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STANDING COMMITTEE ON URBAN DEVELOPMENT (2008-2009)

FOURTEENTH LOK SABHA

MINISTRY OF URBAN DEVELOPMENT

URBAN TRANSPORT

THIRTY-SEVENTH REPORT

सत्यमेव जयते

LOK SABHA SECRETARIAT
NEW DELHI

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Presented to Lok Sabha on 16.12.2008
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LOK SABHA SECRETARIAT
NEW DELHI

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INTRODUCTION

I, the Chairman of the Standing Committee on Urban Development (2008-09), having been authorized by the Committee to submit the Report on their behalf, present the Thirty-Seventh Report on the subject 'Urban Transport' relating to the Ministry of Urban Development.

2. The Committee took evidence of the representatives of the Ministry of Urban Development on 2nd August and 18th December, 2007 and 31st July, 2008. The Committee also undertook evidence of the representatives of the Government of NCT-Delhi and DMRC on 2nd August and 18th December, 2007.

3. Experts Shri P.K. Sarkar, Head (TP), School of Planning and Architecture, New Delhi and Shri Amitabh Bajpai, President, Association for Intelligent Transport Systems India (AITS), New Delhi were also invited to tender their views on the subject at the sitting of the Committee held on 31st July, 2008.

4. The Committee considered and adopted the Report at their sitting held on 12th November, 2008.

5. The Committee wish to express their thanks to the officials of the Ministry of Urban Development, representatives of Government of National Capital Territory of Delhi (GNCTD), Delhi Metro Rail Corporation (DMRC) and the experts S/Shri P.K. Sarkar, Head (TP), School of Planning and Architecture and Amitabh Bajpai, President, Association for Intelligent Transport System India (AITS) for placing before them the requisite material and their considered views in connection with the examination of the subject.

6. They would also like to place on record their deep sense of appreciation for the invaluable assistance rendered to them by the officials of the Lok Sabha Secretariat attached to the Committee.

NEW DELHI;
3 *December,* 2008
12 *Agrahayana,* 1930 *(Saka)*

MOHD. SALIM,
Chairman,
Standing Committee on
Urban Development.

PART I

BACKGROUND ANALYSIS

CHAPTER I

INTRODUCTION

1.1 Urban Transport is a critical component of urban infrastructure and the lifeline of the city. A well-developed and planned transportation system is integral to the development of economic and social activity and accelerates urban economic growth. India is one of the emerging economies in the world with roughly 60% of the country's GDP coming from urban areas. At the same time, the rapidly growing urban population coupled with increased economic activities and increased city size have resulted in mounting pressure on the urban transportation system leading to some undesirable trends, for instance, severe congestion on the roads, rapid deterioration in the air quality, noise pollution, increased road fatalities, travel delays and loss of productivity. Considering this trend, urban transportation issues are of immense importance for the overall urban development. A multi-pronged and holistic approach on the part of the Government is required to address these issues. Moreover the Urban Transport policy should aim at a sustainable mass-based Urban Transport system to suit the urban poor and the low income group.

1.2 The Ministry of Urban Development is the nodal Ministry for planning and coordination of Urban Transport matters at the central level. Urban Transport is not defined in the Constitution as a separate subject and the allocation of subjects between Central and State List is mode-wise. However, since Urban Transport is completely intertwined with Urban Development, which is State responsibility, Urban Transportation is primarily a State subject. Accordingly, major responsibility for urban Transport infrastructure and service delivery rests with State Governments and urban local bodies.

A. Present Trend of Urbanisation

1.3 There has been a repid growth of urban population in India during the last few years. As per the information furnished by the Ministry of Urban Development, India's population rose from 350 million at the time of independence to 1027 million in 2001. It is

projected to go further up to 1.4 billion by the year 2006. This increase would be accompanied by large-scale transformation in the rural-urban composition of the population. India's urbanization in 2001 was around 28% which is expected to reach a level of 34% by 2021 and 38.2% by 2026. Also, 35 million-plus cities account for 39% of total urban population of the country.

B. Travel Demand and Pattern in cities

1.4 Increasing urban population coupled with increased economic activities and increased city size had led to a rapid growth in the urban travel demand. Prof. P.K. Sarkar, Head, School of Planning & Architecture, Delhi and expert on Urban Transport planning, informed the Committee, through a Memorandum submitted in August, 2008, that:

> "A study carried out by RITES has projected the travel demand for different categories of cities for the horizon year of 2021 as presented below. The total intracity passenger demand of 759 million passenger kilometer (mpkm)/day would go up to 2511.23 mpkm/day in 2021. A total number of vehicular trips which were of the order of 126 million in 1994 are expected to go up by 430 million in 2021:

Table 1: Projected Travel Demand (mpkm) for Different Categories of Cities

Class of City	1994	2001	2021	Growth 2021/1994
A	103.09	149.43	453.25	4.36
B	75.89	90.43	309.57	4.08
C	109.20	148.66	227.23	2.08
D	94.41	132.07	347.08	3.68
E	92.08	97.22	270.30	2.94
F	284.34	420.99	903.80	3.18
Total	759.00	1038.80	2511.23	3.31

1.5 The Committee were informed by the Ministry that the increased travel demand, in turn, has resulted in a rapid growth in the number of motor vehicles. In the six major metropolises of India, this has far outpaced the population growth. Although, on an average,

the population of India's six major metropolises increased by 1.89 times during 1981 to 2001, the number of registered vehicles went up by 7.75 times during the same period (Table 1). Thus the growth of motor vehicles was almost four times faster than the growth of population. To cite an instance, the total number of registered vehicles in these cities increased from 95.56 lakh in 2001 to 115.69 lakh in 2004.

Table 1: Growth of Motor Vehicles and Population
Vehicles in Thousands, Population in Millions

	1981		1991		2001		Growth 2001/1981	
	Vehicles	Populn	Vehicles	Populn	Vehicles	Populn	Vehicles	Populn
Bangalore	175	2.91	577	4.11	1593	5.69	9.10	1.96
Kolkata	285	9.19	475	10.86	801@	13.22	2.81	1.44
Chennai	120	4.28	544	5.36	1257	6.42	10.48	1.5
Delhi	536	5.71	1813	8.37	3634	12.79	6.78	2.24
Hyderabad	89	2.53	443	4.27	1241@	5.53	13.94	2.19
Mumbai	307	8.23	629	12.56	1030	16.39	3.36	1.99
Average							7.75	1.89

Source: Ministry of Surface Transport, Handbook of Transport Statistics, 1999 & Ministry of Road Transport and Highways, Motor Transport Statistics of India, 2001-02.
@ Figures of Kolkata and Hyderabad relate to 2002.

1.6 Further, as per the figures furnished by the Ministry on 30th September, 2008, the number of registered vehicles in the six major metropolises can be compared with the respective figures in the year 2001, as here under:

	2001	(Figures in thousand)
Bangalore	1593	2779.024-September, 2006
Kolkata	801@	875.56-March, 2004
Chennai	1257	1674.185-2005
Hyderabad	1241@	1355.7-March, 2004
Mumbai	1030	1994.16-March, 2004
Delhi	3636	5627.384-March, 2008

@Figure relate to 2002.

1.7 During the course of examination of the subject, the Committee received various memoranda, which fall under the following three categories:

(i) Views/suggestions received from Chambers of Commerce

(ii) Views/suggestions received from Associations/ organisations/institutes

(iii) Views/suggestions received from general public

The category (i) of memoranda contained views/suggestions from ASSOCHAM, New Delhi and CII, Gurgaon. Their suggestions pertained to proper land use and transport planning, reserving lanes/corridors for public transport/non-motorized modes of travel, subsidization of public transport for mass up-liftment of road infrastructure, investment in MRTS/BRTS, high parking fees as deterrent for use of personal vehicles, up-liftment parking facilities, more police personnel/modern devices for control of traffic, etc.

The category (ii) of memoranda received from Associations/ Organizations/Institutes pertained to betterment of public transport facilities in their respective towns/cities e.g. Corporatisation of Kolkata's taxi service, follow up of rules and regulations and development of roads and traffic services in Agra, wider ring roads/inner roads in Delhi, Mumbai, Nagpur, Pune etc., metro rail project for Bangalore only on broad gauge, eco-friendly and cheap modes of transport, more tax on private vehicles as deterrent to use public transport, surcharges on diesel and petrol, etc.

The category (iii) of memoranda contained views/suggestions of general public. These relate to development of satellite towns to ease traffic in big cities, construction of bypass and ring roads around cities, improvement of road infrastructure, strengthening of local bus transport system, encouragement to battery and electric operated transport modes i.e. use of cleaner technology vehicles, proper connectivity between road and rail transport in the cities, central guidelines/policy for improvement in traffic scenario in the big cities, removal of encroachments for the roads, encouragement to public-private partnership (PPP) in the transport sector, preparation of Master Plan for urban transport, exemption from taxes/duties and subsidy to alternative fuel driven vehicles, permission for FDI in transport sector, increase in parking areas in all major cities, staggered hours for opening and closing of Government and private offices, need for land management and transport planning to have more land for transport

purposes, provision of a complete and updated data system on urban transport for all cities for better planning and implementation, need for a unified transport authority, etc.

1.8 The ever-increasing travel demand in cities has led to several problems in transportation of people as well as goods. A transport policy was, therefore, needed to offer a clear direction and a framework for future action. In this context, the Government formulated a National Urban Transport Policy in April, 2006 (NUTP-2006) with a vision:-

— To recognize that people occupy center-stage in our cities and all plans would be for their common benefit and well-being.

— To make our cities the most livable in the world and enable them to become the "engines of economic growth" that power India's development in the 21st century.

To allow our cities to evolve into an urban form that is best suited for the unique geography of their locations and is best placed to support the main social and economic activities that take place in the city.

1.9 Major Urban Transport issues and the Government's response thereto alongwith the guidelines under NUTP-2006 and its implementation are examined in detail in the ensuing chapters of this Report.

CHAPTER II

MASS BASED PUBLIC TRANSPORT

A. Public Transport—Importance

Public transport occupies less road space and causes less pollution per passenger-km than personal vehicles. Besides it is a more sustainable form of transport and can be a fundamental solution to the ever-growing congestion. According to the Ministry, one major objective of NUTP-2006, is investing in transport systems that encourage greater use of public transport and non-motorized modes, instead of personal motor vehicles. Elaborating it further, the Ministry informed the Committee as below:

> "The Government encourages investment in public transport as well as measures that make its use more attractive than that of personal motor vehicles. Towards this end, all the State capitals as well as other cities with a population of more than one million have been advised to start planning for a mass transit system, including the use of available waterways, adopting a technology that would best suit the city requirements in the coming years.
>
> In this context, funding is available under JNNURM as central financial assistance. The Ministry of Urban Development has also formulated guidelines for development of Detailed Project Report for Mass Transit System projects."

2.2 Emphasizing the importance of public transport, the Secretary, the Ministry of Urban Development, also stated during their briefing on the subject, as under:-

> "While deciding for appropriate mass rapid transport options for the cities to ease pressure on the roads, the Cities/States have the options ranging from a city bus service in mixed traffic to high capacity metro rail system besides, bus rapid transit system, mono rail, light rail transit etc. Since the urban transport is a State subject, the choice of appropriate options after doing alternative analysis is left to the concerned State Governments to decide. Central Government is providing Central financial assistance for a number of rail based and bus based MRTS projects".

He added further as under:

"...For all the guided urban transit systems, like Metro, mono rail, sky buses etc. coming up in the various cities in the country, there is a need for legislative cover.

The Delhi O & M Act is being amended to extend it to all the cities/urban agglomeration in the country for all types of guided urban transit systems.

...We are encouraging States and cities to look at what exactly is the requirement of the city and design a scheme so that public transport becomes easy and people are motivated to shift from two-wheelers and four-wheelers to an acceptable mode of public transport".

B. Pricing of Public Transport

2.3 Pricing of Public Transport is a major issue in Urban Transport. As per the information furnished by the Ministry:

"The basic question here is whether investments in mobility should be paid for by the direct users only or even by the indirect beneficiaries. Thus, should the users of the public transport system alone pay for the system or should car users and other city residents also pay a portion as indirect beneficiaries of reduced congestion and improved air quality? Similarly, should those who benefit from enhanced land value also pay for it, even if they do not use the public transport system? In this context, the NUTP suggests that in financing mass transit systems the basic principle should be that the Government should provide the infrastructure but users/commuters must pay for operating costs and the rolling stock. This implies, that the infrastructure and capital investments should come from all beneficiaries, both direct and indirect, whereas the operations and maintenance expenses should come from direct beneficiaries."

It was further informed as under:

"At present a number of towns and cities in India, have a public bus service. However, the quality of service is not up to the mark and most citizens who can afford private transport prefer not to use the bus service. Since the poor, who do not have access to other modes of transport, usually use public transport, it would be advisable to render different type of service for different groups of people. Keeping this in mind, the NUTP envisages the use of

different types of public transport services for different segments of commuters. According to the policy, ...those who place a premium on cost are the poorest sections of society and need to be given affordable prices. The cost for providing public transport for them needs to be subsidized by other sections of society. However, there is another segment that values time saved and comfort more than price. This segment is comparatively better off and would shift to public transport if their quality expectations are met. The cost of providing transport service to them need not be subsidized and can be met from the fare revenues..."

C. Integrated Public Transport System for a seamless travel

2.4 A good public transport system is one that is perceived by the user as a single system and allows seamless travel between one mode and the other as also between systems managed by different operators. In their Background note, the Ministry stated as under:

"NUTP, 2006 envisages the establishment of quality focused multi-modal public transport systems that are well integrated, providing seamless travel across modes. Such seamless interchange is possible if proper inter-change infrastructure is available.

The Central Government would expect that investments in public transport systems would also seek to ensure that such systems are well integrated and offer a seamless system to the users. Central Government's financial support would be contingent on appropriate authorities/entities being set up to ensure that a coordinated and integrated public transport becomes available."

2.5 On the ground level progress of seamless integrated travel in cities, the Secretary, Ministry of Urban Development, during the briefing held on 2nd August, 2008 informed the Committee as under:

"In the case of Delhi Metro, they have introduced feeder buses also so that when a person gets off the station, he can take that bus, which is immediately available, to certain nearby destinations he wants to go to. In Delhi, an effort has been initiated to bring about linkages between the Metro, the bus system and the rest so that the type of connectivity, what you referred to as seamless connectivity, is possible. I just recall that during a recent discussion in Hyderabad, it emerged that when they have planned new Metro, they have also planned for connectivity from Metro line to other parts of the city".

2.6 **Single Ticketing**: Single Ticket System can be an important tool for a seamless travel. Such a ticket creates a psychological impression of easy transfer, particularly since it does not require multiple purchase of tickets and may also offer benefits of telescopic fares. The benefits of common ticketing to the operators are reduced transactions and lower recurring costs. For the passengers it means a saving in time and greater convenience. This also requires that a single agency takes responsibility for coordination so that there is a common approach to public transport planning and management. Indore has been a pioneer in this having set up the Indore City Transport Service Ltd. Which arranges for the issue of common tickets and also for its sharing on a fair and agreed basis.

On this aspect, the Ministry furnished the following information to the Committee:

> "Delhi Metro Rail Corporation (DMRC) has implemented a smart card based ticketing system. Further, other Transport authorities (Bus and Railways) have also been requested to plan for Smart Card based ticketing system with DMRC's Cards. The same is currently under discussion with the Transport Department of Delhi Government. Once the systems are put in place by the respective Transport Organisations and they adopt DMRC's Smart Card, the system can interlink through a Central Clearing House being put up by DMRC. The Central Clearing house shall enable the interoperability and apportionment of the revenue between the different operators, on mutually agreeable terms."

2.7 In this backdrop, the Committee examined major modes of public transport and related ongoing projects in cities as follows:

D. Bus Transport

2.8 Bus transport constitutes one of the most important and basic forms of public transport. Hence, it is of utmost importance that modern city bus services are encouraged in keeping with the provision of NUTP. During the course of briefing, the Secretary, Ministry of Urban Development however, mentioned the decline in use of urban public bus transport as under:

> "According to a report, the use of public bus transport has declined by 15 per cent during the period from 1995 to 2004 because there are other means available. Now people are inclined to go for personalized vehicles. But, people should be motivated to move away from personalized vehicles to an acceptable and effective

public means of public transport and one of the experiments that is going on in the country in this direction is the bus based mass rapid transport system which assures continuous regular bus service for a stretch of road."

2.9 During the course of the oral evidence held on 18th December, 2007, the Committee also expressed serious concern that in most of the cities, there was a deterioration in a dedicated bus service despite its increasing demand. When asked about the strategy to tackle this problem, the Secretary, the Ministry of Urban Development responded as under:

"As far as the city bus transportation is concerned, if it is in the private sector, they make it a viable proposition. We have strongly taken up the point about giving tax concession, better quality bus and introducing them in the cities. There is a problem. It is one thing for the State Government Corporations to get more buses and to introduce them. But they are finding it difficult to raise resources. That is why, the Public Private Partnership has been recommended whereby the private sector brings in more buses and better quality buses. There is some incentive available. We have repeated our request to the Finance Ministry to consider this aspect so that this becomes a reality. So, the Central tax concession plus the States also giving concession would help. If that happens, we believe a large number of good buses can be introduced in our cities. That could still be a viable proposition. That is one line we are taking".

2.10 In order to introduce quality modern buses for public transport through private participation, the Ministry in their written note held that it was a must either to bring down the cost of buses or provide direct Government subsidy to encourage public transport. According to them, a large component of cost was the taxes and duties on purchase and operation of buses. The Committee was informed that one major problem which discourages bus transport is that the present taxation system is not conducive for the promotion of bus system. In Delhi, for example, the tax burden on a bus is 26 times more than a car. As per World Bank estimates, the total tax burden per vehicle km is 2.3 times higher for public transport buses than cars in Indian cities. It was, therefore, in the national interest that public transport was promoted at all costs as it was not only highly energy efficient and safe but would also lead to drastic reduction in congestion on roads.

The Ministry of Urban Development stated that they had suggested to the Finance Ministry that urban transport having a seating capacity

of more than 20 persons might be exempted from VAT and Central Excise Duty in the Budget 2007-08, subject to State Government also waiving of their share of taxes. The amount of these taxes could be compensated through levying proportionately higher duties on personal vehicles. The Ministry held that since the ratio of personal vehicle to public vehicles may be 5000:1 countrywide, the additional cost burden on private vehicles would be very nominal. As per the latest information provided by the Ministry on 30th September, 2008, the proposal for exemption of VAT and Central Excise Duty was taken up in the Budget 2008-09 and the excise duty was reduced from 16% to 12% on the buses.

E. Bus Rapid Transit Systems (BRTS)

2.11 BRTS is a sustainable, flexible, quickly implementable and economical mode of providing mass rapid transit system. It replicates various features to a metro system on road through a well-designed system of buses running on segregated lanes.

2.12 As per the information furnished to the Committee, proposals for Bus Rapid Transit System (BRTS) had been approved for Ahmedabad, Bhopal, Indore, Pune,/Pimpri-Chinchwad, Vijayavada, Vishakhapatnam, Jaipur and Rajkot cities under JNNURM to provide better public transport and ease congestion. Considering the low cost, ease of implementation, wide area coverage, flexibility, scalability and overall sustainability, lot of cities were stated to be coming up with BRTS proposal to be funded under JNNURM.

2.13 **Experience of BRTS in Delhi**: Despite all the potential benefits of BRTS, its implementation recently in Delhi has left much to be desired. The Committee noted certain media reports which suggested that the Delhi model of BRT (Based on Bogota, Columbia model) was a failure. To a query regarding its loopholes and the suggestions to plug these loopholes, Prof. P.K. Sarkar, head, School of Planning and Architecture, Delhi and expert in Transport Planning, stated, as under:

> "I fully agree with this view that the BRT system in Delhi is a total failure. There are a number of loopholes as under:
>
> - Major blunder has been to take away 7 m. road width from the already inadequate Right of Way (R.O.W) of the road.
> - Before BRT system, the road with divided 6-lane carriage way continues to experience high volume of traffic during most part of the day resulting in the over-multisation of

road capacity. Even this corridor needs widening in order to meet the traffic demand, but instead of widening the road, it has taken away 7 m width of road (2 lane) which has added further problems of traffic operation.

- Presently, peak hour passenger flow ranges between 20,000-30,000 phpd (peak hour passenger per direction) on Josip Broz Tito Marg & L.B.S. Marg, while it is around 40,000 phpd on B.Z. Marg. In view of this, BRT is not a feasible solution. The passenger carrying capacity in Bogota BRT model is higher primarily due to allocation of four traffic lanes (two dedicated bus lanes in each direction) on both directions as compared to Delhi's BRTS. Moreover the number of traffic lanes for personalized vehicular traffic is more than two lanes as compared to Delhi's BRTS. It is note-worthy to mention that the total number of vehicles in Bogota is one fifth of that of total number of vehicles registered in Delhi.

- Even the movement of pedestrian traffic across the BRT corridor is not well planned. Pedestrians are forced to walk comparatively longer distance to cross the BRT corridor. Due to lack of enforcement, pedestrians cross the BRT corridor randomly wherever they find opportunity to jump over railing barrier of the BRT corridor. After operation of BRTS, a considerable number of fatal accidents are also reported.

- The operation 6 phase traffic signal resulting in more than 5 minutes signal cycle time is a bad example for signal operation. On an average, the vehicular delay at any intersections of this corridor is more than 5 minutes even during off-peak hour.

- As a result, there is more than 100 per cent cycle failure to cater to the heavy traffic demand at the intersection. Due to lack of enforcement, personalized vehicles also occupy the BRT lanes for movement. Two wheelers are also observed to ply on the bicycle lanes.

- Even the BRT is being envisaged to be developed in the other five corridors in Delhi where the RoW of the corridors is inadequate. If the other five BRT corridors are developed without paying due consideration to its negative impacts, the residents of Delhi would face the same music and it would be a nightmare for them.

In view of this, it is suggested that the Government of Delhi should abandon the other 5 BRT corridors as approved earlier. Instead of this, Metro Network should be strengthened along with strong feeder bus service network covering all parts of the road network of Delhi. if the mass transportation is improved integrating MRTS and feeder bus service with high reliability, good frequency of service and easy accessibility, personalized vehicle users, would, no doubt switch over to public transport system as observed in the situation in New York, Toronto, and London where public transport system is very predominant".

F. Mass Rapid Transit System (MRTS)-METRO

2.14 Metro constitutes a vital component of Mass Public Transport in cities like Kolkata and Delhi. As per the information provided by the Ministry, following are the ongoing Metro projects:—

(i) Delhi MRTS Project Phase-I

The Delhi MRTS project is being implemented by the Delhi Metro Rail Corporation (DMRC) Ltd. set up in May 1995 with equity participation by the GOI & GNCTD in the ratio of 50:50, i.e., equal participation.

The Government of India approved the investment proposals for Phase-I of the Delhi MRTS Project on 17th September, 1996.

The estimated cost of the project was Rs. 10,571 crore. Cumulative expenditure upto 31.12.2007 was Rs. 10452.63 crore. All the corridors of phase-I had since been completed and commissioned.

(ii) Delhi MRTS Project Phase-II

As per the information furnished, the project was approved by the Government and necessary sanction issued on 30.3.2006 for implementation at an estimated cost of Rs. 8118 crore and revised alignment from IIT to Qutab Minar on 4.12.2006 at an estimated cost of Rs. 558 crore, i.e. a total of Rs. 8676 crore for 54.675 km.

(iii) Extension of Delhi Metro Phase-II to Gurgaon

Extension of Delhi Metro from Ambedkar Colony in Delhi to Sushant Lok in Gurgaon (14.47 km) has been sanctioned by Government of India (GoI) on 4.12.2006 for implementation by DMRC at a toatal estimated completion cost of Rs. 1600.92 crore including taxes and duties. The project is targeted for completion by July, 2010.

(iv) Extension of Delhi Metro Phase-II to Noida

- Extension of Delhi Metro from New Ashok Nagar to Sector 32, Noida (7km) approved by Government on 18.1.2008 at an estimated completion cost of Rs. 827 crore including taxes and duties.

(v) Bangalore Metro Rail Project

The Government of India approved in April 2006 the implementation of the Bangalore Metro Rail Project at an estimated completion cost of Rs. 6395 cr. over a total length of 33 kms. in 2 corridors *viz*:

1. North-South Corridor—14.9 kms (Yeshwantpur to R.V. Road Jayanagar)
2. East-West Corridor-18.1 kms (Baiyapanahalli to Mysore Road) (Out of the above 33 kms., 3.5. kms is underground)

The project was stated to be scheduled for completion in December, 2011. The first section of 7 km. would be completed in March, 2010.

(vi) Mumbai Metro Rail Project
Mumbai Metro Rail Project Phase-I
First Corridor.

Versova—Andheri—Ghatkopar
Total length—11.07 kms.

Completion cost projected by the private partner was reported as Rs.2,356 crore.

The Government of Maharashtra (GoM) demanded a sum of Rs. 650 crore as Viability Gap Funding for the project. Ministry of Finance has not agreed for VGF assistance from their Ministry. As per their advice, the Central assistance is being considered from the Budget of the Ministry of Urban Development under JNNURM.

The Second corridor

Charkop—Bandra—Mankhurd
Total length—31.87 km.
(Estimated Completion Cost) Rs. 7660 cr.

With regard to Mumbai Metro project, the Ministry furnished the following information to the Committee:

> "The Ministry of Finance has given in principle approval for viability gap funding of Rs. 1532 crore under the viability gap funding scheme of the Ministry of Finance. This is the latest position as on 20.11.08."

(vii) Metro projects in Kolkata, Chennai and other cities

The Committee were further informed that the DPR for East-West Metro Corridor in Kolkata, Metro in Chennai and extension of Metro to Faridabad had since been completed. Studies for MRTS system in Cuttack, Bhubaneswar, Ahmedabad and Gandhinagar were reportedly in progress. Further, DPR for extension of Delhi Metro to Bahadurgarh was also stated to be under progress.

2.15 On being enquired about efforts being made by the Government towards implementing a comprehensive transport network by integrating the Metro Rail with buses and feeder transport in order to achieve a seamless urban transport system, the Ministry, through a written reply, responded as under:

> "Integration of different modes of transport i.e. Metro Rail, Buses and Feeder Service is required at three levels, i.e. physical, fare and information. State Governments have been advised to provide for Inter-Modal Integration in the cities as Urban Transport is a State subject. While sanctioning any new project on Metro/BRTS with Central financial assistance, Inter-Modal Integration is being insisted upon. Even for the Metro projects sanctioned for extension to Gurgaon, Noida and Badarpur, it has been specified that the projects should be part of integrated transport master plan which would also include the plan for feeder routes also.
>
> Government of Delhi has informed that the proposed Delhi Integrated Multi Modal Transit System Ltd. will integrate all modes including Metro Rail, Buses and Feeder Transport in order to achive a seamless urban transport system. Delhi Metro has also been given the status of State Transport Authority and has been permitted to run feeder buses for Delhi Metro."

G. Inland Water Transport (IWT)

2.16 Inland Water Transport, in coastal cities in States like West Bengal, Kerala, Maharashtra, Goa etc. can be very significant for public

transport. NUTP-2006 enumerates IWT as an important component of public transport, which should be encouraged wherever possible. Besides, IWT Policy of Inland Water Authority of India (Ministry of Shipping, Road Transport and Highways) aims at increasing the share of IWT in the inter-modal mix of inland transport, encouraging private participation, making this mode competitive and making Government a provide and facilitator. When asked by the Committee about the steps the Government has taken to start inland water transport and link them with other modes of transport system in coastal cities, the Ministry replied as under:

> "Ministry of Shipping, Road Transport & Highways, Department of Shipping has informed that Inland Water Authority of India (IWAI) undertakes IWT developmental works on National Waterways by providing and maintaining IWT infrastructural facilities such as fairways, terminals and navigational aids. These facilities can be utilized for transportation of cargo and passengers in the cities through which a National Waterway passes.

In respect of cities of Mumbai, Channai and Kolkata, specific information is given below:

(a) Mumbai City:

There is no National Waterway in this city and hence no project of IWT operation is at present being implemented by IWAI here. However, with a view to exploring the feasibility of decongestion of Mumbai City through IWT and/or Coastal routes, IWAI has recently commissioned a study.

(b) Chennai City:

There is no National Waterway in this city and no project is being implemented by IWAI for connection IWT with other modes in this city.

(c) Kolkata City:

National Waterway-I (River Ganga) passes through the city of Kolkata and it is learnt that the State Government of West Bengal and some private operators are running several ferry services for transportation of men and material in the city."

2.17 Further, during the course of the briefing, the Secretary, Ministry of Urban Development stated as under:

> "As far as water transport is concerned, we have put focus on this subject. I can immediately recall, Kerala came up for discussion.

So we suggested in the case of city of Cochin, they should think in terms of integrating water transport also with other means of transport because with backwaters available and water movement possible, they should think in those terms. There is presently a water transport available to a limited extent, but it is a question of making that also equally attractive so that people are attracted to that option. When we advice the States and cities to go in for comprehensive mobility plans where this potential exists, we ask them to incorporate that element also so that that mode and that available means is also utilized for movement of people."

H. Intelligent Transport Systems (ITS)

Intelligent Transport Systems (ITS)—Meaning

2.18 Intelligent Transport Systems (ITS) refers to the use of location, information and communication technologies (like wireless & fixed telephony, internet, mapping & satellite technologies) to make travel safe, energy-efficient, seamless and comfortable. ITS connects roads, vehicles and people through dynamic, real-time information and support systems. The Committee decided to examine the feasibility of ITS for Urban Transport in India and heard the views of an expert, Shri Amitabh Bajpai, President, Association for Intelligent Transport Systems, India (AITS) on the subject. He informed the Committee in a written note submitted on 31st July, 2008 as under:

"The basic concept of ITS is to:

(a) Gather and store real-time traffic and traveller information.

(b) Process this information to model the most suitable immediate, short, medium and long-term transport & mobility plans.

(c) Disseminate the information to travellers—whatever mode—on foot, cycles, public transport, air, rail, water, private vehicles; commercial vehicle drivers, fleet operators, etc. to make informed travel choices."

2.19 From the information available on the internet, the Committee observed that ITS can be applied in various procedures concerning systematic flow of transport in cities, as under:

"(a) Vehicle Tracking: Vehicle tracking is a way of monitoring the location, movements, status and behaviour of a vehicle or fleet of vehicles. This is achieved through a combination of a GPS receiver

and an electronic device installed in each vehicle, communicating with the user (dispatching, emergency or coordinating unit) and PC—or web-based software. The data are turned into information by management reporting tools in conjunction with a visual display on computerized mapping software.

(b) Satellite Navigation: Satellite navigation in the context of ITS is the technology of using a GPS and electronic mapping tool to enable the driver of a vehicle to locate a position, then route plan and navigate a journey.

(c) Wireless Vehicles Safety Communications: Wireless vehicle safety communications aid in car safety. It is an electronic sub-system in a car or other vehicle for the purpose of exchanging safety information, about such things as road hazards and the locations and speeds of vehicles, over short range radio links. This may involve temporary *ad hoc* wireless local area networks.

(d) Electronic Toll Collection: Electronic Toll Collection (ETC) makes it possible for vehicles to drive through toll gates at traffic speed, reducing congestion at toll plazas and automating toll collection.

(e) Emergency Vehicle Notification Systems: The in-vehicle e-call is emergency call generated either manually by the vehicle occupants or automatically *via* activation of in-vehicle sensors after an accident. When activated, the in-vehicle e-call device will establish an emergency call carrying both voice and data directly to the nearest emergency point (normally the nearest 112 Public Safety Answering Point, PSAP). The voice call enables the vehicle occupant to communicate with the trained e-call operator. At the same time, a minimum set of data will be sent to the e-call operator receiving the voice call."

Shri Amitabh Bajpai, expert furnished further uses of ITS to the Committee in his written note as under:

"- Traffic Signals Control
- Vehicles number plates recognition
- Real-time information of traffic and weather
- Route guidance
- Car park information
- Bus/Rail arrival times
- Delay/deviation trips"

ITS—Its benefits

2.20 During a briefing meeting with Shri Amitabh Bajpai, the Committee were informed about the following benefits of ITS:

(i) Accessibility

- Availability of real-time transport and traffic information.
- Make better decision on transport modes, routes to take and the time to travel based on optimal criteria.

(ii) Traffic management

- Data collection and analysis are automatic and around the clock.
- Human intervention is minimal except to respond to traffic incidents detected by the system.
- Increase responsiveness to traffic incidents.

(iii) Public Transport operation

- Real-time monitoring of vehicles enables quick response to delays.
- Planning and dispatching are much more efficient.
- Less manpower with higher efficiency.

(iv) Environment

- The use of LED in traffic signals and electronic signboards consumes less energy and improve legibility.
- Improved transport efficiency reduce air pollution.

(v) Safety

- Vehicle is robot with artificial intelligence.
- Assistance provided when needed.
- Reduce the number of motor vehicle crashes and the related fatalities.

(vi) Security

- Screen and track vehicles.
- Privacy becomes less important when security is concerned.

(vii) Technical

- More Professionals are required.

ITS—Government's Efforts

2.21 The Ministry of Urban Development informed the Committee that introduction of ITS for traffic management is one of the prime objectives of NUTP, 2006. On the question of promotion of ITS in Indian cities, the Ministry replied as under:

> "(i) The Government of India encourages projects for introducing Intelligent Transport Systems for collecting real time data for efficient traffic management, on-line passenger information system, automatic vehicle tracking system, fare integration system etc. The State Governments have been asked to prepare DPRs for the same. Under the existing scheme of Urban Transport planning, 40% of cost of such studies/preparation of DPRs shall be met by the Government of India". The Committee's examination of the subject revealed that in August, 2008, the Ministry decided to raise the Central financial assistance upto 80% to the States/UTs for taking up various urban transport studies/ surveys etc.
>
> (ii) ITS is a very wide term and includes advance traffic management system, advance traveller information system, passenger information system, automatic vehicle location system, automatic fare collection system, automatic train protection, automatic train control, electronic toll collection, emergency transportation operation, vehicle assist and automation and operation system etc. ITS is being implemented for electronic ticketing, passenger information system and automatic vehicle location system in city bus service and BRTS, in automatic control, automatic train protection, passenger information system for Metro rail operations."

2.22 The Ministry further informed as under:

"Ministry of Urban Development has set up a Inter-Ministerial Core Group on Intelligent Transport Systems (ITS) for framing a National framework for intelligent Transport Systems. The Ministry has also written to the Ministry of Heavy Industries for manufacture of ITS enabled vehicles which have Global Positioning System technology for vehicle tracking and traffic management. Government of National Capital Territory of Delhi has informed that a decision has already been taken to introduce GPS technology for Delhi Transport Corporation (DTC) buses and phasing out of

private stage carriage Blue Line carriage buses operated by individual operators and introduction of fleet of modern buses to be operated by Corporates/Companies. The city bus service in Indore is entirely GPS enabled with real-time vehicle tracking and passenger information system. All the State Governments have been advised to introduce ITS enabled city bus service in their cities preferably by Public Private initiative."

2.23 During the briefing, when asked whether any pilot project on ITS was undertaken by the Ministry of Urban Development, the Secretary submitted as under:

"Sir, to the best of my knowledge, there is no pilot project which is in our focus and it is again at an evolving stage, what would be the elements of ITS and where it can be applied. We have suggested to the Delhi Government that they should think of applying ITS in the context of the Commonwealth planning because that would involve movement of a large number of people, vehicles on certain roads at a certain point of time and like the reference made to the peak time."

2.24 Later, with reference to the initiatives being taken by the Government in the field of ITS, the Secretary, the Ministry of urban Development, during the evidence, informed the Committee that:

"Realizing the importance of Intelligent Transport System in management of traffic and reduction of congestion, a Core Group on ITS has been set up under the Chairmanship of Secretary, Urban Development to bring all the stakeholders and Ministries together. This Core Group will help in drafting National Framework for ITS."

However, as per the latest information furnished by the Ministry on 30th September, 2008, the National Framework for ITS is yet to be formulated.

2.25 When again enquired if any pilot project on ITS has been initiated, the Ministry in their latest replies informed that:

"With the technical assistance from Government of Italy, a Detailed Project Report for Comprehensive Mobility Planning and Management using ITS has been developed for Delhi. The report has been made available to Ministry of Home Affairs and Government of Delhi for implementation. Based on the success achieved on implementation of this pilot in Delhi, this will be implemented in other cities."

2.26 Shri Amitabh Bajpai also informed the Committee in this context as below:

> "It is now mandated for all cities under the NURM scheme to develop a Comprehensive Mobility Plan using ITS through the Traffic Information Management & Control Center (TIMCC). The TIMCC will help generate real-time traffic data and help in developing traffic models for different times of day, events, for specific speeds, for specific modes, etc. Such models would give the city-managers a tool to route-guide the travellers, thereby making travel for ALL, which includes cyclists and pedestrians, safe and efficient.
>
> This TIMCC will also help maintain seamless timings between the Metro and bus systems, as well as track buses to give real-time passenger information *via* various communication modes like the internet, kiosks, mobile and land phones, etc. In fact, this exercise will greatly help in creating the best time-tables for road construction and maintenance work so that road users are affected in the least possible way during metro, road repair, BRTS work going on."

CHAPTER III

URBAN TRANSPORT: POLICY IMPLEMENTATION, PLANNING AND FINANCING

A. National Urban Transport Policy, 2006 (NUTP)—Objectives and Implementation

3.1 In order to deal with the rapidly growing Urban Transport related problems as also to offer a clear direction and a framework for future action, the Government formulated the National Urban Transport Policy NUTP in April, 2006 with the objective to ensure safe, affordable, quick, comfortable, reliable and sustainable access for the growing number of city residents to jobs, education, recreation and such other needs within our cities. This is sought to be achieved by:

(i) Incorporating urban transportation as an important parameter at the urban planning stage itself rather than being a consequential requirement.

(ii) Encouraging integrated land use and transport planning in all cities so that travel distance are minimized and access to livelihoods, education, and other social needs, especially for the marginal segments of urban population, is improved.

(iii) Bringing about a more equitable allocation of road space, with people rather than vehicles, as its main focums.

(iv) Investing in transport systems that encourage greater use of public transport and non-motorized modes, instead of personal motor vehicles.

(v) Establishing regulatory mechanisms that allow a level playing field for all operators of transport services.

(vi) Addressing concerns of road safety and trauma response.

(vii) Building capacity (institutional and manpower) to plan for sustainable urban transport and establishing knowledge management systems that would service the needs of all urban transport professionals, such as planners, researchers, teachers, students, etc.

(viii) Promoting the use of cleaner technologies.

(ix) Improving access of business to markets and the various factors of production.

(x) Encourage greater use of public transport and non-motorized modes by offering Central financial assistance for this purpose.

(xi) Enabling the establishment of quality focused multi-modal public transport systems that are well integrated, providing seamless travel across modes.

(xii) Establishing effective regulatory and enforcement mechanisms that allow a level playing field for all operators of transport services and enhanced safety for the transport system users.

(xiii) Establishing institutional mechanisms for enhanced coordination in the planning and management of transport systems.

(xiv) Introducing Intelligent Transport Systems for traffic management.

(xv) Reducing pollution levels through changes in travelling practices, better enforcement, stricter norms, technological improvements, etc.

(xvi) Raising finances, through innovative mechanisms that tap land as a resource, for investments in urban transport infrastructure.

(xvii) Associating the private sector in activities where their strengths can be benefically tapped.

(xviii) Taking up Pilot Projects that demonstrate the Potential of possible best practices in sustainable urban transport.

3.2. **Pilot Projects:** On the objective of taking up pilot projects under NUTP 2006, the Ministry elaborated as under:

> "In order to demonstrate the potential benefits from the policy measures suggested herein, the Central Government would take up pilot projects in a sample set of cities drawn from different regions and different city types so that tested models of best practices can be established for replication in other cities."

3.3 The Committee, when desired to know the status of implementation of NUTP, were informed by the Ministry as follows:

> "NUTP-2006 lays down various guidelines for investment in urban transport. The implementation of the policy is, therefore, an ongoing

process. Since Urban Transport is a State subject, the implementation of NUTP in the field is to be done by the concerned State Governments and Urban Local Bodies. At the Central Government level, the policy is under implementation through various projects which are being taken up with Central financial assistance. A new scheme for "Urban Transport Planning" has been processed wherein Government of India would provide Central financial assistance to the extent of 80% for preparing Comprehensive Mobility Plan, land use and transport plan, feasibility studies, launching awareness campaign etc. A new scheme for 'Capacity Building in Urban Transport' has also been prepared and is in the process of approval. As per the latest information provided by the Ministry, the new scheme for 'Capacity Building in Urban Transport' is yet to be approved. The final EFC note has been prepared based on the comments received from various Ministries, and is likely to be approved soon. The new scheme of the Urban Transport planning has been approved."

3.4 In this connection, the Committee observed from the letter of Secretary, Ministry of Urban Development addressed to States/UTs on 26th August, 2008 that 'under the present centrally sponsored scheme of Urban Development planning, the response of the States to avail Central Assistance had not been very satisfactory', which led to the revision of assistance from 40% to 80%.

3.5 Further, during the briefing, the Secretary, Ministry of Urban Development said:

"The National Urban Transport Policy (NUTP) in April, 2006, focuses on the need to 'Move People-Not vehicles'. Since Urban Transport is a State subject, copy of NUTP has been circulated to all the States and Union Territories (UTs) for implementation. All the Urban Transport Projects to be eligible for Central financial assistance under JNNURM, have to be NUTP compliant. Instead of coming up with piece-meal proposals under JNNURM, State/Union Territories have been advised to prepare Comprehensive Mobility plan for the urban agglomeration and derive each project proposal as a part of Comprehensive Mobility Plan. Such Comprehensive Mobility Plan would focus on mobility of people rather than vehicles and accordingly give priority to pedestrian, non-motorised transport (NMT), public transport (all modes), Intermediate public transport duly integrating land use plan. The

Comprehensive Mobility Plan would also indicate the existing situation as well as future plan with short term, medium term and long term measures to improve mobility on sustainable basis, reduce travel demand and develop networks for public transport as well as non-motorised transport."

B. Study regarding Traffic and Transportation Policies & Strategies in Urban Areas:

The Committee were informed by the Ministry in a written note that recently a study was taken up by the Ministry of Urban Development to establish a comprehensive base line of the traffic and transport scenario of urban India for 0.5 million plus cities and State capitals. 30 sample cities were selected for the survey. It also aimed at establishing an independent and reliable basis for the formulation of future policies and programmes for the management of urban transport in India. The final report which came in May, 2008 suggested that the heavy urban transport infrastructure investments needs proper guidance, planning, sustainability, adequate provisions for their maintenance and safeguard. Apart from the required fund, adequate expertise and proper institution mechanism to implement the urban transport infrastructure is the basic requirement. The report made the following suggestions for the proposed institutional framework:

- Priority for Unified Metropolitan Transport Authority (UMTA) implementation.
- Development and management of Central Urban Transport Database.
- Strengthening of Institutional set up.
- Development of urban transport software library.
- Clearing house for new technologies/major projects/projects involving different agencies in urban transportation.

C. Establishment of unified Metropolitan Transport Authority (UMTA)

3.6 The Committee were informed by the Ministry in their Background Note on the subject that the current legal institutional arrangements for managing urban transport were developed at a time when Urban Transport was not a major problem. As a result there is a high degree of fragmentation and separate enactments covering different modes of transport. Apart from this, the planning and implementation of urban transport infrastructure rests with multiple

agencies, which do not necessarily work in a coordinated manner. The Ministry informed the Committee that in most States, the Transport Departments carry out regulatory functions of setting the fares for public bus systems. Roads are built and managed by the local bodies or State PWD. A State Transport Department Corporations operates public buses. Classic examples exist in Mumbai, Kolkata and Chennai where rail based systems are operated by a Central Government agency. Though Delhi has presented an example of the State Government and Central Government having collaborated to set up the metro rail system, yet there is little coordination between the Delhi metro and the bus system. Fares for different modes are also set by different agencies, drawing their authority to do so from different enactments.

3.7 The Ministry further stated that:

"Such a fragmented system of planning and implementation of urban transport projects is not desirable and there should be meaningful coordination in all urban transport activities. Several changes need to be made in the existing regulatory and administrative systems. They have to be conceptualised in the context of the fact that urban transport can not be divorced from the rest of urban development and there has to be very close coordination between various modes of urban transport as also between urban transport and land use. It calls for a very close coordination among those who provide different urban services and it would not be desirable for any one of them to work in isolation. Accordingly, the National Urban Transport Policy (NUTP) recommends the setting up of Unified Metropolitan Transport Authority (UMTA) in all million plus cities to facilitate better coordination in the planning and implementation of urban transport systems. Such an authority should not be an operator of any transport facility, but should function as a coordinator amongst various operators.

It could perform a regulatory function and also provide common facilities that would benefit all operators. It should play an important role in creating a future vision for improved mobility and ensuring that the required investments take place. With reference to setting up of UMTA, the Ministry informed that States of Karnataka and Rajasthan have taken lead in setting up UMTA."

3.8 With reference to the setting up of UMTA, the Secretary, the Ministry of Urban Development, during the briefing, further informed on 2nd August, 2007 as under:

"Towards facilitating setting up of Unified Metropolitan Transport Authority (UMTA) in all million plus cities, the Ministry has

constituted a Task Force for drafting model UMTA Act which will provide requisite statutory backing to the UMTAs for facilitating more coordinated planning, implementation and management of urban transport system/projects. One meeting of the Task Force has already been held and the State Governments have been requested to give their suggestions on the draft Legislation. There is a Task Force for Delhi. This Task Force has made a recommendation that Delhi should immediately go in for what is called unified Metropolitan Transport Authority preferably under the Chairmanship of the Lt. Governor where all the concerned units are represented. There should be legislation to enable this. They still have to take a decision on that. As a follow up of that, we have constituted a second Task Force to look at the requirements of the remaining mega cities and the larger cities and that is what I have referred to. We are currently on the job. We have had one meeting of this Task Force in which State have participated and we are working out a structure to have this metropolitan transport authorities for at least the mega cities and cities which have larger issues like this. So, that also is something which has to come into effect. Of course, one issue we will have to address is that each such entity would be governed by a separate legislation or a separate scheme of things. How integration can be brought about is something which we are seriously addressing and we have some lessons from abroad also. Some of the consultants are guiding us on that also. So we will take note of all those points while formulating our recommendation for the remaining cities. The National Urban Transport Policy, if I may read out refers to the Central Government will, therefore, recommend setting up of a unified multiplicity transport authority in all the metropolitan cities to facilitate more coordinated planning in implementation of urban transport problem projects and an integrated management of urban transport systems. This is something which we intend pursuing because it is not just transport planning or traffic management, it is bringing about an integration of all these different players and different requirements and working through a single platform to facilitate that . So, I suppose, that is also a culture which will get implemented in our country."

3.9 When enquired about the latest position of the proposed UMTA Act, the Ministry furnished the latest information on 30th September, 2008 as under:

"UMTAs have been established in various cities, namely, Bangalore, Hyderabad, Chennai, Mumbai and Jaipur. In Hyderabad, the UMTA is backed by an Act. This has been circulated to all the States *vide* Secretary (UD)'s D.O. No. K-14011/15/2007-UT dated 12.05.2008."

D. Urban Transport Planning

3.10 In the backdrop of numerous traffic and transportation problems an effective and systematic urban transport planning is of utmost importance. On the issues concerning Urban Transport Planning for Indian cities, the Ministry submitted following information to the Committee:

> "Cities in India vary considerably in terms of their population, area, urban form, topography, economic activities, income levels, growth constraints, etc. Accordingly, the design of the transport system will have to depend on these city specific features. Further, transport planning is intrinsically linked to land use planning and both need to be developed together in a manner that serves the entire population and yet minimize travel needs. In short, a Comprehensive Mobility Plan, including an integrated master plan needs to interalize the features of sustainable transport systems. In developing such plans, attention are being paid to channel the future growth of a city around a pre-planned transport network rather than develop a transport system after uncontrolled sprawl has taken place. Transport plans should, therefore, enable a city to take an urban form that best suits the geographical constraints of its location and also one that best supports the key social and economic activities of its residents. The Government therefore, endeavours to promote the development of such integrated land use and transport plans for all cities. To enable this, all urban development and planning bodies in the States are required to have in house transport planners as well as representation from transport authorities in their managements. As part of this exercise, each city is being encouraged to identify major transport axis as potential corridors for future development and then establish a transport system that would encourage growth around itself. Such corridors would have to be protected from encroachment by putting up physical barriers along such reserved corridors and physically constructing roads on short stretches even before settlements come up. This would imply that stretches of the corridor would come up first in order to guide the location of the settlements and not allow undue sprawl to take place."

3.11 Prof. P. K. Sarkar, head, School of Planning and Architecture, New Delhi and expert on Transport Planning explained through a written reply that among the objectives spelt out by a working group on urban transport of the Planning Commission as a part of terms of reference, the following terms of reference are directly related to the

urban transportation planning:

- To estimate the transport needs, not only for the current urban population of cities but also for the needs of those who are yet to join the urban population.
- To suggest measures so as to ensure that appropriate comprehensive city development plans with integrated traffic & transportation plans are prepared under Jawaharlal Nehru National Urban Renewal Mission for each city with integration of Land use Planning and Transportation Plans.

3.12 Prof. Sarkar further added as follows:

In order to accomplish the above objective, the following issues should be taken up to make urban transport programmes successful:

- Future prospective and planning
- Technology issues
- Engineering issues
- Financial issues
- Legal/Administrative/Regulatory issues
- Capacity Building and Awareness issues."

He elaborated further as under:

"As regards the comprehensive city development plans with integrated transportation plans under JNNURM for each city, vision document is to be made for preparation of comprehensive city development (CDP) before it is able to access funds. Besides CDP, an integrated transport and land use plan is also required to be prepared for ensuring high level of mobility for all sections of people. Actions under such integrated transport plans could be classified under the following areas:

(i) Land use Interventions:

- Encourage 'Transit Oriented Development' with high density areas at or close to public transport stations.
- Allow land use changes from time to time, (including for public/Government uses) to enable efficiency in urban structure through market forces.

- Discourage sprawl through introduction of vacant land tax and levy of 'Transport Impact Fee' on development in the periphery.

(ii) Transport Sector Inverventions:

- Promote Non-Motorized Vehicles (NMV) by creating facilities for safe use of such modes and its integration with public transport systems.
- Promote public transit systems that are more cost effective and able to meet the demand levels more optimally.
- Encourage investments in premium bus systems (AC, Express, etc.) that persuade personal motor vehicle users to also shift to public transport.
- Develop ring roads and city bypass roads as well as Railway Line Bypass.
- Develop freight transport terminals outside city limits.

(a) **Mobility needs for small and medium towns (1-5) lakh population**

- Providing for pedestrian pavements and cycle tracks.
- Some improvements in the quality of roads.
- De-congestion of some of the crowded areas like Inter State bus stations, major hospitals, central market areas, major Government offices, railway stations, etc.
- Improvement of some busy intersections.
- Developing transport corridors in advance to enable the orderly growth of new settlements in a manner that would facilitate a preference for public transport.
- Creation of parking spaces for para-transit and other vehicles.

(b) Mobility needs for (0.5-1) million population

Improvement of some bus intersections:

- Improvement of some busy intersections.
- Construction of pedestrian paths and subways.
- Provision of improved parking spaces.
- Improving traffic flow at selected congestion points.
- Improving Passenger facilities for bus systems.

- Shifting of certain facilities from the city center to the fringe areas.
- Construction of freight terminals and bus terminals on a BOT basis.
- Addition of bus lanes to existing roads.
- Construction of new corridors for the development of new settlements.
- Linkages with small towns falling within a regional context.

(c) Mobility needs for (1-4) million population

- Planning for low medium capacity mass transit system (Rs. 20 crores/km) Linking this MRTS with a larger network of low capacity feeder system.

(d) Mobility needs for small and medium towns 4 million plus population

- Planning for medium to high capacity MRTS.
- A larger network of sub-system & feeder to be connected with MRTS."

3.13 During the course of interaction with the Committee, Prof. Sarkar also elaborated on the concept of a system approach to Urban Transport Planning for Indian cities. He said:

> "Any kind of transport studies to be conducted should be based on the concept of system approach which is connected with optimizing the performance of transport system of urban area by integrating landuse and transport components. Fig. 1 shows a broad concept to system approach where society should receive maximum benefit with respect to safety, mobility and accessibility through the integration of land use—transport planning causing least damage to environment.

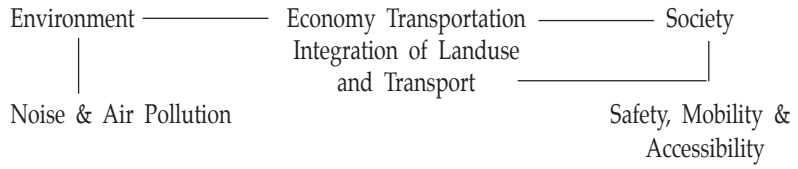

Fig. 1 System Approach to sustainable Transport Planning.

It is envisaged to develop system approach to urban transportation planning through the process of long term transport planning with emphasis of planning for public transport and short term transportation planning.

(i) Long Term Urban Transport Planning

Long Term Transport Planning is a long term strategy planning which examines the traffic implications of alternative land use options and recommends the best pattern of staging development.

The following may be considered to be the key objectives of strategic Landuse plan:

- To reduce the adverse effects of long term growth on the existing urban system.
- To reduce the effects of future urban development on the natural environment.
- To reduce the effects of future urban development on the natural environment.
- To work out a rational balance between residential and employment opportunities so that the journey to work trip is contained.
- To work out a financially feasible transport system that is compatible to environment and with preferences to the community.

(ii) Short Term Transport Planning

The primary objective of short term transport planning is to control the movement of people and goods on the urban transport network in safe and efficient manner and in accordance with social concerns through the coordination in planning and implementation of the different elements of traffic managements.

For preparation of short term transport planning, there are a number of measures which can be applied individually or in combination to accomplish the following aims:

(i) Traffic Engineering Technologies
(ii) Lorry Routes
(iii) Traffic Restraint
(iv) Parking Control
(v) Bus Priority
(vi) Public Transport Pricing and Marketing
(vii) Pedestrian Scheme

E. Financing of Urban Transport

3.14 The information provided by the Ministry with reference to their Demands for Grants (2008-09) mentioned the following regarding financial assistance in the field of Urban Transport:

> "Under the ongoing scheme of 'Urban Transport Planning', this Ministry has been mainly providing grant assistance to State Governments for urban traffic and transportation studies. The grant assistance is presently restricted to 40% of the cost of the comprehensive traffic and transportation studies, preparation of detailed project reports, etc. In addition, this scheme is also used to take up professional studies and for organizing conferences/ workshops etc. on Urban Transport".

3.15 According to the Outcome Budget (2008-09) of the Ministry of Urban Development:

> "The present scheme of providing 40% as the Central Financial Assistance for taking up studies and preparation of DPRs in the field of urban transport was not found attractive enough by the States and they were not exploiting the scheme. As such, a new scheme providing for 80% for Central Financial Assistance for Transport planning is in the process of sanction which will facilitate implementation of National Urban Transport Policy, 2006 objectives effectively throughout India right from the planning stage itself".

3.16 As per Outcome Budget, (2008-09) of Ministry of Urban Development, the outlay for the scheme of "Urban Transport Planning & Capacity Building " for the year 2008-09 is Rs. 30 crore. Besides, as on 01.01.2008, under the component 'Sub-Mission for urban infrastructure and governance' of JNNURM, the number of projects funded for the sectors 'MRTS' and 'other urban transport' were 13 and 11 respectively. Details of the said project assistance are as under:

JNNURM
(SUB-MISSION ON URBAN INFRASTRUCTURE AND GOVERNANCE)
DETAILS OF PROJECTS SANCTIONED UNDER 'MRTS' SECTOR

S.No.	State	City	Sector	Project Name	Approved Cost (Rs. in Lakhs)	Central Share Admissible (Rs. in lakhs)	Central Share Released (Rs. in lakhs)
1	2	3	4	5	6	7	8
1.	Gujarat	Ahmedabad	Mass Rapid Transport System	Bus Rapid Transport System-Construction of 12 Km. Long stretch (Stretch-1 of first phase) BRT Roadway and Carrying out detailed studies and engineering of remaining stretches	87060.00	3066	766.50
2.	Gujarat	Ahmedabad	Mass Rapid Transport System	Bus Rapid Transit System (stretch of 46 km)	40572,00	14200.2	3550.05
3.	Madhya Pradesh	Bhopal	Mass Rapid Transport System	Pilot Corridor (New Market to University) for Bus Rapid Transit System (21.715 km long	23776.00	11888	2972.00
4.	Madhya Pradesh	Indore	Mass Rapid Transport System	Bus Rapid Transport System-PILOT PROJECT	9845.00	4922.5	1230.62
5.	Rajasthan	Jaipur	Mass Rapid Transport System	BRTS project proposal (Package IB) from C zone Bypass crossing to Panipech *via* Sikar Road	7519.00	3759.5	939.88
6.	Maharashtra	Pune	Mass Rapid Transport System	BRT Pilot project for Pune city (Katraj Swargate Hadpsar Route 13.6 Km)	6232.00	3116	779.00

1	2	3	4	5	6	7	8
7.	Maharashtra	Pune	Mass Rapid Transport System	Bus Rapid Transport system (Development of Infrastructure for Commonwealth Youth Games, 2008)	26865.00	13432.5	3358.13
8.	Maharashtra	Pune	Mass Rapid Transport System	Bus Rapid Trasit (Phase I) for Pune city	47615.50	23807.75	5951.94
9.	Gujarat	Rajkot	Mass Rapid Transport System	Bus Rapid Transit System Phase I (Development of Blue Corridor PartI)	11000.00	5500	1375.00
10.	Andhra Pradesh	Vijayawada	Mass Rapid Transport System	Bus Rapid Transport System for Vijayawada (i) MG Road (ii) Nujiveedu Road (iii) Eluru Road (iv) Route No. 5 (v) S.N. Puram Road (vi) Loop Road	15264.00	7632	1908.00
11.	Andhra Pradesh	Vishakhapatnam	Mass Rapid Transport System	Bus Rapid Transport System for Vishakapatnam (i) Simhachalam Transit Corridor including tunnel (ii) Pendurthi Transit Corridor	45293.00	22646.5	5661.63
12.	Rajasthan	Jaipur	Mass Rapid Transport System	Bus Rapid Transport System (BRTS) under package tours	14400.00	7200.00	0.00
13.	Maharashtra	Pune	Mass Rapid Transport System	Pimpri-Chinchwad-BRTS Corridor for Mumbai-Pune Highway (8.5 Kms) and Audh Rawet Road (14.5 Kms)	31214.00	15607.00	0.00
			Total (Rs. In Lakh)		288355.50	136777.95	28492.75

JNNURM
(SUB-MISSION ON URBAN INFRASTRUCTURE AND GOVERNANCE)
DETAILS OF PROJECTS SANCTIONED UNDER 'OTHER URBAN TRANSPORT' SECTOR

S.No.	State	City	Sector	Project Name	Approved Cost (Rs. in Lakhs)	Central Share Admissible (Rs. in lakhs)	Central Share Released (Rs. in lakhs)
1	2	3	4	5	6	7	8
1.	Karnataka	Bangalore	Other Urban Transport	Development of Traffic and Transit Management centre at Kengery (Proposed Bus terminal Maintenance Depot and Passenger Amenity Centre at Kengery, Bangalore)	2112.66	739.431	184.86
2.	Karnataka	Bangalore	Other Urban Transport	Development of Traffic and Transit Management centre at Bannerghatta, Bangalore (Proposed Bus Terminal Maintenance Depot and Passenger Amenity Centre at Bannerghatta)	392.60	137.41	34.35
3.	Karnataka	Bangalore	Other Urban Transport	Proposal for construction of TTMC at Shantinagar Vol I, Vol II, Vol III A 1234 Vol. III B 1 2	8467.96	2963.786	59.27
4.	Karnataka	Bangalore	Other Urban Transport	Proposal for construction of TTMC at Koramangala Vol I, Vol II, Vol III 1 2 3	5058.06	1770.321	44.25
5.	Karnataka	Bangalore	Other Urban Transport	Proposal for construction of TTMC at Banashankari Vol I, Vol II, Vol III 1 2	2223.51	778.2285	19.45

1	2	3	4	5	6	7	8
6.	Karnataka	Bangalore	Other Urban Transport	Proposal for construction of TTMC at ITPL Whitefield Vol. I Vol. II Detailed drawings	2655.63	929.4705	27.88
7.	Karnataka	Bangalore	Other Urban Transport	Construction of TTMC at Vijaynagar Vol. I Vol. II	3812.42	1334.347	33.35
8.	Karnataka	Bangalore	Other Urban Transport	Traffic and Transit Management Centre at Domlur Bus Stand	1555.00	544.25	0
9.	Karnataka	Bangalore	Other Urban Transport	Traffic and Transit Management Centre at Yeswantpur Bus Stand	6131.93	2146.176	0
10.	Maharashtra	Greater Mumbai	Other Urban Transport	Thane Railway System Area Traffic Improvement Scheme (SATIS)	2325.00	813.75	203.44
11.	Karnataka	Mysore	Other Urban Transport	Development of Transport Infrastructure facilities at Mysore	8525.74	6820.592	682.05
				Total (Rs. In Lakhs)	43260.51	18977.7620	1288.90

3.17 As the demand for investment in the urban transport sector during the 11th Plan has been estimated to be around Rs. 1,325,000 million, there is a need felt to create a dedicated "Urban Transport Revolving Fund" for the same. When asked to comment on this, the Ministry replied as under:

> "The investment required in Urban Transport during 11th Five Year Plan for maintaining about 10% growth of GDP is about Rs. 1,32,590 crore. It is likely to be difficult to find resources for such massive investment from out of general funds and hence a dedicated revolving fund for urban transport may be necessary at three levels *i.e.* Central, State and Urban Local Bodies.
>
> The National Urban Transport Policy—2006 also states that "The Central Government would encourage the levy of dedicated taxes to be credited to an urban transport fund and used exclusively to meet urban transport needs within the State. Such dedicated taxes could be in the form of a supplement to the petrol and diesel taxes, betterment levy on land owners or even an employment tax on employers. In fact, revenues from the betterment levy along new high capacity public transport corridors would be included as a component of the financing plan for such, creation transport system.
>
> As such, creation of a dedicated Urban Transport Revolving Fund is under consideration".

3.18 When asked if the said Urban Transport Revolving Fund has since been created, the Ministry stated on 30th September, 2008 as under:

> "A dedicated Urban Transport Revolving Fund has been set up by the city of Surat and also by Pimpri-Chinchwad very recently. All the States have been advised to set up a Dedicated Urban Transport Fund at State level and City level. At the Central level, setting up of Dedicated and Revolving Urban Transport Fund have been proposed in the agenda items of the meeting of National Development Council."

3.19 Land use and levy of taxes: The Ministry further informed the Committee that as suggested in the NUTP, the following methods of additional resource mobilization need to be tapped:

- Commercial exploitation of land and air rights over the land used for transport infrastructure.

- Use of private capital in such activities that are financially viable and can be provided by the private sector in a competitive environment.
- Use of betterment levies to make those whose property values have improved to also pay for the investments that enhanced the value of their properties.
- Fees collected from parking, etc.

In this context, Delhi Metro is already using the space available in the Metro Stations for commercial activities. Shops are being developed in the station premises and at some locations even Malls are being constructed in association with private developers. The Delhi Metro Rail Corporation has also developed an IT Park at Shastri Nagar."

F. Public-Private Partnership (PPP)

3.20 Elaborting the relevance of PPP concept in Urban Transport the Ministry, in a written note, informed the Committee as under:

"There are several activities in which the private sector can be beneficially engaged, thereby saving financial resources for activities that only public agencies can best perform. However, these have to be done under conditions that strike a fair balance between the universal obligations of the Government and the profit motive of the private operator. Accordingly, the Government would encourage a more liberal use of the private sector, especially in activities like the operation and maintenance of parking facilities, certification facilities, repair facilities, construction and management of terminal facilities, etc. Till the mid 1980s most public transport services were largely provided by publicly owned State Transport Corporations. Since then, however, some States have permitted privately run services. While public operations have tended to be high cost and most State Transport Corporations have run up heavy losses, the reliability and safety record of inadequately regulated private operators has been poor. On balance, the Central Government would encourage the State Governments to involve the private sector in providing public transport services, but under well structured procurement contracts.

The DPR guidelines for Integrated Mass Transit System also specify the use of Public Private Partnership (PPP) for funding of various activities including development of terminals, stations, operation of buses etc. An example of this is the Indore city where

buses are operated through private entrepreneurs who are then allowed to keep the fare box collected. The revenue generated from bus passes and advertisements are also shared between the operator and the Special Purpose Vehicle (SPV) formulated for bus operations."

3.21 Further, when asked by the Committee to enumerate the activities and sectors of urban transport in which the Government had opted for PPP, the Ministry stated as under:

"The activities and Sectors of Urban Transport where Public-Private-Partnership (PPP) model has been followed or is intended, are as follows:

(i) Construction, Operation and Maintenance of Metro projects, for example Hyderabad and Mumbai line I and II.

(ii) Operation and Maintenance of Metro e.g. Airport Express line from New Delhi Railway Station to IGI Airport.

(iii) Running of modern city bus service on PPP for example in Indore and Bhopal, Madhya Pradesh.

(iv) Development of bus terminals and parking lots.

(v) Foot overbridges, road signages etc., for example, Foot Overbridge projects being implemented in Hyderabad under 'Fund Your Own City' Scheme run by the Government of Andhra Pradesh.

(vi) Provision/modernization of bus stops/stations, for example new bus stops created in Indore, Madhya Pradesh.

(vii) Bus Rapid Transit System under JNNURM where infrastructure is being provided by the Government and rolling stock, operation and maintenance is planned through PPP participation."

CHAPTER IV

URBAN TRANSPORT: MAJOR ISSUES

A. Rapid increase in private motor vehicles

Rapidly increasing ownership and use of private cars/two wheelers due to lack of reliable public transport as well as presence of extreme income inequality has exacerbated India's transport crisis. Prof. P.K. Sarkar, Head, School of Planning and Architecture, Delhi and expert in Urban Transport Planning, in a written note, referred to the data on vehicle fleet sizes prepared by the Ministry of Road Transport and Highways showing an extremely rapid growth of motorcycle ownership i.e. 16-fold between 1981 and 2002 while car ownership had increased around 7-fold during the same period.

4.2 The Annual Report of the Ministry of Urban Development (2007-2008) stated the following facts regarding vehicle ownership in cities:—

> "The average two wheeler and car ownership levels in metropolitan cities which were 112 and 14 per 1000 population in 1994, are expected to grow to 393 and 48 respectively by the year 2021. This would mean 53 million two wheelers and 6 million cars in the next 15 years in metropolitan cities."

4.3 Responding to a query from the Committee as to what steps the Government has taken to ease congestion on roads due to unchecked rise in the number of personal vehicles in the cities, the Ministry *inter alia* replied as under:

> "...To ease congestion from roads, the Central Government is encouraging public transport, pedestrian and non-motorised transport in line with National Urban Transport Policy (NUTP), 2006 for all the projects which are posed to the Central Government for Central financial assistance under Jawaharlal Nehru National Urban Renewal Mission (JNNURM) etc. Cities and States/UTs have also been advised to introduce modern city bus service with state-of-the-art buses on Public-Private-Partnership basis so that people are incentivised to use public transport rather than the personal vehicles. The Central Government has sanctioned Bus Rapid Transport System (BRTS) projects for a total of 287 kms. at a cost of Rs. 2427 crore in 8 cities under JNNURM in addition to Metro

projects of 115 kms in Delhi at a cost of Rs. 18,205 crore and 33 kms in Bangalore at a cost of Rs. 6395 crore. The Central Government is also encouraging Metro projects in other mega cities namely, Mumbai, Kolkata, Chennai, Hyderabad etc. and BRTS projects in million plus cities."

4.4 **Congestion Tax**: When asked by the Committee as to whether the Government had any plan for imposing a congestion tax on personal vehicles as a deterrent to the use of these vehicles, the Ministry replied as under:

"Introduction of congestion tax lies within the purview of the concerned State Government/City Government. The Govt. of NCT of Delhi has replied that there is no enabling provision for Government of Delhi under the Motor Vehicle Act, 1988 and rules to enforce congestion tax.

It is further mentioned that before congestion tax may be introduced, it would require provision of credible alternatives in the from of improved public transport system and creation of sufficient parking spaces."

B. Non-Motorized Transport

4.5 Until very recently non-motorized modes of travel like bicycles, cycle-rickshaws and walking constituted very basic urban transport modes for the lowest rung of the population. However, with increasing urban sprawl and rising income levels, non-motorized transport has lost its earlier importance. As per the information provided by the Ministry, the share of bicycle trips of the total trips in Delhi declined from 17% in 1981 to 7% in 1994, owing to factors like longer trip lengths and greater risk of accidents, as studies showed that 56% of the road accident fatalities in Delhi involve cyclists and pedestrians.

4.6 As regards the latest figures on the share of bicycle trips of the total trips in major metropolises, the Ministry furnished the same on 30th September, 2008 as under:

"As per the report of M/s Wilbur Smith Associates in connection with 'Study on Traffic and Transportation Policies and Strategies in Urban Areas in India' submitted in May, 2008, the share of bicycle trips of the total trips in major metropolises is as under:

Ahmedabad	15%
Hyderabad	9%

Chennai	9%
Bangaluru	5%
Delhi	12%
Kolkata	11%
Mumbai	6%

4.7 The Ministry however maintained that despite these bottlenecks, non-motorized modes are environmentally friendly and need to be given their due share in the transport system of a city. Towards this end, the Ministry informed the Committee as under:

"First of all, the safety concerns of cyclists and pedestrians have to be addressed adequately. For this purpose, there has to be a segregated right of way for bicycles and pedestrians. Apart from improving safety, this will improve traffic flow, increase the average speed of traffic and reduce emissions resulting from sub-optimal speeds. The Central Government would, therefore, support the construction of cycle tracks in all million plus cities to enhance safety for cyclists and thereby increase the number of commuters using this mode. Similarly pedestrian paths would also be supported. Cities are being encouraged to introduce a public bicycle program, where shoppers can rent a bicycle for use in specially designated areas. Creative facilities like shade giving landscaping, provision of drinking water and resting stations along bicycle corridors would also be encouraged as they can mitigate to a large extent adverse weather conditions.

In order to enable longer trip lengths to be undertaken on bicycles, there is a need to improve bicycle technology. Lighter bicycles with gears and tubeless tyres would be more amenable to longer trip lengths. Electric bicycles are now available in the international market and these should be tested in the Indian market."

4.8 The Ministry further stated that:

"The Central Government would support formulation and implementation of specific "Area Plans" in congested urban areas that propose appropriate mix of various modes of transport including exclusive zones for non-motorized transit. The Central Government would also take up pilot projects, in a simple set of cities, to demonstrate the improvements that are possible through the enhanced use of cycling, for possible replication in other cities."

4.9 In this connection, the Committee were also informed by the Ministry that it had issued an advisory letter to all the State Governments on 2.1.2008 to provide for enough provision for dedicated paths for pedestrians and cycle users with proper design for all new roads, widened roads. It has also been advised that where it is not possible to provide dedicated path for pedestrians and cyclists, traffic calming measures need to be adopted to limit the maximum speed of motorized vehicles to 30 kmph. State Governments had also been advised to incorporate complete network of bicycle tracks to promote safe cycling practice between homes and schools and work centres in particular while preparing the Master Plans. Investment in creating facilities for pedestrians and cyclists was identified as priority area for investment in urban transport under Jawaharlal Nehru National Urban Renewal Mission. Compliance of various advisories issued by the Ministry was also being monitored while providing the Central Financial assistance. All the Bus Rapid Transit Systems (BRTS) projects sanctioned so far for the million plus cities *i.e.* Ahmedabad, Bhopal, Pune, Indore, Vijaywada, Vishakhapatnam, Jaipur and Rajkot envisaged construction of cycle tracks along the BRTS corridors. The work was stated to be in different stages of progress for these projects. State Governments had also been advised by the Central Ministry to give a feedback on implementation of various provisions of NUTP 2006 including construction of cycle tracks. However, no specific steps had been contemplated by the Government to improve bicycle technology as according to them, it was not the technology but the present lack of safe infrastructure for cycling which was leading to the declining share of non-motorized modes of travel in cities.

C. Urban Transport and Environment—Need for clean technologies

4.10 In order to deal with the problem of vehicular pollution, cleaner technologies need to be explored and encouraged. As per the written information submitted to the Committee, while petroleum-based fuels are by far the most commonly used today, other alternatives have been emerging, though slowly. CNG was adopted in a big way for bus transport in Delhi. Electric trolley buses were also being proposed in the city. Electric vehicles had already entered the market for cars and auto rickshaws. Electric two wheelers were also stated to be under development. Besides, renewable sources needed to be tapped as a measure of sustainable development and in recognition of India's energy security concerns. As per the Ministry's information, the Government was encouraging the research, development and commercialization of cleaner technologies.

4.11 In this context, it was informed that the Ministry proposed to lay down a clear and time bound schedule of progressively tighter emission norms, with adequate lead-time, to allow the auto and oil industry to make the required investments. Further, the Ministry proposed to introduce measures to incentivize the use of fuel efficient small sized vehicles that use up little road space and also cause low pollution. The Committee were informed that statutory provisions would also be introduced requiring all in-use vehicles in a city, including personal motor vehicles, to undergo a periodic check up and obtain a specified certification. States would be encouraged to set up such certification facilities, in partnership with the private sector. The Central Government would also support the establishment of training centers for the staff of such certification establishments so that there are adequate skilled personnel, both for certification and for undertaking the required repairs. All of these would require an effective regulatory body to be set up to prescribe, monitor and enforce the adherence of emission and safety standards. When asked about status of the same, the Ministry informed the Committee on 30th September, 2008 that the setting up of effective regulatory bodies to prescribe, monitor and enforce the adherence of norms and safety standards as well as establishment of training centres for the staff of Certification Establishments was within the purview of the State Governments and that so far none of the State Governments had reported any action taken in this regard.

4.12 With reference to the strategy for adoption of cleaner technology, the Ministry stated as under:

> "The strategy of the Government to adopt cleaner technology is outlined in the road map envisaged under the Auto Fuel Policy as approved by the Government of India in 2002 which lays down the roadmap for tighter emission regulation upto 2010. The tighter emission norms as envisaged in the road map are under:

Vehicle Category	Bharat Stage II (entire country)	Bharat Stage III (11 Metros)	Bharat Stage III (entrire country)	Bharat Stage IV (11 Metros)
Passenger Cars	01 April, 2005	01 April, 2005	01 April, 2010	01 April, 2010
Commercial Vehicles	01 April, 2005	01 April, 2005	01 April, 2010	01 April, 2010
2 & 3 Wheelers	01 April, 2005		Preferably April, 2008 but not later than 01 April, 2010	

Department of Road Transport and Highways has informed that the emission norms of the motor vehicles have been tightened periodically. The Bharat Stage III emission norms have been made effective from 1st April, 2005 in 11 mega cities *i.e.* NCR-Delhi, Mumbai, Kolkata, Kanpur, Ahmedabad, Chennai, Surat, Bangalore, Hyderabad including Secunderabad, Pune and Agra. In rest of the country, Bharat Stage II emissions norms are being enforced. Further, cleaner fuels such as CNG/LPG have also been notified by the Department of Road Transport and Highways."

4.13 On the issue of the impact of Urban Transport on the environment, the Secretary, Ministry of Urban Development, during the course of the evidence, *inter alia* stated as under:

"Considering the importance of climate change in the present scenario, Planning Commission is drafting a policy paper on 'Public Transport Sensitive to Climate Change'. A draft policy paper has been forwarded to Planning Commission from the Ministry of Urban Development duly incorporating the comments of experts and of Bureau of Energy Efficiency. The draft policy suggests strengthening of public transport through promotional, fiscal control/regulatory measures, reduction of the fuel consumption per passenger travelled through modal shift to improve access to goods and services through an integrated urban plan, integrating inter-city road passenger transport with urban transport systems, shifting from fossil fuel to natural gas and renewable energy sources, implementing fuel efficient standard for new as well as existing vehicles, discouraging diesel propelled personalized vehicles, technological options to improve fuel economy, etc."

The Ministry later informed on 30th September, 2008 that the Planning Commission had submitted the policy paper on 'Public Transport Sensitive to climate change' to the Prime Minister's Office (PMO).

D. Parking Problem

4.14 Intense motorization has expanded the demand for parking space. On this issue, the Ministry, in a written note informed the Committee as under:

"Levy of a high parking fee, that truly represents the value of the land occupied, should be used as a means to make the use of public transport more attractive. Preference in the allocation of parking space for public transport vehicles and non-motorized modes as well as easier access of work places to and from such spaces would go a long way in encouraging the use of sustainable transport systems. Park and ride facilities for bicycle users, with convenient inter-change, would be another useful measure.

Simultaneously, a graded scale of parking fee, that recovers the economic cost of land used in such parking, should be adopted. The objective would be to persuade people to use public transport to reach city centers.

State Governments would be required to amend building bye laws in all million plus cities so that adequate parking space is available for all residents/users of such buildings. To enable this, Floor Area Ratio (FAR) norms would be made more liberal. Multi-level parking complexes should be made a mandatory requirement in city centers that have several high rise commercial complexes. Such complexes could even be constructed underground, including below areas declared as green belts in the master plan. Such complexes could come up through public-private-partnerships in order to limit the impact on the public budget. All such parking complexes would be encouraged to go in for electronic metering so that there is better realization of parking fees to make the investments viable and also a better recovery of the cost of using valuable urban space in the parking of personal motor vehicles. In residential areas too, appropriate changes in bye-laws would be considered to free the public carriage way from parked vehicles that impede the smooth flow of traffic. Proposals for parking complexes would also be given priority under the National Urban Renewal Mission. Provisions would also be made in the appropriate legislation to prevent the use of the right of way on road systems for parking purposes.

The Ministry in its guidelines for Detailed Project Reports (DPRs) on mass transit system has also specified allocation of parking space for private vehicle, bicycle and para-transit services along the corridor. It also lays emphasis on development of a parking policy for the city and implementing it on PPP basis. The Ministry has also listed the option of higher pricing for parking in Central Business Districts (CBDs).

The Government of Delhi has already escalated the parking fees in the CBD."

4.15 During the course of briefing by the Ministry, the Committee enquired as to whether it would be possible for the Ministry of Urban Development to direct all the State Governments to modify the Development Control Rules (DC Rules) to the extent that sufficient parking space is compulsorily provided to everybody in the urban area, and to deny commencement certificate unless that is done. To this the Secretary, Ministry of Urban Development, responded as under:

"A beginning on this front has been made in Delhi. Under the Master Plan of Delhi, earlier there was a parking space for one

vehicle for one dwelling unit. Now the parking space has been increased to accommodate two or three vehicles per dwelling unit. And this guideline shall be circulated to all the other States as well."

4.16 To a query from the Committee about the States/UTs that have developed parking policies, the Ministry responded on 30th August, 2007 as under:

"Though all the States/UTs have been advised to develop parking policy for smooth and sustainable transport system, most of the States have yet to develop the same. However, the State Governments have been recently asked to provide a feedback about the same. Government of Delhi has informed that they have developed a parking policy in line with NUTP, 2006 and submitted to Hon'ble Supreme Court for consideration and approval. States have also been advised to develop Multi-level parking in cities on PPP basis."

D. Road Accidents:

4.17 Growing traffic in urban areas is linked with a growing number of accidents and fatalities. During the course of the briefing, Secretary, Ministry of Urban Development revealed that a total 4672 persons were killed in road accidents in the six major Indian Metropolises of Bangalore, Kolkata, Chennai, Delhi, Hyderabad and Mumbai in 2005. As per the Ministry's latest data this figure rose to 5796 in 2006 with following breakup:

Bangalore	-	919
Kolkata	-	476
Chennai	-	1136
Delhi	-	2169
Hyderabad	-	427
Mumbai	-	669
Total	-	5796

One major factor for the road accidents is a lack of discipline, and improper driving. The Committee, during the evidence, rued the fact that in our country, it was very easy to get a licence. Further, drivers have scant regard for transport rules and discipline. These factors have aggravated the chaotic traffic situation in cities.

The Committee were informed that addressing concerns of road safety and trauma reponse was an important objective of NUTP-2006.

PART II

OBSERVATIONS/RECOMMENDATIONS OF THE COMMITTEE

Public Transport:

1. Public Transport is the more suitable form of transport for our country in view of the ever-increasing population as well as inability of a large chunk of the same to afford personal modes of transport, apart from severe crunch of road space in metropolitan cities. Therefore, it is imperative for the Government to explore maximum ways to improve public transport and make it attractive. The Committee have been made to understand that the Ministry have advised all State Capitals as well as other million-plus cities to start planning for mass transit systems, which is funded under JNNURM. However, from the figures furnished by the Ministry, the Committee note that 23 out of 35 million-plus cities are yet to submit any proposal on public transport. The Committee, therefore may be apprised of the steps being taken by the Government for impressing upon these cities to submit proposals for improving their public transport systems. In so far as providing statutory support to urban transport system is concerned, reportedly, the Delhi O&M Act is being amended to extend it to all the cities in the country for all types of guided urban transit systems, as legislative cover. The Committee appreciate the move and expect an expeditious action on the same. The Committee hope that the cities are already aware of the merits of a well-integrated and seamless public transport for the users and are working towards proper inter-change infrastructure between different modes of public transport. The Committee understand that the National Urban Transport Policy, 2006 addresses these issues. They would urge the Ministry to formulate a well-laid out strategy/road map in consonance with the Policy and advise the States accordingly. The Committee desire to be apprised of the same in due course.

Bus Transport

2. Bus transport constitutes one of the most important and basic forms of public transport. Thus, the city bus services need to be strengthened. Sadly, the share of buses in all vehicles has declined by 15% during 1995-2004. The Committee urge the Government to take urgent measures to improve the city bus services through better quality of buses and an efficient service.

One major problem which discourages bus transport is that the present taxation system is not conducive for the promotion of bus system. In Delhi, for example, the tax burden on a bus is 26 times more than a car. As per World Bank estimates, the total tax burden per vehicle km is 2.3 times higher for public transport buses than cars in Indian cities. Thus, the taxation system need to be rationalized and harmonized with a view to improving public transport bus system. The cost of modern buses need to be brought down through tax and duty concessions so as to make their introduction financially viable. The Government's initiative of reducing the excise duty from 16% to 12% on the buses in the Budget 2008-09 is appreciable and must be carried forward in future through phasing out VAT and Central Excise Duty on buses. The Committee also desire that the input cost of bus transport particularly the fuel cost needs to be brought down through measures like fuel subsidy to make it viable.

Further, to make public transport attractive so that people move away from using personal vehicles, it would be advisable, in line with the recommendation of the National Urban Transport Policy, 2006 (NUTP), that there should be different types of public transport services for different segments of commuters. At the lower levels public transport should be affordable. However, fares should be commensurate with the quality of services provided. The economically better off, who value time saved and comfort, would definitely shift to public transport if their quality expectations are met. State of the art modern buses may be introduced on Public Private Partnership (PPP) mode. There should also be provisions for express buses guaranteeing seats to passengers. The Committee may be apprised of the steps taken by Government with regard to above issues.

Bus Rapid Transit System (BRTS)

3. BRTS which entails dedicated lanes for high capacity buses, is a crucial mode providing smooth and affordable transport facility to the public. Considering its low cost, ease of implementation, wide area coverage, flexibility and overall sustainability, this system should be encouraged. However, the Committee have been informed by the expert that its merits notwithstanding, this concept should be cautiously and selectively applied in cities and that there are certain basic parameters and prerequisites necessary to make this system successful. In line with the advice of NUTP, the Committee would like to believe that factors such as the urban form, terrain, level of demand, direction and extent of sprawl, width of road available,

extent of population density have been taken into consideration in BRTS projects. From the material furnished by the Ministry, the Committee understand that apart from Delhi, BRTS projects in 8 other cities have been approved. The Committee hope that before implementing these BRTS projects, a thorough scientific feasibility study of each respective city has been taken up in the light of the above-mentioned parameters with due incorporation of public opinion as well. In the backdrop of the criticism of BRTS project in Delhi, the Committee expect that utmost care would be taken in the implementation of these projects.

Inland Water Transport (IWT)

4. Inland Water Transport is a very significant, economic, fuel-efficient and environment-friendly mode of transport for coastal cities and those having inland waterways. However, its current share in total inland transport is very low. IWT Policy of Inland Water Authority of India (Ministry of Shipping, Road Transport and Highways) aims at increasing the share of IWT in the inter-modal mix of inland transport, encouraging private participation, making this mode competitive and making Government a provider and facilitator. The Committee expect the Ministry of Urban Development to coordinate with the Ministry of Shipping, Road Transport and Highways to realize the goals of IWT policy and give a boost to inter-modal transport by connecting the urban inland waterways with other modes of transport, wherever feasible. They urge the Ministry to ensure that cities capable of having inland waterways transport are encouraged to come up with suitable mobility Plans that utilize and integrate their waterways transport with other modes of public transport. The Committee further feel still there is ample scope left to explore the utility of inland waterways in several cities for providing a major affordable means of public transport. Therefore, the Committee also desire that for a smoother and better utilization of inland waterways for urban traport, the Government should explore the possibilities of bringing in land water transport in the urban areas under the jurisdiction of the Ministry of Urban Development. The Committee would urge the Ministry to take up the matter at appropriate level and apprise them of the outcome.

Intelligent Transport System (ITS)

5. As per the expert opinion, ITS when used in urban transport, has a great potential of enhancing safety, reducing emissions as well as congestion. The draft urban bus specifications, currently under finalisation in the Ministry, have also specified that bus architecture

should be compatible with ITS and vehicle tracking system. Considering the benefits of ITS, there is a strong case for formulating a National-level Intelligent Transport System framework. The Ministry of Urban Development has reportedly set up an Inter-Ministerial core group on ITS for establishing a National framework for ITS after bringing all the stakeholders and Ministries together. The Committee commend the same and desire that the core group must frame it with due urgency. They would like to be apprised of the progress on the matter.

National Urban Transport Policy- 2006 (NUTP)

6. The Committee note that Government of India has formulated a National Urban Transport Policy (NUTP) 2006 with its objective to ensure easily accessible, safe, affordable, quick, comfortable, reliable and sustainable mobility for all. It focuses inter alia on integrated land use and transport planning, more equitable allocation of road space, greater use of public transport and non-motorized vehicles, road safety, establishing knowledge management and promoting cleaner technologies. Appreciably, it underlines the need to 'Move People-Not vehicles'. As major policy guidelines need to be implemented by the State Governments and Urban Local Bodies (ULBs), the Committee urge that the State Governments should not be found wanting in this respect and should take expeditious steps to prepare Urban Transport projects in compliance with the NUTP.

While the NUTP is a commendable initiative, the Committee would like to comment on certain vital aspects which should be implemented. According to experts, the planning based on the policy should be more specific on tragets and goals and performance measures, for instance 50% reduction in road accidents over 5 years; reduction in petrol fuel use by 20% 30% and 50% over 2, 3 and 5 Years; increase in pedestrianisation and cycling trips; increase in bus capacity & use; improvement in air quality; reduction in vehicular noise, etc. Also, the Committee feel that some common, basic technical, communication and service standards should be set by the State Governments by standardizing tolling systems and traffic monitoring, management & control systems to ensure seamlessness in Urban Transport. Further, the Committee would like to emphasize upon reform-oriented funding ensuring that more money is not given merely to cities and towns with more problems. In fact, it should be extended as incentives to such towns and cities that show improvement with optimization of existing infrastructure, efficient solutions, and innovative ways to mobilize resources and private

investments. The Committee expect that these proposals would find favour with the Government and would be duly incorporated in the NUTP.

Establishment of Unified Metropolitan Transport Authority (UMTA)

7. A high degree of fragmentation within Urban Transport management and separate enactments for various modes of Urban Transport as also the multiplicity of Urban Transport agencies render a coordinated planning and implementation of Urban Transport infrastructure difficult, ultimately defeating the prime purpose of a unified integrated Urban Transport System. In this connection, the Committee commend the fact that the Ministry is working towards ensuring very close coordination between the providers of urban transport services. They note further that the NUTP recommends the setting up of Unified Metropolitan Transport Authority (UMTA) backed by an Act in all million plus cities to facilitate better coordination in the planning and implementation of Urban Transport systems.

The Committee deplore the fact that even after more than two years of NUTP's recommendation for UMTA, the drafting and enactment of the said Act in all million-plus cities, except Hyderabad, is yet to be done which would provide requisite statutory backing to the UMTAs for facilitating more coordination, planning, implementation and management of urban transport system/projects. Reportedly, Hyderabad is the only example where UMTA Act is in place. The Committee, therefore desire the expeditious enactment of the UMTA Act, by all the State Governments. The Committee also note the constitution of a second Task Force to look at the requirements of the remaining mega cities and the larger cities with respect to the setting of UMTA. The Committee desire that no further time should be lost in finalizing the constitution of the said Authority for all these cities as well. The Committee may be apprised of the composition and the functional mechanism of the UMTAs, thus set up.

Urban Transport Planning: Need for a long-term system approach

8. In the light of the uncontrollable urban transport related problems, a long-term system approach to urban transport planning is urgently required. In this connection, experts have emphasized before the Committee that any Comprehensive Mobility Plan, including an integrated master plan, should be developed keeping in view the population, area, urban form, topography and mobility

needs of each city. The Committee also desire that in compliance with the aim of the NUTP, 2006, the Ministry should systematically encourage the integration of land use and transport planning in all cities so that travel distances are minimized and access to livelihood, education and other social needs, specially, for the marginal segments of the urban population is improved by encouraging the concept of walk-to-work. For a systematic and successful urban transport planning, future perspective technology issues, engineering issues, financial issues, legal/Administrative/Regulatory, capacity building and awareness issues need to be adequately addressed. The Committee expect that in all future urban planning, all these factors would be taken due care of.

Financing of Urban Transport

9. A sound and adequate funding is required for a sustainable urban transport. In so far as the Centralized schemes on Urban Transport is concerned, the Committee note that a scheme for Urban Transport Planning was introduced wherein the Government of India provided Central Financial assistance to the States/UTs upto 80% for preparing comprehensive urban transport plans/studies, integrated land use etc. The percentage of Central Financial assistance was revised from earlier 40% to 80% as the States were reportedly not very forthcoming in availing the same. The Committee hope that the revised provision would attract a suitable response from the States/UTs. They would like to be apprised of the response from the States/UTs to the scheme as well as the level of monitoring done to ensure appropriate utilization.

Further, the Committee have been given to understand a new scheme for 'Capacity Building in Urban Transport' is currently awaiting approval of the Expenditure Finance Committee (EFC). They would like to be apprised of the latest position on the same and furnished with a note on the details of the scheme, projections and tragets, if any.

Further, the Committee are dissatisfied to learn that as on 01.01.2008, under the component 'Sub-Mission for urban infrastructure and governance' of JNNURM, the numbers of projects funded for the sector MRTS and 'Urban Transport' excluding MRTS were just 13 and 11 respectively. Moreover the projects are being taken up in only 12 cities out of 63 mission cities, which is not even 20%. The Committee do not find it satisfactory considering the fact that JNNURM, which was started in December, 2005 will be completing

3 years by the end of this year. The Committee hope that more projects covering all these cities would be taken up. Further, as the demand for investment in urban transport sector during the 11th Plan has been estimated to be around Rs. 1,325,00 crore, there is a need felt to create a dedicated "Urban Transport Revolving Fund" for the same. However, the Committee regret the delay in creation of the said fund. As regards States, the Committee learn that only the cities of Surat and Pimpri-Chinchwad have set up such a fund. At the Central level, the setting of such a fund has been proposed in the agenda items of the meeting of National Development Council. The Committee hope that the Ministry would continue to pursue the matter so that such a fund is set up at the earliest.

Public Private Partnership

10. The merits of private participation in Urban Transport in bridging the resource gap in investment and improving the operational and efficiency vis-a-vis the rapidly growing Urban Transport demand have already been recognized. At present the Government is stated to be pursuing policies to promote private sector involvement in Urban Transport. An appropriate regulatory framework is required for a cooperative public-private mixed operation. While the Government should coordinate and monitor the operation, private operators should also be consulted for planning the system. Though privatization appears to have good potential for improving the efficiency of public transport, experience to date has shown the crucial need for public regulation of safety, route and schedule coordination and service quality. The Committee have been apprised of certain sectors where PPP model is being followed in cities like Delhi, Mumbai, Indore, Bhopal and Hyderabad. They further desire that focus of PPP should be on those sectors of Urban Transport which encourage inter-modal public transport, cleaner technologies, modern parking facilities and Intelligent Transport Systems. The Ministry may apprise the Committee of the activities/ sectors of Urban Transport, where PPP is being taken up in conformity with the parameters mentioned above.

Rapid Increase in Private Motor Vehicles:

11. Indian cities are facing a transport crisis in recent times. As an inveitable consequence of rapid urbanization, which is reportedly expected to reach from 28% in 2001 to 34% by 2021, the country is witnessing great jump in travel demand. However, inadequate public transport facilities, as well as uncoordinated land use and transport

planning are some of the most severe problems faced by a city-dweller today. This has led to a tremendous increase in personalized vehicles. The growth of private motor vehicles has far outpaced the growth in public transport facilities in the major cities. According to the Ministry of Road Transport and Highways, while motorcycle ownership has shown a 16-fold increase between 1981 and 2002, car ownership has shown a 7-fold increase during the same period. The impact of such imbalance has resulted in choking up of already congested roads, increase in traffic accidents, environmental pollution due to greenhouse gas emission, noise pollution and rise in demand for petroleum products thereby putting an increasing pressure on our foreign exchange reserves. The Committee feel that the urban poor suffer the most from the worsening transport problems in cities as they cannot afford personal vehicles and remain dependent on public transport for travel.

In this context, the Committee desire that in order to check the rapid rise of personal vehicles in cities as well as cater to the increasing demand for public transport, the Ministry, in coordination with the States, should play a pro-active role in providing modern, reliable, comfortable, affordable and seamless public transport service in cities. As Urban Transport is primarily a State subject, the Central Ministry has to play the role of a guide and facilitator in the matter.

Congestion Tax

12. Traffic congestion is the most visible transport problem plaguing our cities on a daily basis. The most important cause of congestion is the presence of mind-boggling number of private motor vehicles sharing road space with other modes of transport. According to the Annual Report of the Ministry, 5.3 crore two wheelers and 60 lakh cars will be on the road in our metropolitan cities in the next 15 years. The Committee feel that the Ministry should explore the possibility of issuing suitable guidelines for levy of 'congestion tax' on personal vehicles in the form of a toll tax in the congested areas or roads. This mechanism should be evolved in such a manner that the charges change according to the time of the day to reflect congestion levels so that the private vehicle users are inclined to consider other options for transport.

Non-Motorized Transport

13. The Committee note that non-motorized modes of transport like bicycles, cycle rickshaws, etc. are environment friendly and economically favourable for the lower income group population.

Hence, these modes need to be encouraged. However, they deplore the fact that non-motorized modes of transport are fast losing their importance not only as a natural consequence of the increasing urban sprawl and rising income levels but also as a result of lack of desired importance given to non-motorized modes in the overall urban transport policy, planning and investment.

The Committee desire that the safety concerns of cyclists and pedestrians should be addressed urgently and adequately. The Ministry must ensure that segregated right of way for bicycles and pedestrians are constructed in all the million plus cities. Facilities like secure parking, shade giving landscaping, provisions for drinking water and resting stations along bicycle corridors should be encouraged. Further, the Ministry should incentivize the use of lighter bicycles with gears and tubeless tyres as also the use of electric bicycles. Besides, local neighbourhood roads need to be strengthened. People taking cars for small distance need to be discouraged by building safe, comfortable and exclusive walking and cycling paths. The Committee are also of the view that there should be a clear provision for rights as well as responsibilities of pedestrians and cyclists in the traffic rules. The Committee note that under the NUTP, the Central Government has committed to give priority to the construction of cycle tracks and pedestrian paths in all cities, apart from encouraging public-bicycle programmes. The Bus Rapid Transit System (BRTS) projects in 8 million-plus cities resportedly have provision for cycletracks. The Committee hope that the Ministry will monitor this in all seriousness and take necessary steps to protect the non-motorists. The Committee would like to be apprised of the progress on the matter.

Urban Transport and Environment—Need for clean Technologies

14. In order to deal with the problem of vehicular pollution, cleaner technologies need to be explored and encouraged. In this connection, a clear and time bound schedule of progressively tighter norms with adequate lead-time has been envisaged in NUTP, 2006. In this context the Committee feel that for popularizing cleaner technologies as well as reducing the use of fossil fuels, the use of battery-run/electric vehicles/carts should be encouraged in closed campuses like universities, institutions, Government organisations etc.

The Committee have been made to understand that the Government proposes to encourage State Governments to set up

specified certification facilities wherein all in-use vehicles in a city, including personal motor vehicles, would be required to undergo a periodic check up and obtain a specified certification in tune with the policy. Further, as the Government has decided to support the establishment of training centres for the staff of such certification establishments so that there are adequate skilled personnel, both for certification and for undertaking the required repairs, the Committee would like to be apprised of the progress on the matter. In so far as setting up of an effective regulatory body to prescribe, monitor and enforce the adherence of emission and safety standards is concerned, the Committee deplore the fact that so far none of the State Governments has reported any action taken in this regard. They expect the Ministry to play a proactive role in the matter.

Parking Problem

15. Inadequate parking space has aggravated the congestion problem in cities. In this context, the Committee expect an urgent and proactive role by the Ministry in laying down such guidelines that encourage formulation of State level urban transport policies containing features like a differential charging of parking fees for various vehicles, preferential treatment for public transport and non-motorized modes etc. In this connection, the Committee note that the Government of Delhi has escalated the parking fee in Central Business Districts. The Committee expect that similar measures should have been taken by other million-plus cities also. Further the Committee feel that the building bye laws must make it mandatory to leave ample space for parking of at least two vehicles per dwelling units. Besides, the purchaser of a vehicle must be asked to produce relevant documents related to availability of parking space at home. The Committee are also of the view that multi-level parking complexes on PPP basis must be made a mandatory requirement in city centres that have several high-rise commercial complexes. The Committee deplore that despite the Ministry's advisory to State Governments on all the above-mentioned aspects of the parking policy, they are yet to come up with an appropriate parking policy. The Committee hope that the Ministry would take up the matter with the State Governments and urge them to address this issue.

Accidents and Safety: Need for a stricter licensing policy

16. The Committee are pained to note that a total of 4672 persons were killed in road accidents in the six major Indian Metropolises of Bangalore, Kolkata, Chennai, Delhi, Hyderabad and Mumbai in

2005. The figure rose to 5796 in 2006 for these six Metropolises. These figures indicate that about 16 persons per day were killed in road accidents in these six cities during 2006. Though the Ministry could not furnish latest figures, yet the Committee are convinced that the figures are showing an upward trend day-by-day. The Committee observe that most of the road accidents/fatalities occur due to indiscipline and lack of proper driving skills of drivers. The Committee, therefore, feel that licensing norms need to be made stricter in the urban transport policy with appropriate monitoring for implementation of the same. The Committee also desire that in order to rein in the recalcitrant drivers, punitive action should be made more stringent. Also, Intelligent Transport Systems should be utilized in identifying the culprits. The Committee would like to be apprised of the efforts made by the Government towards enhancing road safety.

NEW DELHI;
3 *December,* 2008
12 *Agrahayana,* 1930 *(Saka)*

MOHD. SALIM,
Chairman,
Standing Committee on
Urban Development.

ANNEXURE I

STANDING COMMITTEE ON URBAN DEVELOPMENT
(2006-2007)

MINUTES OF THE SIXTEENTH SITTING OF THE COMMITTEE HELD ON THURSDAY, THE 2ND AUGUST, 2007

The Committee sat from 1500 hrs. to 1700 hrs. in Room No. '139' Parliament House Annexe, New Delhi.

PRESENT

Mohd. Salim—*Chairman*

MEMBERS

Lok Sabha

2. Shri Surendra Prakash Goyal
3. Shri Anant Gudhe
4. Shri Kaliash Joshi
5. Shri A.K. Moorthy
6. Shri Shripad Yesso Naik
7. Shri D. Vittal Rao
8. Shri Sudhangshu Seal
9. Kunwar Sarv Raj Singh
10. Kunwar Devendra Singh Yadav

Rajya Sabha

11. Shri Manohar Joshi
12. Shri Surendra Moti Lal Patel
13. Shri Krishan Lal Balmiki
14. Shri Penumalli Madhu
15. Shri Mukul Roy
16. Shri Brij Bhushan Tiwari

SECRETARIAT

1. Shri S.K. Sharma — *Additional Secretary*
2. Shri S. Balshekar — *Joint Secretary*
3. Shri R.K. Saxena — *Director*
4. Smt. Anita B. Panda — *Deputy Secretary*
5. Shri Harchain — *Under Secretary*

Representatives of the Ministry of Urban Development

(i) Shri M. Ramachandran, Secretary (UD)

(ii) Shri M. Rajamani, Joint Secretary (UD)

(iii) Shri S.K. Lohia, Director, (UT)

(iv) Shri C.B.K. Rao, Director (P&P), DMRC

2. At the outset, Hon'ble Chairman welcomed the Members and representatives of the Ministry of Urban Development to the sitting of the Committee. The Chairman then asked the Secretary, Ministry of Urban Development to brief the Committee on the subject, "Urban Transport". He also drew the attention of the representatives to the provisions under Direction 55(1) of the Directions by the Speaker.

3. The Secretary, Ministry of Urban Development, then gave a brief presentation on the subject 'Urban Transport' and also explained the measures taken by them for ensuring an efficient and sustainable urban transport system in the light of the National Urban Transport Policy, 2006. The representatives of the Ministry then clarified the queries raised by the Members on the subject, "Urban Transport".

4. As there are several technical as well as non-technical aspects of the subject, the Hon'ble Chairman desired to hear the views of the experts also and have further briefing from the representatives of the Ministry of Urban Development on the subject "Urban Transport" in due course.

5. A verbatim record of the proceedings has been kept.

The Committee then adjourned.

ANNEXURE II

STANDING COMMITTEE ON URBAN DEVELOPMENT
(2007-2008)

MINUTES OF THE SIXTH SITTING OF THE COMMITTEE HELD ON TUESDAY, 18TH DECEMBER, 2007

The Committee sat from 1500 hrs. to 1530 hrs. in the Committee Room 'D' Parliament House Annexe, New Delhi.

PRESENT

Mohd. Salim—*Chairman*

MEMBERS

Lok Sabha

2. Smt. Botcha Jhansi Lakshmi
3. Shri Sharanjit Singh Dhillion
4. Shri Surendra Prakash Goyal
5. Shri Anant Gudhe
6. Shri Pushp Jain
7. Shri Sajjan Kumar
8. Shri Sudhangshu Seal
9. Kunwar Sarv Raj Singh
10. Kunwar Devendra Singh Yadav
11. Shri Suresh Ganpatrao Wagmare

Rajya Sabha

12. Shri Nandi Yellaiah
13. Shri B.K. Hariprasad
14. Shri Surendra Moti Lal Patel
15. Shri Krishan Lal Balmiki
16. Shri Brij Bhushan Tiwari
17. Shri Penumalli Madhu

SECRETARIAT

1. Shri S. Balshekar — *Joint Secretary (SB)*
2. Smt. Anita B. Panda — *Deputy Secretary (UD)*
3. Shri Harchain — *Deputy Secretary-II (UD)*

Representatives of the Ministry of Urban Development

(i) Shri M. Ramachandran, Secretary (UD)

(ii) Shri S.K. Lohia, Director (UT), MoUD

(iii) Shri Vijay Anand, Director (Projects), DMRC

(iv) Shri A.K. Chaturvedi, Special Commissioner (Transport), Govt. of NCTD

2. At the outset, the Hon'ble Chairman welcomed the Members and the representatives of the Ministry of Urban Development to the sitting of the Committee. The Chairman then asked the Secretary, Ministry of Urban Development to brief the Committee on the subject "Urban Transport". He also drew the attention of the representatives to the provision of Direction 55(1) of the Directions by the Speaker, Lok Sabha.

3. The Secretary, Ministry of Urban Development then briefly outlined the issues regarding the subject 'Urban Transport' and also explained the initiatives taken by them to realize the objectives of the National Urban Transport Policy, 2006. The representatives of the Ministry also to the clarifications sought by the Members on the subject.

4. As there are several technical as well as non-technical aspects of the subject which needed further clarification, the Committee decided to hear the views of some experts also on the subject in due course.

5. A verbatim record of the proceedings has been kept.

The Committee then adjourned.

ANNEXURE II

STANDING COMMITTEE ON URBAN DEVELOPMENT
(2007-2008)

MINUTES OF THE SEVENTEENTH SITTING OF THE COMMITTEE HELD ON THURSDAY, THE 31ST JULY, 2008

The Committee sat from 1100 hrs. to 1300 hrs. in Committee Room No. '139' Parliament House Annexe, New Delhi.

PRESENT

Mohd. Salim—Chairman

MEMBERS

Lok Sabha

2. Shri Surendra Prakash Goyal
3. Shri Anant Gudhe
4. Shri Pushp Jain
5. Shri Sajjan Kumar
6. Shri A.K. Moorthy
7. Shri Sudhangshu Seal
8. Kunwar Devendra Singh Yadav
9. Shri Suresh Ganpatrao Wagmare

Rajya Sabha

10. Dr. Prabha Thakur
11. Smt. Syeda Anwara Taimur
12. Shri B.K. Hariprasad
13. Shri Surendra Moti Lal Patel
14. Shri Krishan Lal Balmiki
15. Shri Penumalli Madhu
16. Shri Mukul Roy

SECRETARIAT

1. Shri A Louis Martin — *Joint Secretary*
2. Shri T.K. Mukherjee — *Director*
3. Smt. Anita B. Panda — *Deputy Secretary*
4. Shri Harchain — *Deputy Secretary II*

EXPERT

Professor P.K. Sarkar, Head (TP), School of Planning & Architecture, I.P. Estate, New Delhi.

2. At the outset, the Chairman welcomed Professor P.K. Sarkar and drew his attention to the provision of Direction 55(1) of the 'Directions by the Speaker, Lok Sabha'.

3. Professor P.K. Sarkar, then proceeded with his power point presentation on the topic 'Transport Planning & Research', and highlighted certain core issues like increasing number of private vehicles and the consequent rise in road congestion, transport related pollution, inadequate traffic management, etc. He also explained the concept of a sustainable long-term transport planning focussing on 'people centric' public transport. Thereafter, he responded to the queries raised by the Members pertaining to the subject.

Professor Sarkar then withdrew.

EXPERT

Shri Amitabh Bajpai, President, Association for Intelligent Transport Systems, India (AITS), Prithvi Raj Road, New Delhi, AITS.

4. Shri Amitabh Bajpai, was then invited to appear before the Committee.

5. The Chairman welcomed Shri Amitabh Bajpai and drew his attention to the provisions of Direction 55(1) of the 'Directions by the Speaker, Lok Sabha. Shri Bajpai then made a power point presentation on 'Intelligent Transport Systems' (ITS). He explained the meaning and significant role of ITS in making travel safe, energy-efficient, seamless and comfortable through the use of real time information and support systems. He also responded to the queries raised by the Members pertaining to the subject.

6. A verbatim record of the proceedings has been kept.

The Committee then adjourned.

ANNEXURE IV

STANDING COMMITTEE ON URBAN DEVELOPMENT
(2008-09)

MINUTES OF THE FIFTH SITTING OF THE COMMITTEE HELD ON WEDNESDAY, THE 12TH NOVEMBER, 2008

The Committee sat from 1100 hrs. to 1230 hrs. in Committee Room 'E' Parliament House Annexe, New Delhi.

PRESENT

Mohd. Salim—*Chairman*

MEMBERS

Lok Sabha

2. Shri Anant Gudhe
3. Shri Pushp Jain
4. Shri A.K. Moorthy
5. Shri Sudhangshu Seal
6. Kunwar Devendra Singh Yadav

Rajya Sabha

7. Smt. Syeda Anwara Taimur
8. Shri Surendra Moti Lal Patel
9. Shri Krishan Lal Balmiki
10. Shri Brij Bhushan Tiwari
11. Shri Penumalli Madhu
12. Shri Mukul Roy
13. Shri Manohar Joshi

SECRETARIAT

1. Dr. Ravinder Kumar Chadha — *Joint Secretary*
2. Shri T.K. Mukherjee — *Director*
3. Smt. Anita B. Panda — *Deputy Secretary*
4. Shri Arvind Sharma — *Under Secretary*

2. At the outset, Hon'ble Chairman welcomed the Members to the sitting of the Committee. The Committee then took up for consideration the draft Report on the subject 'Urban Transport' relating to the Ministry of Urban Development. After some deliberations, the Committee adopted the draft Report with some modifications.

3. The Committee then authorized the Chairman to finalize the Report in the light of the additions suggested and consequential changes, if any, arising out of factual verification of the Report by the Ministry, and present the Report to the Parliament.

4. The Committee also decided to have a briefing with the representatives of the Ministry of Urban Development on Tuesday, the 25th November, 2008 in connection with the examination of the subject, "The progress of JNNURM and challenges of Urban Infrastructure."

The Committee then adjourned.