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CITIES AND ENVIRONMENT : PROBLEM OF TRANSPORTATION IN THE URBAN SCENARIO

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INTRODUCTION

The growth of cities is one of the most far reaching global changes affecting humanity. According to Herman Knoflacher the starting precondition for urban structure & urban life is a surplus of production of agriculture. The 7000 years of urban history reveal that cities all over the world have grown, developed, destroyed & even been demolished. Environmental changes have also forced people to give up their cities. This was due to the over exploitation of both natural & human resources causing urban development come to a close collapse.

In the mid-seventies & eighties it was stated as a matter of fact that India lived in it's villages. However in the last two decades or so there is a transformation in the scenario. The 2011 Census figures corroborate this fact and the urban population accounts for 31.6% of the population. The number of million plus cities have also jumped from 5161 to 7937 .

This increase in the urban population was not only welcomed but promoted by planners in the decade of the 90's. This period also coincided with the wave of Liberation, Privatization & Globalisation sweeping over India. It was estimated that agriculture accounted for only 20% of the GDP employing only 60% of the workforce. During the 90's 'growth' was the new 'mantra' & hence people were encouraged to move from uneconomic rural occupation to urban areas in search of seemingly productive occupations. This one of the major contributing factors for the massive jump in the urban population in the decades 1991-2011

EXPANSION OF CITIES AND TRANSPORTATION

In the past cities mainly depended on the basic local products easily accessible in their environment. The discovery of fossil fuels gave an impetus not only to the growth of cities but also the modes of transportation.

The levels of development differ significantly from place to another & from one country to another. Often large cities & adjoining areas experience progressive growth. On the other hand the smaller urban centers are characterized by poor living conditions, inadequate infrastructure, service deficiencies & outmigration.

Rapid unplanned expansion of cities has resulted in the degradation of the urban environment. It has widened the gap between the demand and supply of infrastructural services like energy, housing, transport, communication, education water supply & sewage thus depleting the precious environmental resources.

Environmental degradation is a resulted in the degradation interplay of socioeconomic, institutional & technological activities. Environmental changes may be driven by many factors such

as population growth, urbanization, intensification of agriculture, rising energy use & transportation. Transport infrastructure in India has expanded considerably in terms of network and roads.

The current trends of urbanization inspired by better quality of life are posing multiple stresses on our environment and transport is one of them. Indian cities are faced with mushrooming illegal settlements and slums poor transport and inadequate facilities. Cities like Mumbai, Chennai, Kolkata, and Delhi are facing high levels of pollution and rampant diseases linked to an unhealthy environment. Along with overcrowding Indian cities are filled with various kinds of automobiles like cars, scooters, buses and inappropriate industrialization.

Most large cities in the world are already located, in low and middle income countries and many more cities are expected to expand very rapidly in the coming decades. All these cities are with serious problems of inadequate mobility and access, vehicular pollution, road traffic crashes and crime on the streets. Increasing use of cars and motorized two wheelers adds to these most cities in the world and India grappling with this ever looming problem of transportation.

Among the various factors affecting the quality of life and safety in a city the transport system has the most far reaching effects. It has a direct co-relation with air quality and safety. The urban transport situation in the large cities is deteriorating rapidly. Commuters in these cities are faced

With acute road congestion , energy wastage , rising air pollution and a high rate of accident risk . It is no longer safe to walk on the road or ride a bicycle . Public transport is scarce , overcrowded and unreliable. It is also uncomfortable , undependable , unco- ordinated and inefficient . Inadequate roadway accommodation adds to chaos and confusion on the already overcrowded roads .Considering the population growth in Indian cities the urban transport infrastructure needs to be increased manifold if the gap between demand and supply has to be diminished.

The vehicle operating speed on many roads in cities especially metropolitan ones has declined .

The transport crisis faced by most cities has manifold effects and undermines the very quality of life. The cost of travel for the poor has increased considerably . This is largely due to the use of non- motorized modes of transport like cycling and walking . It has become extremely risky since these modes have to share the same road space with motorized modes of transportation.

Urban areas are continuously growing and the demands of transportation remain unmet . The deteriorating quality of public transport is driving many more people to use personalized transport . Most of these modes of transport are fuel inefficient , unsafe and add to the congestion on the roads . The volume of traffic is enormous . This is further aggravated by the poor road infrastructure and inefficient traffic monitoring . Such conditions create snarls resulting in heavy wastage of time , fuel and at the same time create enormous environmental hazards .

EFFECTS OF UNCONTROLLED GROWTH IN TRANSPORTATION :

Vehicular Pollution High vehicle density in urban Centre's

Predominance of older vehicles especially taxis and auto rickshaws

Adulteration of fuel and fuel products

Improper traffic management system and road conditions.

High levels of pollution at traffic intersections .

Absence of effective mass rapid transport system in intra – city networks

Large in- migration to metropolises.

Vehicular pollutants have varying effects on human health . The Pollution Monitoring and Technical Corporation Division New Delhi listed some of the most hazardous pollutant s from vehicle emissions They were found to be both harmful and in some cases near fatal . The SPM damage lungs and causes asthma.SO2 causes acid rain and damages the lungs and eyes . CO causes blood poisoning ;Pb slows down the nervous system and HC leads to cancer . In a study reported by S.Majumdar in 2010 in Bangalore nearly 25.6% of children suffered from asthma WHO also reports that estimates reveal nearly 2 million deaths in the world are caused by outdoor air pollution . Pavement dwellers , road side hawkers cyclists and pedestrians are dangerously exposed to vehicular exhaust fumes .

Noise Pollution is the second most hazardous pollutant of environment The net effects of high traffic intensity in noise pollution are extremely harzardous pollutant of environment The net effects of high traffic intensity in noise pollution are extremely hazardous . In most cities the decibel levels of

honking are well above the prescribed levels . The traffic congestion on the road is uncontrollable and the no-honking zone loses its meaning .

VIAABLE SOLUTIONS AND REMEDIAL MEASURES FOR SUSTAINABLE TRANSPORT SUSTEM :

The issues of transportation are so complex and there cannot be A SOLUTION but a series of solution will have to be worked out for a more sustainable system of transportation . Urban planners, transport specialist , medical and public health specialists , sociologists , engineers will have to work in close co-ordination .

In order to return urban places to people and to create more livable cities decision makers urgently need to change the direction of urban transport development . In a developing world the trend is largely in favour of the rapid expansion of infra-structure for private motor vehicles . Policies for more and more road construction have clearly failed to cope with the ever increasing demand from rapid motorization. The increase of infrastructure to alleviate travel demand will have apparently positive consequences in the short term; but some months later there will be a much greater congestion than before; rather than solving it.

PUBLIC TRANSPORT

- Shift from private / personal to mass public transport can lower the vehicular emission to a larger extent.
- Priority should be given for the design and development of a modern bus transport system to increase their use in the cities. The JNNURM has been set up in 2005 for a better public transport system.
- A rational evaluation of the cost-effectiveness of the metro rail system needs to be carefully analyzed and only then implemented
- Introduction of engines and transmission technologies fitted to vehicles especially buses to ensure cleaner burning of fuel
- Encourage the use of CNG buses and battery driven vehicles. For motor vehicles especially four wheelers BHARAT STAGE III has specified in cities like Mumbai, Kolkata, Chennai, Bangalore, Hydreabad , Ahmedabad, Pune, Surat, Kanpur, and Agra
- Introduction of safe entry and exit modes for bus passengers. This will require that the buses are fitted with closing doors and properly designed bus stops.

SEGREGATED LANES FOR NON-MOTORIZED TRANSPORT & SAFE PEDEST

- Phasing out of grossly polluting commercial vehicles so as to reduce both air and noise pollution .
- Introduction of alternative fuel like CNG / LPG in vehicles including privately and publicly owned four wheelers and autorickshaws .
- Elevated roads should be reduced and the use of double layered and multi- layered roads should not be adhered . This is to ensure a sustainable transport and creating an awareness amongst children through inputs in school curricula .
- THE WHO has focused on the issue of road safety and declared the 2011 – 2020 as the “ Decade Of Action For Road Safety ” .

CONCLUSION :

The focus on improvement of transport links between places and development of modern transport system and infrastructure becomes an integral part of future planning policies to be implemented .

Cities should respect nature and consider the urban ecological environment as an assest. Integrating environmental issues into urban planning and administration and accelerate the transition of sustainable development . They should promote the use of renewable energy sources and build low carbon eco – friendly cities . An environmentally sustainable transport system will meet today’s need of mobility , access and economic growth without compromising the ability of future generation to meet their needs and environmental protection Cities and their citizens should join together to create sustainable lifestyles and an ecological civilization in which people and environmental co-exist in harmony . There is a need for a

holistic and balanced approach for achieving environmentally sustainable transport focusing on
3 ' E's ENVIRONMENT ECONOMIC GROWTH AND EQUITY

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