Population Environment and Development: Some Issues in Sustainability of Indian Mega-Cities of New Delhi and Kolkata (Calcutta).

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Abstract

Rapid Population Growth fuelled by in-migration has been the hallmark of the leading mega cities of India, creating a "top-heavy" structure of India's urbanisation. This has resulted in a continuous urban sprawl and deterioration of the urban environment in most of these cities. The present paper is an attempt to decipher the effect of rapid growth of population, urbanization and urban sprawl on physical environment, amenities and infrastructue of two Indian mega cities viz. New Delhi, the present capital of India and Kolkata (Calcutta), the earlier capital under the British rule in India.

New Delhi

New Delhi, situated in north India, has sprawled over the west bank of the river Yamuna and is one of the fastest growing cities in India. It is surrounded by Haryana in the West and to the East, across the river Yamuna by Uttar Pradesh. The population of Delhi Urban Agglomeration was 9.4 million (1991) and had increased to 13.7 million in 2001. In terms of population it holds the top position among Union Territories and ranked eighteenth among all States and Union Territories in the country. The density of population in Delhi (9,294 persons per sq. km.) is also the highest among all States and Union Territories. Her density had risen from 6352 to 9294 persons per sq. km. in just a decade. The decadal growth rate has also continuously increased ever since, till 1981 Census, and was 52.44 percent in 1951-61, 52.93 percent 1961-71, 53.00 percent 1971-81, and 51.45 percent in 1981-91 and 46.31 percent in 1991-2001.

The rise in population of Delhi has been also associated with growth in economic activity in Delhi leading to multifaceted environmental problems. One of the immediate effects has been the rapid urban sprawl and rise in environmental pollution. After independence, the city has become the major centre of commerce, industry and education. The growth of government departments and office

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complexes has also contributed to the spread of the city. The growth in civic amenities has not kept pace with the rising population. Unabated in-migration has compounded the problem. Landuse regulations have been flouted in many cases. The green cover, the essence of the city's sustenance has been dwindling over the years. Earlier, in the 1960's, the population of Greater Delhi was about 3 million. There was hardly any water problem and hardly any shanties. This is exactly the time when the first master plan was launched. Now that the third master plan is about to exist, the question of sustainability has become very evident. The master plans have simply resulted in concentric expansion of the city and high increase in slum / shanty population (now almost 50 percent of the total), and a near breakdown of the essential services and a high rise in pollution.

Kolkata (Calcutta)

Kolkata (Calcutta), the capital of the state of West Bengal, is one of the primate cities in Eastern India, and is also the main port of entry in North East India. It is 120 km from the Bay of Bengal, and is drained by the river Hughli. One of the largest metropolitan regions of the world, Kolkata serves as the global example of the potentials and problems facing mega-cities in developing nations. An overview of the demographic and socio-economic problems of this mega city necessitates placing Kolkata in the context of its entire metropolitan region. This city region spreading over both the banks of the Hughli river had a 1991 population of 11.02 million that increased to about 13 million in 2001. It is characterized by a vast immediate hinterland of over 300 million population, that is predominantly poor, covering the states of eastern, north-eastern and northern India; and is probably one of the most important reasons behind the fast population accretion in the city in the post-independence period.

Prior to the late 1800's, estimates of Calcutta's population growth remain indeterminate. By the end of the 19th century, Calcutta had grown onto the most important colonial trading post and the second biggest city of the British Empire. Rapid population increase started in the post independence period; which is also a reflective of the influx of refugees, as well as the significant in-migration from the surrounding regions. This rapid growth of population, coupled with severe geographic limitations, has resulted in extreme congestion, urban blight, and a myriad of economic, social and environmental problems that burden the city with insurmountable obstacles. Failure to accommodate this almost unmanageable population has resulted in the proliferation of slums and squatters in the city. The multiplicity of planning institutions catering to the city has not been able to cope up with the myriad of environmental and infrastructural problems of the city

Objectives

➢ Against this backdrop, the present paper tries to trace the evolutionary history of growth, urban genesis and development of these two mega cities in relation to their regional economy and population growth. The aim is also to analyse the present day access to housing, amenities and infrastructure in Delhi and Kolkata.

➢ Furthermore, the paper also tries to highlight the effect of rapid urban growth and urbanisation on land use, particularly the mushrooming of low-income housing colonies, squatters and slums; changing land values; traffic density, and the environmental quality of these cities.

➢ An appraisal has also been made to ascertain the role of metropolitan planning in the present day evolution and growth of Delhi and Kolkata.

➢ Finally, the impact of liberalisation and globalisation on these mega cities and the future possibilities has been also examined in detail.

Data Base and Methodology

Data has been drawn from a wide variety of sources including Census of India, 1951-2001; Office of the Registrar General, Government of India; Central Pollution Control Board Reports, Government of India; Delhi Jal Board; Master Plan of Delhi (1961-2001); Action Plan of the Ministry of Environment and Forests, Government of India, 2001; Calcutta Environment Management Strategy and Action plan (CEMSAP) and the State of Environment Report, West Bengal, Department of Environment, Government of West Bengal, 1998.

The methodologies incorporated include the usage of population growth rates and migration rates. Pollution has been estimated through monthly / annual mean and percentage variation with reference to the base year. Sometimes absolute figures per unit have been used.

Against the theoretical formulations, based on secondary information and government documentary sources, an empirical methodology has been grafted by using Census data in order to focus on the magnitude of the problems; in the light of the future possibilities and sustainability of these mega cites.

Main Findings

The population growth of Delhi vis-a-vis the finiteness of the environmental resources and stress on common property resources, amenities and infrastructure raises the serious question of sustainability of the city in future. Increase of population has lead to heavy pressure not only on the environment, but at the same time has placed other services into strain like water supply, drainage, roads, (physical

infrastructure), in addition with heavy stress on social infrastructure, that has not been commensurate with the growth of population.

Moreover due to the incorporation of the towns and villages due to the process of urban sprawl, the self-sustaining nature of these settlements has been lost. They have now become appendages to the metropolis itself and have become increasingly dependent on Delhi. This has resulted in exerting an additional pressure on the carrying capacity of the city and serious environmental consequences. Today, the population of Delhi is already almost twice its carrying capacity and at current rates we will be heading for an urban genocide.

Another important point to stress is that everything cannot be attributable to population growth alone. There also exist problems at the administrative levels, as well as the fact that Delhi demands good urban governance.

Kolkata, as of today, provides a mixture of opportunities and problems. Environmental problems loom large over the city that raises issues in sustainability. Post reform transformation of the city also raises the sustainability of the poorer sections of the community who have become more vulnerable to the changing forces of globalisation, particularly with the development of the high-income residential spreads. Multiplicities of planning organisations have also added complexity to the problem.

However, the most pressing of the all the problems are the issues regarding environmental sustainability and its impact on human health. Rapid urban growth has affected the population momentum, and hence would prolong the unplanned urbanisation and industrialisation for quite sometime. This has resulted in acute air and noise pollution. Toxic chemicals sprayed into the atmosphere from industries and automobile exhausts in an already congested city have triggered acute respiratory illness, while the noise pollution has disrupted the normal sleep and rest. Solid waste management also poses another problem area. The CMC periphery has been characterized by a zone of water pollution because of the indiscriminate dumping of solid wastes. Moreover, sanitary facilities are almost absent here. Therefore whereas the city core is affected by air and noise pollution, the fringe areas are affected by water contamination and frequent outbreak of epidemics. The slums and squatters provide another set of problems encountered by the city. On one hand these are the environmentally vulnerable areas, lacking civic amenities, and on the other they form the repositories of urban crime, which is highly correlated with the economic and social insecurity faced by these inhabitants.

Finally, as the city still grapples to fit into the changing global scenario, it must be realized that an emphasis of developing the knowledge based skills and innovative character of the region must be

enhanced, and must be made known to the world. It has been realised that Kolkata has the potentialities for knowledge-based development in the post- industrial society, being the music and literary capital of India. Thus only by following a regional approach, which recognizes and integrates the importance and potential contribution of the city's knowledge base, including the vast informal sector of the economy, may this mega-city progress.