

PLANNING APPROACHES FOR SUSTAINABLE URBAN DEVELOPMENT IN INDIAN CONTEXT

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Introduction

Urban India is in the process of transformation. With the ushering of economic reforms, liberalisation and globalisation, cities and towns are fast emerging as the centres of domestic and international investment¹⁾. Because of their centralised location urban areas offer wide range of specialised services, facilities and amenities. Accordingly cities have emerged as the dominant spatial expression of economic and social activity in our societies. The process of urban development has long been accepted and established as a natural corollary of transformation of economy from agrarian to industrial in the developed world. In the developing world the process of urbanisation has started gaining momentum only recently. India is no exception to the prevailing trend where urbanisation has witnessed accelerated growth in the post – independence period.

¹⁾ Venkateswarlu, India's Urban Vision 2021: An Agenda for shaping the urban future, p.1.

Urban Productivity

Urban centres make large contribution to nation's economic development and physical well being. It has been estimated that contribution of urban India to nation's gross domestic product was of the order of 50% in 1991 would go up to 60% by 2001 when level of urbanisation will be 30%²⁾. Thus one-third population living in urban areas will produce two-third wealth of the nation whereas two-third population living in rural India would produce rest of the one-third annual wealth. The productivity of each urban worker has been estimated to be three times of a rural worker in the India context. Accordingly future of nation's prosperity and economic well being clearly hinges on the productivity and efficiency of urban India.

Urban Agenda

Over the years urbanisation process despite its many positive aspects has come under severe criticism because of the failure of the governments in the developing countries to effectively cope with its adverse impact i.e. to meet the basic needs of land, shelter, services and infrastructures for the rapidly growing urban population. Looking at the entire process of urbanisation it can be safely concluded that it is not the urban growth which is causing problem but the scale and rate of growth of population which outpaces the institutional, administrative and financial capacities to effectively cope with it³⁾. While trying to optimise the positive consequences of urbanisation, efforts are needed to eliminate the negative impact and mitigate the avoidable ones. The Urban Agenda should address key issues of urban development and management in order to make cities and towns more productive, economically efficient, socially equitable and environmentally sustainable. Critical task before the nation would be to evolve appropriate strategies

²⁾ Ministry of Urban Development, Government of India, Eighth Five Year Plan (1992-97), p.344.

³⁾ Devas Nick and Rakodi Carole. Managing Fast Growing Cities, p.28.

which would rationalise the growth, promote orderly development and ensure effective management of urban areas, provide basic amenities of life even to the poorest of the poor of urban dweller to lead a dignified life, impart operational efficiency to urban areas to make them not only productive but also livable entities.

Indian Urbanisation

Population Growth

India's urbanisation is not only characterised by its massiveness but also due to its spatial distribution. Despite the fact that level of urbanisation was 25.72% in 1991, in absolute terms number of urban dwellers were placed at 217 million. It has been estimated that by 2001 the number would go up to 307 million when India would touch one billion mark. As per India's National Report for Second United Nation's Conference on Human Settlements: Habitat - II, urban population would be of the order of 436 million in 2011 and 618 million in 2021 out of total population of 1164 and 1545 million when level of urbanisation would be 36.50% and 40.00% respectively⁴). Table 1 shows the march of Urban India during the current century (1901-1991). During last 9 decade when total population increased by three and half times i. e. from 238 million to 844 million, urban population increased by eight and half times i. e. 26 million to 217 million. During this period number of urban settlements merely doubled i. e. 1827 to 3768 indicating a high degree of concentration of population in existing urban centres posing in the process numerous problems of inadequacy of infrastructure, shortage of housing, congestion and transportation etc.

⁴) Government of India, National Report for Second United Nation's Conference on Human Settlements;-Habitat II-1996.

Table 1. Trend of Urbanisation in India

Census year	Number of Uas/ Towns	Total population	Urban Population	Urban Population as percentage of total Population (%)
1	2	3	4	5
1901	1,827	238,396,327	25,851,873	10.84
1911	1,815	252,093,390	25,941,833	10.29
1921	1,949	251,321,213	28,086,167	11.18
1931	2,072	278,977,238	33,455,989	11.99
1941	2,250	318,660,580	44,153,297	13.86
1951	2,843	361,081,090	62,443,709	17.29
1961	2,365	439,234,771	78,936,603	17.97
1971	2,590	548,159,652	109,113,977	19.91
1981	3,378	683,329,097	159,462,547	23.34
1991	3,768	844,324,222	217,177,625	25.72

Source: Census of India.

Spatial Distribution of Population

It is not the massive numbers, which are disturbing, but what really disturbs is the spatial distribution of these numbers. India's urbanisation is highly distorted with large share of urban population being grabbed by larger urban centres. A look at Table 2 clearly brings out that over the years large urban centres are the major gainers of population. The share of class I cities have increased from 26% in 1901 to 65.20% in 1991. Thus out of every 3 urban dwellers 2 reside in cities and one in towns. The share of towns has sharply declined from 74% in 1901 to 35% in 1991. Even within cities the population distribution is not uniform but is highly stratified. 23 metropolitan centres house 32.54% of urban population (Table 3). 4 mega cities of Bombay, Calcutta, Madras & Delhi account for 16% urban population of the country. Studies have revealed that the trend is likely to gain further momentum when number of metropolitan cities would grow to 40 by 2001 and 65 by 2021. Thus we can visualise that Indian urbanisation is clearly heading towards metropolisation. This trends needs to be slowed down because

concentration of large number of people within few settlements is likely to pose numerous developmental and management problems. Large cities have emerged as big consumers of national resources and have lead to distortions in the development pattern of the nation. Nation has suffered on account of primacy of few urban centres. These large cities have grown at the cost of smaller urban settlements where small investment can yield better dividends and which offer better livability to their inhabitants. Accordingly in order to achieve sustainability of the urban India it would be essential that smaller urban settlements are provided with necessary planning and development input. Resources and investment must be made available to these centres so that they can generate enough jobs minimising migration in the process. In fact adoption of a regional approach for integrated development of large and smaller urban centres along with their rural hinterland would be most critical in promoting a balanced development of urban and rural India.

**Table 2. Percentage Distribution Of Urban (Ii)
Population By Size Class - India, 1901 - 1991**

Census year	All Classes	I	II	III	IV	V	VI
1	2	3	4	5	6	7	8
1901	100.00	26.00	11.29	15.64	20.83	20.14	6.10
1911	100.00	27.48	10.51	16.40	19.73	19.31	6.57
1921	100.00	29.70	10.39	15.92	18.29	18.67	7.03
1931	100.00	31.20	11.65	16.80	18.00	17.14	5.21
1941	100.00	38.23	11.42	16.35	15.78	15.08	3.14
1951	100.00	44.63	9.96	15.72	13.63	12.97	3.09
1961	100.00	51.42	11.23	16.94	12.77	6.87	0.77
1971	100.00	57.24	10.92	16.01	10.94	4.45	0.44
1981	100.00	60.42	11.63	14.33	9.54	3.58	0.50
1991	100.00	65.20	10.95	13.19	7.77	2.60	0.29

Source: Census of India.

Table 3. India: Metropolitanisation Trends

Census Year	No Of Urban Agglomerations/ Cities with more than one million population	Population	Population of million plus UA/cities as % of India's	
			Total Population	Urban Population
1901	1	1,510,008	0.63	5.84
1911	2	2,763,586	1.10	10.65
1921	2	3,129,518	1.25	11.14
1931	2	3,406,869	1.22	10.18
1941	2	5,307,540	1.67	12.02
1951	5	11,746,616	3.25	18.81
1961	7	18,101,748	4.12	22.93
1971	9	27,831,065	5.08	25.51
1981	12	42,121,700	6.16	26.41
1991	23	70,661,259	8.37	32.54

Source: Census of India.

Rural-Urban Continuum

In the absence of an integrated approach the problems and challenges of cities would continue to multiply as we enter the next millennium. Trying to solve the problems of the cities in isolation is like treating symptoms instead of curing the disease. In most cases the explosion of the city is but the result of the failure of the overall development that is biased in favour of cities. So long as the gap between the quality of amenities and opportunities remains wide or widening, the push and pull factor would continue to be in play. The city will keep swelling and would become more and more unmanageable. It is imperative that city be again related to countryside, the rural areas. Cities should not represent a break with the rural areas, but rather a continuum⁵⁾. Re-energising the rural sector constitutes a critical component of addressing urban problems, so that it can retain population and even encourage return.

⁵⁾ Deputy Prime Minister of Malaysia: Earoph Bulletin : Page 1, December, 97.

The rural India must also provide job opportunities, quality education, social needs and recreational facilities so that its inhabitants can lead a better, richer and productive life. Improving productivity of Rural India will hold the key to the sustainability of Urban India in the longer run.

Urban Planning & Management

Urban Planning

Urban planning and management is one of the most critical area which requires focussed attention due to its wider implication on the rational growth and sustained development of urban centres. Existing mechanism of physical planning has done very little to improve the livability in urban areas. Despite best of the efforts of the planners to contain cities they have grown larger and larger. Despite best of the efforts to promote planned growth, unplanned and haphazard development has emerged as the order of the day. Despite best of the efforts to provide shelter to all number of shelters-less and pavement dwellers have increased day by day. Despite best of the efforts to evolve a rational pattern of city development, sporadic and inefficient pattern of land development has become natural way of city growth. Despite all efforts to contain and minimise the growth of slums, they have emerged as a necessary and essential corollary of urban growth. City growth, which promised better quality of life has perpetuated worst kind of living conditions for majority of its residents. City growth today is marked by dualities and total contradictions⁶⁾. Over the years there has emerged a wide gap between what planners perceived as their objectives and what happened on the ground. Cities are fast becoming breeding ground of dirt, disease, violence, squalor, operational inefficiency and home for large number of problems. This calls for reviewing the planning practices and evaluating the planning tools in order to cater to the demands of urban dynamism.

⁶⁾ Gupta J. K.: Strategies for Managing Urban India.

Informal Sector

For make planning process more effective and efficient it would be essential to redefine the planning objectives so that the process becomes more responsive to the needs of urban society in general and vast majority of urban poor in particular. It must duly account the vital informal sector, which has so far been kept out of the normal planning process. Informal sector not only generates maximum employment but makes substantial contribution to the urban wealth. Need is to make this sector more vibrant and productive by including it in the city planning mechanism. Once informal sector is catered to in the planning and developmental process most of the urban ills will be taken care of and city growth would become much more cleaner and orderly.

Master Plans

Planners have also to critically look at the planning tools adopted for promoting the planned development of urban areas. Master plan which is being used by majority of cities as an important tool for promoting planned growth has, by and large, emerged as the greatest hindrance in the planned development due to its rigidity and limitation of scope. Master plan focuses more on plan preparation rather than on critical issues. There is dominance of spatial and land use planning as compared to social, economic and environmental issues. It is too rigid, too detailed and largely unrelated to forces which shape the city. Accordingly city growth suffers and in the process people and development suffers enormously⁷⁾. This calls for reviewing the entire mechanism of master plan along with its preparation and objectives. For catering to the ever changing needs of urban centres and urban people future master plans have to be flexible, objective oriented, more effective, efficient and highly responsive to their ever growing needs.

⁷⁾ Devas Nick: *Evolving Approaches; Managing Fast Growing Cities*, p.72.

Involving People

Planning process which is supposed to revolve round the human beings and cater to all their physical and meta-physical needs have kept human beings away from it. People have never been involved in plan preparation with the result its acceptance by the society and implementation on ground becomes a distant reality. Non-involvement of citizens and interest groups invariably leads to planning proposals which are far removed from the ground reality and are anti-thesis to the needs of the society. For making planning process more effective and efficient it would be essential to ensure people's participation not only in the plan preparation but also in the plan implementation. Involvement of people would make the process more transparent. Introducing transparency in urban planning should be a priority area in order to enhance the effectiveness of the planning process and to minimise subjectively in the matter's of vital public interest.

Urban Governance

Urban management and governance has assumed increased importance as the capacity of a nation to pursue its economic goals is contingent upon its ability to govern cities. This is largely due to the significant contribution that urban centres make to the national income. Most disturbing part in the area of urban management in India is the lack of clear focus on the agency that is to be entrusted with the job of urban management. Urban management over the years has remained as the most diffused issue. Number of state and local level agencies have been created in different states to look after various facets of urban development with the result urban management has become highly fragmented. Multiplicity of agencies with overlapping functions and areas of operation, functioning at the city level in large urban centres without any coordination and absence of such agencies in smaller towns have played havoc with the city growth and management. Presently every agency is free to undertake development, sell plots, make money and go away without

contributing to the development of city level infrastructures which they extensively use. In the end all these areas are transferred to municipalities for maintenance and upkeep. This process needs to be effectively checked since it dilutes the role and importance of urban local bodies in the area of urban management.

Local Bodies

74th constitutional amendment Act, 1992 does lay down a framework for urban management at local, district and metropolitan levels. It calls for vesting all powers, functions, authority and responsibilities of urban management with the urban local bodies⁸⁾. At district level District Planning committees have to be constituted and for Metropolitan area Metropolitan Area Planning committees are to be established. As per the amendment municipalities have been made as the third tier of the governance in the country and have been given constitutional recognition. However, looking at the present scenario most of the states have not made municipalities as institutions of self-governance. Number of state and local level agencies continue to operate in the urban areas and urban management continues to be an area of least priority. For improving the efficiency of urban areas their management has to improve considerably. Present structure of municipalities is totally incapable of taking the arduous task of urban management. They need strengthening not only in resources but also in terms of technical manpower. The management skills at the local level have to be improved considerably by deploying trained professionals. Capacity to effectively manage would hold the key to the sustainability of urban India in the next millennium.

⁸⁾ Ministry of Urban Development, Government of India, The Constitution (Seventy Fourth) Amendment Act, 1992.

Slums

Slums have emerged another peculiar phenomenon out of the shadow of urbanisation which has adversely affected the sustainability of urban India, Slums are the outcome of the inability of the individuals and lack of capacity on the part of public agencies to provide them with proper shelter. Slums offer worst kind of living conditions which a city can perpetuate on its residents. Slums have social economic, physical and environmental implications for the city and its residents.

Urban Poverty

The root-cause of the slums is the poor rural migrants coming to the city who have no resources of their own. These migrants are pushed out of rural areas into the urban centres with the prime motive of securing gainful employment and making a living. Thus rural poverty which is spread over large rural habitat gets concentrated in few urban centres and that too in few pockets making a visible impact on city infrastructures, services and quality of life. For all the relative advantages of city life, wide-spread poverty casts a shadow over the urban living. As per estimates of World Bank, 27.7% of developing world's population lives below the official poverty line. The proportion of poverty has been estimated to be higher for large cities and lesser for smaller urban settlements because large centres offer more opportunities for gainful employment. Planning commission of India has placed urban poverty in India at 76 million in 1993-94 which constitutes 32.6% of urban population. Urban poverty manifests in proliferation of slums and bustees, fast growth of informal sector, increasing casualisation of labour, increasing pressure on civic services and deprivation in education and health facilities⁹⁾. Such poverty may effect few urban dwellers directly but its indirect effects are felt by the entire society.

⁹⁾ Takru Rajiv: Urban Poverty. Issues and Ramifications, National Seminar on Future Cities – Urban Vision 2021. p.4.

Issues In Slums

Slums are the outcome of number of adverse factors which cumulatively create conditions leading to their rapid growth. Lack of resources coupled with high land prices due to inefficient land market, makes legal shelter a distant dream for majority of urban dwellers. Lack of capacity on the part of governmental and parastatal agencies to create a favourable environment makes the target all the more difficult. Political patronage of slums treating them as vote bank and urban land mafia has made the entire process very complex leaving little option for public agencies to tackle this enormous problem. Numerous efforts have been made to improve the living conditions in the slums and to contain their growth. The net outcome of all these efforts has been rapid growth of slums and number of slum dwellers. Beneficiaries in most of the schemes are not properly targeted and majority of slum dwellers consider slums as the best option to make money and to live in city without paying for any services and infrastructure which they use and enjoy with impunity. Accordingly different strategies would be needed to solve this complex problem.

Tackling Slums

Tackling slums and removing them from the face of urban centres looks to be a remote possibility in the Indian conditions. However, efforts are required to minimise the growth of slums in order to improve the sustainability of urban centres. Tackling slums would require multi-pronged strategy. Once the informal sector is catered to and provided for in the planning process, enough land would be available for providing shelter to these migrants. Migrants should be actively involved in providing shelter through the process of self-help so that resources available with them are also used. Shelter and employment generation should be closely linked in order to improve their economic conditions. Provision of shelter and other amenities should be done on a gradual basis which should be closely linked to the economic conditions

of the inhabitants. Let the development of these areas be handled by NGOs & CBOs who can work with slum dwellers on a continuous basis. Wherever parastatal agencies undertake the task of providing shelter to the slum dwellers it must be ensured that house design are evolved in such a manner that it does not permit the unit to be transferred to higher end of society. Targeting has to be done carefully so that benefits are not availed by other than poor. Allotment conditions should be made highly stringent by making the sale, purchase and transfer of the dwelling unit illegal and a cognisable offence. Both seller and buyer should be made liable for the action. Making adequate resources available to the slum dwellers would help in improving their capacity to engage in gainful employment and improve their quality of life. Cross -subsidisation would be another mechanism to fund the development of the slums and provision of infrastructure in these areas. In fact city must effectively contribute to ensure that all residents are given the opportunity of gainful employment and proper living. Redevelopment of the slum area with commercial component can be used as a mechanism for improving the slums and providing housing. These steps would go a long way in effectively checking the growth of unwarranted slums in urban areas. The capacity to meet the challenges of eradicating extreme poverty and improving living conditions in the slums will and to a large extent determine the sustainability of urban centres and the economies which they increasingly dominate.

Transportation

Transportation And Urban Development

Advent of mechanised vehicles has added a new dimension to the city growth and development. Better mobility placed at the command of mankind has resulted in enormous growth of urban centres beyond human perception. Large sized urban centres have necessitated long travel from home to work to place of leisure etc. with the result travel has become essential in gradient of

human existence. In fact efficiency of the human settlements is largely governed by the efficiency of urban transport. As per National Commission on Urbanisation, "Urban transportation would be the single most important component instrumental in shaping urban development and urban living. If urban areas have been viewed as engines of economic growth, urban transport, is figuratively and literally the wheels of that engine"¹⁰. Accordingly urban transportation would be one of the critical area which requires focussing to improve sustainability of Urban India.

Transportation and Urban Problems

In the Indian context urban transport has emerged as one of the problematic area due to enormous growth of motor vehicles in India whose number increased from 3.1 lakh in 1950-51 to 302.9 lakh in 1994-95. As per Association of Indian Automobile Manufacturers, vehicle population by 2001 would be of the order of 50 million out of which number of two wheelers would be 35.32 million (70%), with continued growth and expansion of production capacity to reach 10 million vehicles per year and assuming all vehicles over 20 years of age would be off the roads, the vehicle population in 2021 would be of the order of 200 million. Most of these vehicles would be in the metropolitan cities which presently account for 33% of total vehicle population. Increasing vehicular population in cities has resulted in witnessing considerable traffic congestion leading to slowing down of the movement in the urban areas and increasing level of air pollution. Inadequacy of road space and public transport system, reliance on personalised modes, mixed traffic, bad road geometry, lack of parking have emerged as the main causes for perpetuating worst conditions in urban centres in terms of congestion, delays, accidents, high energy consumption, low productivity, pollution etc. Whatever may be the outcome of the process of urbanisation, there would be continued increase in the demand for urban transport.

¹⁰ Ranganathan N., India's Urban Transport Scenario 2021, Problems & Solution, p.4.

Approaching Problems

For making cities more productive and efficient transport related issues need to be tackled on priority. The objective would be to minimise the need of travel. For this our planning process would require review. Instead of pure zoning, it would be desirable to adopt the mechanism of mixed land use planning. This would lead to planning of smaller and compact communities on a self-sustained basis where living, working, facilities, amenities, leisure and day to day requirements of the inhabitants would be met within the community itself, minimising travel needs in the city. Decentralised planning on the basis of self-contained communities would drastically reduce the travel needs and make cities more cleaner and efficient. Efficient public transport needs to be developed on priority so as to minimise the use of personalised vehicles in large cities to reduce congestion on roads. Specially designed super-cycle-tracks need to be created within the city area which ensure safe movement of cycles without coming into conflict with mechanised vehicles. This would encourage people to use cycles over shorter distances as means of transport. Further efforts need to be made to discourage people from using personalised vehicles by making all public parking as paid. The priority area would be the raionalisation of traffic and its effective management; All activities which yield large volume of traffic should be shifted from core of the urban areas on to the major road network on the outskirts of cities. Intra-city traffic should be segregated from inter city traffic so as to minimise congestion on the city roads. Staggering of traffic during peak hours would help in reducing pressure on the city roads. Thus multi-pronged strategy would be required to rationalise the movement of men and material on the city roads. Our capacity to rationalise urban traffic and make transportation efficient will hold the key to ensure sustainability of urban India.

Environment

Issues

Environment is another critical component which has important bearing on the capacity of urban areas to sustain. Over the years it has been observed that the first casualty of urban growth is the quality of environment prevailing in urban areas. Traffic congestion adversely affects the quality of urban air, haphazard and unplanned urban growth in the shape of slums adversely affects the environment of residential area, polluting industries not only damage the quality of water but also the ground water due to discharge of toxic effluents on land and in water. In the absence of sewerage treatment plants the raw city sullage is disposed off in the water bodies making these water highly toxic and unfit for human consumption. City garbage has emerged another area of concern.

Approaches

Cumulatively these factors have considerably lowered down the quality of urban environment creating numerous health and development related problems for both urban areas and its inhabitants. In order to improve the livability in the urban area it is important that environment related issues are given due priority. All sources of environmental pollution should be clearly identified and appropriate framework for action needs to be evolved to eliminate these sources. No polluting industry should be permitted to function within residential area and should be moved away. No industry should be permitted to discharge any toxic effluent within air and on ground. All polluting industries must be asked to treat the effluent before discharge and in case of repeated violation it should not be permitted to operate. All industrial areas should be segregated from residential areas with a thick belt of tall trees which would act as buffer against noise and air pollution. Garbage disposal must be given utmost priority. NGO's and CBOs along with

local communities should be actively involved in the process of garbage management. Urban dwellers should be made active partners in managing environment related issues. Adoption of the principle 'Polluter must Pay' would help in minimising pollution in urban areas. Using the mechanism of developing City Forests would help in improving the quality of urban air and urban environment. Cities should start focussing on environment related issues if the quality of life in urban India is to be improved.

Suggestive Framework

Improving productivity, alleviating poverty and managing urban environment continue to be the principle challenges of urbanisation. When the urban area is at the scale of Mega-City the magnitude of these challenges alter the very nature of problems themselves. These issues have traditionally been seen as the prime responsibility of the government at the local level. This perception needs to be changed. People who are to be the beneficiaries must actively involve themselves in making their cities cleaner, healthier, more productive, more efficient and sustainable. In fact it would require a coordinated effort on the part of state, parastatal, community based organisations; city interest groups, numerous organisations operating at local level and inhabitants of the area to achieve the objective of sustainable development. Local level agencies must use their limited resources to lever private sector investment in the urban development and urban infrastructure. Planning mechanism must be changed in order to effectively respond to the urban dynamism. Planning laws must be reviewed in order to facilitate the urban management. Focus of urban development should be to minimise use of scarce resources, reduce reliance on mechanised transportation, renewal of distressed urban areas, creating new economic opportunities for the marginalised, improved efficiency in delivery of urban services and provision of urban infrastructure, higher quality in the built environment to improve urban living conditions and ensuring greater equity in access to resources, employment, housing and other opportunities which urban areas offer. The

task is both enormous and challenging. Capacity of urban India to meet the challenges and achieve the objectives effectively would ultimately determine the sustainability of India in general and urban areas in particular in the next millennium.