Road Safety : Scenario & Initiatives

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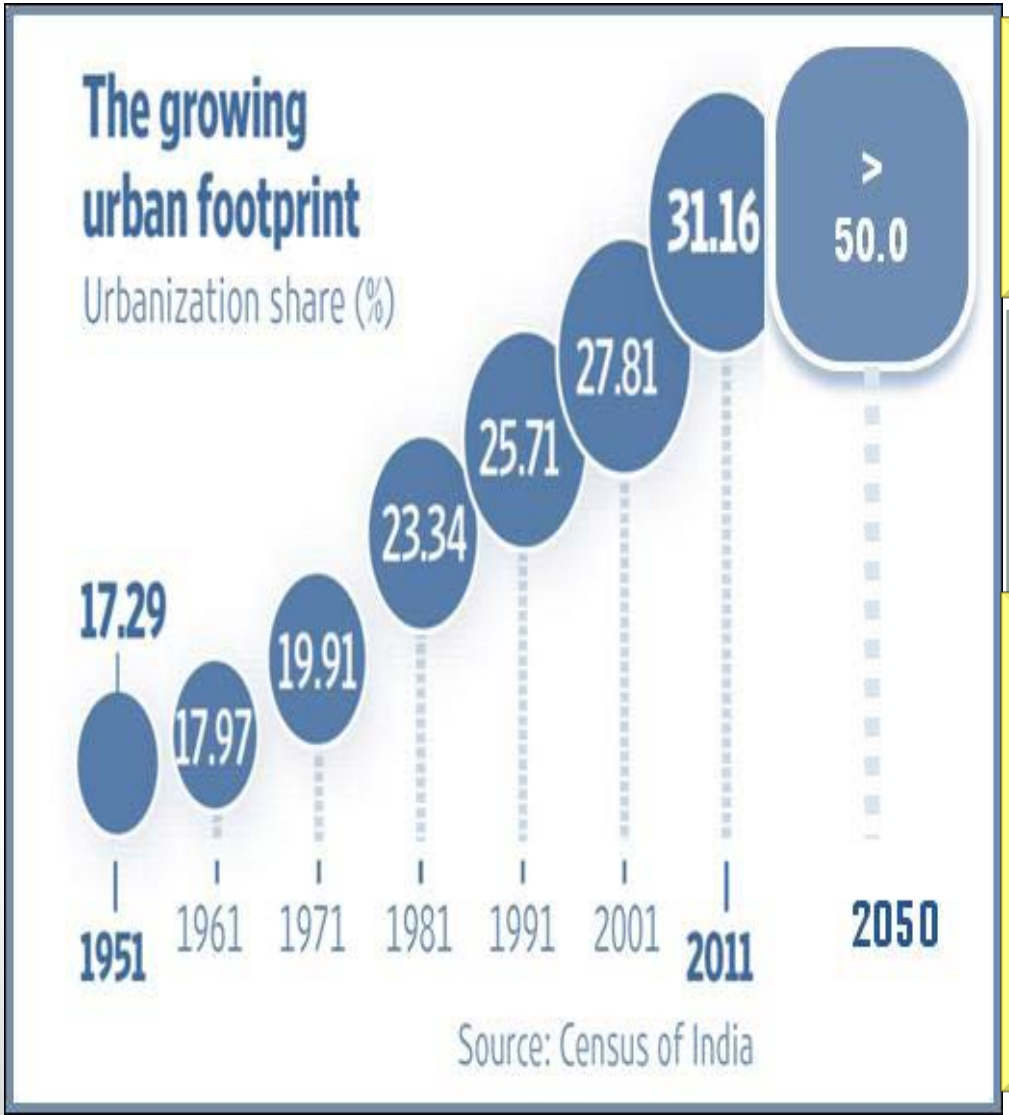
Present Scenario- India

Urban Scenario

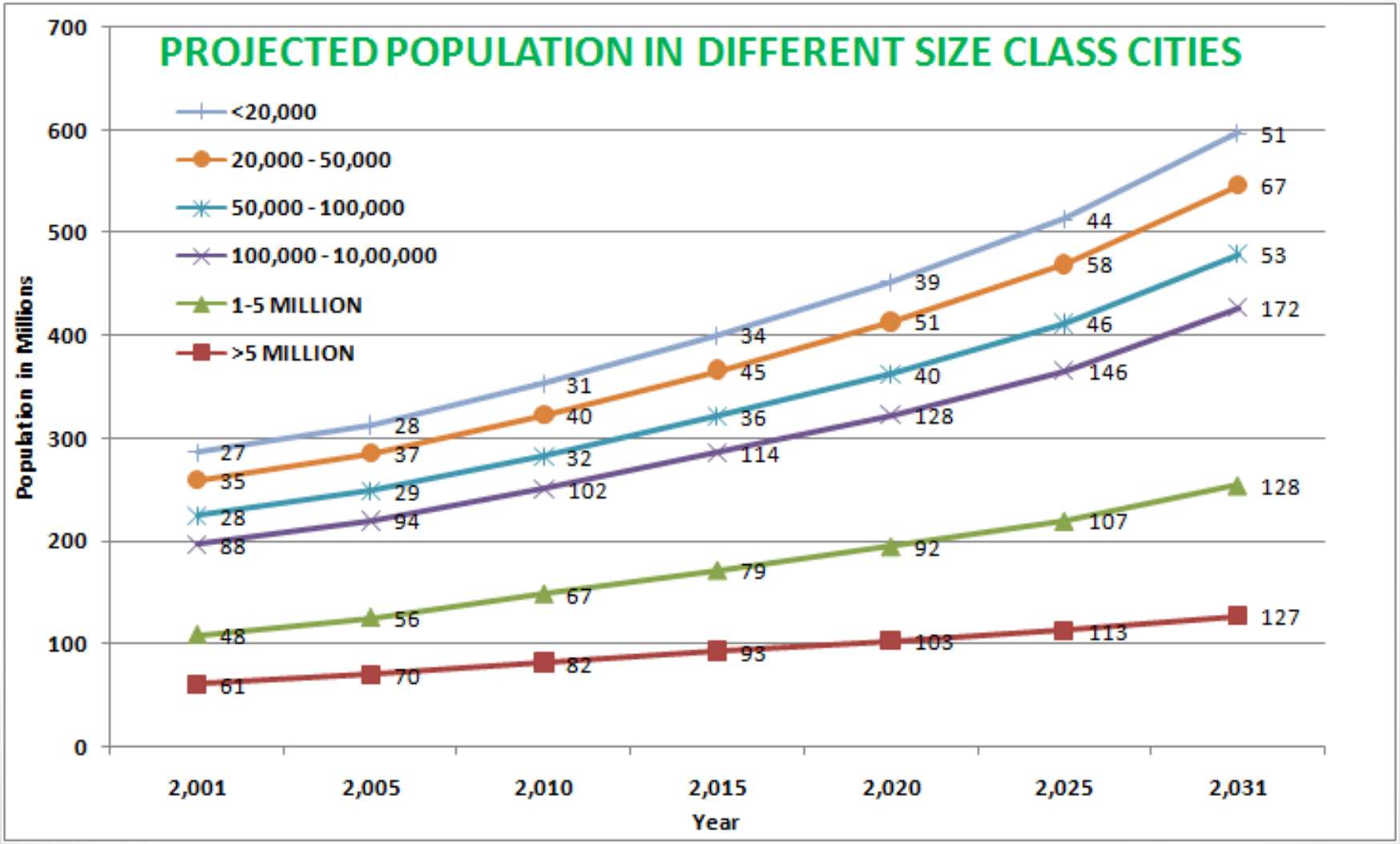


Urban population likely to increase from present 377 million to 600 million by 2030 &900 million by 2050

Urban population is increasing at a rapid rate, so is the *gap* between demand and supply of urban services

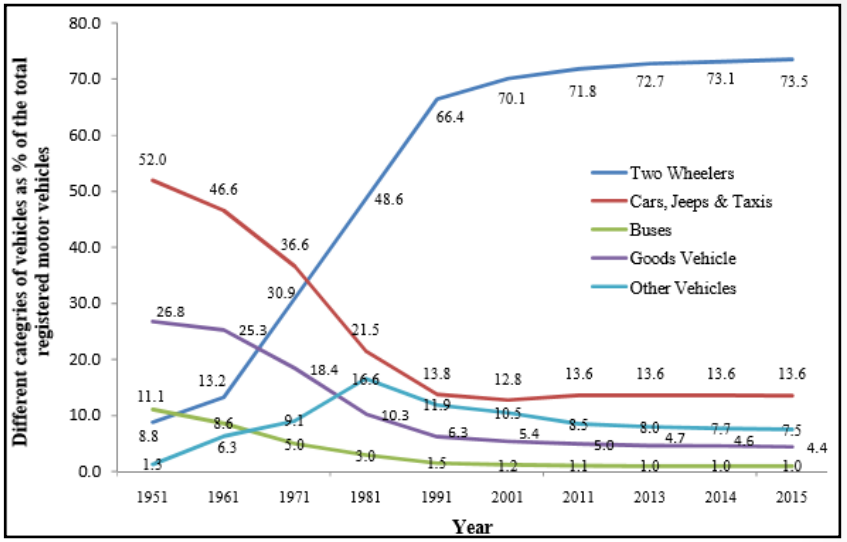
- No of census towns has increased by ***185%*** whereas the number of statutory towns has increase by ***6.37%***
- This shows no of rural settlements has attained urban characteristics

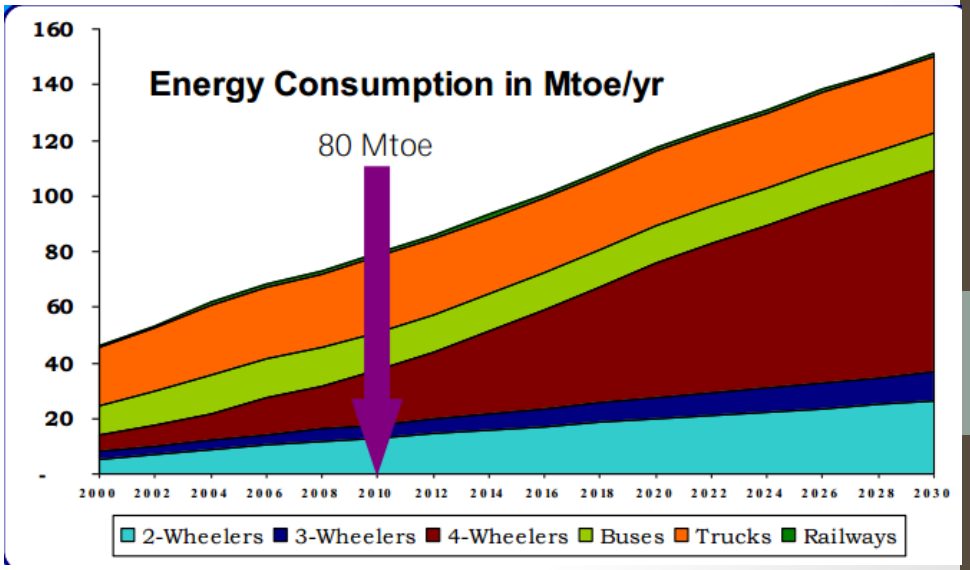
Population Pressure on smaller Cities- more pronounced than Bigger ones



Motor Vehicle Scenario

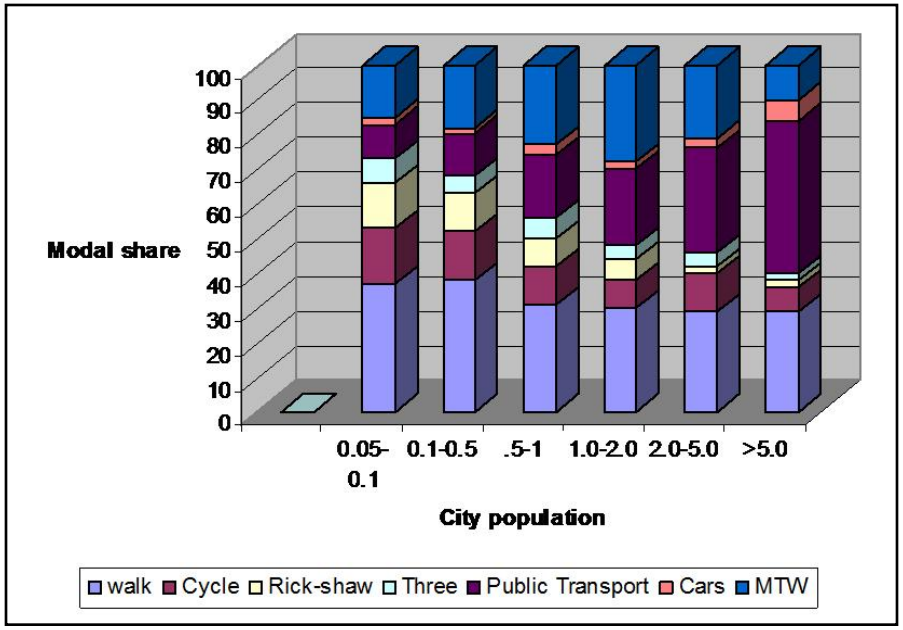
- From 2001 to 2015, the annual growth of population 3%, but motor vehicles increased by almost 10%
- Energy Consumption by transport sector – 80 Million Tons of Oil Equivalent (Mtoe)/ year



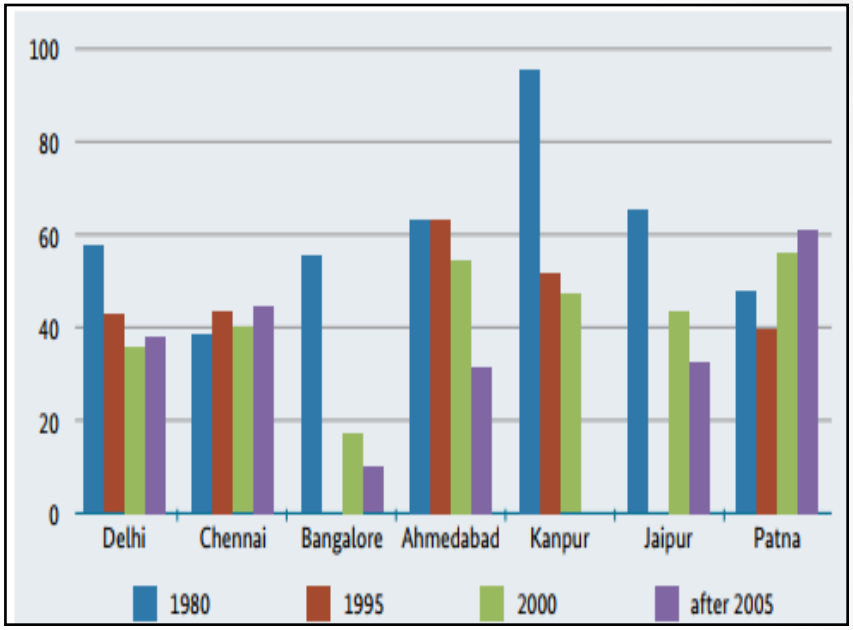


Non Motorized Scenario

Travel mode share (%) vs. different city size (population in millions)



Trends in changing modal share for NMT in 1980s, 1990s, 2000s;

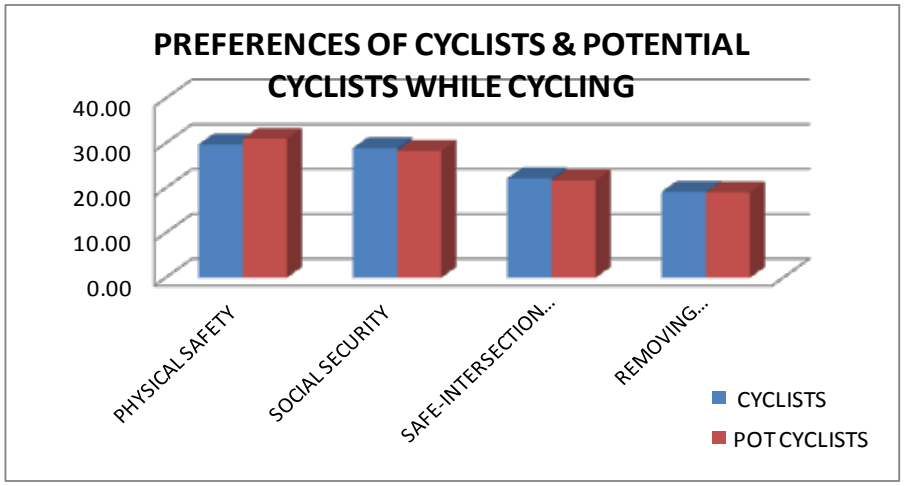


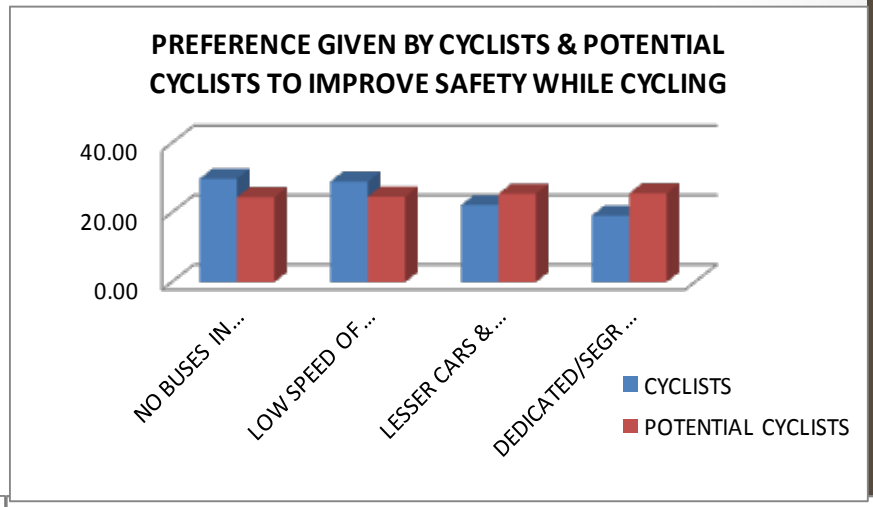
Source: (http://www.sutp.org/files/contents/documents/resources/E_Fact-Sheets-and-Policy-Briefs/GIZ_SUTP_FS_Non-Motorised-Transport-Policy-in-India_EN.pdf)

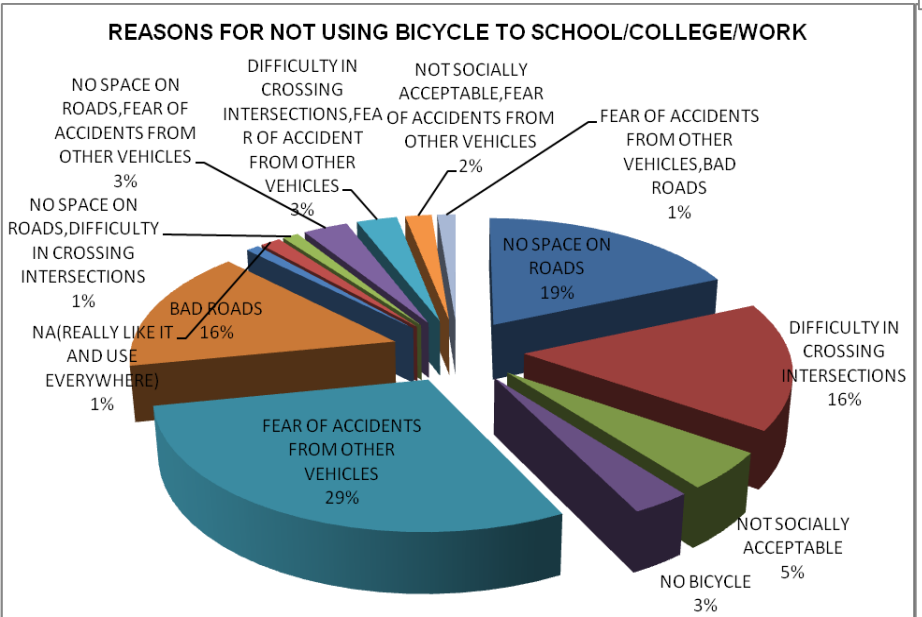
- The travel trends of past three decades show sharp decline in bicycle trips and rise in two wheeler and car trips.
- People using public transport, bicycles and walking are mostly captive users.
- Given the existing transport service status these people aspire to own a personal mode like two wheeler or car to ensure reliable and comfortable commute.

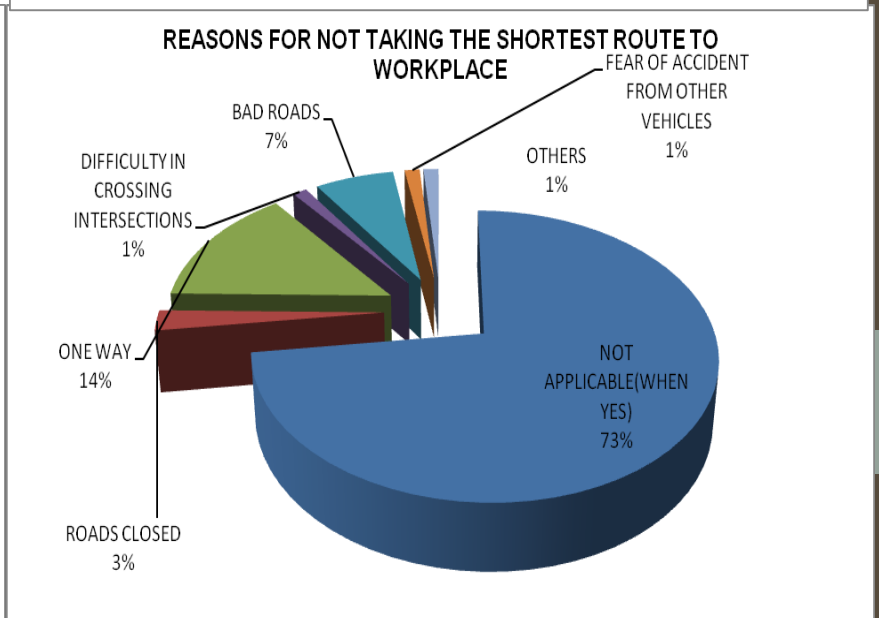
Predominant Barriers for Potential Users

40% safety, 40% road

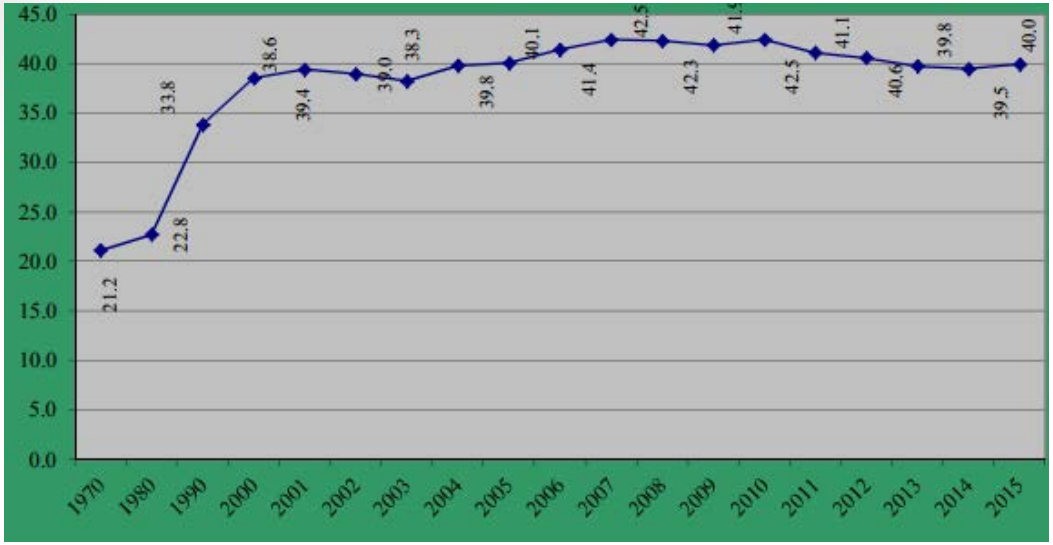






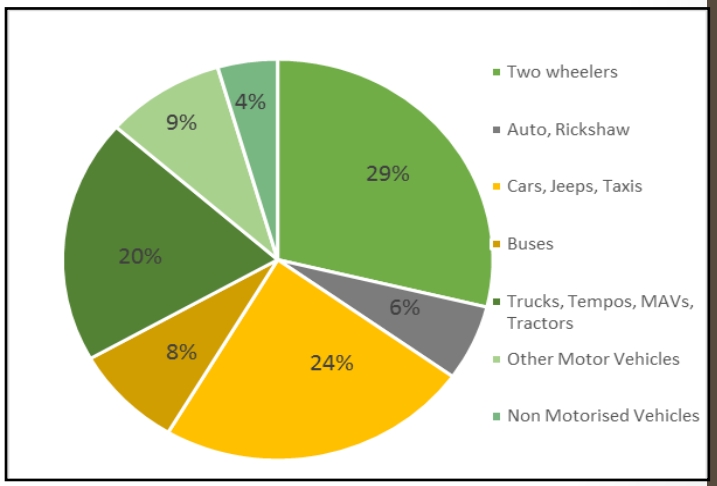


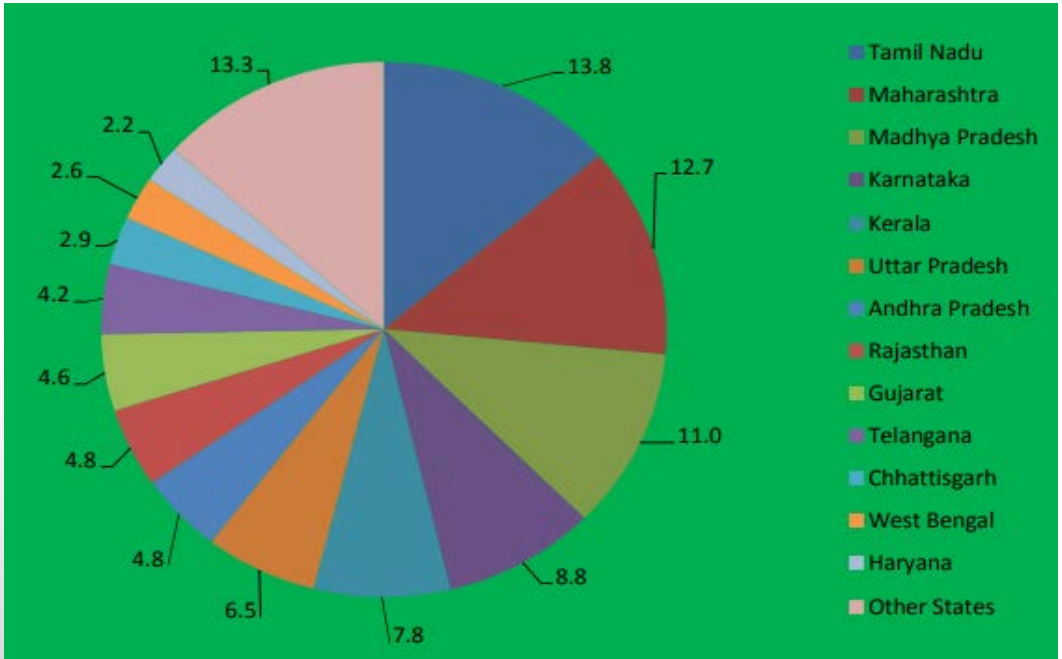
Road Fatalities



Number of Road Accidents per Lakh Population (1970-2015)

In India, road accidents have been increased by 2.5% from 2014 to 2015. The road fatalities per 100, 000 motor vehicles in India is 130.1 compared to Europe having 19 and America 33 in 2013 .

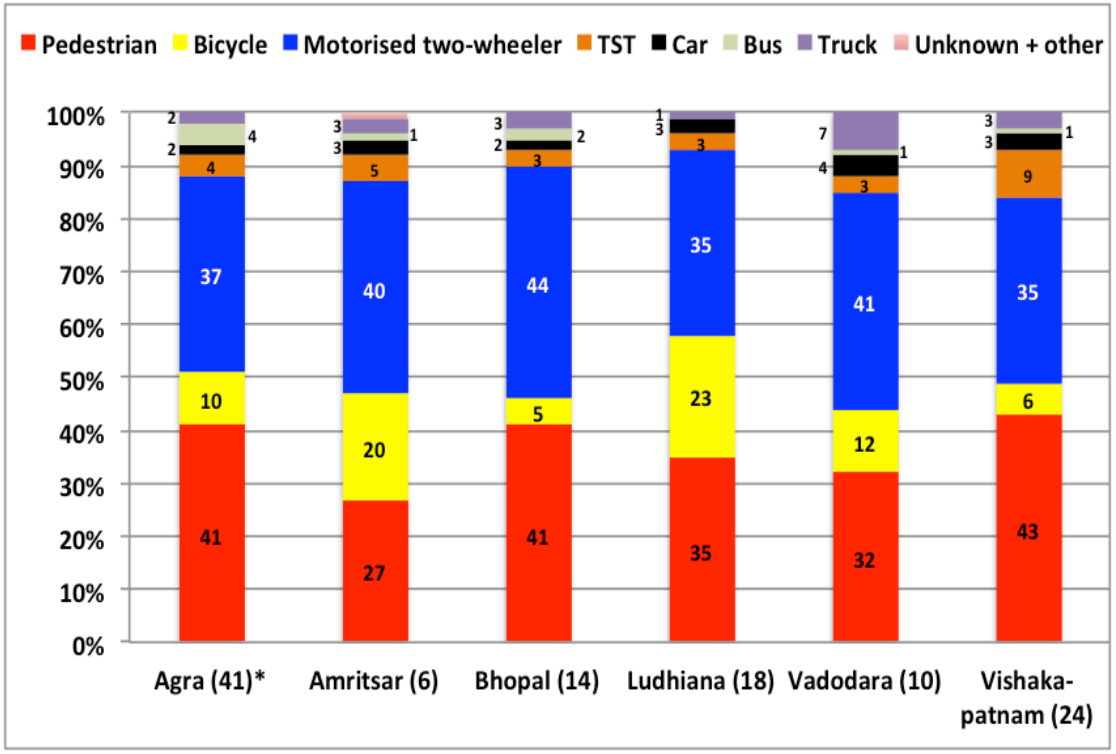




Major NMT fatalities

Percentage Share in Total Number of Road Accidents (in %), 2015

Proportion of road traffic fatalities by road user type (vehicle occupants, bicyclists and pedestrians) in 6 Indian cities (IITD study)



City	Per cent pedestrian fatalities
Agra	0
Amritsar	0
Bhopal	<1
Delhi	5
Ludhiana	3
Mumbai	10
Vadodara	6
Vishakhapatnam	17

Impact of new infrastructure

Transport infrastructure improvement has included road expansion, road widening, grade separated junctions and signal free corridors. Results:

- Reducing access of pedestrians because crossing roads become more difficult,
- Public transport users have longer distances for changing bus routes because distances between public transport nodes increase
- Signal free junctions increase risk to pedestrians
- Pedestrian foot over bridges and subway increase crossing distances for pedestrians

Pedestrian Bridge ~ 6-8 m high

- Increases walking distance by 100-200 m
- Discourages use of Public transport
- More motorcycles and cars leading to congestion and high risk in off peak hours

Pedestrian Crossing near subway

Road Design Standards for Urban Roads

MoRTH and IRC lays down the standards and specifications on various aspects of the design of roads and highways.

- Ministry's Specifications for Road and Bridge Works.
- Geometric Design Standards for Urban Roads in Plains (IRC: 86-1983)
- Code of Practice for Road Signs (First Revision) (IRC: 67-2001)
- Code of Practice for Road Markings (First Revision) (IRC: 35-1997)
- Guidelines for the Design of Interchanges in Urban Areas (IRC: 92-1985)
- Guidelines on Design and Installation of Road Traffic Signals (IRC: 93-1985)
- Guidelines for Pedestrian Facilities (IRC: 108-1988)
- Guidelines on Design of At-Grade Intersections in Rural & Urban Areas (IRC: SP: 41-1994)
- Hill Road Manual (IRC: SP: 48-1998)
- Guidelines for the Design of Flexible Pavements (Second Revision) (IRC: 37-2001)
- Manual for Standards and Specifications for 4-Laning & 6 laning of NH through PPP
- Ministry also issues technical circular from time to time.

Drawbacks

- Most of the documents were evolved aprrox 10 – 20 years back.

- Standard on design of urban roads was written 30 years back, when the roads and road transport was neglected and was allotted very meager funds

Serious safety concerns

Expenditure on road safety

- The year-wise expenditure on road safety during the last five years is as under:-

Year	Total Allocation		Expenditure	
	(in Rs. crore)	(in US $ Mn)	(Rs. in crore)	(in US $ Mn)
2004-05	40	9	35	8
2005-06	43	10	30	7
2006-07	47	10	43	10
2007-08	52	12	43	10
2008-09	73	16	55	12
2009-10	79	18	22	5
2010-11	180	40	58	13
2011-12	**514**	**114**	**286**	**64**

- Despite the huge investment in the road sector, road traffic crashes and fatalities have increased during the years.
- About 50% of the road accidents occur on NH's and SH's and VRU's are involved in about 60% cases.

Why Accessibility, Safety and security?

- Accessibility, safety and security have impact on the choice of public transport(Bus, metro) and NMV modes(walking and cycling), and hence on health outcomes.
- Accessible public transport includes safe access to public transport, vehicles with universal access.
- Safe accessibility to public transport modes- Implies
  - short access trips to public transport nodes,
  - Safe pedestrian paths(well lit, safe from fear of crime),
  - Safe at grade crossing facilities
  - Public transport nodes

Lessons for sustainable mobility plans

- Modal shares in favour of NMT and PT is more effective than technology alone: Retain PT and NMT trips
- PT and NMT must be integrated
  - Pedestrians and cyclists have the right to direct, pleasant and safe routes
  - Restrict private motor vehicles: speed, road space and convenience

Enhance use of NMT (cycling and walking)

Environmentally cleaner and healthier mode of travel

Yet, facing a declining share of travel demand

Address Safety, Image & Trip Length issues

- Construction of segregated rights of way for non-motorized modes
- Provide convenient NMT access for mass transport systems
- Government assistance for cycle tracks and pedestrian paths under National Urban Renewal Mission
- Support research for improved bicycle designs

Initiatives for road safety

Measures taken to minimize Accidents

- Five separate working groups formed on
  - Education
  - Enforcement
  - Engineering (roads as well as vehicles)
  - Emergency care.

- Recommendations to focus on short term, long term measures.

Educational Measures

- Awareness campaigns through print and electronic media, Calendars, posters, hand bills/stickers and fund games for school children.
- Observance of the Road Safety Week appreciated by a large number of persons and organizations including Members of Parliament.
- Road safety part of curriculum in class VII under Central Board of Secondary Education.

Enforcement Measures

- Testing the competence of drivers at the time of licensing.

- Checking the physical fitness of vehicles and their compliance with regulations at the time of registration and periodical fitness check of commercial vehicles

- Statutory use of helmets, wearing of seat-belts, detection / prosecution of drunken driving and prevention of plying of overloaded vehicles.

Measures Taken - Engineering

- Indian Road Congress- Standards and Specification
- NHAI roads – Geometric and safety standards including flyovers, grade separators, by-passes, Railway Over/Under bridges, bus/truck lay-byes, informatory retro-reflective sign boards, crash barriers, median railings, thermoplastic road markings, traffic lights and delineat
- Bye-passes and service lanes
- Road Safety Audit

Emergency Response Services

- Establishment of Trauma Care Facilities on National Highways-at a total cost of Rs.732.75 crore (US $ 0.16 Bn).
- Role of MoRTH and NHAI:
  - NHAI to deploy life support ambulances with trained and specialized manpower at every 50 km on the completed stretches of Highway being built and operated by them.
  - MoRTH to provide advanced life support ambulances to 140 identified hospitals to be upgraded under this Scheme.
  - 70 ambulances already provided. Balance 70 to be provided during 2011-12.

Vehicle Safety

- Under Motor Vehicles Act
  - active and passive safety covered
  - Legislated - safety belts, laminated safety glass for wind sheet, rear view mirrors, and power-steering for certain category of vehicles.
- Road Safety Map under preparation
- Progressive harmonization with ECE
- Accession to 1998 Agreement of WP-29

National Road Safety Council (NRSC)

- Apex Body for Road Safety established under Section 215 of Motor Vehicles Act, 1988
- Chaired by Minister (RT&H)
- Members
  - State Road Transport Ministers
  - DG (Police) of States
  - Representatives of Ministries, such as Home Affairs, HRD,
  - Railways, P&NG, Env. & Forests, Health & Family Welfare, etc.
  - 25 non-official members
- MoRT&H requested States for setting up of State Road Safety Councils and District Road Safety Committees as per MV Act, 1988

National Road Safety Policy

- Committee constituted in 2005 to deliberate &

  recommend creation of a dedicated body on Road

  Safety & Traffic Management inter-alia recommended the draft National Road Safety Policy in 2007

- Adopted in March 2010

Initiatives to Educate & Promote Awareness

Refresher Training for Heavy Vehicle Drivers –

- 2-day programme to inculcate safe driving habits and acquaintance with rules; 80,000 drivers to be trained during 2011-12 through SIAM, AIMTC, etc.

Setting up of Model Driver Training Schools –

- also to develop Institutional mechanism to train trainers; 10 schools costing US $ 31 Mn to be set up upto 2012; sanctions accorded so far for 7 schools; 3 more to be sanctioned shortly.

Publicity measures and awareness campaign on Road Safety-

- Telecasting / broadcasting of TV spots / Radio Jingles, displaying cinema slides, hoardings, organizing Road Safety Weeks, Seminars / Exhibitions, All India Essay Competitions, printing of handbills / stickers / posters / calenders
- Road Safety Education in Schools, distribution of Road Safety Publications games in Schools.

- **Thank You……..**