Land Use & Transportation Planning

- 2 and 3 Wheelers predominant part of vehicle population due to rapidly growing middle income group population and inadequate public transportation and there is a need for a primary focus in the abatement strategy. Need to restrain proliferation of 2-3 wheeler population by promoting public transportation
- Problems associated with public transportation
  - Unavailability of Undeveloped Land
  - Road Space(Transport Corridor) Low in Urban Areas
  - Paucity of Funds For Transport Solutions
  - Lack of Priority for public transport
  - Inadequate Driver Training
  - Diversity of Public Transport
Land Use & Transportation Planning - (cont’d)

- Diversity of Road Users
- Rapid Urbanization Overtaking Planning Process
- Lack of Transparency Stakeholder Involvement
- Low rates of vehicle obsolescence
- Low Priority For Public Transport

Fuel Quality

- Environmentally inadequate quality in respect of Lead
- Sulfur
  - Benzene/Aromatics, Olefins and PAH in diesel fuels
  - Large number of old refineries needing high capital investment for upgrading - countries putting up new refining capacity could leapfrog to superior quality
- Adulteration/Quality Control
- Resource Limits due to State Ownership of Oil Industry
- Absence of Transportation Fuels Policy
- Distortions of Market Prices due to Administered Pricing Mechanism
- Selective Substitution of Conventional Fuels by Region-specific Alternative Fuels
- Lack of Incentives For Clean Fuels Adoption
Emissions Standards – New Vehicles

- Lack of Information/Data base on Emission Inventory/Air Modeling to evolve effective emission standards
- Lack of Capacity To Define/Implement/Enforce Mass Emissions Standards
- Lack of On Line, Real Time Comprehensive Air Monitoring Network
- In-use Vehicle Inspection Data Not Available
- Lack of Regulation
- Weak Enforcement

Emissions-Based I&M

- Lack of Preventive Maintenance Culture
- Absence of Infrastructure for Proper Maintenance Facilities
- Regulatory Framework: Lack of Enforcement of Standards
- Lack of Oversight of Inspection Centers
- Proliferation of Non Genuine and Spurious Spare Parts
- Accountability Issue with Centralized/Decentralized Systems
- Need for Specially Designed I/M System For 2/3 Wheelers and Alternative Fuelled Vehicles
- Absence of Framework To Ensure In-Use Emission Control
- Tighter In-Use Emission Standards & Additional Parameters commensurate with Mass Emission Standards
- Emissions Warranty & Recall Program
- Absence of Impact Assessment
Summary & Recommendations

1. Transportation
   - Control private vehicle numbers and usage (retirement/relocation of old and used vehicles)
   - Provide clean, efficient, effective, comfortable, affordable, sustainable public transport.
   - Prioritization on use of limited transport corridor space
   - Facilitate and Plan use of non-motorized transport

Summary & Recommendations

2. I&M
   - Train and equip mechanics
   - Create awareness to use genuine spare parts
   - Authorization of workshop especially for alternative fuel vehicles
   - Public awareness/education of consumers
   - Region-specific I&M facilities to be designed
Summary & Recommendations

3. Emissions Standard
   - Leapfrog to higher fuel and emission standards
   - Pooling of resources for R & D (especially for 2 & 3 wheelers and AFV’s)

4. Fuel
   - Lead, sulfur, benzene phase out
   - Special fuel specification for “hot spots” (i.e. clean city diesel, CNG/LPG, etc.)