

EST : PROGRESS AND ACHIEVEMENTS IN INDIA

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INDIA - URBAN TRANSPORTATION SCENE

- ❖ 2nd Largest urban system
- ❖ 60% GDP generated from urban areas

- ❖ 5161 towns and cities
 - 7 megacities (4 million + population)
 - 28 cities with population 1-4 million
 - 13 cities in 0.8 to 1.0 million range, will cross 1 million by next census
 - 40 cities in 0.5 to 1 million population range and balance state capitals

- ❖ Motorization rates are high
- ❖ In 6 Metro Cities, during 1981 to 2001
 - Population increased by 2 times
 - Motor vehicles increased by 8 times
- ❖ In 2006 organised city bus service - in only 20 cities

The Demand

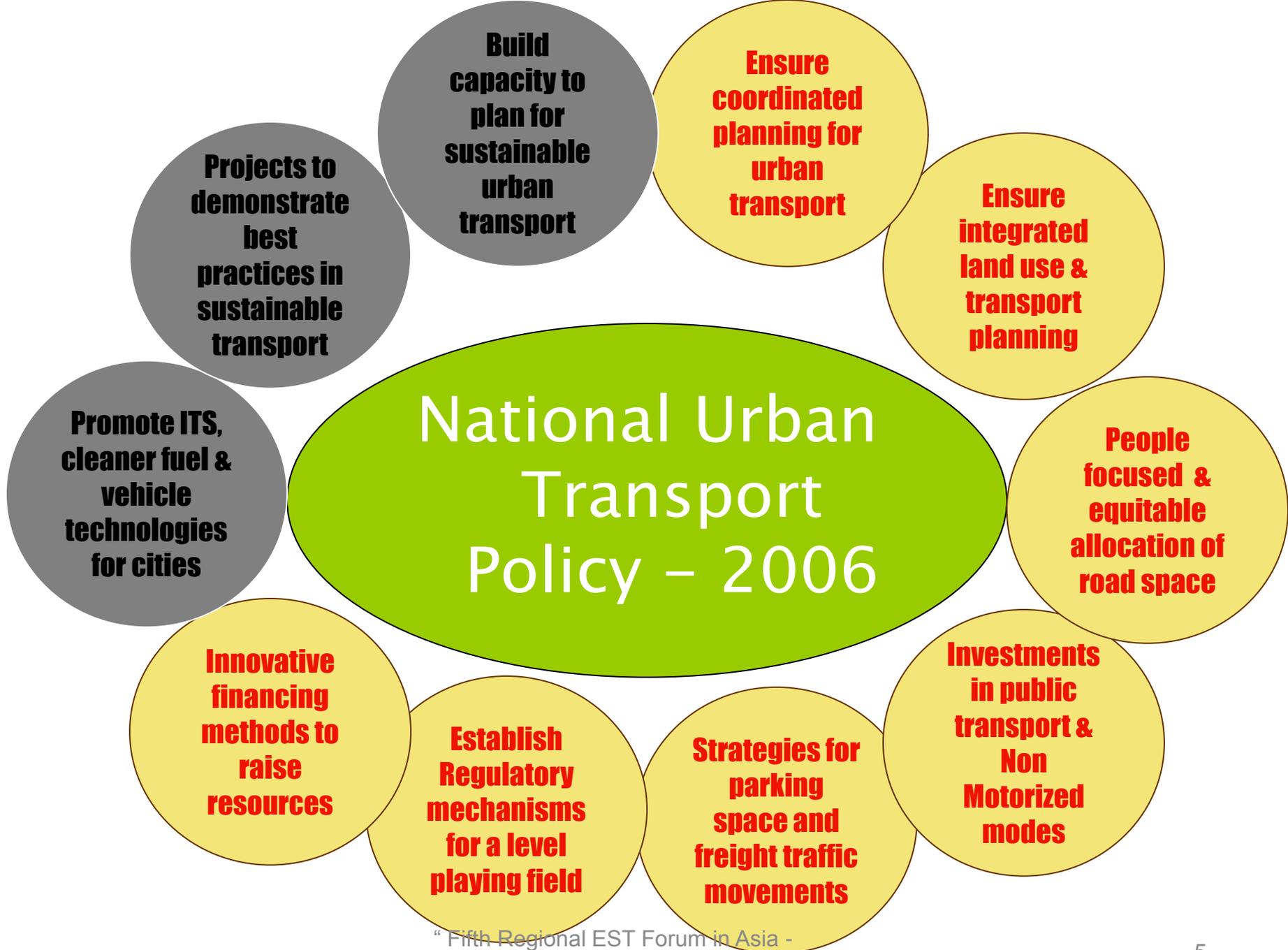
- ❖ In order to improve the Urban Transport Infrastructure and provide the gaps, the investment requirement is estimated as USD 30 billion in the 11th five year plan and about USD 97 billion over next 20 years.

Breakup of the Investments in the 11th Five year plan (2007-12)

Items	Investment required in million USD
Capacity Building and urban transport planning	77
0.1-0.5 million cities	1645
0.5-1.0 million cities	1733
1.0-4.0 million cities	5787
4.0 million plus cities	4667
MRT for mega cities	7111
Modern Buses for city transport	8444
Total	About 30 billion

India's Response to Urban Transport Demand and Climate Change

- I. Policy- National Urban Transport Policy
- II. JnNURM- Sector Reform Linked Investments – Bus, Rail and Related Infrastructure
- III. World bank – UNDP – GEF Sustainable Urban transport Project
- IV. Human Resources and Capacity Enhancement
- V. National Action Plan on Climate Change
- VI. National Mission on Sustainable Habitat
- VII. National Ambient Air Quality Standards for 12 Pollutants
- VIII. Bharat Stage III to Bharat Stage IV auto fuel switch over



Jawaharlal Nehru National Urban Renewal Mission (JnNURM)

<http://jnnurm.nic.in/>

- ❖ A reform based mission for Central Financial Assistance (CFA) to Urban Local Bodies
- ❖ Reforms like abolition of Rent Act, Urban Land Ceiling Act & reduction of Stamp Duty etc
- ❖ Reforms for better urban transport planning and management-made conditional to the sanction of Urban transport Projects are:
 1. Comprehensive Mobility Plan (CMP)
 2. Setting up of Unified Mass Transit Authority (UMTA).
 3. Setting up of Dedicated Urban Transport Fund at state and city level.
 4. Transit Oriented Development Policy, Parking Policy and Advertisement Policy.
 5. Setting up of city specific Special Purpose Vehicle for managing public transport.
 6. Setting up of Traffic Information and Management Control Centre etc.
 7. Use of ITS and integration of multi-modal systems
 8. Bus prioritisation at intersections, dedicated/demarcated lanes for buses
 9. Designate a nodal department for urban transport
 10. Mechanism for periodic revision of public transport fares
 11. Waive/reimburse state and local taxes on public transport
- ❖ About 22% of the projects sanctioned under JnNURM for Urban transport (NUTP compliant)



URBAN BUS TRANSPORT IS IMPORTANT AND HAS TO BE TRANSFORMED TO A LEVEL THAT IT CAN BE SOLD TO PUBLIC AS A “BRANDED PRODUCT”

AIM TO REPLICATE METRO EXPERIENCE ON THE URBAN BUSES

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Bus Rapid Transit System (BRTS)

- ❖ Buses contribute as the most important mode of Public transport across all cities.
- ❖ BRTS Projects for 437 Kms sanctioned for 10 mission cities at a total cost of US \$ 1085 million (@US \$ 2.4 million per km)

▪ Pune	101.77 km
▪ Pimpri Chinchwad	42.22 km
▪ Indore	11.45 km
▪ Bhopal	21.71 km
▪ Ahmedabad	88.50 km
▪ Jaipur	39.45 km
▪ Vijaywada	15.50 km
▪ Vizag	42.80 km
▪ Rajkot	29.00 km
▪ Surat	29.90 Km
▪ Kolkata	15.00 Km



Delhi is implementing BRTS with its own funds

- * Ahmedabad is the first city under JnNURM to have successfully launched a complete BRT system.

Buses for City Transport

❖ Urban Bus Specifications

- ❖ Low floor (400mm), semi low floor (650mm) and standard buses (900mm) as against prevailing 1100mm floor height (truck chassis)

❖ ITS features

- ❖ LED sign boards,
- ❖ audio visual passenger information
- ❖ multiplexing, On board diagnostics,
- ❖ Cameras, integrated controller
- ❖ GPS, GPRS, Smart card ticketing machines



❖ Economic stimulus package

- ❖ Funding procurement of buses for urban transport under JnNURM.
- ❖ 15260 modern buses sanctioned under economic stimulus package at a cost of US \$ 1020 Million
- ❖ Waive state & local taxes on public transport (upto 16%)
- ❖ 61 mission cities Covered; about 7700 buses are on road – 31st July'10
- ❖ City buses planned for 118 more 200 thousand+ population cities
- ❖ Delhi has largest CNG Bus fleet in the world

34 new cities to get organised city bus service



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Urban Transport-Metro Rail Projects

- ❖ Urban ministry is supporting metro rail projects also in bigger cities to serve high demand corridors
- ❖ Reforms in urban transport made conditional to sanction

- ❖ Delhi
 - ❖ 111 kms is under operations.
 - ❖ Another 78 kms is under commissioning.
- ❖ Metro rail projects promoted under joint ownership with the concerned state governments in Delhi, Bangalore, Kolkata & Chennai
- ❖ 20% Viability Gap Funding for Urban transport projects on PPP
 - ❖ Mumbai
 - ❖ Hyderabad

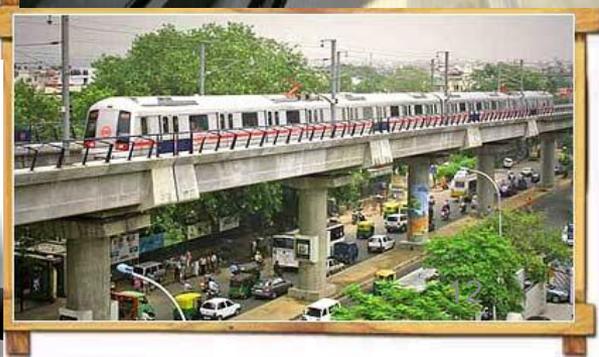
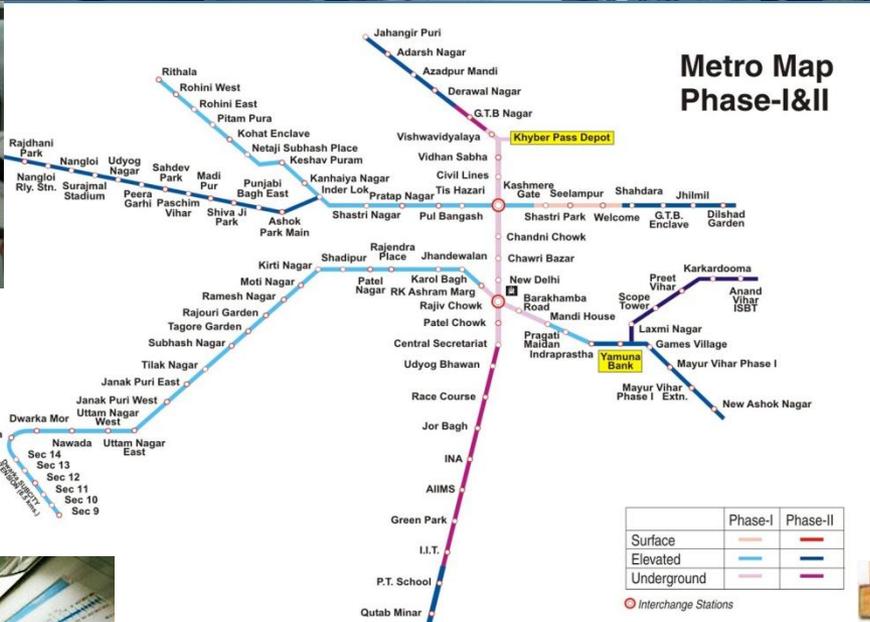
City	Kms	App. Cost (US\$ Million)
Delhi	121.26	4085
Mumbai	62.89	3915
Bangalore	42.30	1736
Kolkata	14.67	1037
Chennai	46.50	3106
Hyderabad	71.00	2638
Cochin	25.30	617

US \$ 17135 Million for about 380 kms at US \$ 45 Million/km

Finding resources to cover entire demand!



Photo © Richard Stedall



World Bank – UNDP – GEF Sustainable Urban Transport Project (SUTP)

- ❖ Unique project for taking up Demonstration projects in select cities and Capacity Building across India
- SUTP – **Many Firsts in India**
 - Multilateral Agencies in Transport Sector (World Bank and UNDP)
 - Multi-City Program
 - **Moving Train Concept**
 - Oversight Mechanism
 - Auditing System
 - Specifically Aims at Addressing Objectives of NUTP
 - Focused Capacity Development of GEF-SUTP Participating Cities
- Massive Capacity Building Effort in Urban Transport Sector
 - Training
 - Experience Sharing
 - Manual & Toolkit Development
 - Dissemination Program
- ❖ Reforms in Urban transport made conditional
- ❖ World Bank loan, Govt of India as well as State Govt/ Urban local funding, GEF grant pooled together

Human Resource and Capacity Building Initiatives

To promote better practices:

- ❖ Ministry provides central Financial Assistance up to 80% of the cost for
 - ❖ Undertaking various studies relating to preparation of CMP
 - ❖ Launching of awareness campaign and
 - ❖ Developing Clean development mechanisms etc...
- ❖ For preparation of Detailed Project Reports (DPR) Financial assistance is given upto 50% of the cost of preparation of DPR
- ❖ Training of trainers and practitioners
- ❖ **Annual Conference and Exhibition on Urban Mobility India from 3rd to 5th Dec**
- ❖ Institute of Urban Transport to support ministry in capacity building initiatives
- ❖ **4 Centres of Excellence in Urban Transport**
 - ❖ CEPT University, Ahmedabad
 - ❖ IIT, Delhi
 - ❖ IIT, Madras
 - ❖ NIT, Warangal



Standard Service level benchmarks in Urban Transport

- ❖ **Benchmarking** is to identify the gaps in service delivery and effect in improvement through the sharing of information and best practices, resulting in better services to the people through urban sector.
- ❖ It provides common minimum framework for monitoring and reporting on SLBs and Guidelines on how to operationalize in phased manner.

SSLBs in Urban Transport (total-10)

- ▶ Public transport facilities
- ▶ Pedestrian facilities
- ▶ Non motorized transport facilities
- ▶ ITS facilities
- ▶ Congestion level
- ▶ Parking
- ▶ Road safety
- ▶ Pollution levels
- ▶ Integration of land use and transport
- ▶ Sustainability of public transport
- ▶ **Overall LOS 1 to 4**
- ▶ **Each LOS computed based on number of indicators.**
- ▶ **All future projects and plans in Urban transport shall be linked to SSLBs.**

Other Initiatives Relating to Urban Transport

- **Policy and Planning**
 - National Environment Policy 2006
 - National policy for public transport sensitive to climate change
 - National policy for metro rail projects
 - Advisories/Circulars to State Govts for guiding city development and redevelopment
 - National Transport Policy
- **Management**
 - National public transport helpline
 - **Common mobility card across India**
 - Control centre based management of all Auto-rickshaws and Taxis
 - Task Force on UMTA
 - Core Group on ITS
 - **National Consultant for CDM**
 - Partial Funding for Urban Transport cell at ULB and UMTA in cities
- **Investment**
 - Innovative PPP to attract private financing.
 - Dedicated Urban transport fund so as to catch up with investment requirements given the pace of urbanization and increase in the travel demand.

Initiatives for Climate Change and Air Quality

- **National Action Plan on Climate Change launched**
 - 8 missions which include Mission on **Sustainable Habitat covering Environmentally sustainable Transport**
 - **Mission on energy efficiency launched**
- **Cleaner fuel**
 - **Bharat Stage III to Bharat Stage IV switch over done in 13 cities**
 - **Remaining cities being upgraded from Bharat Stage II to Bharat Stage III by Oct'10**
 - **USD 7.1 Billion invested by oil companies for switch over**
- **National Ambient Air quality Standards notified in 2009**
 - **12 pollutants (PM₁₀, PM_{2.5}, SO₂, NO₂, CO, NH₃, O₃, Benzene, BaP, Pb, As and Ni)**
 - **At par with EU regime**
 - **Among the best designed in the world**
- **Source apportionment studies for PM₁₀**
- **43 Continuous Ambient Air Quality Monitoring Stations operated on 24 X 7 basis in 17 cities**

AIR QUALITY IN INDIAN CITIES

- SO₂ - Within Limits (50 µg/m³) & decreasing trend
- NO₂ - Emerging pollutant: Limits (40 µg/m³) exceeded in 16 out of 141 cities
- PM₁₀- exceeded in 83% of cities (60 µg/m³)
- Shifting of problem to smaller cities
- Vehicular Emission & re-suspension of dust-key factors

Thanks

SERVICE LEVEL BENCHMARKS IN URBAN TRANSPORT

1. Public Transport facilities
2. Pedestrian Infrastructure facilities
3. Non Motorized Transport facilities
4. Usage of Intelligent Transport System (ITS) facilities
5. Travel speed along major corridors
6. Availability of Parking facilities
7. Road Safety
8. Pollution levels
9. Integrated Land Use Transport System
10. Financial Sustainability of Public Transport