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**AN ANALYSIS ON THE DESIGN OF URBAN
DEVELOPMENT IN THE CITIES OF INDIA**

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An Analysis on the Design of Urban Development in the Cities of India

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Abstract – The present paper attempts to develop vulnerability profiles of cities by highlighting exposure to various risks and hazards. Urban renewal interventions have been suggested in order to strengthen climate resilience of India's urban centres. The paper shows that the resilient cities are those that have sustainable infrastructure, efficient governance and informed and capable citizens. This study shows trends across cities and the problems with the approach to their development.

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INTRODUCTION

Unlike many countries that are grappling with aging populations and rising dependency ratios, India has a young and rapidly growing population—a potential demographic dividend. But India needs thriving cities if that dividend is to pay out. New research by the McKinsey Global Institute (MGI), the economics and business research arm of McKinsey & Company, estimates that cities could generate 70 percent of net new jobs created to 2030, produce more than 70 percent of Indian GDP, and drive a near fourfold increase in per capita incomes across the nation.

Surging growth and employment in cities will prove a powerful magnet. The cost of not paying attention to India's cities is enormous. Today's policy vacuum risks worsening urban decay and gridlock, a declining quality of life for citizens, and reluctance among investors to commit resources to India's urban centers. We believe that the lack of serious policies to manage urbanization could jeopardize even the 7.4 percent growth rate we assume in our base case, risking high unemployment.

India is the second most populous country in the world (PRB, 2011). Its population has increased by more than 181 million during the decade 2001-2011 (Census of India, 2011). Correspondingly the urban population in India has increased from 286.1 million in 2001 to 377.2 million in 2011 (NIUA 2011). It is expected that by 2026 the urban population in India will reach 534 million (38%) (Chetan Vaidya, 2009). The rapid expansion of Indian cities, driven by increase in population and urban development has expanded the already existing gap in demands and supply of necessary infrastructure services (Mundu and Bhagat, 2008). This inefficiency of urban systems hinders their ability to adapt to climate change and affects the cities resilience to climate change. This creates a negative feedback loop where climate change resilience becomes progressively more difficult

because of existing inadequacies. An increasing concentration of population, coupled with extreme events, results in high damages to assets, interruptions in business continuity, loss of lives and displacement of populations. It further enhances economic and social vulnerability of the urban system and possibly results in its collapse, as has been seen in Mumbai in 2005 and more recently in New York City.

About 377 million Indians comprising of about 31 per cent of the country's population, live in urban areas according to Census 2011. Projections are that by 2031, about 600 million Indians will reside in urban areas, an increase of over 200 million in just 20 years. Urban areas are engines of economic growth.

BACKGROUND

While developing a city level approach for the National Mission on Sustainable Habitat (NMS11) a question was raised: "How many cities in India are vulnerable to climate change and in what way?". The genesis of this study lies in this question. India has more than 400 cities in 2011 and climate informed development is needed because urbanization in India is accelerating and cities need to be sustainable and resilient. Due to diverse physiographic and meteorological conditions, cities in India are exposed to various types of natural hazards. Indian cities are facing additional risk due to climate induced extreme events such as flood, droughts, heat and cold waves. This can occur with varying intensity at varied geographical scales and degree of exposure. An increasing concentration of population coupled with extreme events, result in high damages to assets, interruptions in business continuity, opportunity losses, loss of lives, displacement of populations, which is further enhanced by economic and social vulnerability and reduced the capacity of the urban

system and services to adapt to climate variability and change.

Twenty representative Indian cities from fourteen states were selected for this study based on their location and other characteristics such as population densities, geographical diversity etc. The selected cities are shown in Table 1.

The main objective of this study was to develop vulnerability profiles of cities by highlighting exposure to various risks and hazards. Urban renewal interventions have been suggested in order to strengthen climate resilience of India's urban centres. This analysis shows that the resilient cities are those that have sustainable infrastructure, efficient governance and informed and capable citizens. This study shows trends across cities and the problems with the approach to their development.

S. No.	City	Population in 2011 (millions)	Ecosystem	S. No.	City	Population in 2011 (millions)	Ecosystem
1	Greater Mumbai UA	18.4	Coastal	11	Vishakhapatnam -GVMC (MC)	1.7	Coastal
2	Delhi UA	16.3	Riverine	12	Thiruvananthapuram UA	1.7	Coastal
3	Kolkata UA	14.1	Coastal	13	Srinagar UA	1.3	Hill
4	Chennai	8.7	Coastal	14	Allahabad UA	1.2	Riverine
5	Bengaluru UA	8.5	Mixed	15	Jodhpur UA	1.1	Mixed (arid)
6	Hyderabad UA	7.7	Riverine	16	Bhubaneswar UA	0.9	Mixed (arid)
7	Ahmadabad UA	6.4	Mixed (arid)	17	Dehradun UA	0.7	Hill
8	Surat UA	4.6	Coastal	18	Shillong UA	0.4	Hill
9	Indore UA	2.2	Mixed	19	Haridwar UA	0.3	Riverine
10	Kochi UA	2.1	Coastal	20	Puri Town M	0.2	Coastal

Table 1: Selected cities.

INDIA'S CURRENT APPROACH TO CITIES

Good cities offer a certain quality of life for their citizens and an attractive proposition for companies. Urban India has attracted investment on the back of strong growth, but is failing many of its citizens. Across all major quality-of-life indicators, India's cities fall well short of delivering even a basic standard of living for their residents.

Combine this fact with India's large-scale urbanization and the task is going to become far more onerous. As the urban population and its incomes increase, demand for every key service will increase five- to sevenfold in cities of every size and type. And if India continues to invest in urban infrastructure at its current rate—very low by international comparison—in 20 years' time the urban infrastructure will fall woefully short of what is necessary to sustain prosperous cities.

Life for the average city dweller in India would become a lot tougher. Water supply for the average citizen could drop from an average of 105 liters to only 65 liters a day with a large section of the population having no access to potable water at all. India's cities could leave between 70 to 80 percent of sewage untreated. While private car ownership would increase, shortcomings in the transportation infrastructure have the potential to create urban gridlock—similar to the

acute congestion that cripple some Latin American cities.

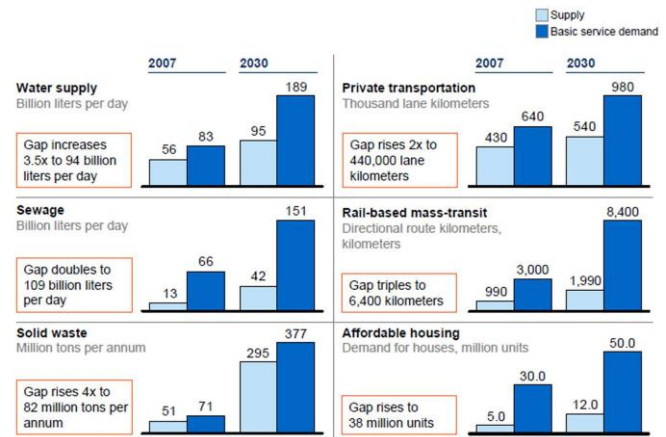


Figure-1 : On current trends, quality of urban services will deteriorate quite sharply by 2030.

URBANISATION TRENDS AND THEIR IMPLICATIONS

The degree of urbanization at 31 per cent of the population is one of the lowest in the world though it is accelerating. The share of persons living in urban areas rose by 3.35 per cent in the decade 2001 to 2011 while it had risen by only 2.10 per cent in the decade 1991 to 2001. The sources of increase in urban population are shown in Figure 2.

About 60 per cent of the growth in the urban population is due to natural increase. Rural-urban migration has contributed to only about 20 per cent of increase in urban population. In this regard, the Isha Ahluwalia HPEC has observed that notwithstanding three decades of rapid economic growth, rural urban migration has remained relatively low as industrialization has been capital intensive and the services boom fuelled by the knowledge economy has also been skill intensive. This has prevented Indian cities from realizing their full potential of generating employment opportunities and consequently making the development process more inclusive.

There is a concentration of the urban population in large cities and existing urban agglomerations. As per census 2011, there are 53 million plus cities accounting for about 43 per cent of India's urban population. Class-I cities with population over 3 lakh accounted for about 56 per cent of the urban population and with a population ranging from 1 lakh to 3 lakh accounted for another 14 per cent. This pattern of population concentration in large cities reflects spatial polarization of the employment opportunities. While it is expected that gains from an agglomeration economy would lead to some polarization of economic activities, there is a need for developing an optimal portfolio of cities by drawing regional development plans and promoting growth centres that are employment intensive and consistent with the economic potential including the natural endowment of

cities and regions. The availability of water to provide for the needs of a large urban population must be a critical factor in plans for urban development.

Though the proportion of urban population concentrated in larger cities continue to remain high, there is some evidence that other urban growth nodes are emerging underscoring the need for adequate policy attention to smaller cities and peri-urban areas as against the narrow focus of concentrating on large 'Mission Cities' as was followed in the Eleventh Plan period. Census 2011 notes that the number of towns in India increased from 5,161 in 2001 to as many as 7935 in 2011. It points out that almost all of this increase was in the growth of 'census' towns (which increased by 2,532) rather than 'statutory' towns (which increased by only 242).

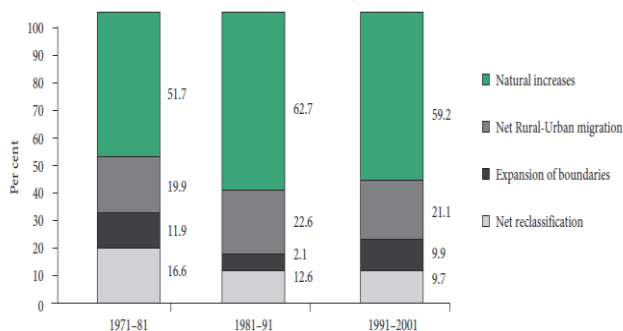


FIGURE 2: Sources of Increase in Urban Population.

'Statutory' towns are towns with municipalities or corporations. Whereas, 'census' towns are agglomerations that grow in rural and peri-urban areas, with densification of population that do not have an effective urban governance structure or requisite urban infrastructure, for example, sanitation, roads and so on in place.

BUILDING CAPACITY FOR CONTROLLING INDIA'S URBANISATION

Lack of sufficient capacity across all levels of Government is a root cause of India's urban development challenges. The Mid-term Appraisal of the Eleventh Plan highlighted that many States have lagged in programmer utilization due to inadequate capabilities of governance and management. Traditionally, capacity building, though critical, has been given low priority, which is evident in the absence of dedicated municipal cadres and robust urban management structures. Substantial skill gaps exist across almost all areas of urban management. This is driven as much by the lack of credible and specialized supply side institutions as it is by poor demand from those responsible for urban management in cities. Addressing the capacity deficit must be a key endeavor during the Twelfth FYP and

the following strategies should be adopted to achieve this:

Create a Comprehensive Capacity Building Strategy - The Central Government should create a comprehensive framework that addresses issues such as staffing, training and skill development and finances. This framework should then be used by the States to evolve a capacity building strategy for all their ULBs detailing staffing norms, cadre rules that reflect service delivery and governance norms to be met by ULBs. This strategy should dynamically meet future needs, incentivize knowledge and skill development and provide an environment for using the acquired skills. State strategies should translate into ULB level implementation plans for capacity building.

The wide-spread need and extreme urgency for urban management capabilities to catch up with the relentless process of India's urbanization, makes a 'Just-in-Time and Task-Aligned' approach imperative to build capabilities. In a 'Just-in-Time and Task-Aligned' approach, functionaries are provided requisite tools and skills as they get to do the tasks, rather than acquiring these only through 'remote' training programmers not synchronized with action requirements. Therefore, the training process must be flexible and accessible. IT-based training systems enable this.

Institutionalization and Professionalization of Municipal Cadre - Every State should institutionalize a dedicated municipal cadre with necessary technical skills. The cadre should cover the key areas of urban governance and be equipped for increasing complexities of modern city management. State Governments should suitably frame the recruitment rules including norms for direct recruitment to ensure that the cadre attracts top-quality talent. A career path should also be put in place by allowing functionaries to move to higher levels of local bodies based on their experience and should ensure that employees are continuously motivated and recognized.

Establish a Reforms and Performance Cell at the Central Level - A dedicated unit to address issues such as implementation of reforms, dissemination of best practices across urban issues should be set up under the Capacity Building Mission structure of JNNURM. This unit should comprise urban planners, municipal finance experts, IT personnel, public health engineers' and others from required disciplines in addition to programmer managers.

CONCLUSION

The challenge of climate change can only be met if cities are healthy and sustainable under normal circumstances. Their existing infrastructure should be

adequate. The efficient and responsive governance should be in place. Their citizens should be educated, healthy and empowered who are in a position to control their destinies- at least in normal circumstances. A city that protects itself from storms, floods, droughts, heat waves, and diseases benefits its residents; their environment is better, their health is more protected, and their economic activities are less liable to damage and disruption. Such cities bounce back against nature's fury in a much shorter time as was seen in New York where despite devastation, stock market, metros, power and other infrastructure began to function in a few days. In order to have climate resilient development with positive mark on India's growing urban centres, the report is stressing to mainstream climate resilience measures in urban development programmes and policies as a priority. It is necessary to set up windows to promote and support research and development, innovation and entrepreneurship through enabling policy environment like legal and institutional landscape, financial and physical infrastructure for urban services. Thus well-targeted interventions emerging out of "HIGS" framework have multiplier effects in promoting sustainable and inclusive urban growth.

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