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PROBLEMS OF URBANIZATION IN INDIA AND EMERGING CHALLENGES - AN ENVIRONMENTAL PERSPECTIVE

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Abstract

Urbanization in India began to accelerate after independence, due to the country's adoption of a mixed economy, which gave rise to the development of the private sector. Urbanization is taking place at a faster rate in India. Population residing in urban areas in India, according to 1901 census, was 11.4%. This count increased to 28.53% according to 2001 census, and crossing 30% as per 2011 census, standing at 31.16%. According to a survey by UN State of the World Population report in 2007, by 2030, 40.76% of country's population. Urbanization is expected to reside in urban areas. As per World Bank, India, along with China, Indonesia, Nigeria, and the U.S, will lead the world's urban population surge by 2050. Urbanization no doubt has a positive impact on income level, employment, production, infrastructure and education, but it is accompanied with a number of problems such as shortages of housing, inadequate water supply, inadequate sanitation and waste disposal facilities. Added to all these problems, in the developing countries, administration is weak and slack, traffic systems are not managed properly, industrial rules and regulations are flouted, and they are not implemented seriously. As a result deterioration of urban environment has increased in many folds than what it should have been actually. This research paper aims to highlight problems of Urbanization in India and emerging challenges with special focus on urban environmental issues like air, water, land and noise pollution, problems of housing, traffic congestion, slums, and solid waste management and also to suggest measures to overcome all these problems. The study reveals that rapid growth of population in the small and large cities of India has resulted in deterioration of urban environment giving rise to shanty town and slums, heavy population concentration, uncontrolled land use, problem of solid waste traffic congestion, and pollution.

Keywords: Urbanization, Urban environment, urban challenges Ecological management

Introduction

Urbanization has become a common feature of Indian society. Growth of Industries has contributed to the growth of cities. As a result of industrialization people have started moving towards the industrial areas in search of employment. This has resulted in the growth of towns and cities. Industrialization is a major cause of urbanization. It has expanded the employment opportunities. Rural people have migrated to cities on account of better employment opportunities.

The onset of modern and universal process of urbanization is relatively a recent phenomenon and is closely related with industrial revolution and associated economic development. As industrial revolution started in Western Europe, United Kingdom was the initiator of industrial Revolution. Historical evidence suggests that urbanization process is inevitable and universal. The United Nation estimates indicate that at mid 1990s, about 43 per cent of the world population lived in urban areas. With the urban population growing two and a half times faster than its rural counterpart, the level of urbanization is projected to cross the 50 percent mark in 2005. United Nations projections further show that by 2025, more than three fifth of the world population will live in urban areas (U. N- 1993).

Although India is one of the less urbanized countries of the world with only 27.78 per cent of her population living in urban agglomerations/towns, this country is facing a serious crisis of

urban growth at the present time. Whereas urbanization has been an instrument of economic, social and political progress, it has led to serious socio-economic problems. Urbanization no doubt has a positive impact on income level, employment, production, infrastructure and education, but it is accompanied with a number of problems such as shortages of housing, inadequate water supply, inadequate sanitation and waste disposal facilities. Added to all these problems, in the developing countries, administration is weak and slack, traffic systems are not managed properly, industrial rules and regulations are flouted, they are not implemented seriously.

Objectives of the study

To analyze the process and pattern of urbanization in India. To assess urban environmental problems and emerging challenges with special reference to India and also suggest remedial measures to overcome urban problems.

Methodology

In this part of the study we have made an attempt to analyze Urban environmental challenges and problems and challenges with reference to India . The required data for the present study analysis have been obtained from secondary sources like Census of India, Environmental survey by The Hindu Daily, CPCB report, news papers, magazines etc. The collected data have been classified ,processed and presented in the form of different cartographical and GIS techniques.

Table 1: Nnumber of urban centers and urban population in india

CENSUS YEARS	NUMBER OF URBAN AGGLOMERATION/TOWN	TOTAL POPULATION	URBAN POPULATION	RURAL
1901	1827	238396327	25851873	212544454
1911	1825	252093390	25941633	2261517572
1921	1949	251321213	28086167	223235046
1931	2072	278977238	33455989	245521249
1941	2250	318660580	44153297	274507283
1951	2843	361088090	62443709	298644381
1961	2363	439234771	78936603	360298168
1971	2590	598159652	109113977	489045675
1981	3378	683329097	159462547	523866550
1991	3768	844324222	217177625	627146597
2001	5161	1027015247	285354954	741660293
2011	8410	1210193422	37,7105780	83,3087,662

Source: (Census Of India report)

Urbanization in India

Urbanization is an index of transformation from traditional rural economics to modern industrial one .It is progressive concentration (Davis 1965) of population in urban unit . It is a finite process, a cycle through which a nation pass as they evolve from agrarian to industrial society (Davis and Golden, 1954). Davis has mentioned three stages in the process of urbanization. Stage one is the initial stage characterized by rural traditional society with

predominance in agriculture and dispersed pattern of settlements. Stage two refers to acceleration stage where basic restructuring of the economy and investments in social overhead capitals including transportation, communication take place. Proportion of urban population gradually increases from 25% to 40%, 50%, 60% and so on. Dependence on primary sector gradually dwindles. Third stage is known as terminal stage where urban population exceeds 70% or more. At this stage level of urbanization (Davis, 1965) remains more or less same or constant. Rate of growth of urban population and total population becomes same at this terminal stage.

Urban areas have been recognized as “engines of inclusive economic growth”. Of the **121 crore** Indians, **83.3 crore** live in rural areas while **37.7 crore** stay in urban areas, i.e approx **32 %** of the population. The census of India, 2011 defines urban settlement as :-All the places which have municipality, corporation, cantonment board or notified town area committee. All the other places which satisfy following criteria : a. A minimum population of 5000 persons. b. At least 75 % of male main working population engaged in non-agricultural pursuits. c. A density of population of at least 400 persons per square kilometer.

The process of Urbanization is not only desirable but essential for generating economic growth and social change in developing countries like India. Number of urban centers have grown from 1827 in 1901 to 5161 in 2001 and number of population residing in urban areas has increased from 2.58 crore in 1901 to **37.7 crore** in 2011.

Environmental problems of urbanization in India

The population of the world is growing at a fast pace besides this, world's population is urbanizing much faster than its growth. As a result of this process, population of cities is swelling fast. Phenomenal population growth coupled with fast pace of industrialization is responsible for urban environmental hazards. Human activities are disturbing the equilibrium of the atmospheric environment, particularly by changing chemistry of the atmosphere. Disposal of human and industrial waste into rivers, land, air not only affect the atmosphere and the climate but also degrade the quality of fresh water as well as damage the ecosystem. There are many evidences to show that urbanization in India is producing a great stress on the environment.(Kurani.M.S-2007)

Dr. Wiesner, a scientific adviser said that we are “engaged in a race between catastrophe and intelligent use of technology, and it's not at all clear we are going to win”. There can be no question that the earth's capacity to absorb and assimilate pollution are no longer what they were. Almost every day the News Papers publish reports about death of some people from all over the world. They are dying either due to accidents caused by major train collision, plane crash or some natural calamities but very rarely they publish reports about millions of people dying in the hospitals and at their homes or in the caring centers after suffering from long term unavoidable disease which are caused by pollution from air, water, land and noise etc either individually or in combination.

Quality of air

The main sources of air pollution are industrial plants, Power plants, Automobiles, Locomotives, Missiles, Dead bodies burning, Burning of oils, Refuse burning etc. Common contaminants that are Harmful to health or property. They are ammonia, sulfur oxides, nitrogen oxide, hydrogen sulfide, Carbon monoxide, dust radioactive gases, methane, chlorine and various organic solvents. In Mumbai industries daily throw more than 1,600 tones, of pollutants it is followed by Delhi 1020 tones, Calcutta 985 tones, Chennai 880 tones, Bangalore 800 tones & Pune 800 tones etc. Today, everybody has a craze for

having his own vehicles and in most of the cities automobiles are rapidly becoming the main source of air pollution. Due to inferior maintenance of vehicle in combination with lower combustion efficiency is making the vehicular exhausts a menace to the city dwellers.

Quality of water

70 percent of river water pollution is by human wastes. **Kanpur municipality pours 474 million liters of sewage a day in Ganga. In Delhi is major drains discharges 8,30,000 kilo litres of wastes everyday .** Most of urban centers do not have sewerage treatment plants. Around 34 urban centers in India have complete sewerage system but only half of them have treatment systems. In Calcutta only 26 percent of population is served by sewerage. The sewerage water was easily poured into rivers. Crores of rupees today are being spend on cleaning river waters (Ganga Project is known to everybody). The coastal area of Mumbai has become slightly acidic and polluted. Near Gujarat coast the amount of mercury has risen in the sea water.

Many water borne diseases like Trachoma, Elephantiasis, Malaria, Diarrhea increasing. To these may be added Typhoid, Dysentery, Hepatitis are spread by contaminated water or dirty hands as well as Scabies, Yaws ,Leprosy diseases are aggravated by insufficient water for washing purposes.

Disposal of solid waste

Disposal of human waste has become a big problem in urban areas. As such Indian cities have small amount of garbage per person per day when compared with those of developed countries. The National Commission on Urbanization (2008), on the basis of sample of 40 cities over 100,000 population found that the mean per capita waste/day was 370gms Per day. An average Indian generates about 450-500gm/day of solid waste and on a average 82.8% of solid is generated in metropolitan cities are collected and disposed. whereas only 59% is collected and disposed in Class I and Class II cities. Besides the healthier ways of solid waste disposal the municipalities are also confronted with the monstrous problems of managing wastewater. Many of the urban cities in India do not have either proper drainage system or following proper methods of disposal Garbage whether from houses or industries tend to spoil not only the environment, it also effects the land, health of the people and water.

Growth of slums

The prevalence of slums is very common in Third world countries in general and India in particular. But the origin of the slum dates back to the period of industrial revolution that came to exit in European Countries. Presently, India s slum population is 20 per cent of the country's urban population. The slum dwellers in many cities account for between 30 to 40 per cent of the total population. Kolkata among mega cities, tops the list with over a third of its population in slums, followed by Mumbai, Delhi, Chennai, Hyderabad etc. The rapid growth of slum areas in Indian cities is creating bottlenecks for urban planners as well as the administrators in assuring the healthy living conditions in towns and cities. So without the development of these slums, the development of the urban centers is not possible. Hence, while planning for the improvement of environment suitable strategies have to be evolved for different locations to solve the problems of these areas.

Transport and traffic problems

The Traffic problem in Urban areas is one of the greatest problems of the day. Most of the cities and towns are growing in unplanned way. Due to lack of proper enforcement agencies

encroachment in all parts of the cities going rapidly and due to political interference, authorities become incompetent. Most of the roads are narrow, haphazard and ill-maintained. Traffic problem is getting bad to worse because of high density of population, desire to have personal means of transport and to live near the city, mixed traffic, lack of civic sense, ill-maintained roads, poor regulation of traffic etc.

Urban crime

Prevention of urban crime is another challenge before the government of States having more number of urban areas and particularly metropolitan cities. The mega cities are facing increased criminal activities on account of unchecked migration, illegal settlements and diverse socio-cultural disparities, organized groups, gangsters, professional criminals for wishing a lavish life in metropolis. The cities of Delhi, Mumbai and Bengaluru have accounted for 16.2 percent, 9.5 percent and 8.1 percent respectively of the total crime reported from 35 mega cities. Prevention of crime in mega cities is a challenge before the city government in India.

Challenges in urban development

Urban Governance

74th amendment act has been implemented half-heartedly by the states, which has not fully empowered the Urban local bodies (ULBs). ULBs comprise of municipal corporations, municipalities and *nagar panchayats*, which are to be supported by state governments to manage the urban development. For this, ULBs need clear delegation of functions, financial resources and autonomy. At present urban governance needs improvement for urban development, which can be done by enhancing technology, administrative and managerial capacity of ULBs.

Planning

Planning is mainly centralized and till now the state planning boards and commissions have not come out with any specific planning strategies and depend on Planning commission for it. This is expected to change in present government, as planning commission has been abolished and now focus is on empowering the states and strengthening the federal structure.

In fact for big cities the plans have become outdated and do not reflect the concern of urban local dwellers, this needs to be taken care by Metropolitan planning committee as per provisions of 74th amendment act. Now the planning needs to be decentralized and participatory to accommodate the needs of the urban dwellers. Also there is lack of human resource for undertaking planning on full scale. State planning departments and national planning institutions lack qualified planning professional. Need is to expand the scope of planners from physical to integrated planning- Land use, infrastructure, environmental sustainability, social inclusion, risk reduction, economic productivity and financial diversity.

Finances

Major challenge is of revenue generation with the ULBs. This problem can be analyzed from two perspectives. First, the states have not given enough autonomy to ULBs to generate revenues and Second in some case the ULBs have failed to utilize even those tax and fee powers that they have been vested with.

There are two sources of municipal revenue i.e. municipal own revenue and assigned revenue. Municipal own revenue are generated by municipal own revenue through taxes and

fee levied by them. Assigned revenues are those which are assigned to local governments by higher tier of government.

Sanitation

The poor sanitation condition is another gloomy feature in urban areas and particularly in slums and unauthorized colonies of urban areas. The drainage system in many unorganized colonies and slums are either not existing and if existing are in a bad shape and in bits resulting in blockage of waste water. This unsanitary conditions lead to many sanitation related diseases such as diahorrea and malaria. Unsafe garbage disposal is one of the critical problem in urban areas and garbage management always remained a major challenge.

Health conditions

The important indicators of human development are **education** and health. The health condition of urban poor in some areas are even more adverse compared to rural areas. As many as 20 million children in the developing countries are dying consequent to drinking water. About 6, 00,000 persons are losing their lives on account of indoor air pollution (Jagmohan, 2005).

The National Family Health Survey, 2006-07 has envisaged that a lot of women and children are suffering from nutritional anemia and diseases like tuberculosis and asthma are occurring in good number. Providing health care services to the growing urban population is major challenge before the government health care delivery system.

Suggestions for urban planning and development

The measures suggested to Urban planning and development. And also to improve the quality of urban environment.

Overpopulation is the root of all pollution problems. The total impact on environment is simply proportional to total population. The population control is needed both in urban and rural areas. There is also need for checking rural to urban migration by providing employment opportunities and better civic amenities.

Industrial waste water is to be treated and reused on conservation of water and reduction of pollution of nearby surface water. Recycling of industrial wastes and treating of industrial effluents.

Automobiles are the main sources of pollution in urban areas. To check it , public transport system should be encouraged. No vehicles should be allowed to emit the pollutants above the maximum permissible limit.

Noise can be easily reduced without adding much cost of removal. The noise producing industries should use all devices to reduce the level of noise inside the industries. There should be complete banning of the use of loudspeaker in school and college zones and in the nights.

The indiscriminate exploitation of groundwater and other natural resources like agricultural, pastoral, grazing and forest lands also to be preserved. Provision of storage facilities for rainwater harvesting in each house, and making it mandatory by the corporation. Increase of percolation tanks in different parts of the city to augment the water levels in wells /tube wells with the supply of drinking water.

There is need of preservation of land for green areas, recreation, lakes and ponds and parks and playgrounds etc..

There is need to apply of GIS in Urban planning specially in mapping of slum areas, management of solid waste, land use planning and also mapping of all the properties in a city, which helps local bodies in planning, controlling encroachment and smooth administration.

8 There is need to change the life style and outlook of urban people. Every urbanite should think that it is his sacred and patriotic duty to preserve environment for the benefit of one and all. One should develop a consciousness of the preservation is considered to be the highest stage of civilization.

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