

Urban Transport Recommendations

National Transport Development Policy Committee

17th Meeting of the NTDP

Rail Bhawan, New Delhi, 5th January 2013



Summary of Recommendations : Urban Transport

- *Current Ground realities and trends*
- *Futuristic, Aspirational Goals for 2031*
- *Key ingredients of Sustainable Urban Transport Policies*
- *Transforming Sector Institutions and Governance*
- *Investment Requirements and Financing strategies*

Summary of Recommendations : Urban Transport

- *Current Ground realities and trends*

Current Ground Realities



Trends

Personal motorised transport

Trend : BAU will see massive increase in 2w and cars.
Policies can reduce damage

Parking in large cities

Trend : Increasing congestion, parking fees being instated, off street parking yet to be created

Externalities/Energy / Envrnet

Trend : Fuel consumption could go up 7 times in 20 yrs. Costs borne by society in general, has been difficult to pass on to users alone

Densities

Trend : increasing sub urbanization esp. in larger cities

Public transport modes

Regulated: only in 25 mn + cities; rapid reduction in public buses as % of vehicles
Unregulated: thriving in others

Health and Safety

Trend : 1 kmph in speed results in a 3 percent increase in the incidence of injury crashes and a 4 to 5 percent increase in fatal crashes. **Fatalities to go up by 144% in this decade**

Modal Share

Trend : Rapid motorization and falling share of walk, NMV and PT

Trips and Trip lengths

Trend : Motorised Trips increasing with affordability, avg Trip lengths rising

Smaller cities have not yet received transport investments

NMT, Paratransit, pedestrian and bicycling road safety design and infrastructure – lack of any focus policy/strategy

Futuristic, aspirational Goals for 2031

- Promote **access of all citizens to jobs, education and recreation at affordable costs** and within reasonable time, convenience and quality.
- **Minimize overall production of green house gases and pollution** (well to wheel) per passenger km.
- **Empowering urban local governments** to make decisions on urban transport in their respective cities
- Minimize overall demand for transportation and expenditures for both the state and users, while improving the quality of access and of urban transport services.
- **Minimization of full life-cycle costs** in the choice between different urban transport systems and modes

Desired modal mix

- Minimize financial costs of transportation
- Emphasis on **improved safety and environmental emissions standards**. Aim towards zero traffic fatalities.
- Enhancement of technical capacity at all levels: central, state, and local
- Use of a fiscal regime at central, state and local levels to influence mode choice in accordance with the desired shares.

City size in lakhs	.5-1	1-5	5-10	10-20	20-50	>50
Walk	30	30	30	30	25	25
Cycle	25	20	15	12	10	10
Rickshaw	12	10	8	6	1	1
TSR	8	3	5	3	3	1
PT	12	15	15	20	33	38
Cars	1	1	2	4	8	10
MTW	12	21	25	25	20	15

Summary of Recommendations : Urban Transport

- *Key ingredients of Sustainable Urban Transport Policies*

Policies for Sector Transformation

- 1. **Avoid:** which involves Sustainable transportation by moving less, even not moving. Reduction in the need for travel by promoting city structures and urban densities that do not require large passenger–kilometers (km) and freight–km of travel;
- 2. **Shift:** which involves changing modal choice to promote Public Transport and lower fuel consumption per passenger–km/freight–km and manage traffic so as to reduce fuel consumption and air pollutants; and
- 3. **Improve:** which involves the increase of energy efficiency of vehicles and fuels by decreasing distances travelled and reduction in the greenhouse gas footprint per liter of fuel consumed.
- 4. **Involvement of users** and citizens through behavior change for sustainable transport outcomes
- 5. **Large project risk management**, decision making and financing – Sound appraisal required including **full life cycle costing of alternatives - city government led and managed**, with the State Government as facilitator and National Government providing capital investment support as required

Policy instruments and measures for Avoid, Shift and Improve

Type of Incentive or Disincentive	Selected Economic /planning Measures
Avoiding motorized vehicle ownership (AVOID)	High density, Mixed land use, mixed income neighborhood development, Integrated Land use and Transportation Planning, Availability of Dense, convenient, Public transport, Annual vehicle tax, Registration tax/ charge, (re)sales tax/ charge, Scrappage tax/ charge, Auction schemes/ competitive bidding for new licenses, Licensing car ownership
Encouraging Shift to public or non-motorized transport discourage motorize vehicle use and encourage (SHIFT)	Comprehensive Mobility Planning for Accessibility Safety and Environment Protection, Making walk and Non-motorized transport safer and more convenient, Choices of modes of public transport at various levels of service and price ranges, Dense, safe and convenient Public transport (PT), Intermediate public transport/ Para transit made safer and integrated into the Public Transport system, Multimodal, Integrated, City wide public transport network – synchronized ticketing and routing for convenient door to door service. Integrated into Regional systems in larger metropolitan areas, Universal accessibility for differently-abled (80% pedestrians are hindered) Fuel tax, Pay-at-the-pump (sur)charges, Parking fees, City tolls, Road pricing, Bridge tolls, Cordon/ area pricing, Congestion pricing, Subsidized public transport fees, Subsidies for public transport networks and operation, Tax-deductable public transport expenses, P&R schemes
Encourage lower emission technology use and innovation (IMPROVE)	Improved vehicle technologies; cleaner renewable fuels, efficient road and intersection design, Tax differentiations based on emissions, Carbon/ energy taxes, Emission fees, Emission-based surcharges, Subsidies, tax rebates for lower emission vehicles/ technologies

Large project risk management

- Decision making and financing strategies
 - **Full Life Cycle Costing** (Construction/manufacture, maintenance, operations) : International and recent TERI study on 'cradle to grave' cost analysis show that
 - Viable and more insightful way of comparing various technology opportunities
 - modes which involve greater capital costs for fixed infrastructure, embody the larger amount of energy (TJ equivalent) and CO₂ (T) per km or PKM.
- Fixed line urban transport infrastructure systems, need to be viewed from the perspective that they reduce the **flexibility of cities to adopt new more suitable technologies**
- **Impact on applicability of Innovations** in IT, engineering, planning and organizational methods have a large potential for the future – improved para transit, solar charging, electric vehicles, vehicle communication and sharing technologies, development of decentralised transport hubs, etc
- Prioratisation of investments to be done at the at the city wide level, based on system planning and not only at the project level.
- Sound appraisal required to establish the cost – benefit of large project/ investments vis a vis alternative use of funds.
- The **users and city should share significant share in decision making and costs** for these large projects to improve design quality and use of the system

Summary of Recommendations : Urban Transport

- *Transforming Sector Institutions and Governance*

Institutional Framework at the Urban Metropolitan level

Urban Metropolitan Transport Authority (UrMTA not UMTA)

- Current experience shows slow and patchy take off
- Are consultative and recommendatory in nature and do not have clear accountability or funding lines
- Needs to be a Statutory Autonomous Agency set up **by mn+ city governments** (London, Paris, etc) and **not by** State Governments – 87 will have varying contexts and strategies
- Authority to administer funds on ULB request, in the city to undertake UT related activities. Should house **strong technical appraisal and advisory teams**.
- Could also **fill in todays institutional gaps** and house city co-ordination, ATC, TIMCC, Mobility management functions
- Full time nodal office responsible for UT at the urban Metropolitan level
- Empower the city by technical, technological and legislative support for policy, program and project development
- **Three level institutional framework.**
 - **Level 1 - 'Metropolitan Planning committee/Spl for UrMTA**
 - **Level 2 – UMTA supported by cell manned by trained urban transport professionals**
 - **Level 3 - existing agencies to continue as executing agencies.**

Strengthening the Institutional Framework at the State and national level

▪ State Level

- Urban development and hence urban transport essentially a State govt responsibility
- Creation of a Urban Transport dept in each state/UT in the future;
- Setting up of State level Transport Safety Boards
- Beyond the Mn+ cities: State level or State level zonal agency to hose planning and regulatory functions for urban transport in groups of smaller cities

▪ National level

- Role : National Policies, Laws, data base, draft regulations, support setting up institutional framework at state and city levels, planning standards, Operational guidance, promote research, disseminate data and support capacity building in the sector and industry
- Funding support to larger projects and flagship programmes on issues of national concern; Also administer the National Urban Transport Fund
- Full UT Ministry under a Secretary, in the future, if required

▪ **City governments have to move from peripheral operational support role to central planning, decision making role**

Inadequacy of Existing Legislation

- **Existing Legislation- Urban Transport not listed in any list**
 - Motor vehicles Act - licensing of vehicles.
 - Railway Act - inter-city traffic.
 - Metro construction, O&M Acts - issues related to construction, O&M of metro
 - Tramways Act - tramways within the road surface
- **Gap in legislation**
 - Cover the requirements of urban transport comprehensively
 - Other modes and essential facilities for pedestrians, NMV, BRT, LRT, mono rail and other guided modes of transport
 - Issues of transport planning, multi-modal integration, safety, tariff and financing
- **Need for an enabling but Comprehensive Urban Transport Act – Why?**
 - **No generally accepted comprehensive definition of urban transport yet**
 - **Clarity of roles, between different tiers of government**
 - UT plans have to be implemented over a period of time
 - Continuity in planning & implementation
 - **The agency to be made responsible for providing UT needs legislative support**

Summary of Recommendations : Urban Transport

- *Investment Requirements and Financing strategies*

Estimated Investment Requirement as per Working Group

- Total estimated expenditure up to 2030 for the 3 scenarios are;
 - Business as usual scenario; Rs 22.7 lac crores
 - Intermediate scenario; Rs 17lac crores
 - Sustainable scenario; Rs 15 lac crores

ITEM	MGI	HPEC	BAU : Sprawl	Intermediate	Desired Sustainable
In Rs Lakh Crs					
Urban Roads	8.90	17.29	12.08	9.41	9.17
Transit	17.64	4.49	10.55	7.44	5.56
Others	0.50	0.90	0.15	0.15	0.27
TOTAL	27.04	22.68	22.78	17.00	15.00

- Investment requirements vary significantly across scenarios. Average annual outlays are in the range of Rs. **75000 Crores to 1,20000 Crores /Year**
- **Better growth management can cut investment requirements by more than half**

Meeting the Investment Demand

- **Existing main sources of financing in India:**
 - Fare box collections,
 - Non-transport charges on commercial activities,
 - Senior Government subsidies.
- **Financing sources used across the world**
 - Land Monetization,
 - Property tax and user charges,
 - Support from Government and Debt,
 - PPP
- **Possible sources in India**
 - Land monetization- betterment levy
 - Taxes levied on the consumption of fuel by private vehicles
 - Congestion pricing
 - Parking fees according to land prices
 - Financial contribution from the transport demand generators
 - Introduction of PPP – for construction and/or operations
 - 1% of cess on petrol and diesel used to fund the Safety cell at NHAI & city

Meeting the Investment Demand: National Urban Transport Fund and State UT Funds

National Level:

- **A Green Cess on existing Personalised Vehicles:** at the rate of 3 percent of the annual insured value both for car and two wheelers. During first year will be Rs. 18,163 Crore and the amount over first four years will total to Rs. 83, 753 Crore. For the ease of collection the annual cess will be collected through insurance companies. Insurance companies presently collect approx 4% of the insured value as insurance premium now they will collect 7% of the insured value and would return 3% of insured value to the government to be put in the dedicated fund
- **Urban Transport Tax on Purchase of New Cars and Two Wheelers:** at 7.5% of the total cost of the petrol vehicles and 20% in case personalised diesel cars. This will be Rs 20,929 Crore in the first year and Rs. 95,739 Crore over first four years. In case of diesel cars, the urban transport tax has been recommended at 20% in order take care of the fact that diesel is available at substantially subsidized price and will continue to be so in near future. Diesel cars have been assumed to be 30% of the total cars as against 35% of the present annual sales.

State Level

- **A Green Surcharge of Rs. 2 on petrol sold across the country:** the rationale behind the fact that petrol is consumed exclusively by personalized vehicles. The green surcharge from petrol in the base year is Rs. 3108 Crore and over the period of first four years.
- **The total annual yield from the three sources will be Rs 42, 199 Crore in the first year, and Rs 1, 93, 542 Crore in four years.**

Financing Policy including expenditure from the proposed National Urban Transport Fund

- Scaling up funding for Urban Transport critical and unavoidable
- Sustainable financing requires significant proportion of funding from users and at the city level
- Bulk of National resources to be transferred through **transparent predictable formulae** to State and Cities level Urban Transport funds/accounts
- **Some National Funds** to be available for few projects of national importance
- Cities encouraged to tapping other innovative source of funds in addition to User charges, such as land monetization, betterment/development benefit taxes etc.
- Linking all large scale projects funding to related micro level projects like cycling, pedestrianisation, multimodal integration in catchment area, resettlement & rehabilitation of informal sector etc
- Involvement of the private sector for financing and managing urban transport services.
- PPPs should focus on more stand-alone viable routes
- Consider needs/ requirements of all sectors proportionately to use to ensure equitably
- Funding focus on **improving institutional delivery of services**

End Note : For a futuristic, modern and aspirational Urban Transport System - A paradigm shift is required

- Integrating Urban Physical Planning and Transportation Planning by modifying the Urban Development Plan Formation and Implementation (UDPFI) guidelines, to focus on high density, mixed land, mixed income group planning **key for reducing trips and trip lengths**
- Large Mass Transit Systems in India, just as others internationally, will cater to a maximum of **10 %** of the cities urban transport trips
- Other Motorized Public Transport (incl. IPT) and Walk and Non - Motorized modes will continue to cater to **60-70%** of trips even in the largest cities
- Only with the modernisation of facilities for NMV and Walk, keeping safety, and convenience at the forefront, will improved public transport prosper and contain the large growth of personal modes of transport
- For futuristic, modern, sustainable, Urban Transport there is a strong need to also **focus national policy and funding** on facilities for Walk, NMV, IPT and dense and convenient Public Transport and not only on Fixed line - Mass Rapid Transit

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