style="list-style-type: none"> • Three new products developed viz Special Refinance Scheme for Urban Low -Income Housing, Refinance Scheme for Installation of Solar Water Heating and Lighting Equipment in Homes, Refinance for Construction Finance for Affordable Housing • 10-year tax free bond issued through public issue |

2013-14	<ul style="list-style-type: none"> • NHB entered into a Memorandum of Understanding (MoU) with Indian Green Building Council (IGBC) regarding promoting Energy Efficient Homes, sharing of information, capacity building, networking in events and meetings and establishing Synergy between “NHB Energy Efficient Homes & IGBC Green Homes”
2014-15	<p>Bank designated as Central Nodal Agency for Credit Linked Subsidy</p> <p>Scheme under Pradhan Mantri Awas Yojana.</p>
2015-16	<p>A 24×7 on-line portal developed/ implemented for PLIs to lodge CLSS</p> <p>Claims to reduce turnaround time at NHB for processing interest subsidy</p>
2017-18	<ul style="list-style-type: none"> • Launched the revamped NHB RESIDEX • The Finance Act, 2018 amended National Housing Bank Act, 1987, Enabling transfer of share capital of NHB Government establishment Affordable Housing Fund in NHB

Training and Capacity Building; As part of responsibility of development of human resources; NH Bank organizes training programs, seminars and symposia on matters related to housing for Housing Finance Companies (HFCs), Commercial Banks and Public Housing Agencies and provides design and faculty support to various categories of institutions dealing in housing and related activities. National Housing Bank provides support to large number of banks, housing finance companies as well as co-operative sector institutions in the capacity building of the sector

LIC Housing Finance Limited (LIC HFL);

LIC Housing Finance Limited is one of the largest Housing Finance Mortgage loan companies in India having its Registered and Corporate office at Mumbai. LIC HFL is a subsidiary company of LIC. The main objective of the company is to;

- provide long-term financing to individuals for the purchase /construction of houses or flats for residential purposes;
- provide finances for the purpose of repair and renovation of existing flats and houses.
- provides financing on existing property for business and meeting personal needs and gives loans to professionals for purchase or construction of

Clinics, Nursing Homes, Diagnostic Centres, Office Space and also for purchase of equipment.

- The Company is known for providing long term financing to individuals engaged in the business of construction of houses or flats for residential purpose. (*Wikipedia*)

PNB Housing Finance Limited (PNB Housing);

- PNB Housing Finance Limited, promoted by Punjab National Bank (PNB), is a registered housing finance company with National Housing Bank (NHB).
- It was incorporated under the Companies Act, 1956 and commenced its operations on 11 November 1988.
- The company provides housing loans & loan against property as a part of its product portfolio and also holds the license to accept public deposits.,
- **Home Loan:** PNB Housing provides housing loans to individuals for construction, purchase, repair, and upgrade of houses.
- **Non Home Loan:** The company also provides loan against property, commercial property loan, lease rental discounting loans for commercial property, loans for purchase of residential plots and loan for real estate developers
- Main products offered include; *Home Loans, Mortgage loan, Home Improvement Loans, Home Construction Loans, Plot Loans, Home Extension Loans, Land Loans, Loan Against Property, Lease Rental Discounting*

Housing Development Finance Corporation Limited (HDFC);

- Housing Development Finance Corporation Limited (HDFC), was launched in the year 1977, as Indian private development finance institution.
- Over the years, it has emerged as a major housing finance provider in India, having presence in banking, life and general insurance, asset management, venture capital, realty, education, deposits and education loans.
- HDFC is known to be first company to launch almost every housing loan product that is on offer today, right from introducing variable rate loans to offering customised repayment options based on individual customer needs.
- Following types of Home Loans are usually offered in India by Housing Finance Institutions:
- **Home Loans-** loans availed for; **1.** The purchase of a flat, row house, bungalow from private developers in approved projects; **2** Home Loans for purchase of properties from Development Authorities such as PUDA; HUDA, DDA, MHADA as well as Existing Co-operative Housing Societies, Apartment Owners' Association or Development Authorities settlements or privately built up homes; **3.** Loans for construction on a freehold / lease hold plot or on a plot allotted by a Development Authority
- **Balance Transfer Loan;** Transferring your outstanding home loan availed from another Bank / Financial Institution to HDFC is known as a balance transfer loan . **House Renovation Loans;** House Renovation Loan is a

loan for renovating (without altering the structure/carpet area) your home in many ways such as tiling, flooring, internal / external plaster and painting etc.

- **Home Extension Loan;** It is a loan to extend or add space to your home such as additional rooms and floors etc.
- **Plot Purchase Loan;** Plot purchase loans are availed for purchase of a plot through direct allotment or a second sale transaction as well as to transfer your existing plot purchase loan availed from another bank /financial Institution
- At the national level, the company played critical role in setting up the National Housing Bank (the apex body for housing finance companies) in 1987 and in formulating national policies related to housing finance and urban development.
- **HDFC determines Home Loan Eligibility** based on; income and repayment capacity besides factors including age, qualification, number of dependents, spouse's income (if any), assets & liabilities, savings history and stability & continuity of occupation
- **Home Loan** can be applied at any time once decision has been made to purchase or construct a property, even when property not selected or the construction has not commenced. However, title to the property must be clear, marketable and free from encumbrance. There should not be any existing mortgage, loan or litigation, which is likely to adversely affect the title to the property.
- The maximum term that a customer **can avail is 30 years** or till the age of retirement ,whichever is lower under HDFC's 'Telescopic Repayment Option.
- For carrying out renovation in Apartment/Floor/Row house. Existing home loan customers can also avail a **House Renovation Loans-** a loan for renovating (without altering the structure/carpet area) home involving tiling, flooring, internal / external plaster and painting etc. House Renovation Loans can be availed for a maximum term of 15 years or till your age of retirement, whichever is lower.

2.3 Institutions involved in shelter delivery

Based on the pattern followed in the financing of the housing sector, there also exist number of agencies/institutions , which are involved in the delivery of shelter, set up at the national and the state level. States are credited with the setting up of Improvement Trusts; Housing Boards; Urban Development Authorities; Police Housing Boards etc,which are known to contribute to increase the housing stock in the states. Government of India, also has set up agencies like HUDCO, which are engaged in both aiding, advising and funding the housing in the country. Few of these agencies engaged in the delivery of housing have been detailed below;

i. Housing and Urban Development Corporation- HUDCO

The Housing and Urban Development Corporation Ltd. (HUDCO), a fully owned company of Government of India, was established more than five decades back on April 25, 1970, with the objective of promoting housing, providing long-term finance for construction of houses, undertaking urban development programs, infrastructure facilities and promoting housing finance industry with focus on the social aspect of housing and utility. Initially incorporated as “The Housing and Urban Development Finance Corporation Private Limited,” as a private limited company, it was later converted, by the Department of Company Affairs, Ministry of Finance, Government of India, to “Housing and Urban Development Corporation Limited,” as a public financial institution under Section 4A of the Companies Act, 1956 on December 9, 1996. HUDCO was registered with National Housing Bank on July 31, 2001, for carrying out business of the housing finance institution.

Working now under the administrative control of the Ministry of Housing and Urban Development, HUDCO is mandated with building affordable housing and carrying out urban development in the country besides implementing National Housing Policy. It has also been entrusted with the task of implementing priority programmes of the Ministry of Urban Development including; Low-Cost Sanitation, Slum Upgradation, Staff Housing, Night Shelter for Footpath Dwellers, Shelter Upgradation under Nehru Rozgar Yojana, Rural housing under Minimum Needs Programme. Although commercial banks and housing finance companies are doing brisk business in the growing housing finance sector, the housing needs of the poor and low-income groups have remained unaddressed. In such a scenario, HUDCO's role has become more critical and significant in meeting the national objective of *Housing for all*.

Despite commercial orientation, HUDCO focus remains preferential allocation of resources to the socially disadvantaged section of the society. It continues to promote socially relevant sectors, rather than promoting only commercial and profitable sectors. 92 percent of the 150.93 lakh houses financed by HUDCO are basically dedicated to promote the interests of Economically Weaker sections and Low-Income categories. Providing housing loans directly to the borrowers, instead through state governments / housing agencies, HUDCO, has adopted innovation in its lending operations through the novel scheme named ‘HUDCO Niwas’, which has been made operational since 1999. Scheme remains extremely popular in the domain of individual housing loan. HUDCO has moved the government seeking permission to enter the banking and insurance sectors. HUDCO is ranked high in the domain of construction of dwelling Units for the poor’, Operating under a decentralized operational approach, HUDCO functions and operates across nation, with zonal office, a research & training institute, 20 regional offices, 34 retail finance units and 9 development offices with head office at Delhi.

Vision and Mission *“HUDCO to be a leading Techno-financial institution, promoting sustainable habitat development for transforming the lives of the people”*

Objectives Of HUDCO; The prime objects of HUDCO, as defined in the Memorandum of Association include; housing, urban development, setting up satellite towns, making provision of services, promoting building materials, providing consultancy services, promoting mutual funds etc. as detailed below;

- To extend long term finance for construction of residential complexes or undertake housing and urban development programs in the country.
- To finance or undertake building of new or satellite town, either wholly or partly.
- to subscribe to the debentures and bonds to be issued by the State Housing Boards; Improvement Trusts, Development Authorities etc., specifically for the purpose of financing housing and urban development programmes;
- to finance or undertake the setting up of industrial enterprises of building material;
- to administer the money received, from time to time, from the Government of India and other sources as grants or otherwise for the purposes of financing or undertaking housing and urban development programmes in the country;
- to promote, establish, assist, collaborate and provide consultancy services for the projects of designing and planning of works relating to Housing and Urban Development programmes in India and abroad;
- to undertake the business of Venture Capital Fund in Housing and Urban Development Sectors , facilitating innovations in these sectors and invest in and/or subscribe to the units/shares etc. of Venture Capital Funds promoted by Government/Government Agencies in the above areas; and
- to set up HUDCO's own Mutual Fund for the purpose of Housing and Urban Development Programmes and/or invest in, and/or subscribe to the units etc. of mutual funds, promoted by the Government/Government Agencies for the above purpose.

Housing and Urban Development Corporation Ltd (HUDCO), is valued nationally as the premier techno-financing public sector enterprise, in the field of housing and infrastructure development. With an authorized capital of Rs 2,500 crore, HUDCO has a paid-up equity of Rs. 2,001.90 Crore. With its corporate vision of being among the world's leading knowledge hubs and financial facilitating organizations for habitat development, HUDCO is on the mission of promoting sustainable habitat development to enhance quality of life. HUDCO was upgraded to a Schedule-A PSE in 2002 and conferred the Mini Ratna status in 2004. Considering urban infrastructure finance, HUDCO make loans for projects relating to:

- Water Supply; Roads and Transport and Power;
- Emerging Sectors, which includes SEZs (special economic zones), Industrial Infrastructure, Gas Pipelines, Oil Terminals and Telecom Sector Projects;

- Commercial Infrastructure and others, which include; Shopping Centres, Market Complexes, Malls-cum-Multiplexes, Hotels and Office Buildings;
- Social Infrastructure and Area Development; and Sewerage, Drainage and Solid Waste Management (collectively, “Urban Infrastructure Finance”).
- Promoting planned development of Smart Cities

Main borrowers under Urban Infrastructure Finance are primarily State Governments and their agencies. Sanctioning of new Urban Infrastructure Finance loans to entities in the private sector was stopped since March 2013. Loans for Housing projects in urban areas are offered to Central and State Governments, parastatals bodies, Corporates and Joint sector Agencies for construction of Houses / Flats and development of residential plots including Site and Services scheme, Skeletal Housing and Core housing etc. HUDCO has emerged as a major player in housing sector during the last five decades of operation; through its project financing window which has so far extended financial assistance for the construction of 7.67 million residential units in the country under urban housing and laid special emphasis to housing for under-privileged and poor in urban area. Corporation offers loans on softer financial terms to Economically Weaker Section and Low- Income Group housing which includes lesser interest rates, larger extent of loan and longer repayment period when compared with financial assistance to other income group categories. In addition, HUDCO also offers financial assistance to different agencies including Central and State Governments, parastatals agencies like Housing Boards/Corporations, Slum Clearance Boards, Police Housing Corporations, Development Authorities, City Improvement Trusts, Municipal Corporations/ Councils, other Urban Local Bodies, Apex State Co-operative Societies and other institutions such as Joint Sector and Corporate Sector etc. for following projects related to Housing :-

- Acquisition of land and development of plots.
- Housing for EWS/LIG/MIG/HIG and other categories.
- Staff Rental Housing.
- Slum rehabilitation/ in-situ development/ Slum upgradation.
- Repairs and renewal of houses
- Loans to Apex Co-operative Housing Societies.
- Meeting margin money in projects pertaining to Government of India Action Plan Schemes.
- HUDCO also tends to explore opportunities in related sectors for sustainable profits, which in turn helps to further support its social objectives. Towards expanding its role in the sectors, HUDCO plans to integrate itself along the complete project finance value chain and position itself as sector expert in the identified areas. HUDCO intends to leverage its expertise and experience gained over the years towards augmenting its Interest based activities. HUDCO's IT strategy is also focused on using the right technology solutions to meet its business objectives, including setting up an industry bench marked integrated solution spanning HUDCO's business processes.

- HUDCO is considering the option of undertaking larger role in the sector by supporting the growing needs of housing and infrastructure in the coming years with the continued growth of economy with a special focus on the needs for the economically weaker sections.

Sources of Funding

As already stated, subscribed and paid-up Equity Share capital of HUDCO is Rs. 20,019.0 million. HUDCO sources funds include market borrowings involving;

- NCDs (including secured, redeemable, non-convertible, non-cumulative tax-free bonds), term loans, commercial paper, public deposits and external commercial borrowings.
- Taxable **Bonds Refinance Assistance from NHB**; The NHB offers refinance assistance to HFCs in respect of their loans given for housing under various refinance schemes. These loans had a maturity period ranging from seven years to 10 years.
- **Other Term Loans**; HUDCO avails secured as well as unsecured long-term and short-term loans from various Indian banks. These loans are mostly in the nature of term loans. These loans had a maturity period ranging from 180 days to 24 years and were subjected to floating interest rates.
- **Commercial Paper**; HUDCO also issues commercial paper from time to time.
- **Public Deposits**; Corporation offer a range of deposit products to customers. Public deposits are repayable in accordance with the individually contracted maturities ranging from 12 to 60 months from the date of deposit. Public deposits remain secured by a floating charge on the statutory liquid assets created by way of a deed of trust as per the HFC Directions.
- **Other Loans**; HUDCO avails unsecured cash credit / overdraft facilities from various Indian banks, which are short term in nature and repayable on demand and are subject to floating interest rates.
- **Bank Guarantee Facilities**; Corporation also avails unsecured bank guarantee facilities from various Indian banks with validity period ranging from 12 months to three years.

International Borrowings

- **External Commercial Borrowings and Loans from Multilateral Institutions**; HUDCO has availed foreign currency loan from the Japan Bank of International Cooperation and Development Bank . Loans from the Japan Bank of International Cooperation and the Asian Development Bank are guaranteed by the Government of India. The loan availed from USAID was in the nature of external commercial borrowings in the form of floating rate promissory notes, guaranteed by USAID and counter-guaranteed by various Indian banks, having a maturity period ranging from 25 to 30 years from the date of disbursement.

Consultancy Services

HUDCO also runs a consultancy unit at its headquarter at Delhi with the objective; to promote, establish, assist, collaborate and provide consultancy services for designing and planning of projects relating to housing and urban development programmes in India and abroad. HUDCO consultancy has undertaken more than 300 projects in diversified fields under housing and urban development sector covering; cost- effective housing, environmental improvement, preparing development plans, post-disaster rehabilitation, landscape and conservation. HUDCO Consultancy Services are suited for institutions that do not have the expertise or manpower, or want to supplement their own efforts; housing or urban development agencies that wish to prepare project reports for implementation on their own or by availing financial assistance from international agencies, Govt. of India, State Governments or housing finance institutions including HUDCO. Consultancy services has multi-disciplinary professional staff including Architects, Town Planners, Housing Experts, Landscape Designers, Engineers, Transportation Planners, Ecologists, Construction Management Specialists etc. at various levels. It can also draw on the expertise available in different disciplines from within and outside organizations.

ii. State Housing Boards

Housing Boards are known, across India , for their contributions in the domain of creating large housing stock in general and affordable housing, including housing for economically challenged communities of the society, in particular. Housing Boards in India have been set up in most of the Indian states by the governments under a legal framework defined by the state legislatures. Among the various state-led nodal agencies that work towards offering residential housing to the citizens, are the state Housing Boards. These Boards, generally established in sixties and seventies, have been working towards meeting the prime objective of launching housing schemes from time to time including those catering to

lower-income groups (LIG) and economically weaker sections (EWS). Apart from residential components, Housing Boards have also been carving out and leasing/selling commercial and institutional sites for raising resources and supporting residential projects for economically weaker sections of the society.

The objectives of the Housing Boards include:

- To provide housing to eligible and needy persons at affordable prices.
- To construct houses and make them available for different income categories including high- income group, middle- income group, and low- income groups
- To select sites, undertake planning and develop them along with services to be provided for constructing houses
- To formulate self -financing housing schemes focusing on middle- and high-income groups

- To construct commercial complexes, multi-storied buildings, and shops to secure financial resources for the Boards.

Some of the states which have established Housing Boards include; Gujarat Housing Board; Andhra Pradesh Housing Board; Himachal Pradesh Housing Board; Orissa Housing Board; Madhya Pradesh Housing Board, Haryana Housing Board etc. Gujarat Housing Board was set up on May 1st, 1960; The Andhra Pradesh Housing Board was established on July 1st, 1960; The Orissa Housing Board was set up in 1968 and Madhya Pradesh Housing Board was established in 1972. Punjab also established the Housing Board in seventies, but subsequently abolished with assets merged into Urban Development Authority in, 1995

The Housing Boards in India have been instrumental in providing accommodation for large number of Indians across the country. Housing Boards have been successful to a large extent and the government of India needs to strengthen these Boards by making available adequate funds to ensure that they are able to continue with their housing projects, effectively and efficiently. In order to explain the overall structure, functioning, operation, development schemes framed by the Housing Boards in India, case study has been made for the Haryana Housing Board, as detailed below.

The Housing Board Haryana came into existence during the year 1971 in pursuance of the Haryana Housing Board Act (Act No. 20 of 1971). The main objective of the Board is to construct houses for allotment to the public in accordance with the guidelines issued by the State Government following the prescribed procedure. The emphasis is to construct houses for socially and economically weaker sections of the society. At the apex level, there is a Board appointed by the State Government under the Act. Chairman heads the Board which decides all its policies and programmes. Chief Administrator is its Chief Executive. The Board has in-house construction divisions, design cell, and supporting network.

Structure of the Board

Board consists of Chairman, Chief Administrator and such other members, not more than twelve and not less than six, appointed by State Government. Chairman is head of the Board and exercises powers as mentioned in the Act. Chief Administrator is Chief Executive of the Board, looks after the day-to-day functioning of the Board and oversees the implementation of policies formulated by the Board. The housing colonies developed by the Board are planned, as per specified planning norms and provided with metalled roads, street lighting, water and sewerage services, storm water drains, open spaces, parks, shopping booths, provision for school etc including houses of different categories.

Housing Schemes;

Subject to the provisions of this Act and subject to the directions of the State Government, the Board is authorized to take up different schemes and incur expenditure and undertake works in any area for the framing and execution of such housing schemes, as it may consider necessary from time to time or as may be entrusted to it by the State Government. Housing scheme framed by different Boards remain different due to provisions made in their Acts. Haryana Housing Board has also taken the initiative of creating large stock of rental housing in the urban centres of the state. However, Haryana Housing Board Act provides for large number of options to frame Housing Schemes which may provide for all or any of the following matters, namely :-

- (a) acquisition by purchase, exchange or otherwise of any property necessary for or affected by the execution of the scheme,
- (b) acquisition by purchase, exchange or otherwise of any land, division of the same into plots and the sale thereof after developing it or otherwise to co-operative societies or other persons, in accordance with the scheme,
- (c) Laying or re-laying out of any land comprised in the scheme,
- (d) distribution or re-distribution of sites belonging to owners of property comprised in the scheme
- (e) The closure or demolition of dwellings or portions of dwellings unfit for human habitation,
- (f) demolition of obstructive buildings or portions of buildings,
- (g) The construction and re-construction of buildings, their maintenance and preservation,
- (h) Sale, letting or exchange of any property comprised in the scheme,
- (i) Construction and alternation of streets and back lanes,
- (j) Drainage, water- supply and lighting of the area included in the scheme,
- (k) Laying parks, playing-fields and open spaces for the benefit of any area comprised in the scheme and the enlargement of existing parks, playing-fields, open spaces and approaches,
- (l) Making sanitary arrangements required for the area comprised in the scheme, including the conservation and prevention of any injury or contamination to rivers or other sources and means or water- supply
- (m) Creating accommodation for any class of inhabitants, industries, institutions, offices, local authorities, co-operative or corporate bodies,
- (n) Advancing money for the purpose of the scheme,
- (o) Creating and maintaining facilities for communication and transport,
- (p) Collection of such information and statistics as may be necessary for the purpose of this Act, and
- (q) any other matter for which, in the opinion of the State Government, it is expedient to make provision with a view to provide housing accommodation and, or, to the improvement or development of any area comprised in the scheme or any adjoining area or the general efficiency of the scheme.

Explanation-

- (1) For the purposes of this section the State Government may, on the recommendation of the Board, by notification, specify area surrounding or adjoining the area included in a housing scheme to be the adjoining area. No housing scheme shall be made under this Act for any area for which an Improvement Scheme has been framed and sanctioned by the State Government under Punjab Town improvement Act, 1922 inconsistent with said Act or any other enactment for the time being in force, nor any town planning scheme. Any housing scheme made under this Act shall not contain anything, which is inconsistent with any of the matter included in a town planning scheme sanctioned by the State Government under the Haryana Municipal Act, 1973, or other enactment for the time being in force.
- (2) If any dispute arises whether a housing scheme made under this Act includes any area in an Improvement Scheme sanctioned under any enactment referred to in sub-section (1) or contains anything inconsistent with any matter included in a Town Planning scheme sanctioned under the Haryana Municipal Act, 1973 or any other enactment for the time being in force, the same shall be referred to the State Government whose decision shall be final. It shall be the duty of the Board to take measures to expedite speedier and cost-effective construction of buildings and the Board may for that purpose do all things for-
 - (a) Unification, simplification and standardization of building materials,
 - (b) Encouraging pre-fabrication and mass production of housing components,
 - (c) Organize or undertake the production of building materials required for the housing schemes,
 - (d) Encourage research for discovering cheap building materials and evolving new methods of economic construction,
 - (e) Secure a steady and sufficient supply of workmen trained in the work of construction of buildings.

Looking at the entire context of acute shortage of the housing existing in the country, with majority of shortfall recognized in the economically weaker sections of the society, role of Housing Boards becomes both valuable and critical. All private developers focus on high and middle end housing, which generates lot of profits, whereas EWS housing remains ignored being a volume game and not a profit game. So private developer and promoter ignore the low-end housing. In order to bridge the gap between demand and supply in this category, role of state Housing Boards gains importance. State needs to value Housing Boards, support them in terms of resources and capacity so that they can deliver the mandate they have been given. Housing Boards need quality manpower and latest technologies in order to create large stock of low-cost and sustainable housing. If Housing Boards are not empowered it will be difficult for the states and country to achieve the goal of housing for all. Boards should be

mandated to search new materials and technologies, which have the capacity to lower the cost and increase the speed of construction of houses. These Boards should also be mandated to promote managerial skill to effectively manage the projects without any cost and time over-runs. Housing Boards need to be given financial resources to take up remunerative schemes and generate resources to subsidize the low-cost housing. These Boards should be supported to source land and create a land bank for creating large scale housing. In addition, state should avoid creating multiple agencies operating in the area of housing and housing construction. These Housing Boards should be facilitated to create rental housing for the migrants to the cities, and labour force working there, so that growth of slums is minimized and largescale migration of labour force from the cities is effectively checked in the eventuality of any crisis facing the cities, like Covid 19.

Government of India should consider the option of creating a common platform for State Housing Boards at the national level , so that they can learn by sharing knowledge and good practices undertaken by the different Boards. Boards should be permitted to float joint ventures with reputed private developers, on the pattern adopted by West Bengal Housing Board, to create large quality stock of affordable housing in the state. In this case equity of the Board could be in the shape of land and funds for construction can be made available by the private partners. All Boards need to be mandated to get high degree of connectivity with the Building Materials Technology Promotion Council, in order to learn the art and science of latest available building materials and state of art construction technologies. Housing Board will need resources and support from the state governments to enable them to develop and emerge as institutions of excellence in the domain of planning, designing, construction and managing housing in general and affordable housing in particular.

iii. Urban Development Authorities in India

Urban India is on the rolls. Inevitable rapid and uncontrolled growth of the cities has been accepted as a phenomenon, which cannot be reversed. Cities are getting concentrated with people, economic activities, high rise residential and commercial buildings. Higher quality of infrastructure and social services in urban areas remain always very attractive. However, existing urban systems have already shown inability to cope with the increasing pressure of population. Cities face enormous stress involving; congestion, acute shortage of housing; making available quality potable water and electricity; rationalise transport; maintenance of peace and security; regulating in-migration; reducing poverty, creating adequate urban Infrastructure; minimising slum, improving quality of life etc.

To meet these urban challenges, effectively and efficiently, states have been toying with idea of setting up different agencies which could effectively tackle the urban problems and rationalize the urban growth. Starting with urban local

bodies, which were created as agencies for managing services in the cities in the early 20th century; creation of Improvement Trusts in 1922's were found to be better option as agencies outside the local government system to take up the challenges and issues related to urban development. After understanding the limitations of Improvement Trusts, state Town Planning Departments and Urban Directorate were considered the option to regulate the urban development process. After India became independent in 1947, existing cities faced enormous challenges due to rapid migration of displaced persons, to meet the emerging challenges, urban development authorities were considered better option to manage the urban development at local level. Accordingly, such authorities were put in place in few selected cities, starting with the capital city of Delhi.

Development Authorities in India, is the product of the necessity to tackle growing housing problems and poor infrastructure prevailing in large cities. It was thought that given the structure, power, authority and resources, development authorities will be able to plan, implement & co-ordinate development activities in a rational and planned manner. Setting up of urban development authorities, also ushered the era of preparing and implementing master plans in India. Starting with Delhi Development Authority (DDA) in 1957, for the Delhi capital city, large number of development authorities came into existence across India. Haryana State level Urban Development Authority – HUDA came into existence in 1977 and the Maharashtra Housing and Area Development Authority (MHADA) was commissioned in 1976 to accelerate the process of planned development. Punjab came up with its version in the form of Punjab Urban Development Authority in 1995.

From existing scenario, it can be seen that all states have one form or the other of legal framework which mandates the setting up of development authorities. There exists two typologies of development authorities existing in the country *i.e.* at state level and at city level. All these authorities are established under the laws passed by the state legislatures. There is limited uniformity of pattern followed for defining the structure, functions, role, resources etc. to be taken up /performed by different development authorities. In order to understand the structure, functioning of various authorities few case studies have been briefed below.

Haryana Urban Development Authority (HUDA)

HUDA, state level development authority was constituted under Haryana Urban Development Authority Act, 1977 which came into operation in the year 1977. HUDA, as per the Act, is required to; promote and secure development of urban areas in a systematic and planned way with the power to acquire sell and dispose off property, both movable and immovable; use the land so acquired for residential, industrial, recreational and commercial purpose; make available developed land to Haryana Housing Board and other bodies for providing houses to economically weaker sections of the society, and undertake building works. The Authority consists of a Chairman, a Vice Chairman, a Chief

Administrator and such other members (not more than 12 but not less than 6) appointed under notification issued from time to time, provided that the number of non-official members shall not, at any time exceed three.

HUDA undertakes various development activities and has developed or facilitated the development of housing projects, public infrastructure, industrial & commercial places, recreational zones. Also, it has played a pivotal role in providing civic amenities like water supply & drainage systems in the urban areas. It also provides developed land to Haryana Housing Board, other institutions, co-operative societies and parastatal agencies, to achieve its basic aim of providing housing to all sections of society with special focus on the economically weaker section of the society. HUDA carries out its functions of planning, development, construction, finance, estate management through 12 different wings created within the authority. Which include;

- i) **Engineering Wing**; foing provide basic infrastructural facilities, including approach roads, electrification, water supply and sewerage facilities; community buildings, parks and other facilities
- ii) **Finance Wing**; mandated with financial management of the Authority, including performance budgeting, materials and inventory planning and control based on network and cost- control techniques.
- iii) **Town Planning Wing**; entrusted with the job of designing and issuing advertisements in the newspapers regarding sale of sites in City Centers, Shopping Centers and Residential/Industrial Sectors in all the Urban Estates.
- iv) **Architecture Wing**; for undertaking jobs related to preparation of architectural controls and Architectural designs of all buildings constructed by HUDA besides designing parks, open spaces and gardens.
- v) **Legal Wing**; which deals with and monitors all legal matters related with development authority.
- vi) **Monitoring Wing**; for monitoring the progress of the developmental works done by the field offices on regular and timely basis,
- vii) **Enforcement Wing**; deals with all matters relating to the removing of encroachments
- viii) **Vigilance Wing**; to bring out transparency in the functioning of various wings; checking corrupt practices and also to ensure quality in the development works.
- ix) **Establishment and Authority Wing**; deals with the establishment matters of all the employees deployed in HUDA.
- x) **Policy Wing**; deals with all the matters relating to policy and allotment of land to various institutions and Government Departments.
- xi) **Land Acquisition Division**; taking care of acquisition of land for urban development
- xii) **Information Technology Wing (IT Wing)**; to facilitate the internal efficiency of the Department and to provide quality services to the allottees, citizens and external agencies through website of HUDA.

Despite such an elaborate structure, HUDA remains a state level authority, with city development managed by the local government department. HUDA does not have provision for preparing the master plans of the city. Its area of operation remains outside the municipal limits, with city looked after by the urban local bodies, which is a separate department. All plans prepared by HUDA are to be approved by the State Town and Country Planning Department, which remains the nodal agency for promoting planned development in the state of Haryana. For all intent and purposes HUDA is treated at par with the private developers and required to pay all charges, fees, levies, duties and conversion charges paid by private developers. HUDA operates in urban areas, Controlled Areas or in New Towns. Panchkula is totally planned and developed by HUDA. Recently, state of Haryana has set up city level development authorities for Gurugram and Faridabad.

Punjab Urban Planning and Development Authority (PUDA);

In the state of Punjab, concept of urban development authority came up in the year 1995, with the enactment of the comprehensive town planning act; 'The Punjab Regional and Town Planning and Development Act, 1995'. Act provides for both powers to plan and develop the urban and rural areas. It also provides for preparing Regional Plans and Master Plans for the cities and towns. The preamble of the Act defines the focus and agenda of planned development in the state of Punjab in terms of;

- to make provision for better planning and regulating the development and use of land in planning areas delineated for that purpose,
- for preparation of Regional Plans and Master Plans and implementation thereof;
- for the constitution of a State Regional and Town Planning and Development Board, for guiding and directing the planning and development processes in the State;
- for Constitution of a State Urban Planning and Development Authority; Special Urban Planning and Development Authorities and New Town Planning and Development Authorities, for the effective and planned development of planning areas; and
- for undertaking urban development and housing programmes and schemes for establishing new town; and for matters connected therewith or incidental thereto.

Act provides for constituting both state and local level Development Authorities. Starting with one state level development authority, *ie* PUDA- Punjab Urban Planning and Development Authority – state government has now constituted number of regional level authorities, dividing the entire state under different regions and placing them under these regional planning and development authorities. Regional level development authorities constituted by the state include; GMADA-Greater Mohali Area Development Authority for Mohali Region; GLADA-Greater Ludhiana Area Development Authority for Ludhiana

Region; JDA- Jalandhar Area Development Authority for Jalandhar Zone; BDA- Bathinda Area Development Authority for Bathinda Zone; PDA- Patiala Area Development Authority for Patiala Zone besides Anandpur Development Authority and Dera Baba Nanak Development Authority.

The structure of the Authority, which appears to be based on the structure defined for the Haryana Urban Development Authority, consists of the members appointed by the State Government, namely :- (i) a Chairman ; a Co-Chairman (ii) a Vice – Chairman (iii) a Chief Administrator, appointed from amongst the officers of the Government of Punjab and (iv) not more than twelve and not less than six official and non-official members including the Secretaries to Government of Punjab holding the charge of Local Government and Town and Country Planning.

Authority is mandated to perform following functions;

- Preparation and implementation of Regional Plans, Master Plans and New Township Plans and town improvement schemes;
- undertake the work relating to the amenities and services to be provided in the urban areas, urban estates, promotion of urban development as well as construction of houses;
- promote research, development of new techniques of planning, land development and house construction and manufacture of building materials;
- promote companies, association and other bodies for carrying out the purposes of the Act; and
- perform any other function which are supplemental, incidental or consequential to any of the functions referred to in this sub-section or which may be prescribed.

Authority has its manpower, resources to procure land, plan and develop and sell plots/houses to people/institution by charging the price, it may deem fit. On the pattern of HUDA, PUDA has also its different operational wing. PUDA Act is more comprehensive than HUDA Act. Punjab Act, provides for preparing both Regional and Master Plans in the state. Despite elaborate structure, state remains laggard in the urban planning with only 36 master plans prepared out of 157 towns and only one regional plan prepared so far even after 26 years of the law being made operational . Haphazard, unplanned and illegal development appears to be rampant in the state. Issue of unplanned development has genesis in existence and operation of two separate departments of Urban Development and Local Government Departments, which operates differently in the urban space, leading to lot of duplication, overlapping, confusion and contradictions.

Despite creating large number of regional authorities, these authorities remain both ineffective and inefficient due to lack of trained manpower, resources, understanding , capacity and will to undertake planned development. Most of these authorities are managed by the bureaucrats who are frequently transferred and have little understanding of urban complexities. Appointments

in such local level authorities , except PUDA, GMADA and GLADA are not being valued and considered of any significance. These authorities are made to run like government departments rather than being treated as authorities having role and importance in managing the cities to make them more liveable and productive through the planned/orderly development. Urban development in the state does not appear to be of any significance and value and accordingly is treated with impunity and remains largely muted and diluted.

Delhi Development Authority;

Set up under Delhi Development Act, 1957, DDA has been mandated to achieve the objectives which include;

- To formulate a Master Plan for covering the present and future growth of Delhi and
- to promote and secure the development of Delhi according to the plan covering all the possible activities;
- to acquire, hold, manage and dispose of land and other property and
- to carry out building, engineering, mining and other operations. and,
- to provide services and amenities incidental to the above.

Thus, DDA has been envisioned to be both planning and development agency with power vested to prepare the master plan for Delhi and implement the same. Under this mandate, Delhi also resorted to bulk acquisition of the land for promoting planned development. In addition, development of all amenities was also to be done by DDA. However, despite three master plans have been prepared and implemented in Delhi, orderly growth remains distorted with mushrooming of large number of slums in the city and majority of residents face exclusion from the availability of basic services. DDA remains a city level local development authority with area of operation confined to Delhi capital city. DDA has elaborate structure and manpower dealing with planning, development and management of urban development of National capital, but it has largely failed to promote rational and orderly development of the capital city of India. The structure, operation and functioning of DDA needs to be critically reviewed, revised and redefined to make it more operationally effective and efficient to make Delhi, a better place to live and work.

Development Authorities: Issues & Challenges

Since its inception, development authorities have undergone various changes to cater to the dynamic needs of growing cities. Post-liberalization of economy (after 1992) saw increased demand for industrialization, commercial activities, and infrastructure. Through efficient planning & better utilization of available resources, these authorities have been able to play greater role in urban development by implementing various development projects involving housing, roads, flyovers, metro rail etc besides focusing on promoting sustainability

and launching green initiative to provide a clean & healthy environment to the people at large. Considering India, a fast-developing economy, planned and orderly development is essential to fuel the economic growth. For achieving the objective of orderly and rational development, smart planning and objective implementation of development activities assume critical importance.

Looking at the existing urban scenario, it appears urban development authorities have not been able to achieve the objective of promoting planned and orderly development of the cities. Cities are now facing more challenges in terms of housing, infrastructure, employment, amenities and transportation. Rapid rural-urban migration has led to unplanned, haphazard, sub-standard growth of cities besides coming up of large number of slums and squatter settlements. Developmental pressure exerted on the cities have neither been assessed, nor quantified and planned for. Cities on one hand are facing enormous challenge of development, on other hands have multiplicity of development agencies operating at the city level with duplication/overlapping of activities without any co-ordination, leading to duplication of efforts and wastage of precious and scarce resources. Development authorities have assumed monstrous proportions and remain answerable to none. They operate their own agenda of city growth and development. Majority of development problems existing in urban areas can be attributed to the way these authorities have been constituted and operate in the domain of urban development. Further, these development authorities are largely responsible for steep rise in prices of the developed land. Holding monopoly, they fix the prices of developed land in an arbitrary manner leading to large scale speculation in land. Policy of auction adopted by these authorities to dispose off the developed land /plots in a limited manner, has led to steep rise in land prices excluding majority of urban residents. Slums have genesis in the very process/practices adopted by these development authorities in planning, development of urban areas. In majority of cases these development authorities operate and behave like private developers with the sole aim of earning money by generating profits using the mechanism of urban development. In fact, development authorities need to be made accountable for all issues related to planning and development besides enormous rise in land prices.

In majority of states, there exists conflict of interests in the urban space due to operation of two distinct entities involving urban local bodies, who are mandated to manage the urban areas and the development authorities, who only look after the development of the cities. These two institutions need to be merged and brought under single umbrella to collate their strength and synergies them. Local bodies should look at the urban governance issues and development authorities should operate as the technical/development arm of the urban local body at local level. Multiplicity of agencies need to be avoided and all development agencies existing/operating at local level should be merged into a single agency. Development authorities need to be made more professional and made slim and trim to operate efficiently. Mandate should be to promote

development of urban areas, exploring all options and making optimum use of available resources to make urban development sustainable, inclusive, safe and resilient.

iv. Building Materials & Technology Promotion Council (BMTPC)

Ministry of Urban Development, Government of India, established the Building Materials & Technology Promotion Council in July, 1990 for;

- bridging gap between research and development;
- promoting large scale application of new and emerging building material and construction technologies;
- providing an inter-disciplinary platform under Central /State Governments/ private sector for promoting emerging building materials proven technologies;
- assisting commercial production;
- systematic dissemination of appropriate technology for the benefit of the construction/construction agencies /different sections of the population;
- promoting resource-efficient; climate resilient; disaster resistant construction practices;
- creating a resource institution to provide S&T support in the area of innovative building materials & construction technologies and disaster mitigation & management.

Vision ; “BMTPC is visioned to be;

- “World class knowledge and demonstration hub,
- for providing solutions to all with special focus on common man,
- in the area of sustainable building materials,
- appropriate construction technologies & systems including
- disaster resistant construction.”

Mission;

- “To work towards a comprehensive and integrated approach
- for promotion and transfer of potential, cost-effective, environment-friendly, disaster resistant
- building materials and technologies including
- locally available materials from lab to land for
- sustainable development of housing.”

Objectives; BMPTC works in four verticals including;

- Materials and construction technologies,
- capacity building ,
- disaster mitigation and
- project management ; as detailed below;

- **Building Materials & Construction Technologies:** To promote development, standardization, mechanization and large-scale field application of proven innovative and emerging *building materials and technologies* in the construction sector.
- **Capacity Building and Skill Development:** To work as a *Resource Centre* for capacity building and promotion of good construction practices to professionals, construction agencies, artisans and marketing of building technologies from lab to land.
- **Disaster Mitigation & Management:** To promote methodologies and technologies for natural disaster mitigation, vulnerability & risk reduction and retrofitting/ reconstruction of buildings and disaster resistant planning for human settlements.
- **Project Management & Consultancy:** To undertake project management and consultancy services including appraisal, monitoring and third-party inspection of housing projects under the various Central/State Schemes.

Activities

BMTPC through networking, with academic and research institutions, public & private sector, NGOs, foreign institutions, is mandated to;

- create enabling eco-system for innovative;
- cost-effective, environment-friendly and energy-efficient alternate building materials and technologies including bamboo-based housing solution;
- propagate industrialized housing systems ;
- bringing globally successful technologies;
- promoting resource efficiency, economy, quality, environmental protection, speed and sustainability in housing construction;
- constructing demonstration houses;
- spreading awareness and building confidence about new technologies and disseminate technical know-how in various States/UTs under Pradhan Mantri Awas Yojana (Urban).

Ministry of Housing & Urban Affairs in collaboration with SPA, New Delhi and BMTPC, has already started a NAVARITIH : Certificate Course on Innovative Construction Technologies. Playing a pro-active active role in the area of disaster mitigation and management, BMTPC, worked with NDMA, NIDM, and has brought out number of Atlas/guidelines/study material on vulnerability, landslide, earthquake, floods, cyclone including first ever Vulnerability Atlas of India (2019, 1996 & 2006), Landslide Hazard Zonation Atlas of India, Guidelines for Improving Earthquakes, Wind/Cyclone and Flood prone Housing Construction(1997 & 2010); Tips on earthquake resistant construction jointly with IIT Kanpur to educate and spread awareness about Disaster resistant design & construction practices for engineers, architects and other stakeholders

through workshops; E-Course; publishing valuable guidelines/ manuals on disaster resistant construction and retrofitting of few buildings including life-line buildings.

For creating awareness, e-copy of Vulnerability Atlas of India has also been put on website and an e-Course on Vulnerability Atlas of India is being run jointly by School of Planning and Architecture , New Delhi and BMPTC. For amending /modifying building bye-laws Council also organised Technical Workshop for safety against natural hazards and assisted the State/UT to amend their bye-laws. Council has also prepared/upgraded Earthquake Hazard Maps and Atlases for India, State/UT and District (626 Districts). BMTPC is also technical partner in the Global Housing Technology Challenge – India (GHTC-India), launched by the Ministry of Housing & Urban Affairs ,besides setting up of National Urban Housing Fund (NUHF),for aggregating loans from lending agencies / financial institutions. BMPTC has also demonstrated seismic retrofitting techniques in Hospital, School ,Houses besides retrofitting public buildings and training masons and field engineers after the Bhuj earthquake of January 2001

Services; The Building Materials and Technology Promotion Council offers services in the following domains:

- Identification, evaluation of proven and emerging technologies available globally and encouraging joint venture in building materials and construction sector.
- Promoting economy, efficiency and quality in construction
- Up- scaling of technologies, know-how acquisition, absorption and dissemination
- Field level application of environment-friendly, energy-efficient and disaster resistant technologies for proven, locally available and emerging technologies.
- Formulation of Standards on proven building materials/technologies including emerging technologies/systems and incorporation in the schedule of specifications/rates.
- Documentation of benefits, durability and acceptability of cost- effective and innovative building materials and technologies.
- Skill upgradation of professionals and construction workers through capacity building programmes, training programmes, seminars, conferences, workshops, exhibitions, nationally as well as internationally.
- Promoting disaster resistant construction technologies
- Appraisal, monitoring and third-party inspection of housing projects including undertaking project management and consultancy services.

Council disseminates information through: publications, brochures and display panels.; Audio –video CD-ROMS; participation in exhibitions, workshops, conferences and seminars; organizing various training / entrepreneurship development programmes, seminars, workshops and exhibitions; advertisement in newspapers and creating website

2.4 Factors affecting the cost of Housing.

Owning house is a lifetime goal, dream and desire, which every individual wishes to achieve and fulfil during his/her lifetime. However, housing remains both cost-intensive and resource extensive activity, which involves lifetime investment and decision making, based on host of personal and extraneous factors. Housing costs remains a complex issue involving large components including cost of land (costs of purchase, titling, registration duties, obtaining planning approval, and any necessary cost of environmental remediation or relocation); cost of providing infrastructure/services involving water/sewerage systems, electricity network, heating and cooling, roads, security, sanitation; and cost of construction of buildings etc.(including labour and materials cost), transportation cost, government levies, management cost and taxes. While constructing shelter, every owner/builder wishes to have a house of highest quality, built in the shortest possible time but involving minimum financial cost. So cost remains at the core of house being constructed besides the quality and the time. However, majority of the individuals and architects consider only the housing cost, which refers to the initial cost, which goes into making of the house.

According, to Le- Corbusier buildings are like machines which require both resources and services, for its operation and maintenance. Therefore, house invariably involves cost which has to be incurred after occupation in terms of using electricity and water besides lighting,

heating and cooling of the house in terms of HVAC, to have both comfortable living, ambient temperature and appropriate humidity. These are operational costs, which the owner has to pay after the occupation of house. Further, house as a structures, has much larger life span, sometimes even longer than the life span of normal human beings, accordingly these costs add up to be considerable amount when compared to the initial cost of the house.

In addition to the cost of operation, there are additional costs, which have to be incurred for the maintenance and making changes, addition and alterations to the house.

As per the studies made and analysis carried out, it is said, only 10% of the cost makes the initial cost which goes into making of the house, whereas 90% cost involves the operation and the maintenance cost of the building, which amounts to nine times the initial cost of the house, when life- cycle cost of the house is considered. Accordingly, if the house has to be made cost-effective in the real sense of the term, then we have to consider both the life-cycle cost and the initial cost, Accordingly, it will be prudent to look at the cost in long term perspective and not short term while evaluating cost-effectiveness of the house.

Considering the overall context of cost-effectiveness, even if while designing a cost-effective and resource-efficient building, if the initial cost goes up by 2-5%, it should be permitted, if it helps in lowering or reducing the operational and the maintenance cost of the buildings over its entire lifespan. Initial higher cost, can be recovered within 3-5 years of operation of house, due to reduced cost of water /electricity bill generated by lower energy and water consumption. Globally, green buildings are known for their capacity, not only to make buildings cost-effective and affordable, but also help affordable housing to graduate from affordable housing to affordable living.

Green buildings are known to save up to 40% electricity and 50% water during the usage. Accordingly, while designing and constructing houses, if the building is designed as a green building, then it will make building highly cost-effective over entire period of its existence and operation. Studies made globally, have actually demonstrated that the green houses make inhabitants happy, healthy and more productive besides minimizing the cost of living. In fact green buildings are known for their distinct advantages of creating win-win situation, both for owners, tenants and users.

As already said, housing remains highly complex and large consumer of resources and time, so to make it cost-effective it requires lot of efforts, studies and analysis to achieve economy in the cost of the house. According to the 'World Economic Forum'; Building costs include land acquisition (costs of purchase, titling, registration duties, obtaining planning approval, and any necessary environmental remediation or relocation); utility infrastructure (costs of developing, for example, e.g. water systems, electricity grids, heating and cooling networks, roads, security systems, sanitation systems); and construction costs (including labour and materials). Since land costs and infrastructure costs are usually a factor of location, developers may account for land acquisition and utility infrastructure costs collectively when comparing locations.

Cost of housing involves large number of factors including; size of the house to be constructed, place where construction to be made; climate zone in which house is located; context of the site on which house is to be constructed, design of the house; cost of approval of the house for construction and completion; design efficiency, carpet area; material to be used; specifications of the materials; building technologies to be used for construction; area, thickness and length of walls, number of toilet to be provided; specification for public health and electrification appliances/fixtures to be used; structural systems; materials for flooring roofing and walls; number of doors and windows/openings; size of openings; amount/type of wood and glass to be used; internal finishes adopted; capacity and capability of the contractor and labour hired; nature of the contract for construction; project management; quality of supervision; amount of wastage of materials ; profit margins of the contractor; cost and time of the money borrowed for construction, government levies, taxes, fees; cost of security etc.

It will be critical and important to understand the role of the designer engaged for the designing of the house and his capability and capacity to design, which will be very vital in achieving the cost-effectiveness in the housing. If the house is not designed rationally and logically, then achieving cost-effectiveness will remain a distant dream and will be difficult to achieve. Accordingly, it will be desirable that only qualified architects are engaged for designing the buildings, who have the capacity and capability to design good and cost-effective house. Architect hired should have a good knowledge of materials, construction technologies and knowledge of the latest trends in vogue for promoting cost-effectiveness in the buildings. Knowledge of the architect to design green building will be an added advantage. Structural efficiency and designing and placing of services will remain important to achieve cost-effectiveness in the house. Using materials, requiring low maintenance and replacement, will help in making the house cost-effective.

In search for appropriate options for making housing really cost-effective, there is an urgent need to look at different options to make house cost-effective in the real sense of the term. Suggested options for promoting economy; looking at the components which constitute the cost of the house; initial and life-cycle cost; key drivers of cost reduction in terms of planning and designing; materials; cost of labour; innovative construction technology; infrastructure; marketing; management; finance; speed etc. However, cost-effectiveness does not mean compromising, in any way, on the quality of construction/building/ housing.

Factors enumerated for achieving cost-effectiveness in housing and their context/ impact have been explained/detailed below;

1. Cost of Housing includes:- Initial Cost & Life Cycle Cost

- **Initial Cost involves**
 - i. Cost of sourcing land
 - ii. Cost of construction
 - iii. Cost of Services- water supply, sewerage, sanitation, electricity, mechanical, HVAC, roads, pavement, landscaping, rain water harvesting etc
 - iv. Government Charges/ levies/fees/taxes– registration of land/houses
 - v. Cost of approvals of building plans, professional fees/charges etc
- **Life Cycle Cost**
 - vi. Maintenance cost and
 - vii. Cost of operations
- Building cost needs to be viewed in both— long term and short term
- Building cost needs to be evaluated in terms of — Initial Cost and Life Cycle Cost
- Short Time cost includes Initial Cost—constitutes Cost of construction of building
- Long Term cost component — involves whole life cost.

2. Whole life cost of building includes:

- Initial design cost
- Construction cost,
- On-going operations and
- Maintenance cost,
- Parts replacement cost
- Disposal cost or salvage value, and
- Useful life of the system or building

3. Initial Building/ Project cost includes:

- Cost of land, land registration, land survey
- Cost of Designing/ plan approval
- Cost of developing Site
- Cost of Construction
- Cost of Money
- Carrying Charges
- Government fees and Taxes
- Cost of Advertisement
- Legal expenses
- Cost of Supervision
- Cost of Manpower and Security
- Cost of Equipment and Furniture
- Transportation and Travel Charges
- Cost of Making buildings Green, Energy efficiency
- Cost of Time
- Contractor' Margin
- Builder's Margin
- Miscellaneous and Unforeseen Charge

4. Key Drivers to Cost Reduction in Housing

- *Architectural design and Planning*– Best option to reduce cost
- *Site planning* - based on optimum utilization of the land/available resources
- *Optimising area* under roads, services, parking etc
- *Adopting optimum design solutions*- architecturally, structurally, Services etc
- *Adopting Simple form,*
- *Evolving Functional design,*
- *Optimum utilization of spaces*- both within/outside
- *Multiple uses of spaces,*
- *Minimizing area under walls,* circulation etc,
- *High building efficiency* (high carpet area/covered area ratio),
- *Low rise*- avoiding lifts
- *Minimum wood work*— minimum doors
- *Minimizing variations* in the sizes of doors and windows,

- *Avoiding large openings*
- *Room/corridors sizes based on the available sizes of tiles /marbles for avoiding wastage when laying flooring etc.*
- *Using windows/ glass opening sizes based on the available sizes of the wood/glass in the market*
- *Making simple safety provisions for disaster management*
- *Promoting Standardization*
- *Reducing Building Load- self/ occupied,*
- *Designing thin and lean structures*
- *Minimizing PH fixtures/toilets*
- *Clubbing/planning all public health services in close proximity.*
- *Adopting efficient structural system*
- *Avoiding large spans*
- *Avoiding large projections*
- *Avoiding large area under balconies and projections.*
- *Making optimum use of day lighting*
- *Making optimum use of prevailing wind direction for cross –ventilation, where required*
- *Designing with nature*
- *Making optimum use of Panchbhutas while designing- Prithvi, Agni, Vaayu, Jal and Aakash*
- *Making optimum use of orientation*
- *Making optimum use of sun for heat and light*
- *Adopt integrated approach to design*
- *Minimize single loaded corridors, promote doubly loaded corridors to minimize area under circulation*
- *Minimizing building foot- prints*
- *Designing compact buildings*
- *Designing Green Buildings –to reduce cost of electricity/water and generating its own energy*

5 Materials

- *Using cost-effective- materials,*
- *Using pre-cast, pre- fabricated, re-cycled -materials*
- *Using local- materials,*
- *Using minimum variety of- materials*
- *Using materials- in the natural form*
- *Using recycled materials - from demolished structures- bricks etc.*
- *Using available building components— from old buildings- doors, windows, fixtures furniture etc.*
- *Using materials —made from waste- fly ash bricks etc.*
- *Minimizing use —of steel and Cement,*
- *Using materials- requiring minimum maintenance and upkeep/replacement*
- *Using materials- which are light weight*

- Using materials - which are easy to handle
- Using materials- not occupying large space
- Using materials- which can be handled by locally available labour and manpower
- Using materials- which do not require specialized cutting and shaping
- Using materials - not requiring special machinery and manpower for handling
- Using materials- available in standard shape and size, having little variations
- Using materials- requiring minimum fixing and bonding materials.
- Using limited number of variety of materials- for flooring, roofing construction to avoid wastage
- Using materials - which leaves no wastage.
- Using materials- involving less quantity
- Using materials- requiring less water for manufacturing/laying/curing
- Using materials- requiring less energy for manufacturing- low energy
- Using materials - which permit speedier construction
- Using materials- involving minimum transportation

6 Labour

- Minimizing -manual labour component
- Using - local labour
- Involving labour actively— in construction by explaining them design/ construction
- Using skilled labour- having knowledge and experience of handling material used
- Avoiding -outside/specialized labour
- Promoting- standardization, pre- fabrication, cast-in-situ components
- Promoting- repetitive and simple construction
- Managing- labour skilfully, for maximizing output
- Taking care- of the labour for their basic day to day needs
- Making arrangement- for shelter near the site for housing the outside labour- in large projects
- Creating a crèche for the children- of the working women in projects ,having large duration and employing number of women as construction workers with children

7 Technology

- Making use of— state of art construction technologies to promote cost-effectiveness
- Promoting technologies —which lead to time reduction besides ensuring appropriate quality
- Using technologies —for saving on labour, space, materials and money
- Using innovative —walling and roofing system
- Using Pre-cast and ferro- cement- components
- Using pre-cast- Aerated Cement Concrete Blocks
- Using technologies- involving minimum wastage of materials

- Promoting technologies - for repetitive work
- Using technologies- for creating materials locally
- Using technologies- for brick laying and plastering
- Using innovative technologies- for sewage water treatment- phytoremediation system
- Using technologies - which need low operational and maintenance cost
- Using state of art- locally available refined technologies
- Using materials - made out of construction & demolition waste.

8 Infrastructure

- Using Solar- Energy
- Using Solar- water heating
- Promoting - Water conservation
- Reducing - electricity/water consumption
- Involving— low energy consumption equipment
- Using - only star rated electrical equipment
- Using - water efficient WCs/urinals/ faucets
- Promoting- recycling / multiple use of water
- Installing- rain water harvesting system
- Using— low energy LED lighting instead of florescent lighting
- Using day-lighting to the optimum level
- Making -optimum use of landscaping and existing trees/ flora/fauna
- Using- local variety of trees for landscaping
- Using- landscaping requiring minimum water
- Planning- all services near to location of municipal services – to reduce the length of service network
- Promoting — recycling and reuse to minimize waste and promote reuse

9 Marketing

- Minimizing- supply chain- inter-mediatory
- Serving — End -Users directly
- Promoting — economy of scale
- Treating — affordable housing as the volume game and not the profit game
- Promoting — Engineered Quality Products
- Promoting — disposal of houses in minimum time span
- Constructing- houses based on local demand, culture and needs only
- Promoting- construction, based on affordability
- Tying up— with reputed financial institutions for adequate flow of funds and disposal of houses
- Displaying —effectively the end products as sample on site.

10 Management

- Promoting —Effective and efficient/ professional management for the project

- Using —minimum time for construction / completion of building/project
- Minimizing —overhead expenses to optimize housing cost
- Entering —into long term contracts for essential materials- cement/ steel/ sand/ etc
- Outsourcing — to trained petty contractors
- Promoting - effective checks and balances
- Promoting— security of site and materials
- Promoting— effective planning of work schedule
- Ensuring — quality
- Procuring — materials directly from reputed manufacturers
- Avoiding— hasty and unscheduled purchases
- Completing— project within given time span
- Minimizing — time over-run/ cost over-run
- Adopting— technologies to minimize construction period

11. Financing

- Reducing- cost of money
- Sourcing — funds from reputed institutions offering lowest rates of interest
- Completing— the project in minimum time span
- Ensuring— shorter working capital cycle
- Making — beneficiaries part of the project in financing

12. Others

- Sourcing — land at most competitive price
- Keeping— Builders, Contractor margins low
- Rationalizing— Government charges, taxes, levies and fees
- Minimizing— transportation
- Minimizing —specialized/hired machinery

The costs is also known to be closely associated with raw materials used, quality of structural design, cost of plumbing, use of elevators, design of electrical work etc. and varies according to the height, design of the structure being built. When urban expert Alain Bertaud, graphed the relationship between cost and density for multi-storyed buildings, he found that optimal value in cost was achieved for buildings having 20 to 25 floors, with an FSI between 6 and 7. In addition to cost of construction cost of land component remains crucial determinant of the cost of the house because, cheaper the land lower will be the cost of the house (Bertaud,2010).

In addition to factors defined above, for housing to be affordable in the real sense of the term, housing must be closely located to the places/sources of employment/ economic activities and rationally linked with the basic services determining quality of life. No housing

can be considered “affordable” if it is located far from economic opportunities. Housing markets and labour markets have close linkages. High crime rate is also

known to adversely impact the housing and makes it unaffordable, due to lower acceptability of neighbourhood and presence of less economic opportunities in the nearby areas. Accordingly, people need to travel large distances for sourcing job and spend more money/time for accessing job and going back home, which makes housing unattractive, unaffordable and cost intensive.

In the Mexican city of Puebla, households located on the periphery were found to spend twice as much cash and three times as much time commuting as those who live centrally (Duren N., 2017). When the Tu Casa programme, relocated poor inhabitants into new houses outside the city centre and away from livelihood options, many of the homes were abandoned within a year (King, Orloff, Virsilas, & Pande, 2017). The same consideration applies to amenities such as education and health services. Plans for affordable housing developments need to account for transit stations and walking/cycling infrastructure: The “20-minute neighbourhood” concept aims for daily needs to be accessible within 20 minutes’ walk.

Thus, for rationalising cost; locational aspect of houses assumes importance. For lowering the life-cycle cost and for making affordable housing a distinct reality, affordable housing should be closely linked with time, space, and distance, to the productive economic activities and job market in the city besides looking at the housing site, architectural design, structure, construction technologies, materials and availability of services near-by. Adopting passive design strategy and making building green, remain the best options to achieve economy, promote operational efficiency and make inhabitants, happy, healthy and more productive.

1.5 Migration, Urbanisation and Housing

Migration, urbanisation and housing are known to have high degree of connectivity, inter-dependence and mutual conflicts and contradictions. If urbanisation is the cause and outcome of rapid migration, then housing remains the most impacted human necessity in the urban areas. Migration and urbanisations are known to be responsible for bringing and transporting large number of people on continued basis, which primarily and essentially, require appropriate shelter to live in besides other supportive activities, which are essential for quality human living, growth and development. Accordingly, migration, urbanisation and housing have to be looked holistically in an integrated manner to ensure that cities are able to provide appropriate living to its residents and migrants, which have spaced themselves in the urban setting.

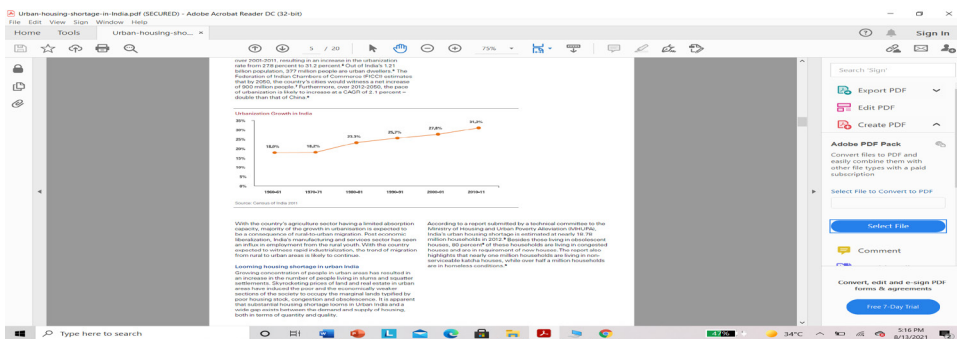
Rapid urbanization is known to drive economic growth, creates numerous options for gainful employment in the urban areas which causes poor, unemployed, under-employed people in rural areas, to seek working and investment opportunities in urban areas. However, as evidenced by poor urban infrastructure and insufficient housing, the local government/cities sometimes are unable to manage this

transition. This incapacity of managing and providing appropriate shelter can be attributed largely to the availability of lack of sufficient funds/ resources/ experience with the urban local institutions of governance, to handle problems brought by massive migration and rapid urbanization. In majority of cases, local governments remain unconcerned with the uncontrolled influx of immigrants during the process of urbanization, believing that slums would finally disappear under the impact of rapid economic growth in urban areas. This belief has led to large scale mismanagement of rapidly spreading slums under the impact of rapid rural-urban migration propelled by unregulated urbanization.

Urbanization is known both for dualities and contradictions. If urbanization can lead to rapid economic growth, it is also known to promote chaos and anarchy creating economic stagnation/ low growth, leading to emergence of high degree of unemployment, non-availability of sufficient housing/financial resources and inconsistent urban planning policies, which remain the prime reason for the mushroom growth of cities and slums. In such adverse circumstances of stagnant economies, an increase of 1% in urban population is known to result in an increase of 1.84% in slum prevalence. Accordingly, cities have to prepare and empower themselves so that dynamics of urbanisation is clearly understood and appreciated for laying down/defining a clear agenda of rational growth and development of urban centres.

Indian Urbanisation

Housing demand and pattern of population distribution are known to be closely linked. Faster rate of population growth and changing social structure are the factors which impact housing demand in any city/state/nation. Rapid Rural-Urban migration in growing economies invariably leads to ever-growing demand for shelter in the urban context. Changing social structure, breaking of joint families, downsizing of families, mobility of population in search of job and education invariably leads to the need for creating large housing stock in urban areas. With fast changing urban population dynamics, majority of cities are not in a position to create appropriate typologies of adequate shelter for its rapidly growing population, leading to emergence of large number of developmental issues.



Source- Census of India, 2011

Looking at the fast pace and dynamics of urbanization and following the global trends of rapid urbanization with more than half of global population living in cities, Indian cities are also growing at an unprecedented rate, presenting an incredible opportunity for the growth and development of both local and national economies, employment, infrastructure and services. With Census 2011, recording population of Urban India at 377.10 million & urbanization level of 31.16%; India has emerged as the second largest urban system globally after China. According to Census 2011, Urban population of the country is distributed in 7933 urban settlements which include; 4041 Statutory Towns; 3892 Census Town; 475 Urban Agglomerations and 981 Out-Growths.

Census 2011 is credited to be a landmark in the demographic history of India for two distinct reasons that,

- for the first-time urban India added more population (91 million) as compared to its rural counterpart (90 million) and
- number of towns and cities recorded a growth of more than 50% during the decade 2001-2011 from 5161 in 2001 to 7933 in 2011.
- Out of the total increase of 2772 urban centers, largest increase was recorded in the number of census towns, which was placed at 2530(91.3%) as against increase of merely 242 (9.3%) in statutory towns.

Rapid increase in the number of Census Towns, clearly indicates that all is not well on the front of urbanisation and Indian urbanization remains distorted for the reason, *Census Towns* having no legal urban status; are treated as rural settlements for all intent and purposes by the government for various schemes and programs. The issue needs to be resolved and rationalized to reflect a clear picture of Indian urbanization.

Based on the prevailing annual urban growth rate of 3.18% as against 1.22% for rural India, it is estimated that by the year 2031, urban India will house 590 million people out of a total population of 1400 million and by 2050, urban and rural India will share parity in human numbers, with population of 800 million and total human count placed at 1600 million (McKinsey Global Institute Report- *India's Urban Awakening: Building Inclusive Cities, Sustaining Economic Growth*).

Census data for the year 2011 also reveals existence of large variations and disparity among states and regions with regard to level of urbanization and distribution of urban population which is marked by both dualities and contradictions, showcased by;

- high degree of concentration in large/metropolitan cities with every 6th urbanite living in super- metros of India namely, Mumbai, Kolkata, Delhi and Chennai;
- 42% urban residents are housed in 53 metropolitan cities and more than 70% urbanites preferring class One cities.

- Concentration of population in urban centers is becoming more and more pronounced with number of urban centers going up from 5161 in 2001 to 7933 in 2011 and million plus cities (Metropolitan Centers) recording 50% increase, with numbers going up from 35 in 2001 to 53 in 2011.
- The new entrants to the list of metropolitan cities include; Srinagar UA , Union Territory of Chandigarh UA, Jodhpurs UA and Kota Rajasthan, Ghaziabad UA Uttar Pradesh, Ranchi UA Jharkhand, Raipur UA and Durg-Bhilainagar UA Chhattisgarh, Gwalior UA Madhya Pradesh, Vasai Virar and Aurangabad UA Maharashtra, Kozhikode UA, Thrissur UA, Malappuram UA, Thiruvananthapuram UA, Kannur UA and Kollam UA Kerala, and Tiruchirappalli UA Tamil Nadu.
- Union territories of Jammu and Kashmir and Chhattisgarh now also have million plus city/UA,
- Kerala now has as many as 7 million plus cities/UAs, a quantum jump from the situation in 2001 when Kochi UA was the only million plus city/UA existing in the state.(*MOHUD website*).
- Looking at the ongoing trends of growth and development, it is estimated, number of metropolitan centers in the country will be 85 in 2031 and 100 in 2051. These cities will be housing large proportion of Indian urban population.
- Out of 34 ten million plus cities of the world, three cities namely; Mumbai, Kolkata and Delhi, are located in India.
- As per estimates made by the United Nations in its report, '*World Urbanization Prospect, The Revision 2014*', the number of such cities will go up to 7 in 2031 and 9 in 2051 with Delhi ranked second largest among urban agglomerations in the world, after Tokyo.
- Among states and union territories, it has been observed that centrally administered territories are more urbanized as compared to states
- among states majority of large populated states have low level of urbanization when compared with states having less population.
- Compact states having less area remain more urbanized as compared to states having large area and large population.
- North India, is traditionally known to be less urbanized, as compared to southern part of the country.
- Hill state of Himachal Pradesh continues to occupy lowest rank among states and union territories in the percentage(10%) of urbanization.
- Among all the States and Union territories, the National Capital Territory of Delhi and the Union territory of Chandigarh are rated as the most urbanized entities with 97.5 percent and 97.25 percent urban population respectively,
- Daman and Diu (75.2 percent) and Puducherry (68.3 percent) are ranked next in the country in urbanisation.
- Among States, Goa, occupies the highest rank in the country in urbanization and is now recognized as the most urbanized state with 62.2 percent urban population, marking a significant increase in urbanization since 2001 when urban population of Goa was placed at merely 49.8%.

- Kerala, as a state, has also made significant progress in the domain of urbanization with urban population placed at 47.7 per cent (2011) as against 25.9 percent a decade ago (2001).
- Among the North-Eastern States, Mizoram has emerged as the most urbanized state with 51.5 per cent population residing in urban settlements, though in terms of absolute contribution to total urban population in the country, Mizoram's contribution is merely 0.1 percent.
- State of Sikkim, which was just 11.0 urbanized a decade ago became almost 25 percent urbanized in 2011.
- Among major states, Tamil Nadu continues to be the most urbanized state with 48.4 percent of the population living in urban areas followed by Kerala (47.7 per cent), surpassing state of Maharashtra (45.2 percent).
- The proportion of urban population continues to be the lowest in states of Himachal Pradesh with 10.0 per cent followed by Bihar with 11.3 percent, Assam (14.1 percent) and Orissa (16.7 percent).
- In terms of absolute number of persons living in urban areas, Maharashtra continues to lead with 50.8 million persons, which comprises 13.5 percent of the total urban population of the country. Uttar Pradesh accounts for about 44.4 million, followed by Tamil Nadu at 34.9 million.

Rapid Migration; Globally, rural economy hinges , gravitates and leveraged by land and agriculture in all the developing economies, as against the urban economy, which has its roots, origin and genesis in the secondary and tertiary sectors, largely dictated by industry and services. With low availability of land-man ratio, lack of irrigation facilities in majority of rural areas, poor connectivity; lack of access to urban market and non-remunerative prices of the produce, agriculture has rarely proved to be an economical viable option to promote prosperity. This has led millions of rural work force, having no land holding, to find work in the informal economies of the cities as their only choice. Accordingly, millions move to the cities on daily basis in search of finding any informal job including domestic assistance, driving middle-class vehicles, taxi driving, construction work, etc. In the already packed urban infrastructure, this causes overcrowding, congestion and slums.

Rural to urban migration is one of the major drivers of increasing demand for housing in the urban areas leading to growth of slums in Indian cities. As per Census, 2011, migration remains one of the prime causes of rapid population growth with every fifth person added to urban population during 2001-2011 was a migrant from rural area. In the face of massive influx of rural population, urban centres, which are ill equipped to support additional population, fail to cope up with high influx of people which ultimately leads to emergence of numerous physical and social problems including housing shortage, unemployment, illegal growth, encroachment on public land, haphazard and unplanned development, lack of basic amenities and essential public services along with development of slums. Migration to cities led by people because of connection with relatives/families already living in slums in urban areas, also leads to further expansion of these slums.

As per data made available, every fifth urban resident in the country is migrant from rural hinterland. As per studies carried out by Government of India, migrants in mega cities like Mumbai and Delhi, constitute 42% of total population of these cities. With large cities offering better options of livelihood, infrastructure and employment, pace of migration to these metropolitan and mega cities is also going to increase rapidly. Since these migrants have limited financial capacity to hire appropriate housing, they all end up in either derelict housing or in slum areas. Considering the fact that India is going to be the most populated country by 2051, with projected population placed at 1.6 billion and urban resident's count worked out at 800 million, cities are going to witness enormous influx of migrants and also growth of slums, if the existing pattern of urban growth and development is allowed to continue

Options

It needs to be understood and appreciated that urbanisation and migrations hold the genesis of housing problems prevailing globally in all the nations. Studies made globally have shown that countries, which are already developed and have reached optimum level of urbanisation; are better placed in terms of housing problems when compared with the developing and under-developed economies. Major problems of acute shortage of housing have been found to exist in nations which are facing pressure of economic and industrial growth, due to large scale migration of people from rural areas to urban centres. Prime reasons for this forced migration rests with the reason that industry requires large manpower with low wages for its operation, management and generating profit and such workforce is available to a large extent only in the rural areas, which holds the key to the housing problems in the urban areas. Larger the migrant work force in the city, greater will be the problem of housing. Accordingly, in order to achieve the objective of housing for all and minimising rural-urban migration, following agenda for action is suggested.

Prioritizing Regional Planning ;

After becoming most populated nation in the world in April, 2023, India is already on the path of rapid urbanisation in the years to come. With urbanization level estimated to go up to 50% as against prevailing 31.1% (Census 2011), urban India will have a total population count of 800 million in 2051 as against 378 million in 2011. Another urban India is waiting to be added in four decades (2011-2051). Accordingly, it will be appropriate that not only prevailing growth rate of urban areas is rationalised but also migration to urban areas is reduced and minimized. To achieve the objective of limiting rural-urban migration, rural areas would require support and empowerment in terms of better economic opportunities, improved services, quality infrastructure, rapid skill development, better education, quality health care and industry based on Agri-products created in the rural settlements. This requires creating synergy between urban

and rural settlements based on adopting Regional Planning as the theme/option for integrated planned development of both rural and urban settlements, rather than focusing on urban areas. Regional planning holds enormous capacity to empower rural areas and reduce migration besides making optimum use of available resources and promoting rational sharing and clearly defining their roles and functions in the domain of development, between urban and rural settlements. Once better options of gainful employment, generating wealth; creating better opportunities of skilling, healthcare, quality education are made available in rural areas, forced migration from rural India to cities shall automatically get diluted and muted. The strategy of going for Regional Planning will help in making both cities and villages better places to live and work, since majority of urban problems have their genesis in the neglect of rural areas.

Avoiding large cities; Looking at the emerging population scenario, large concentration of population will be witnessed in the class- 1 and million plus cities in future. Accordingly, these cities are going to face a crisis of population and crisis of poverty in future, along with unending growth of slums, propelled largely by concentrating poverty and rising number of migrants. Since land prices remain high in these cities, beyond the affordability of majority of poor migrants, therefore these cities believe in marginalizing and exclusion of the poor from the formal process of development and housing. Accordingly, it will be critical that concentration of population in few urban centres need to be avoided by framing rational and realistic policies for promoting diversion of population in small and medium size cities. This would require focusing on small and medium towns in terms of providing basic and essential infrastructure, enabling environment and incentivizing setting up industries and creating job opportunities in these centres. This strategy of developing small and medium cities, other than metro, will help in minimizing concentration of population in large cities. In smaller cities, it is always easier and economical to create adequate stock of housing because of lower prevailing land cost and easy availability of developed land at affordable price.

Regulating Migration; Regulating rapid migration from rural India will also be critical for rationalizing rapid growth of cities and towns, because migration is known to contribute around 29% of total urban population growth in the country. Minimising migration, can be made possible by effectively using the mechanism of empowering rural India, creating more opportunities of gainful employment and supportive infrastructures. As already detailed above, Regional Planning instead of Urban Planning, holds distinct advantage of promoting urban and rural development in tandem and not at the cost of one and another. Adopting Regional Planning will be critical to achieve the balanced growth, rational population and employment distribution and optimum use of resources available in the rural and urban areas. Effectively implementing the central scheme of developing *aspirational districts* needs to be leveraged by states along with RuUrban Mission to empower villages and create connectivity between rural

and urban settlements within the district. In such cases districts shall be taken and considered as the planning unit at the regional level.

Focussing on states with low urbanisation; For minimising growth of slums and to create affordable housing on large scale; it will be logical to focus on states which have low level of urbanization; high degree of poverty and lack of education and skilled manpower. These states need resources, skilling and opportunities of gainful employment in order to minimize dislocation of population from rural areas to urban settlements. States which have low level of urbanization, need to adopt a dual strategy of development. Such states would require large industries to be set up by incentivizing to create jobs and promote urbanization.

Empowering Villages; In addition to planning of urban areas, it will also be important that villages are also put under the shadow of planned development, so that they are also made to operate under a planned regime supported by all basic amenities and services, essential for quality human living. Considering the large numerical numbers of Indian villages, best option/ strategy of development villages shall be to adopt of clustering of rural areas under the mechanism of *Deen Dyal Upadhya RuUrban Mission*. If all village communities/ settlements are linked with the nearby urban areas through the process of clustering of villages,/Regional planning, this country can easily fulfil the mission of Mahatma Gandhi of developing villages as self-sufficient, self-contained and self-reliant units. Skilling, planning and empowering rural India will hold the key to minimize migration to the urban India.

Reducing population growth rate; In addition to dispersing population/ economic activities, creating more employment opportunities, creating large stock of affordable housing, providing basic infrastructures etc, India, also needs to concentrate on evolving rational and realistic policies/ launching focused programs and educating masses to reduce the rapid growth of population. Experience has shown that education remains the greatest panacea to lower/ reduce the population growth rate in any community and nation. Kerala has clearly demonstrated the efficacy and effectiveness of education to rationalize the growth of population in the state, with 100% literacy. Education and population growth are known to be negatively regulated and accordingly, states must pursue the goal of making all its citizens literate so that they can understand, appreciate and promote the role and importance of having small and compact family to minimize the rapid and uncontrolled growth of towns/cities in contents and size so as to minimise the quantity of houses to be constructed in India.

Looking at the quantitative and qualitative aspect of the existing housing stock and ever widening gap between demand and supply , India needs to follow a multi-pronged strategy to solve its problem of creating appropriate and affordable shelter for meeting its goal of providing housing for all.

2.6 Slums-Origin, Growth, Problems, Issues and Strategies for Slums.

In the UN Conference on Human Settlements, held in *Vancouver, Canada, 1976*, the then Canadian Prime Minister, Pierre Elliott Trudeau, redefined the ideas of urbanization by focusing on well-being of slum-dwellers and their rights and aspirations for a dignified life. One year later, The UN General Assembly established the UN Centre for Human Settlements as an immediate response with the aim to create a way to combine spatial planning with the social, cultural and economic aspirations of the informal settlers.

Looking at the genesis, Slums first appeared in the 18th century in growing industrial cities, as the rural poor moved to the city to find work, but then got stuck in illegal suburbs. It is globally recognized that process of urbanization, by which cities and towns grow and develop, has also number of 'by-products', including pockets of poverty and neighbourhood decay, universally called 'slums. Formation of slums and process of urbanization have been found to have high degree of positivity and connectivity. Globally, it has been observed that increase in urban growth, has invariably led to growth of slums. In fact, slums have been rightly called the shadow of urbanization. UN-Habitat reports that 43% of urban population in developing countries and 78% of those in the least developed countries are slum dwellers. Studies made and analysis carried out globally, has suggested that urbanization has invariably led to creation of slums due to lack of capacity/competency, inefficiency and lack of will on the part of local governments to effectively and efficiently manage process of urbanization. Non-availability of adequate, appropriate and affordable housing for large number of migrant workers, without any place to live, has invariably led to mushrooming of slums.

Growth of slums, its location, structure, and fabric has been changing over a period of time. Dynamics of slums has also been seen to have close relationship with the urban economy, land values, existing topography, prevailing political philosophy, quality of urban governance, planning and development practices in operation. Before the 19th century, rich and poor people lived in the same districts, with the wealthy living on the high streets, and the poor in the service streets behind them. But in the 19th century, wealthy and upper-middle-class people began to move out of the central part of rapidly growing cities, leaving poorer residents behind. Slums are often associated with Victorian Britain, particularly in industrial English towns, lowland Scottish towns and Dublin City in Ireland. Friedrich Engels described these British neighborhoods as "cattle-sheds for human beings".

Slums come in all shapes, sizes and have various names, yet they all mean the same thing: an overcrowded residential urban area largely characterized

by sub-standard and poor-quality housing, lack of open spaces, poor living conditions, absence of poor basic services and squalor. The word 'slum' first came into use in the 1820s. It was used to denote certain locations across London, which were known for having the poorest quality housing and the most unhygienic conditions. These locations were reputed for being the breeding grounds for marginal activities including many criminal activities and drug abuse. Slums are known to be the most neglected parts of cities where housing and living conditions are appallingly poor. (Cities Alliance Action Plan). By the end of the 19th century, it had started to imply 'a street, alley, court', situated in an overcrowded district and inhabited by lower class or poor people. During the 1880s, Housing Reform movement in England, introduced the idea of 'slums' - meaning a house that is "materially unfit for human habitation", which led to the delimitation of 'slums' on city maps for planning, by marking out pockets of poverty

Today, the word 'slum' is broadly used to describe poverty led housing arrangements all over the world. In developing countries in particular, the term 'slum' has come to mean informal housing. Although each country has its own way of naming them, the word 'slum' has become universal; imposing a certain status upon those who live there: American English calls them hood/ ghetto. In India, slums have different connotations in different parts of the country. In Mumbai, they are called; chawls, Jhopadpatti ; whereas in Delhi they are named as 'Jhuggi-Jhompri'; bustees in Kolkata; 'Cheris' in Chennai and 'Keris' in Bangalore. In Karachi, Pakistan, they are called *katchi abadi*.

Defining Slums

Known to have origin in London, word slum meant "room" in English parlance, which subsequently was replaced around by Black slum meaning 'back alley or street of poor people in the year 1845. *Slum* are also known as shanty town, favela, ghetto etc. in different countries. The word *slum* has always been considered to have negative connotations. Using word slum for an area is invariably seen as an attempt to label the area as illegal, unauthorized and sub-standard. Slums are known to be areas infected by all vices and little virtues. Despite housing considerable proportion of urban population, making valuable contribution to the urban economy, creating large number of employment opportunities and providing workforce for creating/making operational, basic urban services, slums remain most degraded and neglected areas of the urban settlements.

While slums differ in size and other characteristics, they lack reliable sanitation, supply of clean water, reliable electricity and other basic services. Slum residences vary from shanty houses to professionally built dwellings which, because of poor-quality construction and/or lack of basic maintenance, have deteriorated over a period of time. Although slums, remain usually located in urban areas, they can also be located on urban fringe/peri-urban areas

where housing quality is low and living conditions are poor. Accordingly, they have always been defined by individuals/institutions/ organization/ scholars/ researchers/academicians/ parastatal agencies etc. with negativity. Various definitions globally used for slums include;

- Slums are illegally built, densely populated urban areas with very poor living conditions and quite often plagued by violence.
- A slum, commonly called *Jhuggi-Jhompris* in India, is residential area where the dwellings by reason of over-crowding, lack of ventilation, light and sanitary facilities, unhygienic conditions and other set of factors are detrimental to safety, health and morals.
- A slum is typically a heavily populated urban residential area consisting, for the most part, of densely clustered, decrepit housing units in a degraded or inadequate infrastructural situation, mostly occupied by poor people.
- A slum is a highly populated urban residential area consisting of densely packed housing units of weak built quality. The infrastructure in slums is often deteriorated or incomplete, and it's primarily inhabited by impoverished people.
- Slums' means a house that is "materially unfit for human habitation (*Housing Reform movement in England*)
- Slum is a contiguous settlement where the inhabitants are characterized as having *inadequate housing and basic services*.
- *Cities Alliance Action Plan* describes slums as, neglected parts of cities where housing and living conditions are appallingly poor.
- A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities are termed as Slums (*Census of India, 2011*).
- *Census of India 2011*, also explained slums as, "Residential 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 safety and health
- The slum is reckoned as an inevitable part of modern urbanization where urban poor are active agents serving the non-slum dwellers and contribute to economic growth.
- Urban slums are settlements, neighborhoods, or city regions that cannot provide the basic living conditions necessary for its inhabitants, or slum dwellers, to live in a safe and healthy environment.
- The United Nations Human Settlements Programme (UN-HABITAT) defines a slum settlement; which cannot provide one of the basic living characteristics involving; *durable housing of a permanent nature that protects against extreme climate conditions; sufficient living space, which means no more than three people sharing the same room; easy access to*

safe water in sufficient amounts at an affordable price; access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people and security of tenure that prevents forced evictions.

Slums in the Global Context

- Slums exist in many countries and have become a global phenomenon. A UN-Habitat report states that in 2006 there were nearly 1 billion people settling in slum settlements in most cities of Central America, Asia, South America and Africa, and a smaller number in the cities of Europe and North America. The United Nations also predicted that most population growth will be recorded from the metropolitan areas themselves in the future, with 165 million additional individuals projected to live in urban areas by 2030. It is estimated that the 1 billion who live in slums and informal settlements will grow to 3 billion by 2050 without more action.
- In 2012, according to UN-Habitat, about 863 million people in the developing world lived in slums. Of these, the urban slum population at mid-year was around 213 million in Sub-Saharan Africa, 207 million in East Asia, 201 million in South Asia, 113 million in Latin America and Caribbean, 80 million in Southeast Asia, 36 million in West Asia, and 13 million in North Africa. Among individual countries, the proportion of urban residents living in slum areas in 2009 was highest in the Central African Republic (95.9%), Chad (89.3%), Niger (81.7%), and Mozambique (80.5%)
- Rio de Janeiro documented its first slum in 1920 census. By the 1960s, over 33% of population of Rio, 45% of Mexico City and Ankara, 65% of Algiers, 35% of Caracas, 25% of Lima and Santiago, 15% of Singapore, lived in slums. By 1980, in various cities and towns of Latin America alone, there were about 25,000 slums.

Slums in the Indian Context

- Despite level of urbanization standing at 31.16%; India, reported to have high incidence of slum dwellers. Every sixth urbanite was reported to be slum dweller in 2011.
- Size of the city was found to have positive co-relation with the slum population. Large concentration of slum households were found to be concentrated in metro cities; every third resident of metropolises was a slum-dwellers as against every sixth in the urban India. 46 million Plus Cities held 52 lakh slum households (38.1%) as against 85 lakh (61.9%) in other cities.
- Mumbai, recorded largest slum population with every second resident of the city living in slums. Dharavi, largest slum settlement in India, is also located in Mumbai. Capital city of Delhi had only seventh urbanite as a slum dweller.
- Distribution of Urban population, existing housing shortage, urban poor and slum population in five major states of India is shown below. From the table it can be observed that poverty and slums are positively co-related ie higher the level of poverty, larger will be the proportion of slum population. It

can also be inferred from the table that larger the housing shortage, larger will be the number of slum-dwellers. Further, slums are also known to be positively related to level of urbanization.



Causes Promoting and Expanding Slums

- Growth of slums has been a phenomenon which is witnessed globally. Starting with industrial revolution in the so-called developed countries, culture of slums has engulfed entire humanity. Slums are seen as integral part and product of the process of urbanization and urban growth. It is largely attributed to problem of poverty and inability of local institutions to effectively meet the emerging challenges of urbanization. But poverty is not an urban problem, it is a human problem. It has emerged as an urban problem because of concentration of large number of poor in the urban spaces. Urbanization perse is not bad, but when not managed and regulated properly, it can be major cause of ills facing the urban areas. Primarily and essentially, slums and affordable housing remain negatively co-related. Economist summarizes this as, "good housing is obviously better than a slum, but a slum is better than none."
- Slums are known for having genesis in combination of large number of demographics, physical, social, economic, environmental and political environment prevailing in the community, state and nations. Factors which are responsible and known for the emergence, growth, development, spread and sustainability of Slums have been enumerated in terms of; *rapid rural-to-urban migration, poor planning, economic stagnation, depression, poverty, high degree of unemployment, informal economy, colonialism and segregation, politics, natural disasters, social conflicts, mismatch between demand and supply of housing, low availability of affordable housing, high land cost, irrational housing policies, poor financial base, low level of urbanization, low land-man ratio, large dependence on agriculture, low urban priority, low allocation of resources, neglect of rural areas, absence of regional planning* etc.
- **Rapid and Massive Urbanization**; Rapid urbanization, primarily and essentially, led by industrialization and duly supported by rapid growth of population, rural- urban migration and shift in economic policies and programs, has cumulatively resulted in the growth of slums. Mushrooming of slums in the urban context has genesis in large-scale squatting of unskilled/poor migrants coming from rural areas in search of better living conditions. It is the combination of both push and pull factors, which are largely

responsible for rural to urban migration. With poverty pushing the rural poor and urban areas pulling them with the hope of gainful employment and better economic opportunities, they enter into no-man land. Largely employed informally with low wages, with no security of job; these workers with low affordability are too poor to rent a house and pay for the urban infrastructure, have no option but to look at the shelter which has low financial cost, even when devoid of basic amenities. These squatter settlements, over a period of time, become slums. In whatever way the slum grows, slum dwellers form part of the urban economy. Nevertheless, as more and more people make this transition, the space left to accommodate them becomes less and less. Urban development cannot keep up with the rising numbers of informal settlers, and no agency, institution and parastatal agencies want to be made responsible for the slums or their inhabitants. Slums thus continue to mushroom and grow as integral part of the urban development process.

- **Rapid Migration;** Globally, rural economy is primarily hinges , gravitates and leveraged by land and agriculture in all the developing economies, as against the urban economy, which has its roots, origin and genesis in the secondary and tertiary sectors, largely dictated by industry and services. With low availability of land-man ratio, lack of irrigation facilities in majority of rural areas, poor connectivity; lack of access to urban market and non-remunerative prices of the produce, agriculture has rarely proved to be an economical viable option to promote prosperity. This has led millions of rural work force to find work in the informal economies of the cities as their only choice. Accordingly, millions move to the cities on daily basis in search of finding any informal job including domestic assistance, driving middle-class vehicles, taxi driving, construction work, etc. In the already packed urban infrastructure, this causes overcrowding, congestion and slums. Rural to urban migration is one of the primary drivers of growth of slums in Indian cities. As per Census, 2011, migration remains one of the prime causes of rapid population growth with every fifth person added to urban population during 2001-2011 was a migrant from rural area. In the face of massive influx of rural population, urban centres, which are ill equipped to support additional population, fail to cope up with high influx of people which ultimately leads to emergence of numerous physical and social problems including housing shortage, unemployment, illegal growth, encroachment on public land, haphazard and unplanned development, lack of basic amenities and essential public services along with development of slums. Migration to cities led by people because of connection with relatives/families already living in slums in urban areas, also leads to further expansion of these slums.
- **Poverty;** Poverty and slums have always remained positively connected. Where poverty prevails, slums find place in that space. Considering the high rate of poverty, unemployment and lack of other amenities prevailing in the rural areas, large proportion of rural population tends to migrate to urban areas, in search of better economic opportunities and improving the quality of life for themselves /family. With available shelter and civic amenities

in majority of the urban areas, failing to match the ever-growing demand led by rapid population growth/ uncontrolled migration, the prevailing gap between demand and supply of adequate housing creates adequate space/ reason for the development of the slums in the urban areas. Cities in fact don't create space and positivity to welcome/accommodate immigrants, leading to emergence of slums. Urban poverty encourages the formation and demand for slums. With rapid shift from rural to urban life, rural poverty migrates to urban areas. The urban poor arrives with hope, and very little of anything else. They typically have no access to shelter, basic urban services and social amenities. Slums are often the only option left for the urban poor to find shelter in the city. Slum dwellers typically inhabit marginal locations such as dumping grounds mainly due to the low purchasing power in formal land markets when compared with high-income groups. Further, the urban poor lack the access to formal financial resources to help them purchase new homes or maintain a new life in a new housing unit.

- **Stagnating Economy;** Slow growth rate, rapidly growing population and reduced per capita income, invariably leads to increasing poverty in both urban and rural areas. Rising rural poverty also encourages migration to move and march towards urban areas. A poorly performing economy is known to, increase poverty and rural-to-urban migration, thereby creating favourable environment for slums to come up/mushroom and grow.
- **Low availability of Affordable Housing;** The ever-widening gap between growing demand for affordable urban housing and insufficient supply has encouraged the formation of slums. Whenever the demand surplus is not met by formal sectors, this gap is typically filled by an informal dwelling such as a slum. Reporting estimated 24.9 million shortage of dwelling units at the end of 10th five year plan by the Technical group set up by the Government of India; including 99% shortage reported to be in the category of affordable housing, there exists large gap between demand and supply of housing in the affordable category in the urban areas. Many cities, neither have, nor offer enough low-cost housing options for large number of rural-urban migrant, who come to cities in search for jobs. This mis-match has left little option for the urban poor/migrants to seek shelter in the formal housing market, leading to mushrooming of illegal colonies/slums in the urban areas. Further, rural migrants, mainly lured by higher incomes, continue to flood into cities. They thus expand the existing urban slums. In addition, some rural-urban migrant worker cannot afford housing in cities and eventually settle down in the affordable slums.
- **Neglect of Rural Habitat;** With 68.9% population of India (Census,2011) living in more than 6,42,000 villages, India lives in villages and not in cities. With 2.4% global land housing 17.7 % population, globally India ranks high among nations having poor land-man ratio. With low land-man ratio prevailing in the rural areas, urban poverty is assuming alarming proportions. Primarily driven by dependence on agriculture, Rural India remains largely under-employed/unemployed for majority of the year, leading to emergence

of high degree of poverty. Villages accordingly, remains under-developed in large number of cases and face perpetual shortage of basic amenities/facilities besides opportunities for gainful employment. Lack of facilities in rural India forces people to migrate and increases pressure on urban areas, causing unplanned, haphazard and sub-standard growth of cities including mushrooming of slums. In fact, majority of urban problems/ills including mushrooming of slums, have its genesis in the perpetual neglect of the rural areas.

- **Overcrowding;** Overcrowding remains one of the major causes of growth of slums emerging from large scale conversion of good housing into poor quality of housing due to concentration of people in a limited space. Urban areas are known to follow a pattern of development, which is largely characterized by overcrowding of buildings on the land and overcrowding of people in the buildings. Slums are usually caused by overcrowding in big cities emerging from lack of space available for living and prevailing high cost of land due to large number of people migrating to the cities. Overcrowding in the urban context remains associated with and is considered as the outcome of the low availability of space per person as compared to specified norms, high occupancy rates and habitation of same space by different families. Many slum dwelling units remain overcrowded, with large number of people sharing limited space, used for cooking, sleeping and living. Large number of the urban dwellers in Mumbai reside in one room and thousands sleep on the footpath. About 40% of the households of the metropolis reside in the slums. Overcrowding has become the norm for urban living and has been found to have high degree of positive co-relation with the population of the settlement. Mega cities like Mumbai, Kolkata, Delhi, Bengaluru, Hyderabad, Pune etc. are known for the overcrowding, congestion and consequently for large concentration of slums.
- **Shortage of developed land;** Land remains the basic platform where all human activities are performed. All human activities are also essentially both users and consumers of land. Accordingly, land remains critical for human living and working. Non-availability of adequate urban land remains the greatest challenge in the urban context and also the basic cause for majority of maladies existing in the urban areas. Due to high concentration of people and activities, land as a resource remains highly stressed, in terms of both price and availability, in the urban areas, leading to creation of large gap between demand and supply. Shortage of developed legal land for housing in the urban areas, leads to high land prices and remains the basic/major cause for mushrooming of slums.
- **High land Prices;** Perpetual shortage of land in urban areas leads to making land expensive in the urban market. Accordingly, urbanization forces many people to live in slums when it transforms agricultural land into urban areas and increases land value. Urbanization invariably involves large conversion of land from agriculture to urban uses. With industries, investment and

urban activities coming into the area, many other related activities start competing for the space, leading invariably to increase in the value of land. High prevailing land prices leads to exclusion of large proportion of poor and migrant population from accessing land for creating appropriate shelter for themselves and their families, through formal and legal systems. The gap between people's low income and the high land price forces migrants/people to look for other options and construct cheap informal settlements, known as slums in the urban context. Conversion of agricultural land also leads to loss of employment for large rural workforce, making them surplus and unemployed. Left to fend themselves they have little option but to seek jobs in urban areas as rural-urban migrants. Prevailing high land prices in the urban areas beyond their affordability leads to exclusion of the urban poor out of the formal land market; creating environment for encroaching on land and illegal occupation of available urban land for creating informal housing, even when devoid of basic amenities /services.

- **Urban Villages;** Villages coming into the urban fold due to expansion of urban limits/ falling in peri-urban areas get invariably overcrowded due to offering/creating options of low rent accommodation to work force operating in urban areas, without adequate /basic support infrastructures/ municipal services, creating slum like conditions which become slums in due course of time. Makoko – One of the oldest slums in Nigeria, was originally a fishing village settlement, built on stilts on a lagoon. It developed into a slum and became home to about a hundred thousand people in Lagos. In India also, large number of so-called urban villages, have been virtually converted into slums under the developmental pressure of urbanization and rapid urban development. Urban villages are known to offer cost-effective and soft development options as compared to other urban areas, due to laxity of urban laws, non- descript and poor enforcement of building regulations governing the development. In order to avoid the conversion of villages as urban slums, these villages need to be made integral part of urban planning, development and management process.
- **Poor maintenance;** Poor upkeep, maintenance, overcrowding and dilapidation have been known to be the prime reasons which convert even good housing into slums, due to perpetual neglect. Large housing stock in good standing in urban India has suffered this fate due to prevailing low rent perpetuated by prevailing outdated rent laws, which makes uneconomical for homeowners to rationally maintain the house in good conditions on regular basis. Continued neglect of proper maintenance and upkeep of housing perpetuated by the tenants has also resulted in decay and damage to good housing stock. Good maintenance and upkeep needs to be made integral part of any housing, in order to avoid good housing stock getting converted into slums. In this context, tenants and owners ,both need to made jointly responsible for maintaining the house in a good living condition in order to minimize the loss of good housing.

- **Vote Bank Politics;** In Indian context, democratic process ,based on promoting vote-bank theory, also remains largely responsible for cropping up large number of slums in urban areas. Since slum population constitutes a consolidated and an easy to capture vote bank, various political parties want them to stay and support them to remain in power. It is for this qualified political patronage that all election manifesto of various political parties, while contesting elections, provide for retaining/rehabilitating the slums, where they exist. This is the prime reason due to which one can find large number of slums existing/growing in all mega/metropolitan cities of India. As per *Wikipedia*, many local and national governments have, for political interests, subverted efforts to remove, reduce or upgrade slums into better housing options for the poor. Throughout the second half of the 19th century, for example, French political parties relied on votes from slum population and had vested interests in maintaining that voting bloc. Removal and replacement of slum created a conflict of interest, and politics prevented efforts to remove, relocate or upgrade the slums into housing projects that were better than the slums. Similar dynamics are cited in favelas of Brazil, slums of India, and shanty towns of Kenya. Some of the largest slums of the world are in areas of political or social conflicts. Scholars also claim that politics also drives rural-urban migration and subsequent settlement patterns. Pre-existing patronage networks, sometimes in the form of gangs and other times in the form of political parties or social activists, inside slums seek to maintain their economic, social and political power. These social and political groups have vested interests to encourage migration by ethnic groups that will help maintain the slums, and reject alternate housing options even if the alternate options are better in every aspect than the slums they seek to replace.
- **Prevailing High Rents;** Due to wide gap existing between demand and supply of affordable housing in urban areas, the rents of the available houses remain very high, which are beyond the affordability of the urban poor/migrants. Accordingly, in search of shelter, migrants remain on the prowl to find any available vacant land, public or private, for creating temporary hutments. With the passage of time and with more and more people joining the locality, area soon takes the shape and develop into the slum.
- **Irrational Rent Law;** Prevailing regime of rent related legal framework also remains largely responsible for creating slums in Indian cities and towns. As per Census 2011, more than 10%of the housing stock available in India remained vacant. In certain large cities, every sixth dwelling house was lying vacant. There exists dichotomy and contradictions in the housing market, on one hand India faces huge shortage of housing stock whereas on other side large housing stock remains vacant, locked and unoccupied. Prevailing rent laws, which, primarily and essentially, remain tenet oriented, are known to be responsible for these prevailing dualities and contradictions, which have forced and added large number of people living in slums. Existing rent

related legal regime needs review, revision, rationalization and redefinition for bringing all vacant houses into the urban market and creating an enabling environment for putting in place large stock of rental housing, in order to make housing for all a distinct reality and making cities slum free.

- **Exclusion of the Poor from Planning process;** One of major reason for mushrooming of slums in urban areas, is the non-availability of adequate land for their housing. Planning tools deployed and all the developed plans prepared for the cities, in the shape of Master Plans/ development Plans, to rationalize their orderly and planned growth, generally provide little space and options for creating adequate area for providing shelter and work for the poor/migrants/informal sector. This exclusion from the planning process leads to acute shortage of land for creating spaces for shelter and work. Unable to find adequate and appropriate place/space in the city fabric for their working and shelter, urban poor/migrants become vulnerable to the prevailing market forces. High land prices exclude them from formal planning, development and management processes. Cities do not recognize them as their part and parcel and they are left to fend for themselves. In order to minimize slums, informal sector needs to be included and made integral and essential part of urban planning, development and management process.
- **Declining share of Agriculture in GDP;** Population increase in India has been recorded to be at a much faster pace as compared to total amount of arable land in the post-independence period. Contribution made by the agriculture sector to the national economy and GDP has been gradually declining and getting muted, marginalized and considerably reduced. Contribution of agriculture, which accounted for 52% of its GDP in 1954 was recorded as only 19% in 2004. With reduced wealth available to increasing rural population, standing at 833 million in 2011, rural areas are faced with reduced/diluted/ marginalized income and high degree of poverty stress, leading to large scale migration to urban areas. Many people migrate to urban areas because cities promise more jobs, better schools for poor's children, and diverse income opportunities than subsistence farming in rural areas. Rural–urban migration propelled by declining income and increasing economic vulnerability, remains one of the major causes attributed to the formation and expansion of urban slums.
- **Connectivity with Jobs;** Mushrooming of slums has been observed to have high degree of positivity and connectivity with the areas having large concentration/availability/opportunities of jobs. Concentration of jobs have invariably been observed in the urban settlements as compared to rural hinterland and among urban areas in large metropolises, as compared to smaller ticket cities. Within urban settlements, concentration of options for employment have been observed in the commercial/institutional/industrial/ office complexes and in the residential areas housing upper end of economic pyramid of population. Accordingly, in Mumbai, large concentration of slums

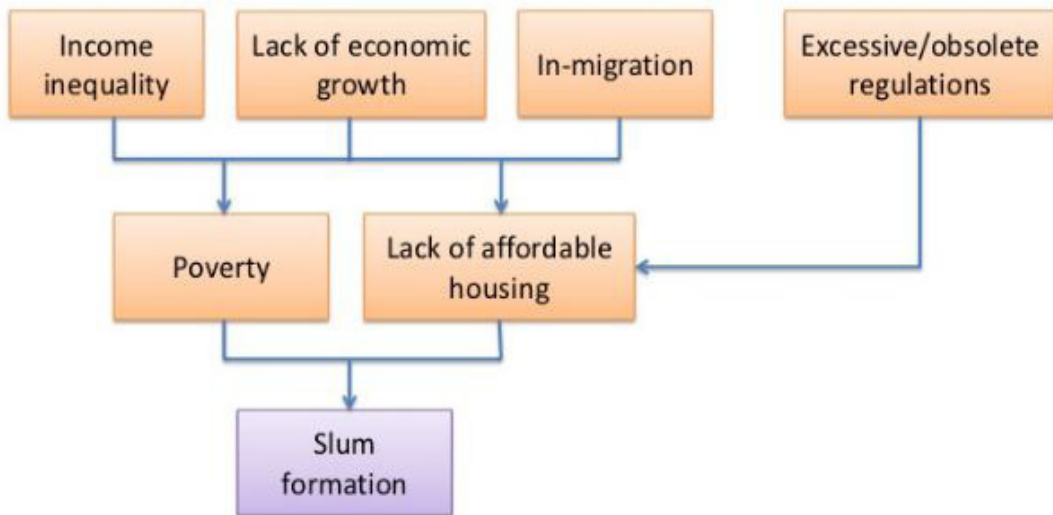
has been found to be in close vicinity of skyscrapers and wealthier parts of the city, a location that provides jobs and easy commute to those living in the slums. In order to minimize the slums, it will be appropriate that creating affordable housing must be made integral part of such development.

- **Social Conflicts;** Social conflicts, both locally and globally, have been found to be one of the many causes of mushrooming of large sized slums. Millions of Lebanese people formed slums during the Lebanese Civil War from 1975 to 1990. Similarly, in recent years, numerous slums have sprung around Kabul to accommodate rural Afghans escaping Taliban violence. India also has large share of slums arising out of social conflicts.
- **Natural disasters;** Major natural disasters in poor nations often lead to large scale migration of disaster-affected families taking place from areas crippled by the disaster to unaffected areas. This forced migration arising from the natural calamities invariably lead to creation of temporary tent city and slums, or expansion of existing slums. These slums tend to become permanent over a period of time , because the residents do not want to leave for various reasons. Growth of slums near Port-au-Prince after the 2010 Haiti earthquake, and slums near Dhaka after 2007 Bangladesh Cyclone Sidr, are the visible examples of displacements caused by natural disasters
- **Rapid growth of informal sector;** The World Bank and UN Habitat has worked out global scenario of slums in the absence of nation not taking up economic reforms and have finally concluded that, assuming no major economic reforms are undertaken by nations, then it is estimated that more than 80% of additional jobs in urban areas, of developing world, may be low-paying jobs in the informal sector. Everything else remaining same, this explosive growth in the informal sector is likely to be accompanied by a rapid growth of slums. Accordingly, urban settlements of developing economies will face the unprecedented crisis of mushrooming of slums in the years to come.
- **Irrational Housing Policies;** Lack of affordable low-cost housing and poor urban planning invariably encourages the supply side of slums. The Millennium Development Goals proposed that member nations should make a “significant improvement in the lives of at least 100 million slum dwellers” by 2020. If member nations fail to achieve this goal, 90% of the world total slum dwellers may remain in the poorly housed settlements by 2020. *Choguill* claims, that existence of large number of slum dwellers indicates a deficiency of practical housing policy. Whenever there is a significant gap in growing demand for housing and insufficient supply of affordable housing, this gap is typically met in part by slums. Insufficient financial resources and lack of coordination in government bureaucracy are two major causes of poor house planning. Financial deficiency also explain lack of affordable public housing for the poor since any improvement of the housing in slums and expansion of public housing programs involves large investment and

great increase in the government expenditure. The problem can also lie on the failure in coordination among different related departments in charge of economic development, urban planning, and land allocation. In some cities, governments assume that the housing market will adjust the supply of housing with a change in demand. However, with little economic incentives, existing housing market is more likely to develop middle-income housing rather than low-cost housing. The urban poor gradually become marginalized in the housing market where few houses are built to sell to them, leading to creating incentives for mushroom growth of slums.

- ***Policies of Colonization promoted by Britishers;*** Large number of slums existing globally has genesis and remain the outcome and product of policies, programs and culture of irrational and biased urbanization brought in by Europeans colonist during the nineteenth century, which in the name of creating new urban centres, to promote their financial interests, followed differential policies/ planning norms and standards for rulers and ruled; regarding locals inhabitants as temporary migrants needed for labour; providing them barest minimum of accommodation with poor quality of basic infrastructure and services. Over a period of time with migratory labour force getting permanently settled with their families gradually migrating to the urban centre, the slums started coming due to poor affordability to buy houses. Slums in Kenya are the outcome of thesis policy.
- ***Development of large sized Projects;*** Development of large size commercial, industrial, institutional projects taken up by public, private and parastatal agencies are also known to be responsible for growth of slums. Large scale development taken up in the post-independence period regarding setting up new capital cities, special economic zones and large industrial units, attracted large work force for their construction, also led to mushrooming of slums created by the migrant labour involved in the construction of these projects, in the absence of any shelter made available to them. Mushroom growth of slums in capital cities of Chandigarh, Gandhinagar, Bhubaneshwar and industrial cities of Bhillai, Rourkela have genesis in this process.
- ***Unplanned Segregation of Land uses;*** Largest slum in India, Dharavi has genesis and is the outcome of policy of promoting segregation, followed between residential and polluting industries imposed by the colonialist British Regime when tanneries, pottery and other economy located within Mumbai were shifted outside and established inside and around Dharavi. With shifting of industries and poor moved , working as servants in colonial offices and homes and in the foreign owned tanneries and other polluting industries near Dharavi , a small and non-descript village Koliwad, without any infrastructure, including roads, sanitation, public services or housing, grew as a shanty town, which was easy to commute for work. By 1947, when India became an independent nation, Dharavi had blossomed into Bombay's largest slum. ✓

- **Poor infrastructure, Social exclusion and Economic stagnation;** Social exclusion and poor infrastructure forces the poor to adapt to conditions beyond their control. Poor families that cannot afford transportation, or those who simply lack any form of affordable public transportation, generally end up in illegal/unauthorized/squat settlements, located within walking distance or close enough to the place of their formal or informal employment. Social exclusion, poor quality/unpaved streets and poor infrastructure, economic stagnation creating uncertainties and risks for the poor, encouraging people to stay in the slums /are the major cause for mushrooming of slums. Studies made globally have revealed that every 1% increase in paved all-season roads, reduces slum incidence rate by about 0.35%. Affordable public transport and economic infrastructure empowers poor people to move and consider housing options other than their current slums. A growing economy that creates jobs at rate faster than population growth, offers people opportunities and incentive to relocate from poor slum to more developed neighborhoods.
- **Informal Economy;** As per *Wikipedia*, many slums grow because of growing informal economy which creates demand for workers. Informal economy is that part of an economy that is neither registered as a business nor licensed, one, that does not pay taxes and is not monitored by local or state or federal government. Informal economy grows faster than formal economy when government laws and regulations are opaque and excessive, government bureaucracy is corrupt and abusive of entrepreneurs, labour laws are inflexible, or when law enforcement is poor. Urban informal sector is between 20 and 60% of most developing economies' GDP; In many cities the informal sector accounts for as much as 60 per cent of employment of the urban population. Slums thus create an informal alternate economic eco-system, that demands low paid flexible workers, something which impoverished residents of slums deliver. Accordingly, countries in which ease of doing business remain low priority and where starting, registering and running a formal business is difficult, these environments are known to be highly conducive to encourage informal businesses and slums. Without sustainable formal economy which increases incomes; create better opportunities; provide assured and secure employment, squalid slums are likely to continue.
- **Role of Labour;** Research in the latest years based on ethnographic studies, conducted since 2008 about slums, published initially in 2017, has found out the primary importance of labour as the main cause of emergence, rural-urban migration, consolidation and growth of informal settlements. It also showed that work has also a crucial role in the self-construction of houses, alleys and overall informal planning of slums, as well as constituting a central aspect by residents living in slums when their communities suffer upgrading schemes or when they are resettled to formal housing. Accordingly, it will be critical to understand and appreciate the role of labour and work in origin and mushrooming of slums.



Characteristics of Urban Slums

United Nations Human Settlements Programme (UN-HABITAT) explain the different characteristics of slum in terms of;

- Slums are known to be characterized by poor housing units which remain vulnerable to natural disaster and destruction because affordable building materials cannot withstand earthquakes, landslides, excessive wind, or heavy rainstorms. They are dirty places without hygienic air, space or light.
- Slum-dwellers are at greater risk of disaster because of their vulnerability to Mother Nature. Slums develop at the outer edges of cities, in derelict areas, abandoned sites or on sides of roads and other cheap places
- Dense and overcrowded living quarters creates a breeding ground for transmittable diseases, which can lead to the rise of an epidemic.
- Slum-dwellers without access to clean and affordable drinking water, with no access to adequate sanitation, such as plumbing and garbage disposal, are at risk of waterborne diseases and malnutrition, especially amongst children.
- Poor slum dwellers commonly suffer from unemployment, illiteracy, drug addiction, and low mortality rates of both adults and children. Law and order is rarely maintained.
- Majority of slum dwellers remain unskilled; employed largely as unskilled workers or in the informal sector of the economy or self-employed carrying out petty trade, repairs and transport.

The distribution of slums within cities varies throughout the world. In most of the developed countries, it is easier to distinguish the slum-areas and non-slum areas. In the United States, slum dwellers are usually in city neighborhoods and inner suburbs, while in Europe, they are more common in high rise housing on the urban outskirts. In many developing countries, slums are prevalent

as distributed pockets or as urban orbits of densely constructed informal settlements. In some cities, slums are not just marginalized neighborhoods holding a small population; slums are widespread, and are home to a large part of urban population. These are sometimes called *slum cities*. The percentage of developing world's urban population living in slums has been dropping with economic development, even while total urban population has been increasing. In 1990, 46 percent of the urban population lived in slums; by 2000, the percentage had dropped to 39%; which further dropped to 32% by 2010. After looking, critically and objectively, at the reasons leading to growth of slums, for understanding and appreciating slums, it will be important to look at their specific characteristics which distinguish them from the formal settlements, in terms of their nature, fabric, socio-economic structure, morphology, physical characteristics, services, quality of life etc.

- **Location;** Slums are known for typicality of their location. Generally making a beginning at the outskirts and with city expanding in area and size over a period of time, slums are known to get enclosed and wrapped inside the urban perimeter. New slums sprout at the new boundaries of the expanding city, usually on publicly owned lands, thereby creating an urban sprawl, mix of formal settlements, industry, retail zones and slums. This makes the original slums valuable property, densely populated with many conveniences and attractive to the poor. Locational aspect of slum is known to be related to the ownership pattern of land. Slums are typically located on least desirable lands near the town or city, that are state /private owned or have no clear land title. Location of slums has relationship to topography, availability of water and visibility. In cities located over a mountainous terrain, slums begin on difficult to reach slopes or start at the bottom of flood prone valleys, often hidden from plain view of city center but close to some natural water source. In cities located near lagoons, marshlands and rivers, they start at the banks or on stilts above water or the dry river bed; in flat terrain, slums begin on lands unsuitable for agriculture, near city trash dumps, next to railway tracks and other shunned undesirable locations. These strategies shield slums from the risk of being noticed and removed, when they are small and most vulnerable to governing institutions. Further, slums come up in hazardous locations such as in proximity to industrial plants with toxic emissions or waste disposal sites. Initial homes tend to be tents and shacks that are quick to install, but as slum grows, becomes established and newcomers pay the informal association or gang for the right to live in the slum, the construction materials for the slum's switches to more lasting materials such as bricks and concrete, suitable for slum's topography. It has also been observed that original slums get established next to centers of economic activity including schools, hospitals; sources of employment, which the poor rely on. Established old slums, surrounded by the formal city infrastructure, cannot expand horizontally; therefore, they grow vertically by stacking additional rooms, sometimes for a growing

family and sometimes as a source of rent from new arrivals in slums. Some slums name themselves after founders of political parties, locally respected historical figures, current politicians or politician's spouse to garner political backing against eviction.

- **Unhealthy living conditions and hazardous locations:** Slums are known to be characterized by living conditions which are not conducive to healthy living. Unhealthy living conditions are the result and outcome of prevailing lack/absence of basic services, open sewers, unpaved pathways, absence of potable water, uncontrolled dumping of waste, polluted environments, etc.
- **Insecure Tenure;** Absence of land tenure is one of the key characteristic, major cause and effect of the mushrooming of slums. As already stated, slums are typically located on least desirable lands near the town or city, that are state/private owned or on land with no clear title. Some immigrants carry a perception that land which is unoccupied is a land without owners and therefore available for occupation and use by anybody. In other cases, land allotted by local community /government to people for public purposes, is misused/illegally occupied by land mafia/ migrants, which later develop into slums and over which the dwellers don't have property rights. Informal land tenure also includes occupation of land belonging to someone else. According to studies carried globally; 51 percent of slums are based on invasion to private land in sub- Saharan Africa; 39 percent in North- Africa and West- Asia, 10 percent in South Asia. In India, situation is no different. In some cases, once the slum has many residents, the early residents form a social group, an informal association or a gang that controls newcomers, charges a fee for the right to live in the slums, and dictates where and how new homes get built within the slum. The newcomers, having paid for the right, feel they have commercial right to the home in that slum. The slum dwellings, built earlier or in later period as the slum grows, are constructed without checking land ownership rights or building codes, are not registered with the city, and often not recognized by the city or state governments. Secure land tenure remains critical and vital for slum dwellers as an authentic recognition of their residential status in urban areas. It also encourages them to upgrade their housing facilities, which will give them protection against natural and unnatural hazards. Undocumented ownership with no legal title to the land also prevents slum settlers from applying for mortgage, which might worsen their financial situations. In addition, without registration of the land ownership, the government has difficulty in upgrading basic facilities and improving the living environment. Insecure tenure of the slum, as well as lack of socially and politically acceptable alternatives to slums, also creates difficulty in citywide infrastructure development, such as connecting them with rapid mass transit and laying electrical line and sewer pipe layout, highways and roads in the slums, which is considered as the government recognition of slums as a legal residential entity.

- **Substandard housing and over-crowding;** Slum areas are invariably associated with large number of substandard housing structures, often built with non-permanent materials, unsuitable for housing, in dilapidated conditions, lacking basic amenities and services offering a degraded and a poor quality of life. Slum areas are largely characterized by substandard shanty housing structures. Shanty homes are often built hurriedly, on ad-hoc basis, with materials unsuitable for housing. Often the construction quality is inadequate to withstand heavy rains, high winds, or other local climate and location. Paper, plastic, earthen floors, mud-and-wattle walls, wood held together by ropes, straw or torn metal pieces as roofs are some of the common materials used in the construction. In some cases, brick and cement is used, but without attention to proper design and structural engineering requirements. Various spaces, dwelling placement bylaws and local building codes are invariably/extensively violated. Overcrowding is another characteristic of slums. All these dwellings have no/little concern for air, light and ventilation and accordingly remain poorly lit and ventilated, leading to creating adverse living conditions for the inhabitants. These dwelling units are generally low height structures, where entries to the structure remain generally low for creating appropriate level of privacy for the inhabitants. Most of these units have plinth level which is normally below the adjoining katcha public path, to provide height adequate enough for standing of the inhabitants. Many dwellings are single room units, with high occupancy rates. Each dwelling may be cohabited by multiple families. Five and more persons may share a one-room unit; with same space used for cooking, sleeping and living. Overcrowding is also seen near sources of drinking water, cleaning, and sanitation where one toilet may serve dozens of families. In a slum of Kolkata, over 10 people sometimes share a 45 m² room. In Kibera slum of Nairobi, Kenya, population density is estimated at 2,000 people per hectare or about 500,000 people in one square mile.
- **Inadequate infrastructure;** One of the identifying characteristics of slums is the lack of or inadequate public infrastructure. Slums remain marginalized spaces in the cities, housing poor people , for whom availability of safe drinking water , electricity, basic health care , police services, affordable public transport, urban services, sanitation, sewer , paved roads, open spaces and public amenities remain a mirage and a distant dream. Old slums are known to garner political support and get some of the basic infrastructure such as paved roads and unreliable electricity or water supply. Slums usually have no formal locations/addresses and remain characterized by narrow alleys, crisscrossed by open drains/sewers that do not allow vehicular traffic to pass. Absence of formal system of managing garbage always leads to garbage accumulate on streets/ in front of houses or thrown on the backyard of slums. The lack of infrastructure has genesis in the informal nature of settlement and outside the domain of formal urban planning process. In large number of cases slums are known to have been destroyed/damaged by frequent fires which plague these areas. In many countries, local and

national government often refuse to recognize slums, because the slum are located on disputed land, or because of the fear that official recognition will encourage more slum formation and seizure of land illegally. Recognizing and notifying slums often triggers a creation of property rights, and requires that the government provide public services and infrastructure to the slum residents. With poverty and informal economy, slums do not generate tax revenues for the government and therefore tend to get minimal or slow attention. In other cases, the narrow and haphazard layout of slum streets, houses and substandard shacks, along with persistent threat of crime and violence against infrastructure workers, makes it difficult to layout reliable, safe, cost effective and efficient infrastructure. According to Census 2011, among the slums in India; 58% have open or no drainage; 43% must bring water from outside their communities; 26% do not have access to clean drinking water; 34% have no latrine within premises; 19% open defecate and minimum two electricity outages occur per day. Looking at the enormity of services and cost involved, making provision of such services remains biggest deterrent for parastatal agencies. With poor financial base, urban local bodies are always reluctant to improve the living conditions from their own resources. Slums are considered as urban liability and not an asset and accordingly remain ignored and marginalized in the urban priorities.

- **Vulnerability to natural /man-made hazards;** Slums are often placed among the spaces in the urban context which remain vulnerable to natural disasters such as landslides and floods. In cities located over mountainous terrain, slums begin on slopes difficult to reach or start at the bottom of flood-prone valleys, often hidden from plain view of city center but close to some natural water source. These strategies shield slums from the risk of being noticed and removed when they are small and most vulnerable to local government officials. However, the ad-hoc construction, lack of quality control on building materials used, poor maintenance, and uncoordinated spatial design make them prone to extensive damage when they are faced with natural disasters. These risks are likely to be intensify under the impact of climate change. Globally, slums remain vulnerable to extensive damage and human fatalities from landslides, floods, earthquakes, fire, high winds and other severe weather due to their locational/development hazards. Some slums risk man-made hazards such as toxic industries, traffic congestion and collapsing infrastructure. Fires are another major risk to slums and its inhabitants, with streets too narrow to allow proper and quick access to fire vehicles. Location on derelict/ low lying/ floodable/ vulnerable/ unhealthy/ disease prone land/ sites and their pattern of development and growth, remain the guiding factors to promote their vulnerability to various disasters.
- **Unemployment and informal economy;** Due to lack of skills and education, many slum dwellers face high rates of unemployment in the competitive job markets. The limited availability of job opportunities makes them get engaged in the informal economy, inside the slum or in developed

urban areas near the slum. Experience gained by working in the informal economies/ professional skills eventually make many secure find jobs in formal economies. However, slums are known to be notorious for various illegal activities involving; drug trade and distribution in Brazil's *favelas*; production of fake goods in the *colonies* of Tijuana; smuggling in *katchi abadis* and slums of Karachi and production of synthetic drugs in the *townships* of Johannesburg. The slum-dwellers in informal economies run many risks. The informal sector, by its very nature, leads to income insecurity and lack of social mobility. There remains absence of legal contracts, protection of labour rights, regulations and bargaining power in informal employments.

- **Violence;** Slums are known to be notorious places infected by social problems involving; crime, violence, illegal trade, rape, drugs trade, drug trafficking, brewing, prostitution, gambling, weapons, smuggling etc. Empirical data suggest crime rates are higher in slums than in non-slums, with slum homicides alone reducing life expectancy of a resident by 7 years. UN-Habitat reports suggests slums are largely more exposed to crimes with higher crime rates. However, crime is not the direct resultant of structure of slums, rather crime remains one of the symptoms of slum dwelling; thus, slums consist of more victims than criminals. Criminals in the slums invariably make gangs to carry out their illegal activities in an organized manner. Often multiple gangs fight for control over revenue in slums. Slum crime rate correlates with insufficient law enforcement and inadequate public policing. In many cities of developing countries, law enforcement lags behind urban growth and slum expansion due to ineffective city planning and governance. Lack of formal recognition by the governments also leads to few formal policing and public justice institutions in slums. Women in slums face greater risk of physical and sexual violence. Gang and drug wars are endemic in some slums, predominantly between male residents of slums to ascertain supremacy.
- **Infectious diseases and epidemics;** Slum dwellers remain prone to large number of diseases like cholera, HIV, AIDS, measles, malaria, typhoid, drug and other epidemics. Cholera and diarrhoea are especially common among young children, which are major contributor to the prevailing high mortality rates in slums. High population densities, poor living conditions, low vaccination rates, insufficient health-related data and inadequate health service remain the major causes for health related vulnerability in slums. Slums have been historically linked to epidemics, and this trend has also continued in modern time. Slums are considered a major public health concern and potential breeding grounds of drug resistant diseases for the urban areas including nations and global community.
- **Child malnutrition;** Child malnutrition is more common in slums than in non-slum areas. In Mumbai and New Delhi, 47% and 51% of slum children under the age of five are stunted and 35% and 36% of them are underweight. These children suffer from third-degree malnutrition, according to WHO standards. The major nutritional problems in slums are protein-energy malnutrition

(PEM), vitamin-A deficiency (VAD), iron-deficiency, anaemia (IDA) and iodine deficiency disorders (IDD). As per Dr. Abhay Bang, malnutrition kills 56,000 children annually in urban slums in India. Widespread child malnutrition in slums is closely related to family income, mothers' food practices, mothers' educational level, and maternal employment or housewifery. Poverty may result in inadequate food intake when people cannot afford to buy and store enough food, which leads to malnutrition.

- **Prevalence of non-communicable diseases;** A multitude of non-contagious diseases also impact health for slum residents. Large number of slum families not reporting cases or seeking professional medical care, results in insufficient data, preventing appropriate allocation of health care resources in slum areas. Health service also remain insufficient or inadequate in most of the world's slums. Emergency ambulance service and urgent care services are typically unavailable, as health service providers sometimes avoid servicing slums. Studied made globally has shown that more than half of slum dwellers are prone to visit private practitioners or seek self-medication with medicines available in the home. Unlicensed or poorly trained private practitioners run clinics and pharmacies in slums. Complex network of physical, social, and environmental factors operating in the slums contribute to the health threats/hazards faced by slum residents.

Way Forward;

In developing countries, slums are known to be integral part of urbanization, growth and development of cities. Slums remain positively co-related to and known to keep pace with the growth of cities. Slums have growth dynamics which has its distinct complexities. Slums are always evolving and devolving and never static. Slums in developing countries are fast emerging as an issue, which is becoming important part of growth agenda of all governments. Slums continue to come in existence and grow in different parts of the world for reasons, which remain different, distinct and specific to particular regions. But factors which have been observed common to their growth in different regions inter-alia include; rapid rural-to-urban migration, economic stagnation and depression, high unemployment, urban poverty, informal economy, forced or manipulated ghettoization, poor planning, politics, natural disasters, and social conflicts.

Recent years have seen a dramatic growth in the number of slums as urban population has increased in developing countries. Nearly a billion people worldwide live-in slums, and as per projections made, figure may grow to 2 billion by 2030, if governments and the global community ignore slums and continue current urban policies. United Nations Habitat group believes change is possible. Strategies tried to reduce and transform slums in different countries, have met with varying degrees of success, which include combination of slum removal, slum relocation, slum upgrading, urban planning with citywide infrastructure development, and creating large stock of rental, affordable and

public housing. Some NGO's are focused at addressing local problems involving; sanitation issues, health, through the mapping out of the slums and its health services, creation of latrines, creation of local food production projects, and even microcredit projects. In one project (in Rio de Janeiro), the government even employed slum residents for the reforestation of a nearby location. To achieve the goal of "cities without slums", the UN claims that governments must undertake vigorous urban planning, city management, infrastructure development, slum upgrading and poverty reduction. However, solutions for managing slums will have to be found within the fabric and reasons which propel the mushrooming of slums in urban areas. As part of discussions held between UN Habitat, NGOs and Civil Society in Nairobi for finding appropriate, realistic and rational solutions to slums and informal settlements, it was concluded that, ' for effectively solving the problem of urban slums, nations must move away from piecemeal slum upgrading and policies that result in more slums, to strategically working with local governments to provide good facilities and services in rural areas to reverse the trend of migration to urban areas; pushing for inclusion, integration and for those living in informal settlements to be able to own their own homes; Plan for reducing poverty and inequality of services in urban and rural areas, improving the urban environment and building capacity to effectively respond to urban crises; and create partnerships, share successes and challenges and creating capacity to deal with the migration, national disasters and violence. Accordingly, way forward to make cities slum free should essentially revolve around;

- **Empowering Rural Settlements;** Since most of the urban ills and problems including mushrooming of slums, have genesis in the neglect of the rural areas, accordingly solutions for minimizing slums also lies in taking adequate care of rural settlements by promoting holistic development of rural areas. Rural areas are known to suffer from the malaise of neglect, absence of basic infrastructure and lack of employment opportunities. Accordingly, if villages are developed with adequate provision made for the basic amenities and services besides creating appropriate options for employment, surely villages will become better place to live and work. With the reduction of number of rural migrants, cities will have large reduction of urban slums. The existing state of rural infrastructure need to be tackled and improved on priority in order to manage large-scale migration from rural to urban areas. It will also remain crucial to make provision/ access to credit and services for the rural areas failing which the causes of rural poverty will continue to wear down the urban fabric. Urban poverty will become the most significant and politically explosive problem in the 21st century. Along with encouraging income-generating opportunities, it will be rational to take adequate steps in encouraging small and medium-sized enterprises in rural areas based on agricultural products. Modernization of agriculture, changing cropping pattern and growing value-added cash crops, shall be vital to improve the rural productivity and rural economy.

- **Promoting Better Urban Planning;** Rational growth of cities has invariably suffered due to rapid growth of informal settlements in urban areas. Slums were not just born overnight. They were there and they are going to be there if we don't own them. Slums are the product of the very factors which promoted urbanization and urban growth. They remain there, because they are needed. They exist and grow because they have been neglected in the past and continue to face marginalization. They are a result of perpetual negligence and lack of development planning. Despite being integral part of city growth and development, they have never been included and recognised in the planning process. Efficient urbanization would require, improving, upgrading or enhancing the basic level of infrastructures, living standards of slum inhabitants. Planning must make provision of and ensure these families, availability and access to clean water, electricity, better employment (via skills training), and create opportunity to make them live in their homes via rehabilitation. For most slum inhabitants, who are at constant risk of eviction, granting assured land rights remain critical to eliminate extreme poverty and instability. All this will require relooking and reviewing the prevailing urban planning tools, approach, thought, strategies and redefine them to include and make urban poor and slum dwellers, integral part of urban economy, employment and development process. Effective urban planning policies, based on housing rights and the right to clean environment, must be established at all levels of urban planning for alleviating poverty and making cities inclusive.
- **Rationalizing Slum areas (Improvement and Clearance) Act, 1956:** The Act aimed at mechanical improvement or complete eradication of slums. It empowers the competent authority to declare any slum area in accordance with the definition, look into possibilities of improvement or eradicate slums. Act remains muted and ineffective and has never been implemented in letter and spirit. Act needs review, rationalization and redefinition to make it more effective and efficient instrument to manage slums in the urban areas. Creating dedicated agencies with adequate manpower and resources under the Act, to monitor and manage the existing slums and to eliminate the coming up of new slums, shall be critical.
- **Limiting Slum Removal;** Some cities have followed the policy of removing slums as an option to make cities slum free. This strategy of dealing with slums is rooted in the fact that slums typically start illegally on someone else's land/ property, and accordingly they are not recognized as legal by the state. As the slum started by violating another's property rights, the residents have no legal claim to the land. Slum removal by force tend to ignore the social problems that cause slums. The poor children as well as working adults of a city's informal economy need a place to live. Slum clearance removes the slum, but it does not remove the causes that create and maintain the slums. This option has to be followed in exceptional cases based on the detailed study, analysis and looking at the social problems and inconvenience caused by slum removal. Option of slum removal remains

expensive, wastage of resources, and destruction of large housing stock besides involving lot of investment and dislocation and inconvenience to the slum dwellers who face displacement. Wrong relocation can defeat the very purpose and object of slum clearance.

- **Minimizing Slum Relocation** ;Slum relocation strategies rely on removing the slums and relocating the slum poor to free semi-rural peripheries of cities, sometimes in free housing. This strategy ignores several dimensions of a slum life. The strategy sees slum as merely a place where the poor lives. In reality, slums are often integrated with every aspect of a slum resident's life, including sources of employment, distance from work and social life. Slum relocation displaces the poor from opportunities to earn a livelihood, generates economic insecurity in the poor. In some cases, the slum residents oppose relocation even if the replacement land and housing to the outskirts of cities is free and of better quality than their current house due to new location has problems related to health hazard, area prone to natural disaster, or that the alternative location is not well connected to employment opportunities. However, slum relocation in the name of urban development is criticized for uprooting communities without consultation or consideration of ongoing livelihood. For example, the Sabarmati Riverfront Project, a recreational development in Ahmedabad, India, forcefully relocated over 19,000 families from shacks along the river to 13 public housing complexes that were an average of 9 km away from the family's original dwelling.
- **Promoting Slum upgrading**; Slum upgrading, as an approach to improve condition in the existing slums, was inspired in part by the theoretical writings of John Turner in 1972. The approach focused on upgrading the slum with basic infrastructure such as sanitation, safe drinking water, safe electricity distribution, paved roads, rain water drainage system, and bus/metro stops. The basic premise on which this approach rested was that if slums are given basic services and tenure security – that is, the slum will not be destroyed and slum residents will not be evicted— then the residents will rebuild their own housing, engage their slum community to live better, and over time attract investment from government organizations and businesses. Turner argued not to demolish the housing, but to improve the environment: if governments can clear existing slums of unsanitary human waste, polluted water and litter, and from muddy unlit lanes, they do not have to worry about the shanty housing. "Squatters" have shown great organizational skills in terms of land management, and can effectively and efficiently maintain the infrastructure that is provided. In Mexico City government attempted to upgrade and urbanize settled slums in the periphery by including basic amenities such as concrete roads, parks, illumination and sewage providing inhabitants access to basic amenities. Most areas were connected to major roads and completely urbanized. Most slum upgrading projects, however, have produced mixed results. While initial evaluations were promising and success stories widely reported by media, evaluations done 5 to 10 years after the project completion have

been disappointing. Similarly, slum upgrading efforts in Philippines, India and Brazil have proven to be excessively more expensive than initially estimated, and the condition of the slums 10 years after completion of slum upgrading has been slum like. The anticipated benefits of slum upgrading, claims *Werlin*, have proven to be a myth. Slum upgrading remains largely a government controlled, funded and run process, rather than a competitive market driven process. Conflicting politics, government corruption and street violence in slum regularization process is part of the reality. Slum upgrading and tenure regularization also upgrade and regularize the slum bosses and political agendas, while threatening the influence and power of municipal authorities. Slum upgrading does not address poverty, low paying jobs from informal economy, and other characteristics of slums. It is unclear whether slum upgrading can lead to long-term sustainable improvement to slums.

- **Providing Basic infrastructure and affordable housing** ; Globally, making adequate provision of urban infrastructure including affordable and accessible transport and public housing projects have been valued for the disappearance of major slums in the United States and Europe during 1960s and 1970s. London Underground and its expansion has been credited to reducing slums in respective cities and also to an extent, the New York City Subway's smaller expansion. As cities expanded and business parks scattered due to cost-ineffectiveness, people moved to live in the suburbs; thus retail, logistics, house maintenance and other businesses followed demand patterns. City governments used infrastructure investments and urban planning to distribute work, housing, green areas, retail, schools and population densities. One historically effective approach to reduce and prevent slums has been citywide infrastructure development combined with affordable, reliable public mass transport and public housing projects.
- **Empowering Urban Poor**; Empowering urban poor will help in inhabitants moving out of slums and reduce the mushroom growth of slums in future. Under this premise, focus should not be on merely building houses for the slum dwellers but also creating appropriate livelihood options and social and economic infrastructure to develop the livelihood. Skilling slum dwellers can be the best option used for empowering the poor and improve their capacity of higher earning made possible by skills they acquired. Urban areas offer enormous opportunities for employment in making provision and maintenance of urban services. Strategies for income generation, transport and empowerment of the beneficiaries will be critical to improve their economic status and redress possible future problems.
- **Minimizing Slums**; Adoption of a multi-pronged strategy would be desirable to reduce the incidence of Slum in urban areas involving; sourcing adequate land for creating multiple options for affordable shelter to the urban migrants; making adequate provision of clear/free title to the residents for enabling them to enjoy the privileges of using property as a tangible asset; upgrading and making provision for the basic infrastructure and services involving water, power, sewage, collection of solid waste, street lighting,

safety and security; defining high-density, low-income zoning that allows individual property owners to upgrade their homes without risk; creating adequate opportunities of gainful employment; linking slums with the areas offering opportunities for employment through cost-effective and fast means of transportation. It will be critical and necessary to equip cities and local level agencies with the tools and capacities to anticipate and control urban growth and city officials to require knowledge, skills and methodologies that will allow them not only to upgrade existing slums but also prevent/avoid coming up of new slums.

Strategies for slum may differ from place to place but goal remains the same focusing on providing slum dwellers decent and well-serviced housing, offering the poor alternatives to slums. Access to affordable, properly serviced and well-located land will always remain central to the process of resolving the problem of urban slums. For addressing the issue of slums, recommendations made by workshop on **City Without Slums**; held in Nairobi, Kenya, September 22-23, 2005; under the aegis of UN Habitat revolved around;

- Addressing slum upgrading in its larger socio-economic and political context,
- Localization of MDG strategies towards achieving significant improvement in lives of slum dwellers,
- Continuation of efforts of all participating cities to broaden the process of participation and consultation in the quest for innovative and durable solutions,
- Prioritisation of gender participation and empowerment in access to land
- Resolution of crisis in cities, not by external intervention but essentially through the involvement of all partners including slum dwellers,
- Consistent political support from national governments in slum upgrading policies with supporting role of the international community,
- Mobilizing funds for leveraging domestic financial resources

Government of India initiatives to tackle problem of urban slums;

In order to minimize urban slums, number of steps have already been taken by the Government of India, in terms of launching numerous schemes, yojana, programs etc. in the urban context. However, despite best of the efforts made, Indian experience in tackling experience has been diverse. It has both encouraging and discouraging outcomes. Indian cities have largely failed to effectively tackle the problem of mushrooming of slums. Slums are considered as the national problem and not as the local problem. Local agencies remain muted and always look forward to the state/national benevolence to solve the problem of slums. As per data made available by the Census, 2011, besides recording increase in number of cities having slums, slum dwellers have also increased considerably along with number of slums in urban areas. Existing trends indicate that Indian cities are going to face the greatest challenge of managing the growth of slums in the years to come. If slums in India are to be managed, governments in power will have to remain totally committed to

promote inclusive development. Existing policies and programs would need a change. We must shift and put an end to our policy of creating ownership of houses, otherwise the problem of slums will never come to close. India must accept the right to shelter but never the right to own the shelter. These two need to be separated and made part of the housing policies and programs. Government must put an end to multiple ownership of houses; encourage/undertaking large scale construction of rental housing, both in private and public sector and also make law to control the rents of the rented accommodation. Rural areas need care, support, empowerment, development and provision of basic infrastructure to improve their quality of life and productivity. Ignoring villages will never permit urban development to become rational and minimize the growth of slums in urban areas. Focus of planning must shift from Urban planning to Regional planning, so that urban and rural areas are brought on same platform of planning and development. This will promote synergy between the two and ensure balanced growth of rural and urban India. Various programs launched by national governments in the post- independence period to improve the quality of life in slums and to make cities free from slum are enumerated in brief below;

- **National Slum Development Programme (NSDP):** Initiated in 1996, NSDP provided both loans and subsidies to states for slum rehabilitation projects based on their urban slum population.
- **Valmiki Ambedkar Malina Basti Awas Yojana (VAMBAY):** Introduced in 2001, to focus on shelter for the urban poor, with 20% of total allocation for community sanitation facilities under the Nirmal Bharat Abhiyan (NBA) program
- **Basic Services to the Urban Poor (BSUP):** BSUP, as an important component of Jawaharlal Nehru National Urban Renewal Mission (JNNURM), aimed at providing basic services to urban poor in 63 identified largest/important cities in India by population/administrative status /religious importance /tourism status.
- **Integrated Housing & Slum Development Programme (IHSDP):** Integrated Housing & Slum Development Programme (IHSDP) launched by Government of India by merging the schemes of NSDP and VAMBAY, with the objective of providing adequate shelter and basic infrastructure facilities to the slum dwellers in urban areas.
- **Interest Subsidy Scheme for Housing the Urban Poor (ISHUP):** The Scheme envisaged the provision of interest subsidy to economically weaker section and low-income groups to enable them to buy or construct houses
- **Rajiv Awas Yojana (RAY):** RAY remains the flagship program of the congress government to eradicate slums and make cities free of slums by bringing them into the urban fold and making them integral part of the existing city. Launched in 2013, the scheme focused on; recognizing and merging the existing slums into the cities where they exist for enabling them to avail the same level of basic amenities, services and infrastructure as the rest of the town. RAY also mandated to redress the failures of the formal

system that lie behind the creation of slums; and tackling the shortages of urban land and housing that keep shelter out of reach of the urban poor. Rajiv Awas Yojana (RAY) envisaged a “Slum Free India” with inclusive and equitable cities in which every citizen has access to basic civic infrastructure and social amenities and decent shelter.

Mission; RAY is based on the premise of encouraging and empowering the States/Union Territories (UTs) to tackle the problem of slums, by focusing on: recognizing and bringing all existing categories of slums, notified or non-notified including recognized and identified, within the urban fabric, ensuring parity with regard to availability of basic infrastructures, on the pattern, norms and standards, defined for the formal system; re-dressing the failures of the formal system that has led to creation of slums by planning for affordable housing stock for the urban poor and initiating crucial policy changes ,required for empowering the slum dwellers

Objectives; Ray was framed to achieve the following objectives;

1. Improving and provisioning of housing, basic civic infrastructure and social amenities in identified slums.
2. Putting in place appropriate reforms to address issues leading to creation of slums.
3. Facilitating a supportive environment for expanding institutional credit linkages for the urban poor.
4. Institutionalizing mechanisms for prevention of slums including creation of affordable housing stock.
5. Strengthening institutional and human resource capacities at the Municipal, City and State levels through comprehensive capacity building and strengthening of resource networks.
6. Empowering community by ensuring their participation at every stage of decision making through strengthening and nurturing Slum Dwellers' Association/Federations.

RAY, Rajiv Awaas Yojna was envisioned and mandated to be implemented in a mission mode by providing financial support to implementing agencies created at States/UTs/Urban Local Bodies (ULBs)/Central Government Agencies, for providing affordable housing and improving basic civic infrastructure and social amenities in each selected slum. Rental and transit housing was made admissible under the scheme. Operation and maintenance (O&M) of assets created under this scheme was also made eligible for funding. RAY was also used for extending financial support to States for creation of affordable housing stock through public-private partnership (PPP) under the Affordable Housing in Partnership (AHP) component of the scheme. The scheme was made applicable to all slums existing within the city, irrespective of their location, ownership of land on which they are located and also made applicable to “urbanized villages” , falling inside the planning area of the city master plan. Ray was known to be a novel scheme and an approach which was known to

be universal so far addressing holistically the problems of slums in urban India. However, scheme did not make much impact and headway due to inadequate data, lack of resources, capacity, capability and political will to address the issues of slums in India.

Affordable Housing in Partnership (AHP); The Government has also approved the scheme of Affordable Housing in Partnership (AHP) under Rajiv Awas Yojana (RAY) on 03.9.2013 to increase affordable housing stock, as part of the strategy to eliminate formation of slums. Central support was provided at the rate of Rs. 75,000 per Economically Weaker Sections (EWS)/Low Income Group (LIG) Dwelling Units (DUs) of size of 21 to 40 sqm. in affordable housing projects taken up under various kinds of partnerships including private partnership. A project size of minimum 250 dwelling units was made eligible for funding under the scheme. The DUs in the project could be planned, designed and constructed to be a mix of EWS/LIG-A/LIG-B/Higher Categories/Commercial components, of which at least 60 percent of the FAR/ FSI was mandated to be used for dwelling units of carpet area of not more than 60 sq.m. Under AHP Scheme, a total of 21 projects from 3 States (Karnataka, Gujarat & Rajasthan) for construction of 24141 DUs were sanctioned.

- **Pradhan Mantri Awas Yojana- “Housing for All (Urban):** Launched in 2015, the scheme seeks to provide central assistance to implementing agencies through states and UTs for providing houses to all beneficiaries by 2022. It incorporates four verticals containing four different options; two each for the demand and supply side; to address the issue of affordable housing in the urban areas. The options for affordable housing include: “**In-situ**” slum rehabilitation with participation of private developers using land as a resource. This approach aims to leverage and unlock the potential of land under slums to provide houses to the eligible slum dwellers bringing them into the formal urban settlement.; Promotion of Affordable Housing for weaker section through credit linked subsidy; Creating Affordable Housing in Partnership with Public & Private Sectors; and Beneficiary-led individual house construction/enhancement.

Challenges in the Indian context:

Experts, researchers and professionals associated with study and analysis of urban slums have identified various challenges which need to be addressed in government policies and program for finding a permanent solution for the urban slums. These challenges have been enumerated in terms of;

- **Slum-land ownership:** Land remains critical for housing the poor. Sourcing adequate land for housing the poor remains the greatest challenge. In the absence of systematic land records, non-transparent deals and ownership conflicts between land-owning departments, assessing land ownership remains difficult. Slum rehabilitation, in-situ development and giving tenure rights to slum dwellers remains greatest challenge in the absence of accurate

and clear land record. This in turn delays and hinders implementation of slum rehabilitation schemes.

- **Inadequate formal housing:** PMAY aims at housing for all by 2022 mission, but the rate at which informal housing is being destroyed far exceeds the rate at which formal housing is being constructed. In addition, in the absence of accurate data, there is no assessment of the number of people living in slums. Government policies and program to provide housing for all by 2022, looks a distant dream, considering the non-availability of number of beneficiaries and large number of rural poor migrating to the cities on daily basis.
- **Illegal Subletting:** Number of slum dwellers already provided with free housing and full ownership rights, have grossly misused and abused these rights and entitlements either by transferring these houses at a premium to non-beneficiaries, by charging hefty premium or have illegally subleased. In the long run, this remains counterproductive to the goal of creating slum free cities.
- **Lack of Coherent policy:** India lacks a comprehensive policy which defines slums or define the desired end-state of slums or what encompasses “slum-free” city. Policies and programs related to slums have been changing with change of successive governments. Slums have been considered as a safe and assured vote bank for political parties, who follow a policy of appeasement to slum dwellers, assuring them protection, promotion and making available free housing ,once they are returned to power. Such agenda needs to be stopped for rationalizing the growth of slums.
- **Environmental Sustainability:** There are concerns about adding additional housing on an already over-constrained municipal system. Without investing in adding capacity to existing civic infrastructure for the city, such policies could put undue burden on the city’s civic amenities such as water and electricity and promote adverse quality of life in urban India. While undertaking rehabilitation of slums and slum dwellers, larger interest of the city and its population, in terms of appropriate services, must also be addressed as integral part of the policy.

Slums in India- 2011 Census

- Slums, as integral part of haphazard and unplanned urban growth and development, are known to be shadows of urbanization.
- Slum, for the purpose of Census, has been defined as residential 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 safety and health.
- Slums under Indian Census have been categorized and defined to be of three distinct types including: Notified Slums; Recognized Slums; Identified Slums

- All notified areas in a town or city notified as 'Slum' by State, UT Administration or Local Government under any Act including the 'Slum Act' are termed as Notified Slums.
- All areas recognized as 'Slum' by State, UT Administration or Local Government, Housing and Slum Boards, which may have not been formally notified as slum under any act are known as Recognized Slums.
- A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities are termed as Identified Slums under the Census of India, 2011
- Slums have been found to exist in majority of Indian towns and cities with 2 out of 3 towns reporting the existence of slums. Out of 4,041 Statutory Towns existing in India, Census 2011 reported Slums from 2,543 Towns. 63% of Indian towns recorded the existence of slums in 2011.
- In terms of Census Enumeration blocks, number of Slum Enumeration Blocks (SEBs) recorded were about 1.08 lakh in the country. Largest number of Slum EBs was reported from state of Maharashtra (21,359). State alone contained about one-fifth of identified slum blocks.
- Largest number of slums in the country fell under the category of Identified slums, followed by Notified slums. Recognized Slums were found to be minimum Based on categories, Notified Slums numbered 37,072(34.30%); Recognized Slums -30,846(28.50%); and Identified Slums count was placed at 40,309(37.20%);.
- Total number of Households in India reported to be living in slums in the year 2011 were of the order of 137.49 lakh; out of which 49.65 lakh HH(36.1%) lived in Notified Slums ;whereas Recognized Slums count was placed at 37.96 lakh HH(27.6%); and Identified Slums had 49.88 lakh HH(36.3%);
- Slum household distribution was found to be uneven in the country with few states reporting existence of large slum household as compared to others. State of Andhra Pradesh was found to provide worst placed in the country in terms of providing quality of life to its citizens, with every third household being a slum dweller. Northern states were found to be better placed in terms of number of slums. Existence of slums and level of urbanization were not found to be co-related at the state level Top 5 States in the country reporting Slum Households included Andhra Pradesh (35.7%); Chhattisgarh (31.9%);Madhya Pradesh (28.3%); Odisha (23.1%);West Bengal (21.9%).
- Few states did much better, considering the existence of slum households in the country. State of Kerala was found to be best placed with minimum number of slums household placed at only 1.5% of total households in the state. Chandigarh, despite being the best planned city, reported every tenth household living in slums. Bottom 5 States Reporting Slum Households included; Chandigarh (9.7%); Gujrat (6.7%); Jharkhand (5.3 %); Assam (4.8 %); Kerala (1.5 %);
- Despite low level of urbanization standing at 31.16%; India, as a nation, was reported to have high incidence of slum dwellers. Every sixth urbanite in

India was reported to be living in slums in 2011. As against total household of 789 lakhs, slum households were counted to be 137 lakh (17.4%) and non-slum households were placed at 652 lakhs (82.6%).

- Size of the city was found to have positive co-relation with the slum population the city was holding. Accordingly, large concentration of slum households were found to be concentrated in metro cities, every third resident of metropolises were a slum dweller as against every sixth in the urban India. 46 million Plus Cities held 52 lakh slum households (38.1%) as against 85 lakh (61.9%) in other cities .
- Number of slum households was found to at variance in the mega cities. Mumbai, being the largest populated city in India, recorded large slum population with every second resident of the city leading a degraded life. Dharavi, largest slum settlement in India, is also located in Mumbai. Capital city of Delhi is found to be better placed as compared to Mumbai, so far as slum households are concerned with only every seventh urbanite a slum dweller. Proportion of Slum Households in Metros were found to be - Greater Mumbai (M Corp) 41.6%; —Kolkata(M Corp.)- 29.6%, Chennai(M Corp)-28.5% , Delhi MC (U)- 14.6%, BBMP(M Corp)- 8.5%.
- Great variation is also observed in the number of households living in million plus cities. Vishakhapatnam was found to have largest proportion of population living in slums with on an average every second household counted to be slum dweller, followed by Jabalpur cantonment, Greater Mumbai, Vijayawada etc. Top 10 million Plus Cities with High Proportion of Slum HHs in 2011 include— Greater Visakhapatnam M Corp-44.1% ; Jabalpur Cantt (CB)- 43.3; . Greater Mumbai (M Corp.)- 41.3% ; Vijayawada (M Corp.)- 40.6%; Meerut (M Corp.)-; Raipur (M Corp.)-40.0%,Nagpur (M Corp.)-39.0%;Greater Hyderabad M Corp(GHMC)-.- 34.3%; 31.9%; Kota (M Corp.)-31.8%; Agra (M Corp.)-29.8%
- In terms of typologies of the housing, majority of houses were found to be permanent followed by semi-permanent with minimum proportion of temporary houses in both urban areas and slums. Proportion of Permanent houses matched both in urban and slum areas, whereas proportion of Semi-permanent and Temporary households was found to be higher in slums as compared to urban areas. Proportion of Households by Type of Census houses in urban India and slums include- Permanent U -84.3/ S-77.7 % HH; Semi-permanent -U -11.6/ S- 16.0 %HH; Temporary-U-3.2/ S-5.3 %HH; Any other - U 0.9/ S-1.0 %HH;
- Majority of households in slums were found to be the owners of the house. Ownership of housing was found to be higher in slums as compared to urban India. Slums also follow the pattern of ownership and providing renting facilities. One –fourth of household were found to be living in the rented housing in slums, following the pattern in urban areas. Details of the households by ownership status in India included –Urban/Slums— Owned – U-69.2% /S-70.2%; Rented— U-27.5%/S-26.3% ; Others- U- 3.3%/ S-3.5 %

- Variations were also observed in the availability of rooms both in the urban areas and the slum households, which makes an interesting study. It varied as widely as with no rooms to more than five rooms. Three-fourth of the slum households lived in either one room or two room accommodation; whereas every sixth slum household was placed in three/four room house. Number of households in slums with no room was placed at 4.4%. Slum household were also found to have five or more rooms. As per Census 2011; Households by Number of Rooms in urban/slums in %age terms were found to be – No Exclusive Room—3.1/ 4.4; One Room—32.1/44.8; Two Room- 30.6/ 29.5; Three Room- 18.4/12.3 ; Four Rooms 9.3/5.4; five Rooms& above -6.5/3.5 .
- Households size in slums were also found to be varying from as low as one member to as high as more than 9 members. Largest proportion of households was found to be comprising of four members; followed by 6-8 members and 5 members. Household pattern based on size was found to be quite similar both in urban areas and slums. As per Census 2011, Households by Household Size— India— urban/slums in %age -1 member- 3.6/3.7 ; 2members- 9.5/9.5; 3 members-15.9/14.9 ; 4 members –26.4/25.1; 5 members-18.5/19.4 ; 6-8 members—20.6/22.2 ; 9 and above members -5.4/5.2
- Considering the use to which houses were put in slums, majority of houses-four out of five- were used for residential purposes. In addition, houses in slums were also used as shops, offices, schools, factories, workshops, place of worships etc. indicating slums also served for activities other than residences only. Details of houses based on Use of Occupied Census Houses recorded in census 2011included —Total Occupies Census Houses - urban/slums in %age—Residence—76.9/ 82.5 ; Residence-cum-other use- 2.4/2.4 ; Shop/Office- 10.8/6.7; School/College etc. 0.4/0.3 ; Hotel/ Lodge/Guest House—0.4/0.2;Hospital/ Dispensary etc- 0.3/0.2; Factory/ Workshop etc- 1.5/1.2 ; Place of worship -0.6/0.6; Other non-residential use-6.0/5.1 ; Locked Census House- 0.7/0.6 .
- In slums, three-fourth household had access to tap water supply, whereas only one-eighth used wells as source of water supply. More than half (56.7%) household had source of water supply located within the premises in which they were living while remaining (43.3%) depended on outside sources
- 9 out of 10 households in slums (90.5%) had access to electricity as the source of lighting, whereas remaining households depended on kerosene, solar, oil etc. for lighting the premises. However, 0.5% household had no access to any source of lighting except nature.
- 81% household in slums could access bathing facility within their premises with 19% having no access to such facility. However, every seventh household had no roof over the available bathing facility (14.%) within the premises.
- Regarding waste water drainage connectivity, one third households (36.9 %) enjoy facility of covered drains; whereas majority are still to live

with open drains(44.3%). About one-fifth (18.8%) are without any drainage option.

- Regarding latrine facility, two-third of slum households (66.0%) have latrines within their premises, whereas rest of 34% go for outside facility including both public and open defecation More than half of slum households (57.7%) have access to WC, whereas 6.2% used pit latrines. One fifth slum households (18.9%) in urban areas defecated in the open
- Cooking inside the house was being done by almost all the slum households (94.1%), whereas only 5.4% slum households were cooking outside the house. However, only 65.3% slum household had the facility of kitchen within the house, whereas remaining 28.8% households were cooking without any kitchen. No cooking was reported in the 0.5% slum households.
- LPG/PNG was being used by majority (51.3%) as the fuel for cooking in the slums. Next preferred fuel for cooking was fire wood (25.8%) followed by kerosene (14.0%). Bio-gas was used by only 0.5% slum households
- Availing banking facility was equally divided between haves and have-nots with facility was being used by (53.2%) slum households, whereas. (46.8%) had no access to banking facility.
- More than two third slum households (69.6%) had televisions along with 18.7% having radio/transistors. As many as 10.4% slum households had computers with them but majority of them were without internet facility (7.1%)
- Among assets in possession of urban slums, 72.7% owned telephones, out of which 63.5% owned mobiles and 4.4% owned landline, whereas 4,8% household owned both mobile and land line connection; .40.2% owned bicycles whereas scooter/motor cycle/moped was owned by 22.0%. Car/ van Jeep was owned by 3.6% of the slum households whereas 10.7% slum households had no such assets

2.7 Neighbourhood Planning – Concepts, Objectives, Principles

Neighborhood Planning

- Word Neighbourhood has been defined in the *Free Dictionary*, in terms of; *immediate environment; surroundings; vicinity ;a district where people live; the people in a particular area; neighbours; neighbourly Feelings; in the neighbourhood of approximately.*
- Looking at the dictionary meaning of the word neighbourhood in physical planning parlance, it denotes a community or number of people living together in a locality or in close proximity and sharing a common space. So, the word Neighbourhood has both spatial and human dimensions , putting them in a physical proximity in any part of the city

- Neighbourhood planning as a concept, has its genesis in the synergy brought in by interaction among people living close by and sharing a common space, to promote a feeling of togetherness and knowing/ supporting each other, which generally remains missing in urban areas in general, but in large urban centers in particular. The concept was largely used and extended in the planning of urban areas to make cities more rational and humane to overcome large number of social and environmental problems plaguing the industrial cities of 19th Century.
- Neighborhood ,as a geographically localized community within large city, with considerable face-to-face interaction among members, has been promoted as a concept, approach, strategy and option by Clarence Perry, as a response to rational planning, development and management of residential areas in metropolitan areas, for ensuring safety of children and elders walking to schools; catering to prevailing social and intellectual attitudes of the early 1900 ; ensuring distribution of open spaces and playgrounds in the industrial cities of early nineteenth century in America.
- While the concept of the neighbourhood unit emerged as early as 1923, at a joint meeting of the National Community Center Association and the American Sociological Society in Washington, D.C., it was the publication of Clarence Perry's paper, in the 1929, ' Regional Plan of New York and Its Environs', which led to its promotion as a planning tool.
- *Clarence Perry*, envisioned neighborhood as a model for residential development in metropolitan areas, to plan safer cities and safer communities against the uncontrolled and unregulated vehicular traffic. Neighborhood planning was designed to provide a framework for urban planners attempting to design functional, self-contained and desirable neighborhoods in industrializing cities besides creating new residential communities which satisfies social, administrative and service requirements for satisfactory urban existence.
- Over a period of time concept has been extended to serve the broader purpose of providing a distinct identity to communities besides offering designers a framework for dissecting the city into smaller suburbs to make it manageable, productive, qualitative and livable Concept which had its origin in USA, with variable degree and variable contours, over the years has been used extensively, both locally and globally, by planners and architects to provide a framework and model for planning and developing residential communities and to promote healthy social and physical relationship besides creating functional, self-contained and desirable social units with appropriate quality of life.
- The concept of the neighborhood unit has been used extensively and forms a notable aspect of designs of the new town movement. However, despite variations used in creating neighborhood units, the basic concept and variety of institutional, social and physical design principles of neighborhood planning enunciated by Perry, have remained universal. These principles

provide specific guidelines for the spatial distribution of residences, open spaces, community services, streets and businesses involving well defined boundaries, safety from vehicular traffic, promoting pedestrianization, keeping vehicular traffic on fringe, providing assured level of open spaces, community facilities based on defined norms for a defined population with primary school as the focus of community.

- William E. Drummond - a central architect in Frank Lloyd Wright's studio, advocated neighborhood unit should be the organizing basis of the whole city; to be regarded as a unit in the social and political structure of the city. Accordingly, the neighborhood unit, as a model for residential environment, containing community facilities, parks, local shopping and housing, has revolutionized the basic approach to city planning promoting decentralization, minimizing travel, rationalizing traffic and equitable distribution of community facilities and amenities across city, based on population housed. Concept has made urban planning more transparent, objective and inclusive, promising assured quality of life to all the residents of the city including poorest of the poor.
- The neighborhood unit, as a comprehensive physical planning tool, has also helped in promoting community centric life within the urban areas, away from the pollution, smoke and ugliness of industrial plants. However, despite distinct advantages neighborhood has also promoted fragmentation of cities promoting dichotomy and contradictions in their planning, development and management. Looking at the variations in the growth and development of cities, one can visualize that neighborhood has also been used as a planning tool to promote discrimination and differential quality of life for the various income groups in the cities. This calls for looking at the concept both critically and objectively in order to make it more rational, effective and efficient.

Objectives;

Based on the intent, content and concept, objectives of neighbourhood planning were enumerated by *Clarence Perry*, in terms of;

- Making city planning, more objective, transparent and children/resident centric.
- Recognizing community as the unit/basis of urban planning
- Promoting high degree of social interaction among community to make growth of cities relevant and rational
- Making neighborhoods self-contained & self-sufficient in day to day living'
- Providing adequate open spaces for promoting health and social-interaction
- Making community safe from noise, pollution and city traffic.
- Creating a well- defined hierarchy of roads -both internal and external
- Empowering communities to manage the local spaces
- Diminishing travel and traffic within cities and making urban development safe, effective and efficient

- Defining norms and approach to planning of the neighborhood- both new/ old
- Combating numerous social problems including community disintegration, economic marginalization, and environmental degradation.
- Rationalising planning of new towns and extension of existing towns globally.
- Promoting the idea of making cities human centric and planned on human scale
- Promoting the concept of planning for people and not vehicles.
- Bringing institutions and communities on the common platform in planning process

Principle

Clarence Perry, also defined Neighbourhood planning principles in order to ensure that planning of communities remains rational and realistic;

- The neighbourhood planning was conceived to be a comprehensive physical planning tool, to be utilized for designing self-contained residential neighborhoods which promoted a community centric lifestyle, away from the “noise of the trains, and out of sight of the smoke and ugliness of industrial plants”, emblematic of an industrializing New York City in the early 1900s
- According to Perry, a neighborhood should essentially comprise of;
 - *a population of about 5000–9000 residents,*
 - *with schools, places of worship, and recreational areas at its center.*
 - *occupying an area of 160-acre*
 - *neighborhood is to be developed such that*
 - *it houses 10 dwellings per acre.*
 - *having elementary school with an enrolment of between 1,000 and 1200 pupils.*
 - *Making basic facilities and services accessible at a distance of not more than one-quarter mile from their place of residence.*
 - *10 percent of the area allocated to recreation.*
 - *Major road arteries confined to the boundaries*
 - *whereas internal streets planned for providing flawless access to the residents of the neighbourhood*

Based on the description given above, 6 major principles enunciated by Perry for governing and guiding the design and development of a good neighbourhood included:

- Focal Point of the neighbourhood should be the elementary school,
- Arterial roads should be to be placed at the perimeter so that it defines the boundary of the neighbourhood and keeps heavy traffic on the fringe of the neighbourhood.
- Interior roads should follow a well- defined hierarchy of roads to differentiate between the arterial roads and the local streets.

- Minimum 10% of total area of NH should be mandated for open spaces.
- Commercial area should be placed on the periphery of the neighbourhood, preferably at the junction
- Radius of the NH should be kept at maximum of ¼ mile

Thus specifying size, population and residential density to have adequate number of families and students to justify the provision of a school; providing essential basic public buildings within a walkable distance; minimizing the distance to be travelled for accessing all basic amenities; providing sufficient open spaces; rationalizing traffic with fast traffic confined to periphery ; permitting only slow moving traffic within the neighbourhood area; placing the commercial component on the periphery on the arterial road; were the principles defined for the planning of the neighbourhood/

Core principles of Perry's planning and designing of Neighborhood Unit revolved around several physical design ideals which included;

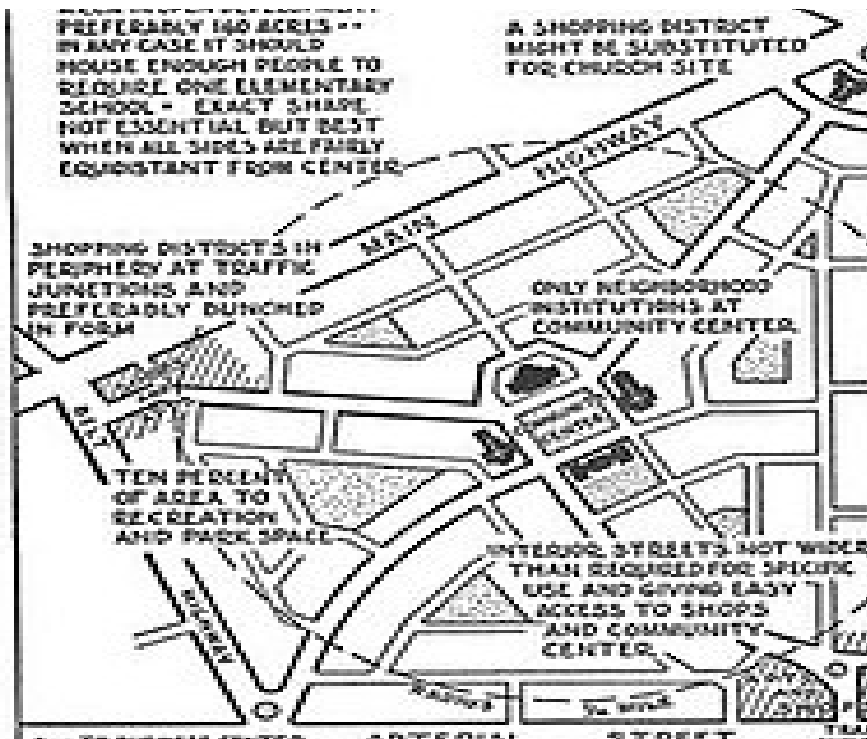
- **Make school as the Core of Neighbourhood** ;Looking at the entire context, Perry tried to put in place a clear agenda for defining and planning of the neighbourhood unit. Considering the context of safety, he stressed the need of adopting human scale based on walkability in order to fix the size of neighbourhood. Based on the observations and data available, he concluded that a child could walk about one-quarter of a mile and no more than one half mile within a time span of 10 minutes without being stressed. This distance, he found sufficient for excluding the major arterial streets in the planning. Making school as the fulcrum of the community, the size of NH unit was placed at 160 acres. Density and population defined for the NH were considered as other principle used by Perry for making provision of the school and other amenities, which could also be used by the community for neighbourhood meetings and activities. Perry envisioned to make neighbourhood planning, school centric based on the human scale with mobility leveraged by walking.
- **Population and Density**; Maintaining size of the neighbourhood, sufficient to support a school by housing a population between 5,000 and 9,000 residents with area placed at approximately 160 acres was the other principle used by Perry. Housing density was placed at ten units per acre. Principle also involved making optimum use of the school facilities for conducting neighbourhood meetings and activities besides constructing a large play area around the school building to be used by the entire community
- **Placing arterial streets along the periphery**; was considered appropriate so that the boundaries of the Neighbourhood are clearly defined , which would distinguish and demarcate the "place" of the neighborhood clearly and exclusively. Internal roadwork was to be designed in such a manner that would eliminates unwanted through-traffic from the neighborhood. Based on the principle of exclusion, the third principle enunciated for defining neighbourhood was to place arterial streets along the perimeter so as to eliminate unwanted through-traffic from the neighbourhood. In this

way, major arterial roads became the definers of the neighbourhood unit rather than its divider.

- **Designing internal streets** ;Perry advocated the need for adopting a well-defined pattern/hierarchy of road network for the internal mobility in order to make it NH safe. He focused on the reduction of the number of vehicles moving within the neighbourhood besides limiting their speed. To achieve this, he suggested the adoption of narrow and curvilinear street design for both safety and aesthetic purposes. Such streets, by design, would discourage unwanted through traffic and enhance the safety of pedestrians by rationalizing vehicular speed.
- **Positioning local shopping on the fringe/ periphery/boundary;** For stopping and excluding non-local traffic, Perry proposed that local shopping area should be placed on the perimeter or close to the main entrance of the neighbourhood. Locating shopping on the fringe will not only stop the entry of vehicles but will also eliminate the need for providing parking vehicles coming for shopping.

Titled “The Neighborhood Unit, a Scheme for Arrangement for the Family-Life Community”, Clarence Perry’s monograph offered in concrete terms a diagrammatic model of the ideal layout for a neighborhood of a specified population size. This model provided specific guidelines for the spatial distribution of residences, community services, streets and businesses.

A diagram of Clarence Perry’s neighbourhood unit, illustrating the spatiality of the core principles of the concept, from the New York Regional Survey, Vol 7. 1929



- **Dedicating at least 10 percent of neighborhood area for parks and open space;** Perry considered open spaces vital for promoting community living and to promote the environment and ecology of the area. Perry considered these spaces vital for promoting social interaction between the residents. He advocated the distribution of open area within the community and the residential blocks for their optimization. Keeping in view the role and importance of these spaces, at least 10 percent of the neighbourhood area (16 Acres), was suggested to be dedicated to parks and open space, creating places for play and community interaction.

Planning of Neighbourhood;

Following approach is suggested for planning of residential Neighbourhood ;

- **Defining boundary;** The first step in planning is to define the boundaries of the neighborhood based on existing natural/manmade features, such as rivers, canals, existing administrative boundaries, roads etc.,
- **Involving Communities;** After the boundaries are established and defined , members of the neighborhood should be involved in the planning process- defining the vision, mission , goals and requirements of various uses/ amenities to be provided in the planning of the neighbourhood. Creating a core group of all stakeholders for taking forward the planning and designing of the neighbourhood unit would be valuable for realistic planning and implementation of the NH
- **Involving Professionals & Undertaking Planning;** for undertaking planning of the neighbourhood, based on the input received from the residents and detailed studies /survey conducted of the site besides information gathered from residents including retail or employment surveys, demographic data or housing needs assessments. Successful neighbourhood plans typically seek to deliver community wishes in ways that are supported by the underpinning evidence.
- **Implementing the Plan;** Committee comprising of the representatives of the community; professionals, service providers, experts, planners and engineers need to be created for finalizing/implementing the plan. This requires the planning committee to decide what actions need to take place for effectively implementing the plan. The committee must decide what resources are available with the community, and how to raise more resources for project implementation besides making optimum use of available resources and minimizing the need for additional resources.
- **Managing operation and Maintenance;** Final step of neighborhood planning is generally considered to be evaluating and monitoring. Planning and sustaining a functional neighborhood involve enormous work and decision-making, and so plans may also need periodic review /revision or replacement by a new plan.

Conclusion;

Neighbourhood Planning ,as an idea, concept, option and strategy has been extensively used globally by Architects and Urban Planners to plan and decentralize cities, create cities within cities, promote self-contained communities and to make cities more humane, safe and socially interactive. Accordingly, large typologies of neighbourhood planning and designing with varying shapes, sizes and contents have emerged in the urban context with Americans using superblock and French using Sector for the neighbourhood planning. Despite high degree of relevance, neighbourhood planning has not been able to deliver the envisioned objectives. Cities in the process have been socially and physically fragmented, leading to clear division into different communities with little physical and social connectivity.

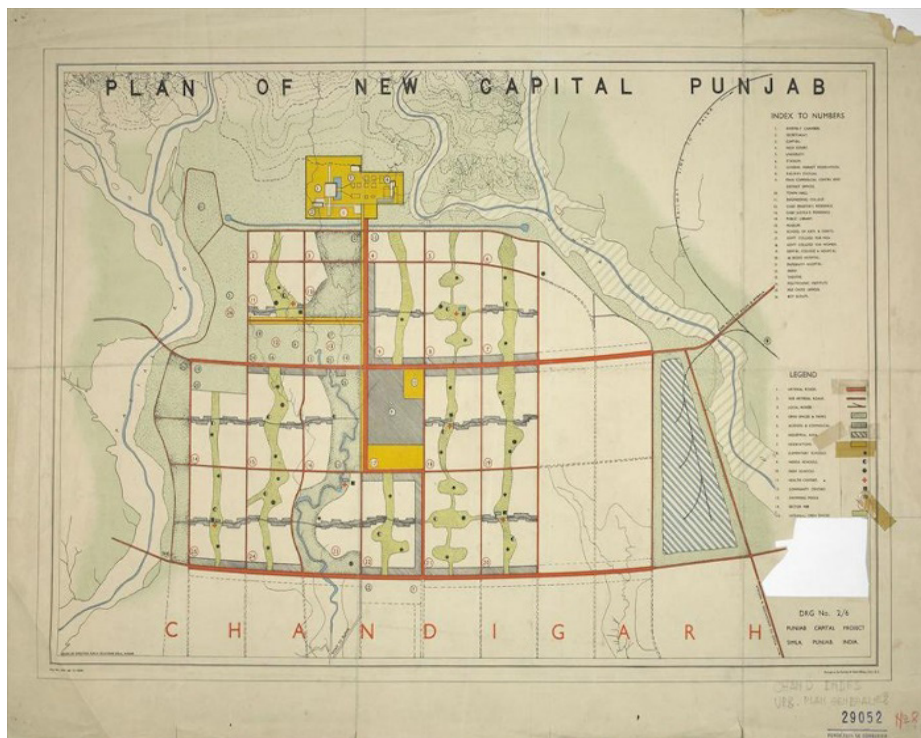
Variance in planning and designing norms followed at neighbourhood and sub-neighbourhood levels have promoted more dichotomy and contradictions with varying quality of life. Differential population and infrastructures have divided the city into high and low- end neighbourhoods. City fabric in large cases has emerged as distinct social map of communities graded on the area/ location basis with neighbourhood planning emerging as instrument of social segregation/division. Neighbourhood has been used in the planning of capital city of Chandigarh (India) with entire city fabric woven around Sector as the basic unit. Despite the various criticisms, the concept of neighbourhood units is still relevant today because it continues to provide a well-defined framework for the planning of cities and towns. NH planning helps in the creation of liveable communities where people live together and interact with each other. The concept of neighbourhood unit has been institutionalized in various cities across different countries including New York City, Chicago, Los Angeles, San Francisco, Tokyo, Chandigarh and India.

2.8 Sector Planning;

- Sector is a French word used for indicating residential neighbourhood like the word Superblock used by the American to showcase the unit which is planned and designed as a residential neighbourhood unit.
- Word Sector gained prominence in India, with the planning of the capital city of Chandigarh by Le-Corbusier.
- Chandigarh was planned on a grid-irion pattern, comprising of rectangular units , known as sectors.
- The capital city of Chandigarh was planned based on human scale with a focus on human living and working. City was planned using all the elements of nature for putting all the residents in touch with the infinite cosmos and nature, so that all the citizens can live a full and harmonious life.
- Master Plan evolved by Le-Corbusier defined Chandigarh as a Horizontal city, on the pattern of a garden city, considering the economy, socio-

economic conditions and living habits of people, which ruled out vertical planning.

- Vision of the planners was to create a city of half a million inhabitants, to be brought into city in two distinct phases of development.
- Planned as a capital city, a distinct quality of life was assured to a distinct class of people to be housed in the capital city
- Chandigarh plan promised basic amenities of life even to the poorest of the poor to lead a dignified life.
- City was planned for a population of 0.5 million to be realized in two distinct stages of development.
- Stage-I (S1)- Involving 29 Sectors- from Sector 1 to 30, covered an area of 3642 hectares for housing 1,50,000 population, envisioned to be a low-density development of 41.12 persons per hectare; with higher order of infrastructure and amenities. Land in the S1, was to be allotted on free hold basis.
- Stage-II (S2),- involving 17 Sectors- from Sector 31 to 47- covered an area of 2428 hectares for housing remaining 3,50,000 population. Stage-2 was designed to be a high-density development of 144.15 persons per hectare (3.5 times of Stage 1), with differential order of infrastructure and amenities. Land was to be allotted on lease hold in the stage as compared to freehold in first stage.
- Stage-III (S3)- Re-densification of Stage-I (S1) proposed to accommodate additional population, in case city population exceeds 0.5 million, without adding any additional area and without compromising with the quality of life.

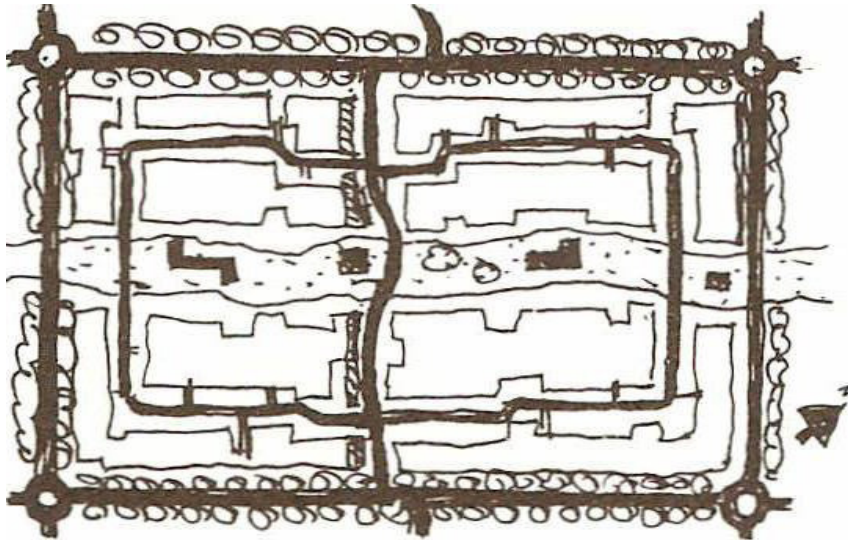




Master Plans of Chandigarh- 1st Albert Mayer ; 2nd- Le- Corbusier

- Master Plan of Chandigarh envisioned a stratified density pattern for the capital city with density rising , as one goes from north to south- from stage one to stage-two.
- The Master Plan of the city, was re-drawn by Le-Corbusier in four hectic days of inspired activity in February 1951. Master Plan was largely based on the Plan prepared by Albert Mayer. Corbusier changed the shape of the city from leaf to a rectangle, reducing its size/area of the proposed city in the process.
- Life of the future inhabitants of the city was compartmentalized and put into air-tight containers of working, living, care of body and spirit, known as sectors
- The entire network of sectors was woven in an efficient system of traffic and transportation governed by the rule of 7 Vs (later changed to 8Vs).
- The industrial area was placed on the South-east of the city to eliminate any possibility of heavy traffic entering the city. A 500 feet wide green belt was provided to function as sink for industrial fumes and noise impacting the adjoining residential sectors.
- Educational activities occupied the North-west side with work centers put in the Capitol Complex, City Centre, and Sub-city Centre placed along the major axis.
- Corbusier Master Plan focused on four major functions, which were fundamental to the harmonious existence of a city, namely, living, work, recreation and circulation.
- Capital city of Chandigarh was structured around 46 sectors out of which 41 were residential and 5 institutional/ commercial besides industrial Area.

- The basic unit of planning was changed from a *super-block* to *sector* keeping intact the neighbourhood concept i.e. city within a city.



Sector- Structure —Typical Sector Layout in Chandigarh

Concept;

- City and Sectors were planned based on theory and principles evolved by the CIAM, a group of eminent architects and planners headed by Le—Corbusier, for city and sector planning.
- Sector, conceived as a container of life, was defined to be rectangular in shape, on the analogy of neighbourhood unit
- Sector was planned to be self- contained and self-sufficient in day to day needs of the residents; in terms of local shopping, high/higher secondary school, hospital/healthcare, bank, post office and leisure.
- Sectors were planned based on the nature and using natural elements of sun, space and greenery.
- Sector was planned on the analogy of a 10 minutes city, where every amenity was available within a 10 minutes walking distance.
- Though plans of different Sectors not identical, but each sector followed the same planning principles. Sectors 7 & 8 are exception, planned on the Mayer's concept of Super Blocks
- Each 'Sector' or the neighboured unit, is conceptualised to be safe from heavy and fast traffic surrounded by V-2 or V-3 roads, with no buildings opening on to them. Access made available from the surrounding roads only through 4 controlled points, which roughly mark the middle of each side.
- Typically a sector is divided in four distinct parts by a V-4 road running from east to west and a V-5 road running from north to south. These four parts are identified as A, B, C and D corresponding to North, East, South and West sides.

- Safe from traffic and in close proximity to the nature, sector constitutes an attempt to create city within a city which provides for all the basic day to day material and social needs of the citizens in easy reach of the home, but at the same time linked to the larger scale of the city in terms of transport and services as well as architectural meaning

Size;

- Size of the sector was based on the human scale with dimensions fixed on a maximum walking time of 10 minutes to access any area/facility of the sector.
- Dimensions of the sector were worked out on a module of 400 metres with two modules in horizontal direction(800 metres) and three modules in vertical direction (1200 metres).
- Sector comprised of a rectangle half a mile apart in the east-west direction and three-quarters of a mile in the north-south direction. Common dimension of sector were 800 metres x 1200 metres with total area of sector pegged at 96 Hectare (0.96 Skms).
- Sectors on the North edge were kept smaller in area(48 Hect), to compensate the large area given to the capitol complex and adjoining gardens and for accommodating low density/large sized housing, catering to residential needs of the ministers and the members of the legislative assembly.

Population;

- Due to variation in size and density envisioned, population of sectors varied considerably.
- Sectors were to caters to the daily needs of its inhabitants which varied from 5000 to 25000
- However, sectors were never planned based on exact distribution of population.
- Population distribution was to be achieved by providing various categories of residential plots.
- Larger plots were created in northern sector to provide for low density whereas smaller plots were provided in the southern sectors, to achieve the high density of population.

Planning

- Each sector was planned in an introvert manner
- No house was made to open on the fast-moving roads
- Sector was planned on the analogy of city within city
- Sector was planned on the analogy of being self-sufficient and self-sustaining in day to day needs of shopping, healthcare, education, leisure, open spaces, community facilities, fruits and vegetables .Only for specialised needs people were required to go out of the sector.

- Adequate number of educational institutions, catering up to higher secondary educations provided for both government and private sectors.
- Each sector has provision of community centre and healthcare facilities depending upon population.
- Sector 22 was the first sector to be planned in the city by Jane B Drew. Pattern followed in the planning of Sector 22 has been followed in the planning of subsequent sectors with minor variations made in the planning for housing clusters but without changing the basic principles

Traffic and Transportation;

- City was planned on a well-defined hierarchy of roads based on the system of 7Vs which was later on made 8bc with the addition of another road exclusively meant for two wheelers traffic.
- Safety from fast and through traffic was the basic objective of sector planning.
- Each sector was enclosed by roads allocated to fast mechanized traffic and transport- V2 & V3
- All sectors were sealed against the heavy, fast and through traffic of the city.
- Restricting fast and through traffic in the sector was achieved by permitting only four entries, one from each side.
- Mobility within the sector was supposed to be led by walking because all amenities and facilities required for daily needs could be accessed within 10 minutes' walk.
- Traffic within sector was distributed through four types of roads;
 - V-4 Meandering shopping streets.
 - V-5 Sector circulation roads.
 - V-6 Access roads to houses.
 - V-7 Foot paths and cycle tracks
- Sector planning was made introvert with no door opening on to V2 and V3 fast traffic roads.
- Each Sector was bisected by shopping street (V4).
- A loop road was to distribute the traffic in the interior (V5) intersecting the shopping street. Individual houses derive approach from V4, V5 & V6 branching out of the loop road.
- Due to influx of large number of vehicles in the sectors and due to absence of parking space within the housing, all roads remain encroached by parking of such vehicles. Open spaces available and the space around parks is also being used for parking in large number of cases.

Green Areas;

- Landscape and open spaces remains the crowning glory of the city and sector planning
- All sectors were provided with green belt in the centre to connect the sector with the Shivalik Range of hills on the north of the city.

- Each sector had a green strip oriented longitudinally stretching centrally along the sector in the direction of the mountains.
- The green strip was planned for having uninterrupted view of the mountains. The green strip was mandated to stay un-interrupted and accommodate schools, sports, Cultural, Religious and Community Buildings and recreational facilities for the sector.
- Vehicular traffic is completely forbidden in the green strips where tranquility is to reign and the curse of noises is not permitted to penetrate.
- Green spaces have been spread over the entire residential area and could be accessed within a distance of 200 meters.
- Part of the area of Leisure valley falling in the sectors have been developed as major green area , based on the overall development plan of the leisure valley.
- Landscaping within sectors have been planned based on a well-designed landscape plan.
- All shopping streets-V4- are distinguished by colours of the flowers which trees planted on the road bears.
- All roads have been planted with trees keeping in view the position of the sun and safety of drivers from sun.

Housing;

- Based on the number of people to be housed in a sector, number of plots of varying sizes have been provided in each sector.
- Majority of the plots provided fall in the smaller marla category
- Plots size were larger in the northern sectors as compared to southern sectors
- Based on the variable density pattern specified, large variations in sizes of the housing plots are observed in the S1 &S2 housing, with larger plots and low density in northern sectors as compared to the southern sectors.
- In initial stages majority of houses constructed belonged to the government for housing government employees to be posted in the city. Government housing still constitutes large proportion of the housing stock created in the city.
- Government housing remains generally low rise – either single/double story
- All private housing was permitted to be constructed with 3 storeys on each plot, having three independent floors, with maximum height of 32'-3".
- Smaller houses were planned in the shape of terraced housing with sharing of adjoining walls. Larger plots were planned, designed and constructed as detaches/demi-detached housing.
- Most of the houses are grouped around a central open space.
- All houses have setbacks (open area) provided in the front and rear.
- Grouping of houses and density pattern derived on the basis of income. High income Sectors have low density and a pattern of detached houses.
- Large addition to housing has also been made by the Chandigarh Housing Board which has constructed large number of houses in various sectors for different income categories including HIG, MIG, LIG&EWS

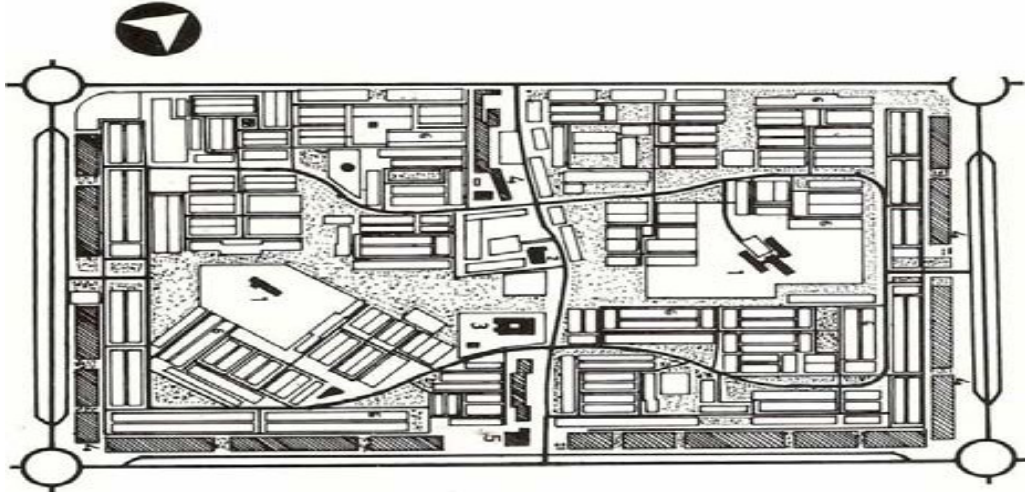
Shopping Street;

- Centre of focus of Sector envisioned to be V4 shopping street, a curved road to slow down traffic.
- Shopping street includes both shopping and public/institutional buildings.
- In certain Sectors housing, both government and private, has also been provided along the V4.
- Shops are located on one side (South-West) along with a verandah to provide shade to shoppers and to eliminate crossing of streets.
- Shopping street of a sector is linked with adjoining Sectors, forming a continuous ribbon.
- Variety of shops have been provided, ranged from smaller booths to larger Shop-Cum-Flats.
- Booths provided in the sector are small sized shops, which are permitted construction up to single storey and have no toilet and water facility available within the booth
- Larger shops designed as three storeyed buildings with shops on the ground floor and residence for owners on upper floors, as per the preference of the shop owners.
- Continuous verandahs running in front of shops is mandatory to protect shoppers not only from rain and sun but also to provide a shaded walkway.
- Initially no space for informal markets were provided, but later on number of double storeyed buildings were constructed to house these informal shops, which are made to house on two floors, planned around a common courtyard with common stairs and toilets.
- Initially, no provision was made of the convenient shops in the sector planning, but later on in sectors falling in S2, provision of convenient shops have been made in many sectors.
- Commercial area provided in the sector planning is not based on any defined norms and standards and remains inadequate considering the population and requirement of the residents.
- Area provided under parking remains inadequate leading to problem of parking of vehicles in the shopping streets during peak hours.
- No commercial space has been provided in the northern sectors adjoining to the Capitol due to low density /limited population.

Controls;

- All buildings within the sector, both residential, commercial, institutional etc. are subjected to developmental controls.
- All commercial buildings are subjected to complete architectural controls prepared by the Chief Architect, Chandigarh.
- All Government buildings are based on the design prepared by the Chief Architect, Chandigarh.

- All private housing not falling in the Marla housing is subjected to Zoning controls, defining setbacks, FAR, Ground coverage height etc.
- All Marla housing is subjected to *frame control* prepared by the Chief Architect, Chandigarh.
- All residential buildings falling on the commercial street V4, are subjected to complete architectural controls.



- All institutional/religious buildings etc. are to be based on the zoning plans prepared by the Chief Architect.

Layout of Residential 22, Chandigarh- first sector to be planned in city.

Looking at the entire context of sector , it can be seen that Sector planning, taken up in Chandigarh, has revolutionized the concept of neighbourhood planning not only in the region but also in the country. Sector planning has been accepted as one of the best options for planning at the neighbourhood level, clearly defining the approach, intent, contents and scope of planning at local level. Defining clearly the agenda of neighbourhood planning in terms of safety from traffic, self-sufficiency in all basic human needs, having adequate open spaces, remaining connected with nature, using human scale, creating appropriate options for leisure, promoting walkability and making living more qualitative, makes neighbourhood planning more productive and simpler and useful in the parlance of city planning. Following the concept of making sector as a city within the city, has made sector planning as an effective and efficient instrument of decentralising the city, making traffic and transportation more rational, minimising use of mechanised vehicles in the city and promoting sustainability in the urban planning. Despite the fact that Sector planning in Chandigarh has numerous fallacies, shortcoming, limitations and problems , which can be appropriately studied and analysed, to make sector planning more effective and operationally efficient and as one of the best options for neighbourhood planning to make cities safe, sustainable, inclusive and resilient.

References;

- Prasanna; Advantages and Disadvantages of Observation Method | Merits and Demerits of Observation in Marketing; March 31,2023; <https://www.aplustopper.com/advantages-and-disadvantages-of-observation-method/>
- Eric; Galpin Tim ; the Use of Mail Questionnaires as a Method of Data Collection; <https://eric.ed.gov/?id=ED287879>
- Desai Rukmini; The Interview Method: Advantages and Limitations ; Social Research
- ;<https://www.yourarticlelibrary.com/social-research/the-interview-method-advantages-and-limitations-social-research/92801>
- United Nations Studies in Methods Series F No.98 Designing Household Survey Samples: Practical Guidelines Department of Economic and Social Affairs Statistics Division; New York; Logo 2005;
- file:///C:/Users/akhil/Desktop/Handbook23June05-%20SURVYS%20HOUSEHPLD.pdf
- Balochistan Rural Development and Community Empowerment Programme [2017 – 2022] ;RURAL SUPPORT PROGRAMMES NETWORK; Oct 2017
- Handbook of Household Surveys (revised edition) St/ESA/STAT/Ser.F/31, New York, 1984
- Pettinger Tejvan; Factors affecting supply and demand of housing; May 27, 2021
- Government of India, (2011) *Census of India- 2011*, New Delhi.
- McKinsey Global Institute (2010) *India's Urban Awakening: Building Inclusive Cities, Sustaining Economic Growth*, New York: McKinsey & Company.
- United Nations (2014) *World Urbanization Prospects: The 2014 Revision*, New York: United Nations.
- World Urban Forum III; PADCO; Housing for All: Essential to Economic, Social, and Civic Development; June2006
- KPMG International & NAREDCO ,(2012) *Bridging the Urban Housing Shortage in India*:kmpg.com/in
- Jones Lang Lasale (2012), *Affordable Housing in India- an Inclusive Approach to Sheltering the Bottom of the Pyramid*
- United Nations; Fact Sheet No.21, The Human Right to Adequate Housing; <https://www.un.org/ruleoflaw/files/FactSheet21en.pdf>
- Government of Haryana; Haryana Housing Board; *Affordable Rental Housing Scheme, 2020 (ARHS 2020)*
- Government of Haryana (2013) , *Policy of Affordable Housing*: Chandigarh
- Knowledge @Wharton (2012) , *What is Holding Back Affordable Housing in India*:
- Government of India, Ministry of Housing and Poverty Alleviation(2012), *Report of Technical Group(TG12) on Urban Housing Shortage 2012-17*: New Delhi
- *Government of India; Niti Ayog , ' Reforms in Urban Planning Capacity in India- Final Report*; September ,2021;

- *Government of India, Ministry of Housing and Urban Development ;Deendayal Antyodaya Yojana – National Urban Livelihoods Mission (DAY-NULM)*
- *Government of India, Ministry of Housing and Urban Development-Guidelines Valmiki Ambedkar Awas Yojana (VAMBAY).*
- *Ellen I, Graves E,O'Regen K, Schuetz ;Report on Strategies for Increasing Affordable Housing amid the COVID-19 economic crisis; June 8,2020*
- *Kulshrestha S K (Vol.22 No.3 MAY-JUNE 2015), Spatio- economic Development Record, SDR News Notes-Smart Cities, AMRUT and Housing for All: New Delhi.*
- *Gupta J K (2014), Making Affordable Housing A Reality in India*
- *Gupta J K (2021); E-Book ;Housing for All in Urban India- Myths and Realities;*
- *World Economic Forum;10 ways Cities are tackling the global affordable crisis; <https://www.weforum.org/agenda/2019/06/10-ways-cities-are-tackling-the-global-affordable-housing-crisis/>*
- *World Economic Forum & PwC; Report on Making Affordable Housing A Reality in Cities; June, 2019*
- *Solutions-to-the-Affordable Housing- Crisis; August 15, 2019; <https://nlihc.org/sites/default/files/Solutions-to-the-Affordable-Housing-Crisis.pdf>*
- *A Century of Public Housing- Lessons from Singapore; <https://theconversation.com/a-century-of-public-housing-lessons-from-singapore-where-housing-is-a-social-not-financial-asset-121141>*
- *Hamilton Emily ;The Limits of the Singapore Housing Model; August 5,2020*
- *Haila Anne; Ur ban Land Rent; Singapore as a Property State ;2015*
- *Majendie Adam; Why Singapore Ha one of the Highest Home Ownership Rates*
- *Government of Punjab; Housing &Urban Development Department; Punjab Affordable Housing Policy, 2020; notification 12/01/18-5HG2/ 1397, dated 24-7-2020.*
- *Department of Town Planning Haryana; Affordable Housing Policy, 2013,*
- *Planning Commission of India; New Delhi; Report of The Working Group on Urban Poverty , Slums and Service Delivery System; September 19, 2011*
- *Kapur Anushri; 3 Reasons for the Growth of Slums in Urban Areas in India.*
- *Singh Dishy; The Causes of Slums in India: How they can be resolved; Nov 3, 2020*
- *UN-Habitat; Workshop on Cities Without Slums- Nairobi, Kenya, Sept 22-23,2005; <https://mirror.unhabitat.org/content.asp?cid=2065&catid=463&typeid=11&AllContent=1>*
- *UN Habitat; Finding Solutions to Slums and Informal settlements; Nairobi 25 May2019; <https://unhabitat.org/finding-solutions-to-slums-and-informal-settlements>*
- *UN-Habitat; Harmful impacts of slums on society and people living in it- Web.05Sept.2012. <http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=2917->*

- Discourses of a Slum-Free Delhi. In Rademacher A. & Siva Ramakrishnan K. (Eds.), *Ecologies of Urbanism in India: Metropolitan Civility and Sustainability* (pp. 249-276). Hong Kong: Hong Kong University
- UN-Habitat; *A practical Guide to Designing, Planning and executing City wide Slum upgrading Program*; 2015
- Wikipedia; Slum-Wikipedia-en.wikipedia.org ›wiki/slum <https://search.yahoo.com/search?fr=mcafee&type=E211US0G0&p=wikepdia-slums>
- Banerji, M. (2009), *Provision of basic services in the slums and resettlement colonies of Delhi*, Institute of Social Studies Trust Centre des Nations Unies pour les Etablissements Humains (CNUEH). (1981).
- Agrawal Vandana; Bandyopadhyay Abir; *Identification of Factors for Growth of Slum: Case Study 'Jyoti Nagar' Slum Raipur* ; IJRST –| Volume 3 | Issue 06 | November 2016
- Housing and Urban Development Corporation, Ministry of Urban Development; Government of India; web site; <https://hudco.org/>
- Building Material Technology Promotion Council, Ministry of Urban Development; Government of India website; <https://www.bmtpc.org/>
- Housing and Development Board https://en.wikipedia.org/wiki/Housing_and_Development_Board
- Government of Haryana; Housing Board; <http://hbh.gov.in/>
- Vibha Aggarwal; *How are Development Authorities Constituted and what do they do.*
- Samuel Rajan; *Housing Must be at the Centre Of Development*; Habitat For Humanity India; October 03, 2017
- Gupta JK; *Inclusive Housing in Urban India*; Published article
- National Housing and Habitat Policy, 2007
- Government of Punjab; *The Punjab Regional and Town Planning and Development, 1995.*
- Government of Punjab; *The Punjab Property Ownership and Regulations Act, 1995*
- Government of Haryana; *The Haryana Urban Area Act, 1975.*
- Government of Haryana; *The Punjab Scheduled Roads and Controlled Areas (Restrictions on Unregulated Development) Act, 1963.*
- Government of India; *Ministry of Housing and Urban Development; 74th Constitution Amendment Act, 1992*
- *Government of India, Ministry of Housing and Urban Development; Prime Minister Awas Yojna- Urban(PMAY-U), 2015*
- *Government of India, Ministry of Rural Development; Prime Minister Awas Yojna- Rural (PMAY-R), 2015.*
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- *Text of Slums in India is based on the data and details reflected in the ppt titled; 'Housing Stock, Amenities& Assets in Slums- Census 2011; by Dr C Chandramouli ; Registrar General & Census Commissioner, India- which author fully appreciates and thankfully acknowledges.*
- *The text on Housing Policy is based on the contents contained in the- National Housing and Habitat Policy, 2007 prepared by the government of India in the Ministry of Housing & Urban Poverty Alleviation, New Delhi.*
- *The write up is primarily based on the policy document of Affordable Housing Policy , 2013, put in place by the Department of Town and Country Planning , Haryana in 2013, to create large stock of such housing in the urban areas of the state.*



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Selected Quotes and References for Housing

- A world in which only a few can afford housing is not sustainable. Everyone deserves a safe place to live: it can transform the quality of life of individuals and families. Today, most cities around the world are facing major challenges in providing safe and adequate housing for their people, especially cities that are growing rapidly and where the affordable housing options are limited. Only 13% of the world's cities have affordable housing (UN HABITAT, 2016).
- For a shelter-less person, getting a house is known to bring about a profound social change in his/her status, safety, security and welfare, endowing them with an identity and integrating them with social milieu. As provider of social security, distinct identity and assured quality of life, securing ownership of an appropriate home has emerged as the lifetime ambition of every individual and family. Spending more than one-third of its life within four walls of the home, housing has emerged as the major determinant of quality of life, health and hygiene. Besides physical, social and health connotations, housing has major economic implications for both human beings and nations.
- States, which have low level of urbanization, need to adopt a dual strategy of development. Such states would require large industries to be set up, to create jobs and promote urbanization besides clustering of rural areas under the mechanism of Deen Dyal Upadhya RuUrban Mission. If all village communities/settlements are linked with the urban areas through the process of clustering of villages, this country can easily fulfill the mission of Mahatma Gandhi of developing villages as self-sufficient, self-contained and self-reliant units. Skilling rural India will hold the key to minimize migration to the urban India.
- Shortage of housing is also not spread uniformly all over the physical space in the country. Large variations in shortage have been witnessed in the country among different states depending upon population and level of urbanization. Out of 28 states in the country, 10 States are known to contribute three-fourths of the urban housing shortage.
- Enormity and complexity of housing problem in urban India can be largely attributed to; non-availability of accurate database pertaining to prevailing housing shortage; land speculation; administrative glitches; inadequate financial resources; outdated construction technologies; ever rising cost of materials; poor project management; ever-increasing taxes and charges levied by the governments; marginalized role of private sector etc.
- Globally, there exists acute shortage of affordable home for the low-income families, adversely impacting their productivity, quality of life, economic growth and active participation in the welfare programs launched by various local, national and international agencies. Ensuring everyone a safe, accessible and affordable housing can be major propeller for empowering poor and securing their active participation in nation building for both physical, social and economic growth besides taking care of major urban ills related to

infrastructure, services, healthcare and unplanned development. Failure to settle the problems of land distribution and housing in the world's cities threatens not only . . . the developing world — it also threatens world stability.

- Good housing and process of overall socio-economic development remain positively linked. In addition to providing, security, safety and raising the quality of life, housing generates and creates supportive conditions which are considered human centric.
- People with appropriate housing are known to perform better and have higher order of protection against health hazards and pandemics as compared to those without housing. Housing is known to reduce pressure on healthcare services by senior citizens, when having access to affordable housing with supportive services; as against those who don't have access to housing with the same amenities.
- Housing, through property taxes, is a significant contributor to local government finance and thereby to the provision of essential services, such as water, sanitation, transportation and education at the local level. The traditional property tax base is the market value of the property, and as housing prices rise, property assessments rise. The tax base is further strengthened by new construction. Globally, typical contribution of residential properties to the municipal tax base is of the order of 43%.
- Low availability of developed land remains a major challenge in the domain of creating adequate housing stock in India. With 2.4% of global land and 17.7% of world population, India is under perpetual shortage of land needed to meet the basic requirements of more than 1.21 billion Indians for food, clothing and shelter. With rapid urbanization and industrialization, asking for more and more land to be brought under non-agricultural uses, the pressure on the land is increasing rapidly. With low land-man ratio coupled with ever rising demand and numerous constraints emerging out of speculation, legal framework, planning tools and building bye-laws, the supply of developed urban land is diminishing very fast and accordingly, cost of land rising very rapidly, making the cost of shelter highly unaffordable for majority of urbanites
- The World Urban Forum III states that; 'The world is facing a global housing crisis with more than billion people living in substandard housing without clean water or adequate sanitation; more than 14 million refugees and internally displaced people living in tents or other temporary shelters. Millions of homeless men, women, and children live in the streets of Washington, DC; Sao Paolo, Brazil; Johannesburg, South Africa; Mumbai, India; and other cities. And the problem is getting worse: Every week more than a million people are born in or move to cities in the developing world, driving up the need for new and better housing. The international response to the housing crisis has been muted. While many international donors have helped develop effective models for housing policies and programs, the scale of their application has not been large enough to significantly affect housing outcome. The result is a growing crisis. Housing remains key input in economic, social, and civic development.

- Many housing-related activities are known to contribute directly to achieving broader political, environmental and socio-economic development goals. Housing investment remains valuable and a major economic driver, both in developed countries and developing countries. In the United States, it has been estimated that housing directly contributes 14% of gross domestic product (GDP) and triggers another 6% in downstream expenditures. Lending for housing helps develop primary and secondary financial markets. Worldwide and especially in low-income countries, housing construction creates job opportunities for migrants to cities. Legalization of informal settlements and registration of housing and other real property helps “unlock” fixed capital for productive investment and builds local property tax bases. Accordingly, context of housing in social, economic, physical, environmental and quality of life needs to be understood and appreciated. Creating housing will not be enough. Its location in terms of accessibility, services, employment, culture, infrastructure also needs to be understood and valued to make housing relevant and contextual.
- Achieving sustainability is fast emerging a mirage, with gap between demand and supply widening making world more and more vulnerable to manmade and natural disasters. Despite framing, promoting, believing and operationalizing Ten Millennium Goals and Seventeen SDGs, to lead humanity to sustainability; laying/defining even a clear path/roadmap to tread, has eluded humanity, communities and nations. It needs to be understood and appreciated that prosperity remains anti-thesis to the sustainability, because prosperity brings disparities, promotes consumptions, leads to consumerism, promote multiplicity of ownership with decreasing commitment to nature, culture, communities. Achieving sustainable shall continue to elude humanity unless word prosperity is redefined and refined. For making this world conducive to universal human living, concept of prosperity and development must move away from individual biased to be communities’ centric; with ownership of both natural and manmade resources moving away from individuals to communities. Co-operative ownership of natural and manmade resources remains the limited option with the humanity and nations to achieve sustainability.
- Root cause of the all the ongoing ills in this world is the outcome of prevailing inequality and poverty perpetuated by both nature, communities and nations. Co-operative ownership, based on making available six basic requirements ; including food, clothing, shelter, healthcare, education and employment ;to all human beings , irrespective of cast, colour, creed, gender, social, physical placement etc. can prove to be a panacea for achieving sustainability and making this world a better place to live and work. Nations need to rethink and evolve a different approach, moving away from the concept of individual growth and prosperity to adopting a community/co-operative based/oriented owner-ship and moving away from greed to need as basic principle of human living, growth and development.

- Destruction is inbuilt in construction and disasters are integral part of creation, growth and development. It is time and opportunity to have a relook at the role, importance and context of Housing in human living and working. Covid 19 has changed the very meaning, relevance of housing as a space in human and community living. Making Homes Healthy and affordable has assumed importance. Dimension of Housing has not only undergone change in its context but also in its role and functions of being a space for working and education besides being place of living. Making available housing to all and making it affordable has assumed importance as a lesson for countering the adverse impact of housing . It is time, that all professionals engaged in the task of planning, designing and construction of housing should redefine the context, fabric, role, relevance and structure of housing. All development agencies engaged in promoting housing and housing construction should work on a new matrix of housing and all governments must redefine their policies and programs to make healthy homes a distinct reality. Housing remains a fulcrum to effectively counter major evils and disasters facing communities , humanity and communities. We need to celebrate and value housing not only as a vital component of human living but also a major option to promote sustainability and achieving SDGs for making this planet healthy. Let society, communities and nation work for making housing supportive and empowering human beings to make them happy, healthy and more productive.
- Cities and civilizations remain synonymous. Cities remain unique, different and distinct. Cities existed in the past, they exist now and they shall continue to dominate the future of human journey on this planet earth. No two cities are same. Each city has its paces of strength , weaknesses. opportunities and threats. Making any city great, ,has genesis in understanding its uniqueness and making optimum use and building on its strength; overcoming the existing weaknesses; creating opportunities for its orderly growth and overcome possible challenges which may emerge in its march to become great. Cities must be owned by people and city must own its people. we need co-operative cities and not smart and sky scrapper cities. People would need cities which provides them safety and basic amenities of life, make them happy and healthy. City must create options for providing best possible living to its people; create options for appropriate working; make people happy and healthy; both physically and mentally and make them travel only when needed and that too on a limited scale. Following this order of planning can surely enhance the credibility and operational efficiency of the cities. Planning cities, using nature and natural elements of Sun, Space and Greenery can help in making cities wonderful and healthy places to live and work. Cities must identify, preserve, manage, protect and manage its Heritage, as integral part of its growth and development to connect with its past glory. Cities need to be made, promoted and declared as a vocabulary of heritage to showcase its past glory and make it integral part of future growth and development. Ignoring and damaging its heritage, can lead to chaos and anarchy. Each city

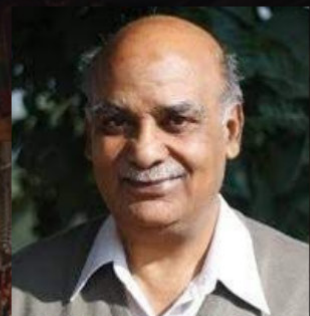
must come out with its own charter of growth and development to retain not only its past glory but also define an agenda of its orderly, rational, people centric /eco-friendly future growth and development

- Urban planning , as a process, has been globally recognised for its role, importance and relevance for defining a roadmap for the rational and orderly growth and development of urban areas. In the planning parlance , Master Plans/Development plans, have been recognised and valued for its intent, contents and scope, to address all issues and challenges facing the urban areas and ensure its development, in an integrated and holistic manner. These plans remain people centric, because all physical planning aims at improving the operational efficiency , productivity and quality of life of human species. In addition, to having local contexts, cities are also known for their global contexts. Being the largest consumers of energy, resources and generators of waste, cities are known to adversely impact the nature, existing environment and ecology. Accordingly, cities also remain responsible for climate change, rising temperature, increasing carbon footprints and global warming. This calls for Master Plans/Development Plans, addressing not only local issues but also larger issues related to environment and climate, in order to stay relevant and rational. Accordingly, besides addressing the local issues, Master Plans/Development plans must be prepared with the objective of contributing to sustainable development. Such plans, should therefore remain consistent with and supportive of the principles and policies which define sustainable development which inter-alia include; contributing to the achieving sustainable development; achieving and addressing the physical, economic, social and environmental issues at the local level besides protecting and enhancing the historic environment. Since heritage forms integral part of the local culture, showcases the past glory and historicity of the city, the entire fabric of the master plans should be woven around conserving and preserving the entire existing heritage wealth and where appropriate, enhancing and making value addition/promoting the significance of the heritage assets besides contributing to their settings. This would require the detailed study, analysis and understanding of the heritage wealth available in the city so that it is included and made integral part of the urban development process. Ignoring heritage, while preparing a master plan, will be like creating a physical entity without a soul. Most of the cities globally have failed to promote desired level of cultural diversity and make cities vibrant centres of culture, which can be, primarily and essentially, attributed to the fact that these cities ignored and marginalized the heritage context while preparing master plans/development plans.
- Despite the fact Housing and humanity remains synonymous but still access to affordable housing eluded majority of people. With access to affordable housing giving a miss and fast becoming a nightmare/mirage for majority of urban migrants, it is time for the communities and nations to pool their knowledge, expertise, ideas, innovations and resources to make myths of housing into reality.

- House remains an individual choice /options and accordingly has large variations in planning, designing, construction, location, amenities and services. Accordingly, wide ranging housing options must be made available in human settlements for enabling residents to make appropriate choice. However, house owned/planned must remain a happy and healthy pace to live for the occupants to be healthier and more productive. House, for its optimum use, must be supported by number of hard and soft infrastructures in terms of; roads, water supply, sewerage, drainage, solid waste management besides having easy accessibility to education, healthcare, open spaces, shopping, community living and recreational facilities, which need to be made available to residents, on defined norms and standards. House location/design must provide ample opportunities for high degree of social interaction and community living. In addition to quality of living, housing area should provide high degree of safety and security to the residents. Housing layouts and provision of infrastructures accordingly remain critical for families to have quality living. They need to be prepared based on the consultation made with the users and community. Effort and approach adopted for planning of housing must remain focused on creating socially interactive, vibrant, self-contained and self-sufficient neighborhood. In addition, it will be important to create adequate options for working within the neighborhood. They must be planned on a human scale based on walkability, minimizing induction of mechanical vehicles and through traffic. Promoting safety, security and quality of life should remain the underlying principles of planning, designing and managing these residential neighbourhoods.
- By 2030, UN-Habitat estimates that 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. Additionally, an estimated 100 million people worldwide are homeless and one in four people live in harmful conditions that to their health, safety and prosperity. Access to housing is a precondition for access to employment, education, health, and social services. In order to address the current housing challenges, all levels of government should put housing at the centre of urban policies by placing people and human rights at the forefront of urban sustainable development.- UN Habitat
- More than 1.8 billion people worldwide lack adequate housing. Every year 2 million people are forcibly evicted, many more are threatened with evictions and some 150 million people worldwide are homeless.
- Adequate housing is a human right enshrined in international human rights law. Failing to recognise, protect, and fulfil the Right to Adequate Housing results in the violation of a plethora of fundamental rights including the Right to Work, Education, Health, and Security
- UN-Habitat and OHCHR jointly launched the United Nations Housing Rights Program (UNHRP) in 2002. The overall goal of this initiative,

launched and championed by the Executive Director of UN-Habitat and the High Commissioner on Human Rights, is to support governments, the civil society and National Human Rights Institutions (NHRIs) in their work on the advancement of the right to adequate housing. Under this programme, UN-Habitat supports the UN human rights mechanisms such as the Universal Periodic Review (UPR). Other joint activities include normative tools development and technical assistance for the States and other stakeholders in building and improving technical capacities for implementation and monitoring of housing rights. On the same topic UN-Habitat also works collaborate with UN Special Rapporteur on the Right to Adequate Housing, particularly on the work of forced evictions prevention and housing rights advocacy.

- Human Rights, including the rights to adequate housing and safe water and sanitation are contained in the Universal Declaration of Human Rights and international human rights instruments, including the International Covenant on Economic, Social and Cultural Rights which have been ratified by most UN Member States. These rights, once so endorsed, do not have a voluntary character. They impose obligations on states and on the international community, they are universal, cannot be waived or taken away, and are legally protected.
- The challenges of urbanization, such as rising inequality and the prevalence of slums, are symptoms of a larger deficit to respect human rights in cities, particularly the right to adequate housing and the right to safe drinking water and sanitation. Only when all dimensions of human rights are respected urbanization will realize itself as the transformative force that it is. The human rights dimensions relate to the availability, accessibility, acceptability, adaptability, quality and appropriateness of the rights to adequate housing, safe drinking water and sanitation.
- Many cities around the world, both in developed and developing contexts, continue to face key challenges related to housing, livelihood generation, climate vulnerabilities, basic service provision and the delivery of essential community infrastructure.
- Harnessing and accelerating the opportunities that knowledge, science and technology and human capital provide across all dimensions of the urban sphere is now more important than ever. Both SDG 11 and the New Urban Agenda cannot be achieved without deep, transformative societal commitments and resources necessary to deliver Agenda 2030.
- Secured land tenure and property rights are fundamental to accessing adequate housing, food security and livelihoods. Land tenure security is crucial for the realization of human rights, poverty reduction, economic prosperity and sustainable development leading to the attainment of the Sustainable Development Goals, the New Urban Agenda and other regional and country level policy initiatives



Prof. Jit Kumar Gupta is an architect with more than 53 years of professional experience in architectural education, urban planning, policy planning, urban legislation, capacity building in sustainability, green buildings, affordable housing, smart cities, urban laws; urban missions, rural planning, disasters, urban development, and urban governance. His academic

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