• Decline in the number of road accidents, fatalities and persons injured in road accidents during 2012.
• Since 2000, for the first time, the total number of road accidents registered a decline in two consecutive years 2011 and 2012.

<table>
<thead>
<tr>
<th>Year</th>
<th>Registered Vehicles (in thousands)</th>
<th>Total Accidents (In Numbers)</th>
<th>Accidents/10,000 vehicles</th>
<th>Fatalities (in Numbers)</th>
<th>Fatalities/10,000 vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>58,924</td>
<td>4,07,497</td>
<td>69.2</td>
<td>84,674</td>
<td>14.4</td>
</tr>
<tr>
<td>2003</td>
<td>67,007</td>
<td>4,06,726</td>
<td>60.7</td>
<td>85,998</td>
<td>12.8</td>
</tr>
<tr>
<td>2004</td>
<td>72,718</td>
<td>4,29,910</td>
<td>59.1</td>
<td>92,618</td>
<td>12.7</td>
</tr>
<tr>
<td>2005</td>
<td>81,502</td>
<td>4,39,255</td>
<td>53.9</td>
<td>94,968</td>
<td>11.7</td>
</tr>
<tr>
<td>2006</td>
<td>89,618</td>
<td>4,60,920</td>
<td>51.4</td>
<td>1,05,749</td>
<td>11.8</td>
</tr>
<tr>
<td>2007</td>
<td>96,707</td>
<td>4,79,216</td>
<td>49.6</td>
<td>1,14,444</td>
<td>11.8</td>
</tr>
<tr>
<td>2008</td>
<td>1,05,353</td>
<td>4,84,704</td>
<td>46.0</td>
<td>1,19,860</td>
<td>11.4</td>
</tr>
<tr>
<td>2009</td>
<td>1,14,951</td>
<td>4,86,384</td>
<td>42.3</td>
<td>1,25,660</td>
<td>10.9</td>
</tr>
<tr>
<td>2010</td>
<td>1,27,746</td>
<td>4,99,628</td>
<td>39.1</td>
<td>1,34,513</td>
<td>10.5</td>
</tr>
<tr>
<td>2011</td>
<td>1,41,866</td>
<td>4,97,686</td>
<td>35.1</td>
<td>1,42,485</td>
<td>10.0</td>
</tr>
<tr>
<td>2012</td>
<td>1,59,491</td>
<td>4,90,383</td>
<td>30.7</td>
<td>1,38,258</td>
<td>8.7</td>
</tr>
</tbody>
</table>

Source: Information supplied by States/UTs (Police Departments).
### Cross Country Comparison of Incidence of Road related Deaths and Injury Accidents in 2010

<table>
<thead>
<tr>
<th>S No</th>
<th>Country</th>
<th>Killed per 100,000 Population</th>
<th>Injury Accidents per 100,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Australia</td>
<td>6.06</td>
<td>5.53</td>
</tr>
<tr>
<td>2</td>
<td>Canada</td>
<td>6.41</td>
<td>359.90</td>
</tr>
<tr>
<td>3</td>
<td>China</td>
<td>4.88</td>
<td>16.41</td>
</tr>
<tr>
<td>4</td>
<td>Denmark</td>
<td>4.60</td>
<td>63.05</td>
</tr>
<tr>
<td>5</td>
<td>France</td>
<td>6.13</td>
<td>103.42</td>
</tr>
<tr>
<td>6</td>
<td>Germany</td>
<td>4.46</td>
<td>352.54</td>
</tr>
<tr>
<td>7</td>
<td>India</td>
<td>10.94</td>
<td>35.17</td>
</tr>
<tr>
<td>8</td>
<td>Indonesia</td>
<td>8.28</td>
<td>27.72</td>
</tr>
<tr>
<td>9</td>
<td>Italy</td>
<td>6.76</td>
<td>349.52</td>
</tr>
<tr>
<td>10</td>
<td>Japan</td>
<td>4.51</td>
<td>569.45</td>
</tr>
<tr>
<td>11</td>
<td>Niger</td>
<td>2.99</td>
<td>8.28</td>
</tr>
<tr>
<td>12</td>
<td>Russian Federation</td>
<td>18.72</td>
<td>140.52</td>
</tr>
<tr>
<td>13</td>
<td>United Kingdom</td>
<td>2.97</td>
<td>248.13</td>
</tr>
</tbody>
</table>

*Source: World Road Statistics, International Road Federation, 2012*
# Road Accident Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>2011</th>
<th>2012</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accidents</td>
<td>4,97,686</td>
<td>4,90,383</td>
<td>-1.5</td>
</tr>
<tr>
<td>Person Killed</td>
<td>1,42,485</td>
<td>1,38,258</td>
<td>-3.0</td>
</tr>
<tr>
<td>Person Injured</td>
<td>5,11,394</td>
<td>5,09,667</td>
<td>-0.3</td>
</tr>
<tr>
<td>Accident Severity*</td>
<td>28.6</td>
<td>28.2</td>
<td>-1.4</td>
</tr>
</tbody>
</table>

*Accident Severity: No. of persons killed per 100 accidents*
Number of Persons Injured per 100,000 population (1970-2012)
Number of Persons Killed per 100,000 Population (1970-2012)
Number of Road Accidents per Ten Thousands Kilometers of Road Length (1970-2011)

- 1970: 1,026.9
- 1980: 1,026.9
- 1990: 1,424.5
- 2000: 1,187.1
- 2011: 1,061.1
Inter-State Comparison for 2012

• Highest share in the number of road accidents (13.8%) - Tamil Nadu
• Highest share in the number of persons injured (15.4%) – Tamil Nadu
• Highest share in the number of fatalities (11.7%) - Tamil Nadu and Uttar Pradesh
• 55.5% of total number of road accidents accounted for by
  • Maharashtra
  • Tamil Nadu
  • Madhya Pradesh
  • Karnataka
  • Andhra Pradesh
Inter-State Comparison for 2012

- 50.7% of total number of persons killed in road accidents accounted for by
  - Uttar Pradesh
  - Tamil Nadu
  - Andhra Pradesh
  - Maharashtra
  - Rajasthan

- 56.6% of total number of persons injured in road accidents accounted for by
  - Tamil Nadu
  - Karnataka
  - Andhra Pradesh
  - Madhya Pradesh
  - Maharashtra
City Comparison for 2012

- 22.5% of all road accidents in the country accounted for by 50 cities
- 12.3% of road accident fatalities accounted for by 50 cities
- 15.9% of persons injured in road accidents accounted for by 50 cities
- Amritsar had the highest accident severity* of 62.5
- Mumbai had the highest number of road accidents – 24,592
- Delhi had the highest number of road accident fatalities – 1,866
- Chennai had the highest number of persons injured – 8,628

* Accident Severity: No of persons killed per 100 accidents
### Accidents as per Road Classification

**Number of Accidents, Persons Killed & Injured as per Road Classification (2012)**

<table>
<thead>
<tr>
<th>Road Classification</th>
<th>National Highways</th>
<th>State Highways</th>
<th>Other Roads</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of Accidents</td>
<td>1,42,694 (29.1)</td>
<td>1,18,835 (24.2)</td>
<td>2,28,854 (46.7)</td>
</tr>
<tr>
<td>No of Persons Killed</td>
<td>48,768 (35.3)</td>
<td>37,711 (27.3)</td>
<td>51,779 (37.4)</td>
</tr>
<tr>
<td>No of Persons Injured</td>
<td>1,53,502 (30.1)</td>
<td>1,32,170 (25.9)</td>
<td>2,23,995 (44.0)</td>
</tr>
</tbody>
</table>

Figures within parentheses indicate share in total accidents, killed and injured in the respective road categories.

- Other Roads accounted for the highest share in total road accidents (46.7%), number of fatalities (37.4%) and number of persons injured in road accidents (44.0%) during 2012.
## Spatial Distribution of Road Accidents

### Total Accidents, Persons Killed and Injured in Rural & Urban Areas (2012)

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Accidents</th>
<th>Person Killed</th>
<th>Person Injured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Area</td>
<td>2,23,933</td>
<td>53,127</td>
<td>2,03,046</td>
</tr>
<tr>
<td></td>
<td>(45.7)</td>
<td>(38.4)</td>
<td>(39.8)</td>
</tr>
<tr>
<td>Rural Area</td>
<td>2,66,450</td>
<td>85,131</td>
<td>3,06,621</td>
</tr>
<tr>
<td></td>
<td>(54.3)</td>
<td>(61.6)</td>
<td>(60.2)</td>
</tr>
<tr>
<td>Total</td>
<td>4,90,383</td>
<td>1,38,258</td>
<td>5,09,667</td>
</tr>
<tr>
<td></td>
<td>(100.00)</td>
<td>(100.00)</td>
<td>(100.00)</td>
</tr>
</tbody>
</table>

Note: Figures in parentheses indicate share of the total.
Two-wheelers accounted for the highest share in road accidents.
Trucks, tempos, MAVs and tractors accounted for the highest share in road fatalities.
Two-wheelers accounted for the highest share in the number of persons injured in road accidents.
### Age Profile of Road Accident Victims

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Year</th>
<th>0-14</th>
<th>15-24</th>
<th>25-65</th>
<th>65 &amp; above</th>
<th>Total number of person killed**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
<td>5,877 (7.3)</td>
<td>26,272 (32.4)</td>
<td>43,049 (53.1)</td>
<td>5,807 (7.2)</td>
<td>81,005 (100.0)</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>6,377 (7.4)</td>
<td>26,178 (30.3)</td>
<td>44,841 (51.9)</td>
<td>9,000 (10.4)</td>
<td>86,396 (100.0)</td>
</tr>
<tr>
<td></td>
<td>2012</td>
<td>5,879 (7.1)</td>
<td>26,709 (32.3)</td>
<td>43,868 (53.1)</td>
<td>6,173 (7.5)</td>
<td>82,629 (100.0)</td>
</tr>
</tbody>
</table>

Note: Figures in parentheses pertain to percentage share of road accident victims in respective age groups to the total road accident fatalities (other than drivers)
Causes of Road Accidents In India

Drivers’ fault accounted for the highest number of road accidents

- Fault of Driver, 78.7
- Fault of Pedestrian, 2.5
- Fault of Cyclist, 1.2
- Defect in Condition of Motor Vehicle, 1.4
- Defect in Road Condition, 1.4
- Weather Condition, 0.9
- All Other Causes, 13.9
STRENGTHENING ROAD SAFETY LEGISLATIONS

‘SAVING LIVES’
Central Motor Vehicle (Amendment) Bill

The Bill as passed in the Rajya Sabha, in consideration before the Lok Sabha, proposes amendments broadly classified into the following categories:

• Enhancement of penalties
• Delegation of powers to States
• Responsiveness on the part of Regional Transport Authorities
• Removal of anomalies and provision for new/emerging requirements
• Compensation to road accident victims
Enhancement of penalties

• To enhance penalties, wherever considered necessary, for violation of provisions of the Motor Vehicles Act, 1988 with a view to ensure road safety and discipline: 21 (new), 113, 114, 177, 180, 181, 183, 183A (new), 184, 185, 186, 192, 192A, 198, 200

• Sec 177 General provision of punishment of offences

• 183 (1) Driving at excessive speed

• 184. Driving dangerously

• 185. Drunken Driving or driving under influence of narcotic substance
• 192. Using vehicle without registration
• 192A. Using vehicle without permit
• 198. Unauthorized interference with vehicle
• 180 Allowing unauthorised persons to drive vehicles
Review of the Central Motor Vehicle Act

• Committee under the Chairmanship of Shri S. Sundar, former Secretary, Ministry of Surface Transport was set up in September 2009 to review the Motor Vehicles Act, 1988 in a comprehensive manner.

• The report of the Sundar Committee was received in the Ministry on 02.02.2011 (http://morth.nic.in/showfile.asp?lid=377)

• Since the CMV (Amendment) Bill in consideration before the Lok Sabha, contains several provisions necessary for effective implementation, the Proposed CMV Bill will be taken up after consideration of the Amendment Bill.
Road Safety: Institutional Mechanism

- National Road Safety Policy approved by cabinet on 15.03.2010
- A Committee Set up for Road Safety Recommendations, which include:
  - A National Road Safety and Traffic Management Board, with adequate expertise, autonomy and funds established through legislation.
  - State Road Safety and Traffic Management Boards in all the states
  - National Road Safety Fund and State Road Safety Funds
The Board

- The Board will be headed by a Chairman
- Five members drawn from various fields
  - Roads design, engineering or construction
  - Automobile engineering or technology
  - Data collection and analysis, accident investigation, research, finance or administration
  - Traffic management, road user behavior strategies or road safety education
  - Trauma care and rehabilitation
# Functions of the Board

<table>
<thead>
<tr>
<th>1. Road Engineering and Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Recommend road safety standards</td>
</tr>
<tr>
<td>• Road safety audits at all stages</td>
</tr>
<tr>
<td>• Commission Black spot treatment</td>
</tr>
<tr>
<td>• Recommend traffic calming</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Vehicle Safety Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Safety standards</td>
</tr>
<tr>
<td>• Vehicle safety audits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Crash investigation, data collection and analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Recommend procedures for data collection, transmission, analyses at various levels</td>
</tr>
<tr>
<td>• Comprehensive database</td>
</tr>
<tr>
<td>• Procedures and Centres for Multi-disciplinary crash investigations</td>
</tr>
</tbody>
</table>
4. **Knowledge Production, Research and Institutional Linkages**

- Identify areas & subjects for research
- Research projects
- Linkages between institutions at local, regional and national level

5. **Road User Behavior strategies, public awareness and education**

- Promote education and campaigns on road safety amongst all user groups
- Recognize NGOs working in the area

6. **Capacity Building & Training**

- Guidelines for building capacity and skills in the traffic police, hospitals, highway authorities, NGOs and other organizations involved with road safety
7. Traffic Management and Enforcement

- Encourage state govts. to implement laws for helmet use, seat-belt use, drunken driving, etc.
- Encourage state govts. to computerize details regarding vehicle and driver licensing
- Recommend drivers’ working hours
- Guidelines for driver training and testing
- Safety standards and infrastructure for non-motorized transport

8. Post-trauma Medical care

- Guidelines to establish grid of trauma care centres in the country
- Guidelines to create a grid of medical and paramedical facilities for dealing with highway injuries
- Emphasize pre-hospital and acute care and rehabilitation
• Bill proposed to Constitute Boards
• Enabling provision in the Act for states to adopt the Act and set up Road Safety And Traffic Management Boards
• Executive Order to put the National Board in place till enacted.
• State boards also to assist the National board in the discharge of its functions
### Highway Safety - MoRTH initiatives

- **Creation of National Road Safety Council (NRSC)**
- **Adopting multi-pronged strategy to address the 4 Es**
  - Education, Enforcement, Engineering, Emergency Care
- **Notifying the National Road Safety Policy**
- **Institutionalizing National Awards for Highway Safety**
- **Ensuring Safety Aspects as integral part during Highways design**
- **Establishment of Integrated Driver Training & Research Institutes**
Highway Safety - MoRTH initiatives

- Setting up of Inspection & Certification Centres
- Identification of ‘Black Spots’
- Enforcement of Safety Standards
- Road Safety Audits for select NH stretches
- Regular awareness creation programs/ campaigns
- Saving Lives: Pilot initiatives like Cashless Treatment of accident victims (Gurgaon Jaipur Stretch of NH 8)
- Digital National & State Registers for Vehicle Registration (Vahan) & Driving License (Sarthi)
- National Ambulance Code
Saving Lives: Project for Cashless Treatment of Road Accident Victims

- Indian road safety scenario: Year 2012 – **Accidents:** 4,90,383; **Deaths:** 1,38,258

- **Strengthening emergency care** - Pilot project for cashless treatment of accident victims for first 48 hours up to Rs.30,000 on Gurgaon-Jaipur stretch of NH-8
  - Fleet of 11 GPS enabled Ambulances, including 6 ALS, for shifting accident victims to nearest hospital in shortest possible time
  - Single toll free No. 1033 with a 24*7*365 call centre
  - 44 empanelled Hospitals and 8 Government hospitals to provide treatment
  - 60 Road Safety Volunteers trained by AIIMS to act as First Responder
  - Crash investigation of serious accidents by NATRIP and IIT Delhi
  - **300 plus accidents attended by Ambulances**
  - **Average time for ambulance to reach accident spot:** 11 minutes
  - **Average claim size:** Rs.10,363
Decisions taken in the Meetings of NRSC

Discussed the following measures to improve road safety:

• Setting up of State Road Safety Councils and District Committees
• Setting up of Road Safety Fund at State level and setting aside 50 per cent fines collected for traffic violations for this fund
• Replication of Tamil Nadu model for implementation of Road Accident Data Management System (RADMS)
• Identification of black spots and treatment thereof
• Action against over-loading, action against drunken driving and removal of liquor shops on NHs
Road Safety: Issues for consideration

- Institutional mechanism at State level
  - State Road Safety Boards-recommendatory
- Annual Action Plan for Road Safety
  - Funding and monitoring
- Road Accident Data Management
  - APRAD or any other format (RADMS of Tamil Nadu)
- Mechanism for enforcement of traffic rules
  - State of infrastructure for enforcement
- Steps taken to strengthen Road Safety
  - Preventing drunken driving and over speeding
  - Overloading of commercial vehicles (weigh in motion weigh bridges)
  - Use of ISI helmets/seat belts
  - Use of retro reflective tapes to prevent rear end collisions
Road Safety: Issues for consideration

- “Vahan” & Sarathi”
  - State of digitization of legacy data, use for enforcement of penalties, e-challans

- Road Design & Geometry
  - Mechanism to identify and rectify black spots

- Traffic calming measures
  - Speed breakers vs rumble strips

- Driver Training & issue of driving licences
  - Status of driver training infrastructure
  - Number of driver training institutes (DTIs)
  - Accreditation & monitoring of DTIs
  - System of testing driving skills: objective vs subjective
Road Safety: Issues for consideration-States (Contd.)

- **System of Inspection & Certification of in use vehicles**
  - Visual or objective
  - Road map for ushering 100% objective fitness

- **Road Safety Awareness Programme**
  - Content, medium and target groups: mass media for road user behaviour

- **Emergency medical care for accident victims**
  - State of relief infrastructure (ambulances, crash rescue vehicles)
  - Existence of dedicated call numbers, monitoring average response time
  - Funding of o&m for accident relief system
Steps taken by Central Government to improve Road Safety

• National Road Safety Policy approved.
• National Road Safety Council constituted.
  – All States/UTs requested to set up State Road Safety Councils and District Road Safety Committees.
• Adoption of a multi pronged strategy to address the issue of road safety based on 4 Es of Road Safety:
  (i) Education
  (ii) Enforcement
  (iii) Engineering (roads as well as vehicles)
  (iv) Emergency care
Thank you