



## MAKING A SUSTAINABLE CITY THROUGH URBAN DEVELOPMENT: THE INDIAN SCENARIO

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**ABSTRACT** The sustainable urban development is a great venture in India. It discusses the concept importance of sustainable development mainly the sustainable urban development. Sustainable urban development and sustainable city form take the responsibility of all this and try to reduce the bad effects of climate change, depletion of non-renewable resources and degradation of the urban environment. There are three issues - which are meeting the deficiencies in service, how to manage the services in an environment friendly way and the need to make them more equitable. For activities locations need to be created which can be reached 1) without moving, by walking, by cycling 2) By public transport and 3) by energy efficient cars. The United Nations Environment Programme (UNEP) and UN-HABITAT, the sustainable cities programme are designed to foster the planning to move cities in the developing countries toward sustainability. They organized different programme for the sustainable urban development. One idea about sustainable urban form is that density needs to be 'high'. A density that is suitable for USA or cities of Europe may not be feasible for already dense cities like Hong Kong and Indian cities. All these things about sustainable environment and climate change have resulted in experiments and debates over city form that is sustainable.

**KEYWORDS :** Urbanization, Sustainable Urban Development, Sustainable Cities, Environment

### INTRODUCTION

Urbanization is a necessary product of modernization and the city is a physical construct or man-made vestige of civilization. However, the urban population in the past has virtually no influence on the world's future, because the urban population was significantly low. Even in the 1980s, the urban population accounted for less than 3per cent of that in the entire world. However, it is reckoned that the urban population increased from approximately 20per cent of the world population in 1920, to 36.9per cent in the 70s of the last century. In 2025, it is conjectured, that almost two- thirds of the world population will be concentrated in the urban areas. In 2050, two- thirds of the world's populations are expected to live in urban areas. This rapid increase will mainly take place in the developing countries.

While the timing and speed of urbanization have varied between countries, regions and continents, the urbanization process has taken far and wide. It has proven to be an unstoppable and a mostly desirable phenomenon. Along with the other developing countries of the third world, urban growth of India has also been upward in the last few decades of 20<sup>th</sup> century. After 1970's, in every decade, more than 50 million people assimilated in urban areas, which transformed into more than 90 million at the onset of 27<sup>st</sup> century. India is the second largest population giant in the world with a population of 1.21 billion as per census of India, 2011 of this, about 377 million people or 31.6 per cent of the total population resides in the urban areas of the country. India in 2011 had 10.38 per cent of the world's urban population and 19.9 per cent of Asia's urban population is larger than the total population of the big countries like Brazil and USA.<sup>1</sup>

Urbanization has been making big strides in India since the second decade of the twentieth century. Between 1901 and 2011, there was more than a fifteen fold increase in the urban population, while the total population prolong only fivefold.

Census Year	Population		Decadal Change in Percentage		Percentage of total urban Population
	Total	Urban	Total	Urban	
1901	238.40	25.8	---	---	10.8
1911	252.09	25.9	+3.8	+0.2	10.3
1921	251.32	28.1	(-)0.3	(-)8.3	11.2
1931	278.98	33.5	+11.0	+19.1	12
1941	318.66	44.2	+14.2	+19.1	12.0
1951	361.09	62.4	+12.3	+41.4	17.3
1961	439.23	78.9	+21.6	+26.4	18.0
1971	548.16	109.1	+24.8	+38.2	19.9
1981	683.33	159.3	+24.4	+46.2	23.7
1991	846.39	217.42	+23.8	+36.5	25.7
2001	1027.02	287.35	+21.3	+31.1	27.8
2011	1210.2	377.1	+17.6	+31.8	31.6

Source: - Census reports from 1901 to 2011 & Census of India, 2001 &

2011 Series, paper 2, provisional population totals, Rural Urban Distribution of Population.

As it turns out, In the middle of the 21<sup>st</sup> Century, more than 70 per cent of the city's population lives in urban areas, the high quality governance of cities is essential to the sustainability of the growth and economic potential and the quality of life most of its residents. Due to their popularity as habitats and need for population growth around the world, such as for traffic consternation of agricultural land and all kinds of population in the city.<sup>2</sup> Moving from rural areas to urban areas constitutes one of the largest mass transfers in world history. Rural property is forced by many people, especially the illiterate and landless people to find employment in big cities. The lack of successful land reform, the extremists of rural poverty, hope and often the reality of better opportunities than city jobs and income and encourage transport in this movement.<sup>3</sup>

Rapid urbanization is likely to improve the health of society. Although almost half of the people live in cities, they produce 80 per cent of Global Domestic product (GDP). Worldwide cities are taking initiatives to deal with poverty-related infrastructure and to combat population across the world. Rapid urbanization also involves environmental concerns and many cities located in the coastal areas or on the banks of the river can be prone to natural disasters such as storms cyclones and floods. Likewise, weak urban infrastructure such as unbelievable power plants, compressed roads and power transport reduce vulnerable ports and city competitiveness and economic potential.

So, all urbanization is not positive, especially if it is indefinite. Opportunities to be fully competent in the global market, policy makers have to deal with some of the key issues.<sup>4</sup>

Urbanization is an indispensable process of economic development of the country. Urbanization involves infrastructure development of towns and cities, basic amenities are provided in the city like food, clothing and shelter, transformation facilities, drinking water, sanitation and roads health facilities, recreational areas and opportunities for education and employment. Urbanization will be the basis of the country's economic growth and simultaneously its adverse effects on the environment cannot be ignored. The interaction between urban development and environment can be characterized as one of interdependence.<sup>5</sup>

The impact of urbanization on the town and cities environment it that of the bad impact in the ecosystems, water population and management, air and noise pollution, unplanned hosting system and urban slums, disposal of solid hazardous (plastic bag, plastic bottle etc.) and other wastes, lack of open space and green park, climate change etc.

### THE CONCEPTS OF SUSTAINABLE DEVELOPMENT

There was a widespread debate regarding the development of India in

the 80's. So after three decades of development, poverty and unemployment reached a very high level increasing difference between rich and non-rich people. Since then, the question arises - what kind of development? Development for whom? National production is growing but the standard of life of ordinary people is not improving? Since then, a part of development list said, want to change the path of development. The way that the development chariot is running, natural resources are being destroyed. In the development of international level, it was added to the conservation of the environment. In order to resolve the apparent conflict between environment and urban development one of the major concepts which has emerged is 'Sustainable developments'. Sustainable development is a concept that emerged in the context of a growing awareness of an imminent ecological crisis, seems to have been one of the driving forces of world history in the period around the end of the 20<sup>th</sup> century. Brundtland Commission of 1987, pioneer of this theory. The term, Sustainable development, was popularized in Our Common Future, a report published by the World Commission on Environment and Development (WCED) in 1987. Also known as the Brundtland Report, Our Common Future included the 'classic' definition of sustainable development: "development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED). The report defined fine clear principle of sustainable development for policy makers.

1. Changing current patterns of economic growth, technology production and management which may have negative impact on the environment and population.
2. Ensuring employment, food energy, safe water and sanitary services for all people.
3. Controlling global population growth.
4. Protecting natural resources for future generations.
5. Integrating economic, environmental and population considerations in policy decision making and planning.<sup>6</sup>

The Brundtland Report provided the momentum for the landmark 1992 Rio Summit that laid the foundation for the global institutionalization of sustainable development. Marking the twentieth anniversary of the Stockholm conference, the Earth summit adopted the Rio Declaration on Environment and Development and Agenda 21, a global plan of action for sustainable development. The Rio Declaration contained 27 principle of sustainable development, including principle 7 on "common but differentiated responsibilities," which stated: "In view of the different contribution to global environmental degradation, states have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command." In Agenda 21, developed countries reaffirmed their previous commitments to reach the accepted United Nations target of contributing 0.7 percent of their annual gross national product (GNP) to official development assistance, and to provide favorable access to the transfer of environmentally sound technologies, in particular to developing countries.

Since that time a number of important international conference on sustainable have been held including the 1997 Earth Summit +5 in New York and the 2002 World Summit on sustainable development (WSSD) in Johannesburg.<sup>7</sup> Johannesburg conference further expanded the definition of sustainable development so as to include environmental sustainability, economic sustainability and social sustainability. All these development in the international scene reflect the view that for sustainable development the economic development must also include environment protection and improvement of social conditions. Therefore, urban development must not aim only towards economic growth of the cities and towns, but also ensure protection and improvement of the environment. In other words, it must be "sustainable Urban Development." This broad definition, which will be used in this paper, does not limit the scope of sustainability. This concept of conserving resources for future generations is one of the major features that distinguish sustainable development policy, which also seek to internalize the externalities of environmental, social and economic concerns into all aspects of decision making.

Institutionally, government organizations are typically organized into sectorial ministries and departments. This works fairly well until the system encounters something very comprehensive and highly integrated in nature, such as such as sustainable development. Sustainable development requires the integration of economic environmental and

social objectives across sectors, territories and generations.<sup>8</sup>

Therefore, sustainable development requires the elimination of fragmentation, that is, environment social and economic concerns must be integrated throughout decision-making process in order to move towards development that is truly sustainable.

### SUSTAINABLE URBAN DEVELOPMENT

Sustainable Urban Development refers to attaining social equality and environmental protection in urbanization while minimizing the costs of urbanization. Sustainable urban development specifically means achieving a balance between the development of the urban areas and protection of the environment with an eye to equity in employment, shelter, basic services, social infrastructure and transportation in the urban areas. With rapid expansion of urban population around the world there has arisen a wide awareness about minimizing the environmental costs of urbanization. Concerns are raised at environmental damages and depletion of non-renewable resources and rising level of pollution in urban areas. In recent times cities have become places of urban areas. In recent times cities have become places of urban environmental degradation and wasteful use of resources, which is proving to be costly to generations present and future. In order to mitigate the problem we require minimizing the depletion of non-renewable resources and resorting to environmentally sustainable economic development. But this has to be done in ways that are socially, economically, and politically acceptable. While planning for sustainable development of the towns, we should also take into account the factor of climate change. According to this, ensuring environmental sustainability means taking steps, which include:

- a. Integration of the principles of sustainable development in the policies and programmes of the country,
- b. Reversal of loss of environmental resources,
- c. Reduction of the proportion of people without sustainable access to safe drinking water, and
- d. Improving the lives of slum dwellers.

It is pertinent to emphasize here that achieving sustainable urban development is not an easy task. In fact, it is the biggest challenge faced by the national and local governments and policy makers.<sup>9</sup>

### SUSTAINABLE CITIES

A joint facility of the United Nations (UN) Environment Programme and UN- HABITAT, the sustainable Cities Programme (SCP) is designed to foster the planning and management needed to move cities in the developing countries toward sustainability. The programme defines a sustainable city as a city in which "achievements in social, economic and physical development are made to last." Cities are the focus of the programme because they are absorbing two-thirds of the population growth in the developing countries and, in the process, are experiencing serious environmental degradation in and around their growing urban centers'. Focusing on smaller cities and towns, the Localizing Agenda 21 (LA 21) programme uses the same basic approaches as the SCP, but emphasizes issues related to the Millennium Development Goals.

Sustainable city planning should aim at achieving social and environmental equity while improving the lives of the people. For that to happen we need to have a sustainable city from as well as provision and proper management of the services. Thus, in order for a city or urban area to be sustainable it needs to produce and manage basic services like water, waste, energy and transportation in a way that it conforms to the principles of sustainable development. In order words, the city should be able to produce and distribute the services in an economic, environment friendly and equitable way. In the next part of this paper we will discuss about the sustainable city form and development in India.<sup>10</sup>

### THE INDIAN SCENARIO

India with its 29 states and 7 Union Territories, displays great regional disparities in terms of economic growth and other features. Indian cities are characterized by high density of population, deficiency in services and air pollution. Let us see the status regarding these in India. In urban India in 2001, 69 per cent of the households had their latrine facilities within their houses, and only 35 per cent of the households had closed drainage facilities. 88 per cent of the urban households had electricity and only 0.2 per cent had solar energy in 2001. In Delhi, the capital city of India, 77 per cent of the

urban households had tap as source of drinking water, 63 per cent had their latrine facilities within their premises and 52 per cent of the households had closed drainage facilities. Delhi generated 5922 tons of solid waste per day in 2004-05. Air pollution has become a major problem in Indian cities. Taking the case of Delhi, we find that there are around 54 lakh vehicles in Delhi. Around 70 per cent of the air pollution in Delhi happens to be due to vehicles. It has been found in a World Bank study based on 1994-95 air quality data that around 10,000 people die every year prematurely due to air pollution in Delhi alone. Densities of Indian cities are very high. Management of the basic services should be along keeping in mind the deficiency in the services, the environmental impacts and the inequality in the provision of the services.

It is likely that climate change will also hamper sustainable development of India as it increases the pressures on natural resources and the environment associated with rapid urbanization, industrialization and economic development. In order to reduce the effect of climate change, we need to include climate proofing concepts in national development initiatives. Urban areas mostly face problems of air pollution, greenhouse gases, inadequate sanitation and water supply etc.<sup>11</sup>

## **SOME URBAN PROBLEMS ARE DISCUSSED BELOW:**

### **1. HOUSING AND SLUMS**

Refers to the massive migration of people to the urban areas leads a serious problem of houselessness. According to the 1988 United Nations International Children's Emergency Fund (UNICEF) report, between one-fourth and half of the urban population in India's largest cities lives in makeshift shelters and slums.

### **2. WATER SUPPLY AND DRAINAGE**

Water supply for drinking purpose is a great problem in urban areas. We have reached a stage where no city has around the clock water supply. Cities like Delhi, Mumbai, Chennai, Hyderabad, Jaipur etc. get water from the municipality for less than an hour a day.

### **3. POLLUTION**

Causes by the use of coal mineral oils and other chemical substances in different industrial factories they are constantly polluting the environment, water, air and soil. The noise pollution is due to additional vehicles in the cities.

### **4. HEALTH PROBLEM**

Air pollution has made urban people to suffer from respiratory diseases such as common colds and lung cancer due to direct exposure to carcinogenic air pollutions. Contaminated water in cities causes cholera, typhoid bacillary diarrhea, infection and hepatitis.

### **5. ENVIRONMENTAL IMPACTS OF URBANIZATION**

Urbanization is associated with higher incomes, improved health, higher literacy improved quality of life and other benefits. Yet along with the benefits of urbanization come environmental and social ills.

Urbanization affects the environment in three major ways:

- i. Implications due to urban poverty which is a result of migration.
- ii. Stressed infrastructure and management systems.
- iii. Rapid improvement of consumerism, etc.<sup>12</sup>

Thus, translated into policy initiatives, environmental sustainability of urban form should aim at energy efficiency in transport and building, optimal planning solutions in terms of locations, distances and spaces, which will reduce air and noise pollution. It should also aim at sustainable management of sanitation and water supply, promote equality in provision of services and of course reduce deforestation. The National Action plan on climate change announced by the then Minister in June 2008 visualized to make economic development of India energy efficient. All these concerns, questions and initiatives about sustainable environment and climate change have resulted in experiments and debates over city forms that are sustainable.<sup>13</sup>

## **CONCLUSION**

The concept and idea of sustainable development is widely accepted and good progress has been made on sustainable development matrix, yet the implementation of sustainable development has been largely unsuccessful. The world has made little progress in implementing programmes and policies to improve the lives of the poor and the integration of the three pillars of economic development, social development and environmental improvement remains a challenge. Sustainable development is not easy and will take considerable time

and efforts. Sustainable development means attaining a balance between environmental protection and human economic development and between the present and future needs. It means equity in development and sectorial action across space and time. It requires an integration of economic, social and environmental approaches towards development.<sup>14</sup>

We have dealt in this paper with some issues relating to sustainable urban development and sustainable city form with special reference to India. The paper first discussed the concept and importance of sustainable development and especially that of sustainable urban development. Sustainable urban development and sustainable city form should take account of all this and try to reduce the ill effects of climate change, depletion of non-renewable resources and degradation of the urban environment. There are three main issues here, which are meeting the deficiencies in services, how to manage the services in an environment friendly way and the need to make them more equitable. In order for this to happen, activity locations need to be created which can be reached

1. without moving by walking, by cycling,
2. by public transport,
3. by energy efficient cars.

There are important implications of this on transport and land use policies. One general idea about sustainable urban form is that density needs to be 'high'. But how much high should density be differs by countries and cultures. A density that is suitable for USA or cities of Europe may not be feasible for already dense cities like Hong Kong or Indian cities.

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