

# STUDY OF NON-MOTORIZED TRANSPORT IN CYBERABAD AND HYDERABAD

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**Abstract: --Economic and Industrial growth is a positive sign for a developing country like India. But all this growth is coming along with some new challenges to the environment and public which is creating an artificial disaster in urban areas as Traffic jams and creating much of noise and pollution. Even more deaths are caused by the road accidents more than any other natural disaster or terrorist activities like 9/11. Unfortunately what happens on our urban transportation is more vehicles move rather than more people, Which is the source of the problem. The present study is to identify the reasons for this problem and working out a methodology to develop Non-Motorized Transport (NMT) model for cyberabad region in Hyderabad city. A detailed study is done to understand the problems of pedestrians, who are mostly killed and injured on roads. Methodologies and measure are to be taken to make the road safer for pedestrians which by adopting the best practices of NMT policies of various developed countries where the importance is understand for the safe roads and green public transport are recommend. The benefits of NMT and the cost of the components are also worked out to develop NMT infrastructure for cyberabad region of Hyderabad city where more private vehicles are used for commute**

**Keywords -- NMT, Pedestrians, Road accidents, Cycling, Public Transportation**

## I.INTRODUCTION

Non-Motorized Transport modes (NMT) include walking, bicycle and cycle rickshaw. Earlier days Cycle Rickshaw was a mode of most of middle class public transport. With the economic, social technological growth there is a drastic shift in mode of public

transport. In India the urban road infrastructure is mainly favoring only the use of motorized vehicles. No where in the country we can find a pedestrian friendly road infrastructure in India. The present situation itself is very pathetic and dangerous for non motorists on Indian roads. Now it's the peak time to make some measure and corrective actions to make our roads safer for now and future. From the statistic it can be understood that every month there is a 9/11 happening on Indian roads taking more live than that of a terrorist attack. UNEP Study on fatalities on urban roads tells the dirty picture of Indian Roads. The reason for this is the importance given in spending for motorized vehicles is not overlooked by the policies and officials.

Urban road infrastructure in India is biased in favour of motorised vehicles. This is on account of lack of a reaction to extremely high growth in motorized vehicles in urban India in the last two decades. While the population of India's six major metropolises increased by about 1.9 times during 1981 to 2001, the number of motor vehicles went up by over 7.75 times during the same period (Ministry of Urban Development, 2007, pp. 1-2). From the population census of 2010, at least 35 per cent (27.76 million) urban households had a motorized two wheeler and 9.7 per cent (7.65 million) urban households had a motorized four-wheeler. While, on the whole, the registered motor vehicles increased by 2.4 times during 2002-2011 period or at the rate of 10.2 per cent per annum, in 19 metropolitan cities for which the two time point data is available, registered an increase at 8.8 per cent per annum in the decade (Transport Research Wing, 2012, pp. 3-4).

This has created congestion on the roads, resulting in road widening exercises and construction of flyovers. These two infrastructures have also become symbols of world class cities. Many cities are aspiring to become world class to attract investments. Car usage has become a status symbol, and car buying is termed by the government as contributing to economic growth. This in turn has made car-users a group which is set to de-rail any equitable road development exercises in a city,

claiming every inch of road space for their own rightful consumption.

## II LITERATURE REVIEW

Vasconcellos (2001) argues that transport is not an end in itself. The 'end' has to be the equitable appropriation of space and the corresponding access to social and economic life. It is quite clear that road infrastructure in India completely ignores facilities for pedestrians and bicyclists, and hence is not equitable. The National Urban Transport Policy (NUTP) 2007 has also acknowledged that there is a need for bringing about a more equitable allocation of road space with people, rather than vehicles. This inherent inequity in distribution of road space has also resulted in a rampant growth in number of accidents. As per Transport Research Wing & Ministry of Road and Transport (2011), 497,686 accidents occurred on Indian roads in 2011 alone, of which 24.4 per cent were fatal accidents in which 142,485 persons were killed. Accident severity<sup>3</sup> has increased from 20.8 in 2002 to 28.6 persons.

Non-Motorised Transport is a sustainable mode of transport (Massink et al., 2011). This is primarily due to the reduced external costs and higher value of benefits (Litman, 2007; Sinnett et al., 2011). The range of benefits of Non-Motorised Transport is also wider than the benefits that can be obtained through motorised transport, especially on an individual level (Pucher and Buehler, 2010).

Whether the Non-Motorised Transport mode is used for only a part of the entire journey or for the whole journey, it helps reduce the number of motorised trips and distance. Hence, reducing motorised trips is an important element in lowering the amount of non-renewable resources used and the external costs that are generated by motorised transport trips (Pucher and Buehler, 2010; Murguía, 2004; Elvik, 1999)

However, despite the various benefits and the value NMT has for both people and the environment, it is often not prioritized (Hüging et al., 2014). This is partly due to the conventional focus on motorised transport modes in policy and practice (Macmillian, 2014; Litman, 2007).

Another important issue that hinders the implementation of NMT projects is the lack of adequate tools to assess these types of projects (Hüging et al., 2014; Sinnett et al., 2011, Litman, 2007). Due to the lack of information regarding the potential impact that NMT projects or single NMT measures can have, decision makers often overlook them in favour of initiatives that come with

more information and/or evidence (Litman, 2007; Pucher and Buehler, 2010).

Motorised transport projects generally are easier to cost and the benefits thereof are normally easier to quantify both ex-ante and ex-post to the implementation. All these factors have contributed to NMT projects being overlooked and undervalued in developing countries (Pucher and Buehler, 2010; Litman, 2007).

## III. NEED FOR THE STUDY

The main objective of the study is

1. To curtail unsustainable losses to health and economy.
2. To identify the causes of Accidents and to ensure safety for road users.
3. To check consistency of the road features.
4. To identify problems in the routine maintenance procedures.

## PUBLIC TRANSPORTATION IN HYDERABAD

As a fast growing IT hub and metropolitan city with vast population adding **everyday** to the city as migrants for better education of employment adds to the demand to the existing public transportation facilities. Modes of Public Transport in HMA are

- (i) Multi-Modal Transport System (MMTS) rail with 43 Km network running in 3 routes having a ridership of 1,70,000 commuters daily using the facility travelling to and fro from home to work and vice versa.
- (ii) City Buses operated by Road Transport Corporation serves more than 1 million commuters with 3700 buses plying all across the city.
- (iii) Autos are also considered to be private owned public transport which serves more than 0.5 million commuters with 1,60,000 auto rickshaws.
- (iv) Taxis/cabs serves near about 2lakh commuters with 40,000 plus vehicles.
- (v) Institutional transport facilities provided for self use to commute own stake holders. Eg – Colleges buses transporting students, office buses transporting employees etc.,
- (vi) As the last option commuters use their own vehicles primarily 2 wheelers occupying most of the roads with 3.6 million followed by four wheelers which are 4, 00,000 plus moving on the roads of city.
- (vii) Metro Rail which is to be commissioned by March 2017 is expected to make the real difference in the

travel pattern of the commuters which may reduce the private vehicles usage.

**Planning of NMT Facility:**

It is important to have the NMT network well integrated with the other road network within the study area. The integrated network should strive for the following Goals:



**INFRASTRUCTURE FACILITIES**

HMA is totally having a road network of 17000 kms including all the major and minors roads together. To park all the vehicles GHMC has estimated that a land of 4000 acres would be required. Huge crisis of parking spaces in the city greats and adds a problem to the increasing number of vehicles to the city. Daily 600 plus vehicles are registered by Road transport authorities adding to intensify the problem. But the crisis of parking is managed by occupying the road space creating chaos and traffic jams.

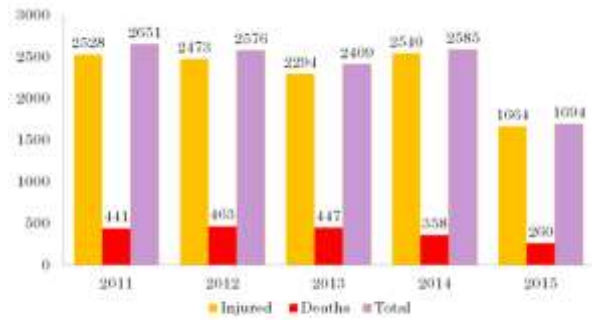
Out of the total road network in the city, not even 5% of the roads are having foot paths and wherever the footpaths are made available that is for the benefit of the street hawkers and not for the use of pedestrians. Very poor infrastructure facility is developed and no plans were made to develop cycle tracks and footpaths. As per IRC the width of footpaths based on the number of pedestrians are given as below.

**Table 1.Capacity of side Walks**

(in meters)	Width of side walk	
	All in one direction	In both direction
1.50	1,200	800
2.00	2,400	1,600
3.00	4,800	3,200
4.00	6,000	4,000

With the existing infrastructure facility which is not at all useful for cyclists or walkers make HMA as unfriendly city for NMT. There is huge scope and need

to develop large Infrastructure facilities for safe travel of NMT users who make a great difference in protecting city and environment by sacrificing their own comfort and which is also a risky affair to get on road without motorized vehicle.



N.B. : Year 2015 (upto 31<sup>st</sup> August- 2015) figures

**Accidents in Hyderabad City Year on Year**

From the above bar charts of the Hyderabad, it can be understood that walking on roads is fatal. So to make NMT a safe mode of transportation in Hyderabad, a proposal is made for Cyberabad region to develop NMT infrastructure for pedestrians and bicyclist. People are much empowered with many organizations coming up with campaigns and activities to promote walk to work, Cycle to work, car pool, special buses for making people to shift in mode of transport. Few organization working in for the rights of pedestrians and Right to Walk foundation, CPIP of ASCI, Roadkraft etc., raising the problems and advocating with local governments for a safe road for cyclists and pedestrians. HYSEA, a software employees association had also made campaigns like Carfree Thrusday, Special buses for work and many other initiatives. To promote cycling Hyderabad Cycling Club (HBC) made bicycles available for rent.

Even after many such initiatives and efforts due to lacks of suitable infrastructure challenges are faced by green commuters. So, in this study a techno economic proposal for developing NMT is studied and derived an approximate budget required for developing a 56 km stretch of with 2 meter width of cycle track will cost only Rs 47 million for Cyberabad region. This region is primarily with IT employees which the awareness and adoption is easy and even the demand for the same is raised in various forums to have a better NMT infrastructure.

**IV BENEFITS OF USING NMT**

Better planning leads to better(more integrated) put-system and NMT-Facilites, which result in better accessibility, conservation of energy and improved of the traffic flow for causing of traffic congestion and by using the NMT services for the Shorter distance it leads

to the travel time saving and improving the saving in fuel consumption and improves in atmosphere in less air pollution and helps lead to the improving of the health of individual and also saves the environment by reducing the consumption of fossil fuels.

With the increase in vehicular growth, commuter's value of time, tendency to fast modes of travel, NMT in spite of its health benefits has been put away from regular travel mode. But in most of countries NMT has developed tends to be retrofitted to existing infrastructure, and to concentrate on minimizing the disturbance that it causes to the flow of motorized traffic. For various reasons, people are now trending to walk, bicycle.

### V CONCLUSION:

A well-functioning road infrastructure must fulfill the requirements of all road users. In the context of the present socio-economic realities pedestrians cannot be ignored from the urban landscape. It is true that all the investment plan focus more on cars but congestion seems to worsen along with lesser pedestrians. Given that there is not much space available to expand existing roads. Future mobility needs are best met by increasing the capacity of the existing road network. This can only be achieved by encouraging modes which are more efficient in terms of space utilization. If pedestrian paths are constructed together with dedicated public transport corridors, will ease of congestion on roads as well as it will make the travel safer. To achieve the sustainability goals of the transport sector, it is necessary to promote use of NMT in Hyderabad. Cost for developing NMT infrastructure would be less than 1 million per km for Cyberabad region for a stretch of 56 kilometers, approximate cost is Rs 47 million. A single project, Hyderabad Metro is expected to spend 150 billion just for a stretch of 72 km. if atleast 0.5% of amount is spend the same length NMT infrastructure could be developed. So, hereafter for any infrastructure development it should be made as a policy that 1 % is to be kept for NMT. Always every Urban Local Body (ULB) need to have a policy for green commutation to promote NMT,

Plan for implementing the policy with proper fund allocation and monitoring the service levels regularly.

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