

The 11<sup>th</sup> Public and Private Joint Forum In Asian Region  
(January 26-27, 2021)

Country Report on  
'Recent situation of the measures related to  
vehicle safety and environment'  
India

## Government of India

### **MORTH**

Ministry of Road Transport &  
Highways

### **MOHI**

Ministry of Heavy Industries &  
Public Enterprises

### **MOEF**

Ministry of Environment & Forests

Ministry of Consumer Affairs

### **DGFT**

Director General Foreign Trade

State Ministries

## Standardization

**CMVR-**  
Technical Standing  
Committee

**Automotive Industry  
Standards Committee-**  
AISC

**Standing Committee on  
Emission Legislation-**  
SCOE

**Bureau of Indian  
Standards-BIS**

## Certification Agencies

1. ARAI – The Automotive Research Association of India
2. VRDE – Vehicle Research Development Establishment
3. CIRT – Central Institute of Road Transport
4. ICAT – International Centre for Automotive Technology
5. IIP – Indian Institute of Petroleum
6. CFMTTI – Central Farm Machinery Testing & Training Institute
7. NRFMTTI – Northern Region Farm Machinery Testing & Training Institute
8. GARC – Global Automotive Research Centre (GARC)
9. NATRAX – National Automotive Test Tracks

# National Committees

Various National committees monitor the work related to automotive regulations.



*MVA Motor Vehicle Act  
CMVR Central Motor Vehicle Rules  
IS Indian Standards  
AIS Automotive Industry Standards  
UN GTR UN Global Technical Regulations  
UN R UN Regulations*



01

### CMVR-TSC & SCOE

Apex Committees working on Safety and Emission Regulations



02

### AISC

Subsidiary Committee to CMVR-TSC and SCOE for formulating and approving standards



03

### Technical Panels

Group of Experts supporting AISC and BIS for formulating Standards

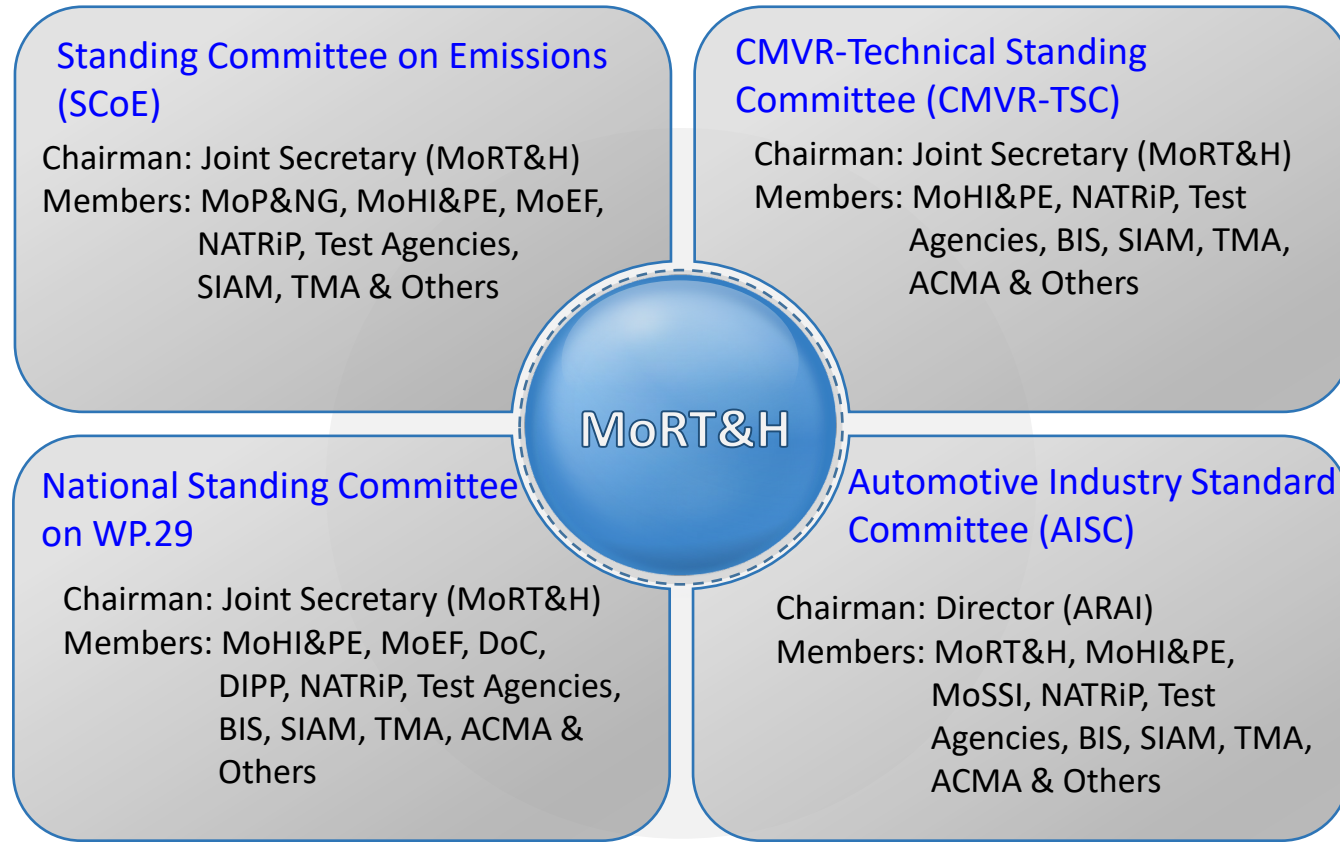


04

### India WP.29 Activities

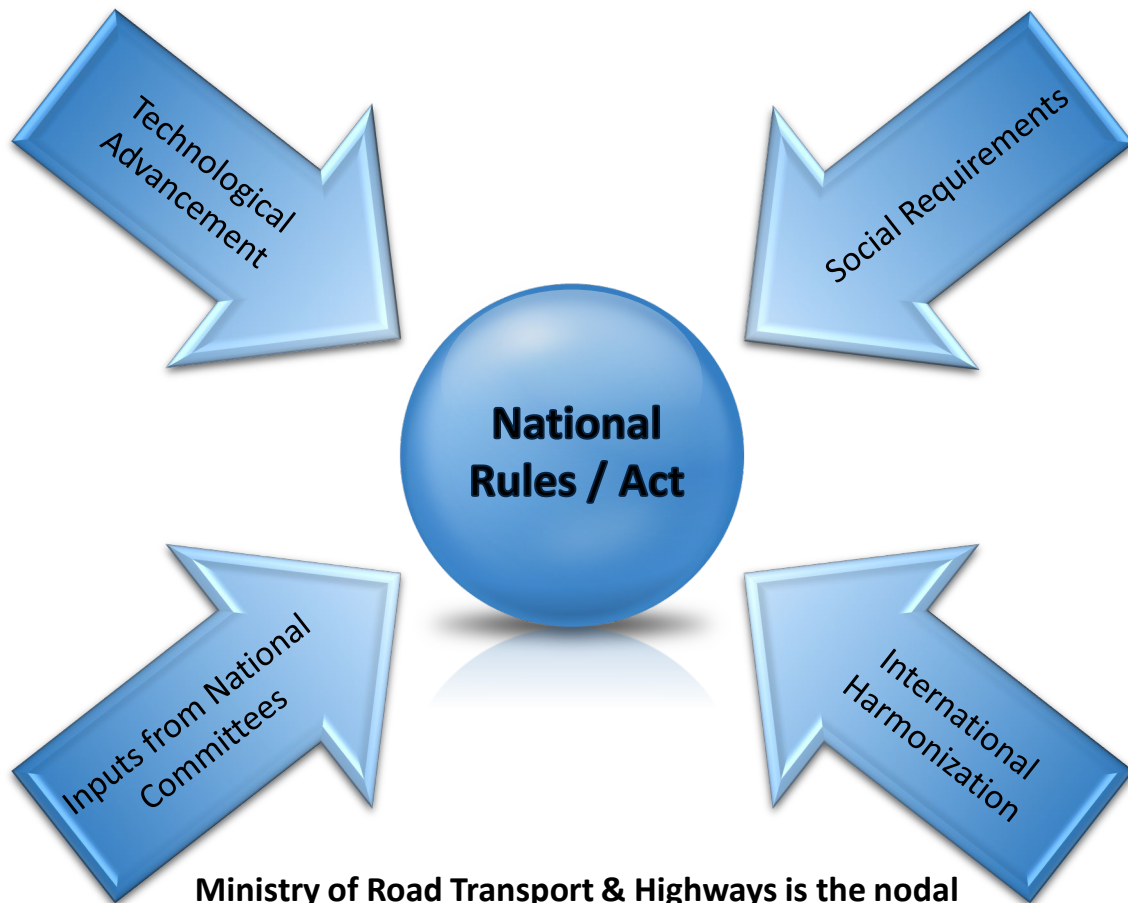
Harmonization of Standards

## National Committees - Composition



- **Type Approval system is similar to UN-ECE**
  - Implemented in year 1991
- **Type Approval administration**
  - Notifying agencies: Primarily MoRTH
  - Standards and other requirements are notified under CMVR
  - Testing agencies: Notified under Rule 126
  - TA certificates: Issued by Testing Agencies
- **Test standards**
  - Bureau of Indian Standards (BIS) prepares IS standards
  - AISC Technical committee prepares AIS standards as an interim step
  - Emission Test Procedure as per TAP/ 115-116 Document. Future standards will be published as AIS.
- **Roadmap of Regulations**
  - Agreed by industry, test agencies and government
  - Standards are aligned with UN Regulations / Global Technical Regulations (GTR) to the extent possible

## Governing Factors



**Ministry of Road Transport & Highways is the nodal  
Ministry for motor vehicle regulations in India**

# Motor Vehicle (Amendment) Act, 2019

## Key provisions in Motor Vehicles (Amendment) Act, 2019

- **Mandatory fitness test through Automated Centres**
- **New provision for ELV**
- **New Section on Vehicle Recall**
- **Safety of Pedestrians and Non Motorized Transport**
- **Safety of Children during Commute**
- **Electronic Monitoring and Enforcement of Road Safety**
- **New Section for Good Samaritan, Golden Hour treatment, No fault liability**
- **Penalties**
- **Schemes for interim relief for accident victim claimants**
- **Constitution of Motor Vehicle Accident relief Fund**
- **Formulation of Road Safety Board**
- **Various Central Motor Vehicle Rules concurrent with Motor Vehicle (Amendment) Act, 2019 are under process.**

**India is a signatory to Brasilia Declaration and is committed to reduce the number of road accidents and fatalities.**

- Reference – Report : Road Accidents in India 2015 – MoRTH

### *Excerpts from Brasilia Declaration*

#### **Recommended actions to develop & promote the use of safer vehicles**

seat belts, air bags and active safety systems such as ABS & ESC fitted as standard, air quality, vehicle disposal

#### **Recommended actions to increase awareness & build capacity of road users**

professional drivers' work conditions

#### **Recommended actions to strengthen cooperation & coordination towards global road safety**

develop national, regional & global targets to reduce road traffic crashes & fatalities. (WHO, UNECE, Stakeholders)



### Core Area - Safer Vehicles

**Objective:**

Eliminate production (and importation) of substandard new vehicles.

**Target:**

100% of new vehicles (defined as produced or sold) meeting priority standards (based on UN regulations or equivalent recognised national standards).

1

Frontal impact protection and side impact protection

2

Electronic Stability Control

3

Pedestrian front protection

4

The seat-belt regulation

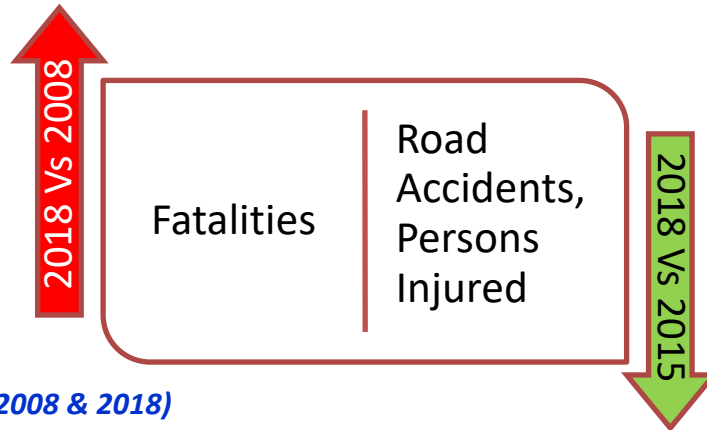
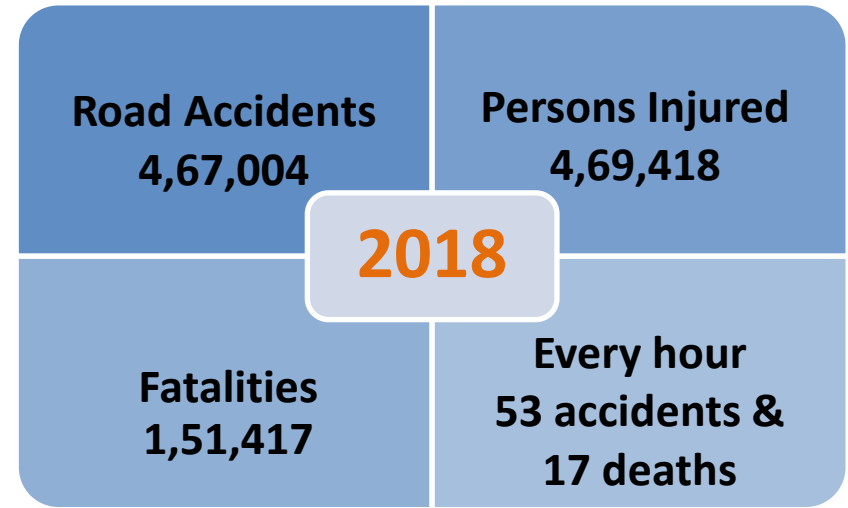
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The child restraint regulation

6

Motorcycle antilock braking systems

## Accident Statistics (India)



## Fatality Vs Vehicle Population

Years	Population of India (in thousand)	Road Accident Risk (normalized for pop)*	Road Accident Death Risk (normalized for pop)\$	Total number of registered vehicles (in thousand)	Road accident Rate (normalized for vehicles)#	Road accident death rate (normalized for vehicles)##	Vehicle Density \$\$
1990	8,35,000	33.8	6.5	19,152	147.6	28.2	10
2000	10,14,825	38.6	7.8	48,857	80.1	16.2	15
2005	10,95,722	40.1	8.7	81,502	53.9	11.7	21
2010	11,76,742	42.5	11.4	1,27,746	39.1	10.5	28
2015	12,54,019	40.0	11.7	2,10,023	23.9	7.0	38
2016	12,68,961	37.9	11.9	2,30,031	20.9	6.6	41
2017	12,83,601	36.2	11.5	2,53,311	18.4	5.8	43
2018	12,98,043	36.0	11.7	--	--	--	--

\*Road Accident Risk : Number of accidents per lakh population

\$Road Accident Death Risk : Number of persons killed per lakh population

#Road Accident Rate : Number of accidents per ten thousand vehicles

##Road Accident Death Rate : Number of persons killed per ten thousand vehicles

\$\$Vehicle Density : Number of Vehicles per km of Road

Source: MoRTH - Road Accidents in India (2018)

# Safety Norms – History / Future

- ❖ Brakes / High speed Braking
- ❖ Steering Effort
- ❖ Seat Belt & Anchorages
- ❖ Gradeability
- ❖ Tell tales & Controls
- ❖ Lighting

2000-05

- ❖ Pass by noise
- ❖ CoP of components
- ❖ Survival Space
- ❖ Strength of Superstructure
- ❖ Retro-reflectors
- ❖ Safety - BoV

2005-10

- ❖ Spray suppression
- ❖ Demist & Defrost
- ❖ Traction Batteries
- ❖ EMC

2010-15

- ❖ Crash Norms
- ❖ Airbags, CRS
- ❖ Speed and seat belt alert
- ❖ Pedestrian Safety
- ❖ ABS
- ❖ EMI / EMC
- ❖ AHO
- ❖ Sleeper Coaches
- ❖ Double Deck Buses

2015-20

Significant Step in last 5 years

- ❖ ESC
- ❖ Safety Roadmap for CEVs
- ❖ Safety features for 2 W – Stands, Foot rest, external projections
- ❖ Future Subjects
  - AEBS
  - ADAS
  - New Technologies

2020-

# Passenger Car – Key New Requirements



## Airbag

Driver Airbag is mandatory

1

## Seat Belt Reminder

Driver and Co Driver Seat Belt Reminder

2

## Manual Override for Central Locking

Manual override for protection against lock down

3

## Rear Parking Assist System

RPAS for safe parking

4

## Crash Standards

Mandatory Crash Standards.

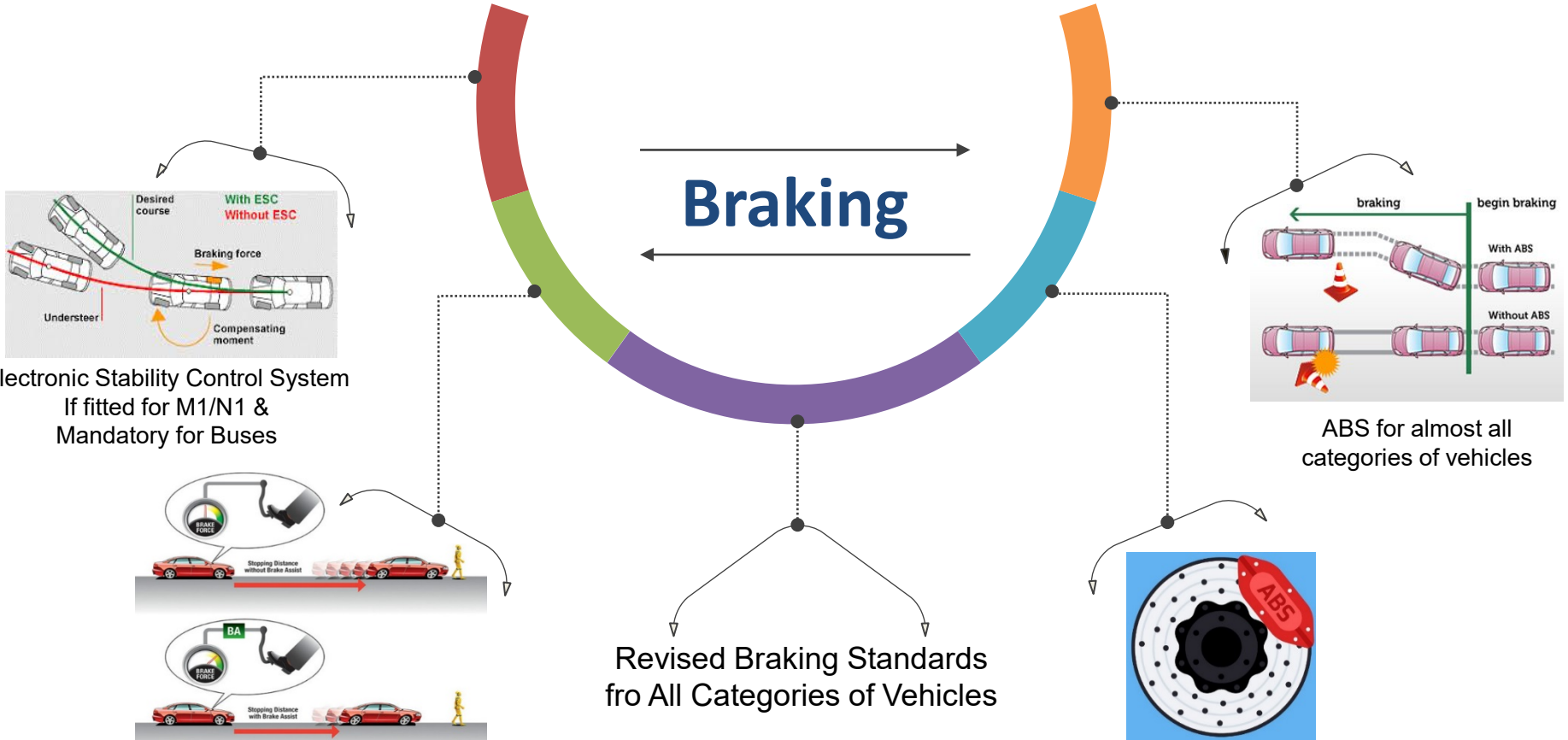
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## Pedestrian safety

Car design for ensuring pedestrian safety in event of crash

6

# Safety Requirements - Braking



# Electric Vehicles

## AIS 038 (Rev. 2)

Construction Safety  
Scope: M & N category  
In CMVR: AIS 038 (Rev. 1)  
New Adopted : AIS 038 (Rev. 2)  
Inline with GTR 20 Phase 1 and  
UN R 100 Rev 3 Transposition  
Document  
Proposed for Notification

## AIS 156

Construction Safety  
Scope: L category  
In CMVR: AIS 038 (Rev. 1)  
New Adopted: AIS 156  
Inline with UN R 136  
Proposed for Notification

## AIS 041 (Rev. 1)

Measurement of Net Power &  
Maximum 30 Minute Power  
Scope: L, M & N category  
In CMVR: AIS 041 (Rev. 1)  
Inline with UN R 85  
UN R 85 Rev. 1 available  
(No technical change  
for Motor)

## AIS 040 (Rev. 1)

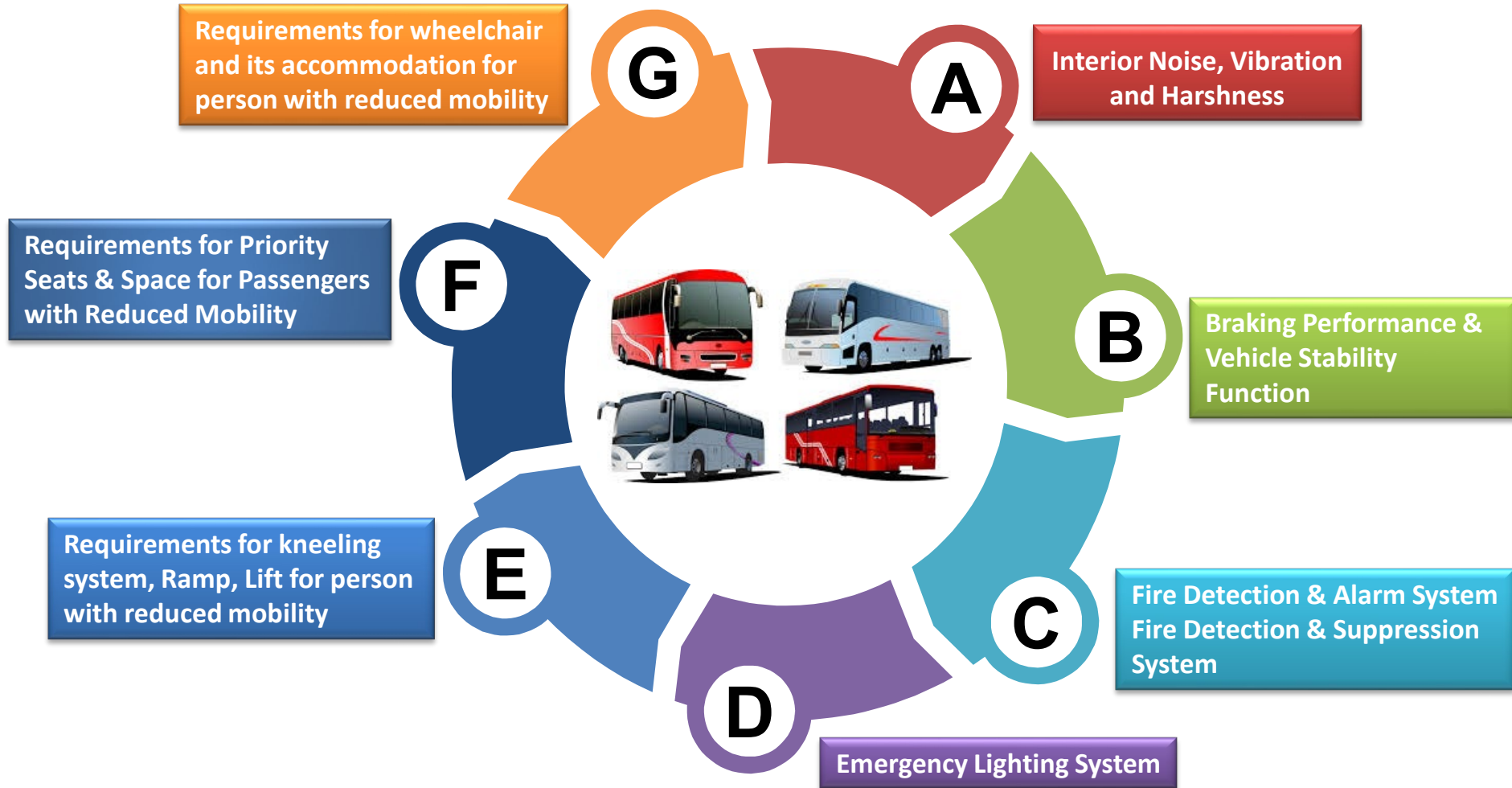
Measurement of Range  
Scope: L, M & N category  
In CMVR: AIS 040 (Rev. 1)  
Inline with UN R 101 Rev. 3

## AIS 039 (Rev. 1)

Measurement of Electrical  
Energy Consumption  
Scope: L, M & N category  
In CMVR: AIS 039 (Rev. 1)  
Inline with UN R 101 Rev. 3

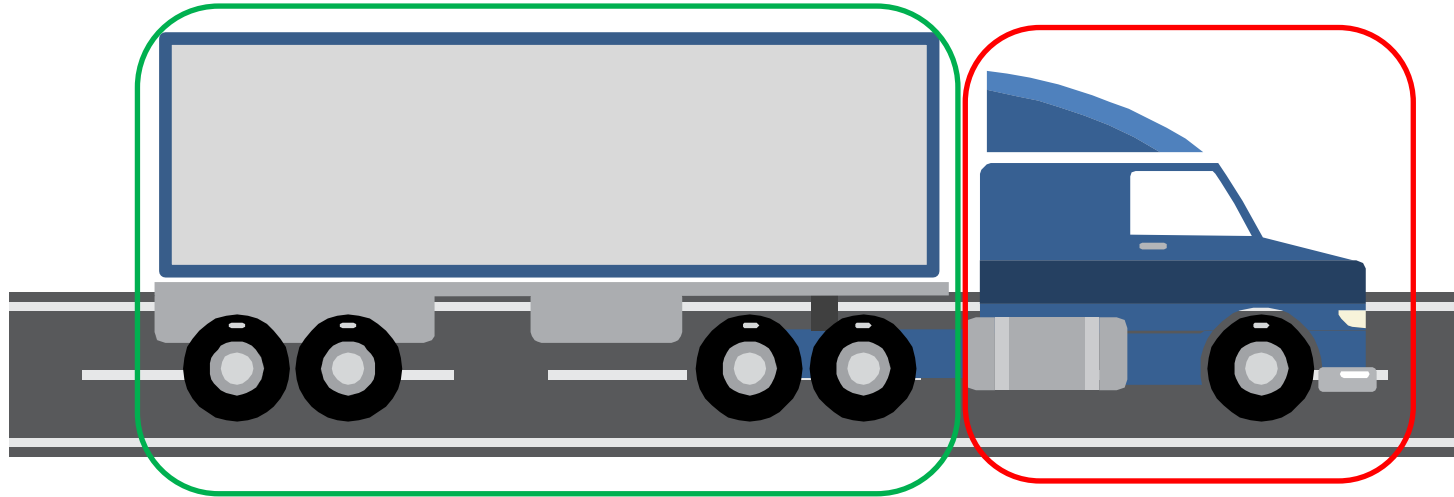


## Advance Requirements for Buses (To Improve Public Transport)





## Codes for Truck and Trailers



Requirements for  
Trailers

Requirements for Truck  
Cabin and Load Body

- Focus on improving the Logistics Segment to enhance safety as well as efficiency.

## Special Purpose Vehicles



Ambulance Code



School Bus



Sleeper Coaches

## Specific Codes for Special Purpose Vehicles



Motor Caravan



Double Deck Buses



Reefer Van

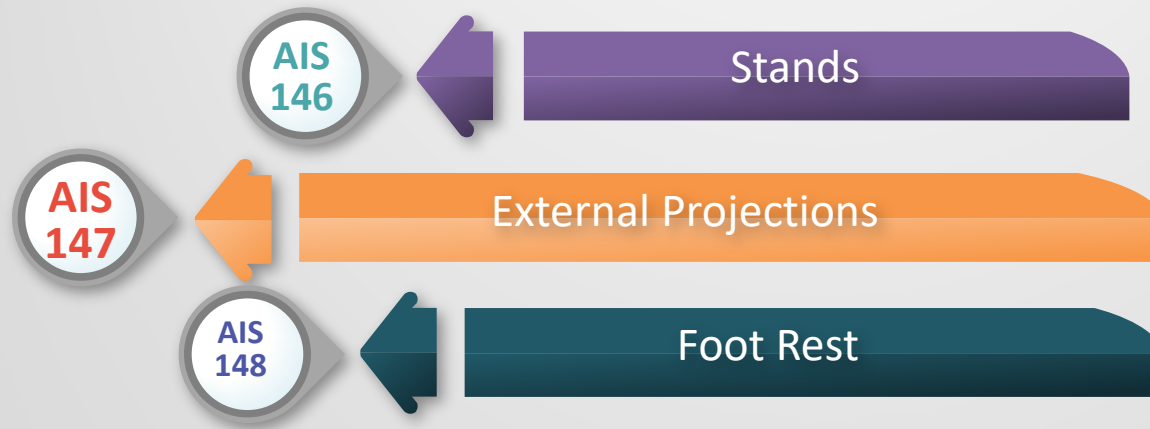


Food Truck



Cash Vans

## Safety Features in Motorcycles

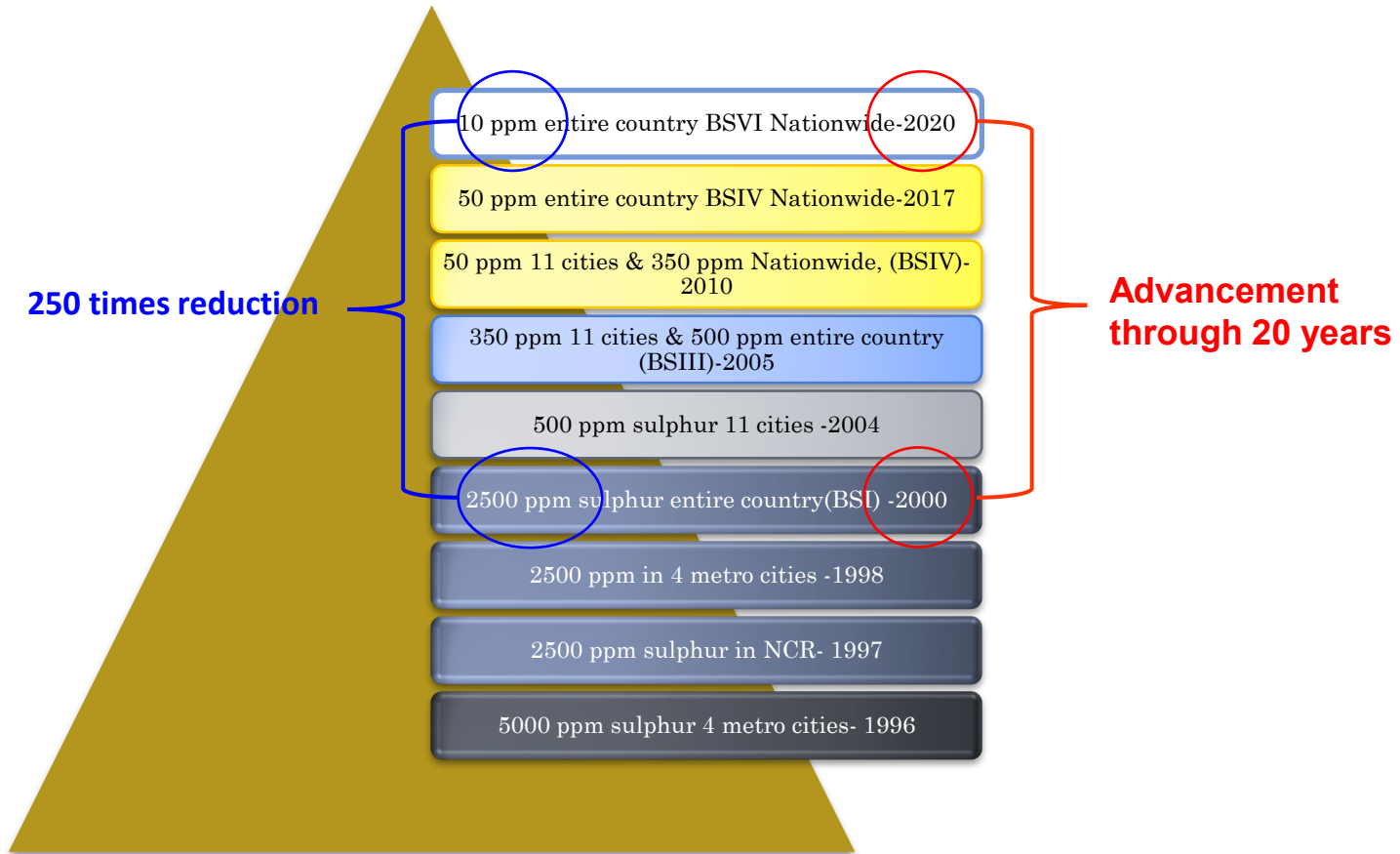


- AIS 146 (Stands) : Reference Standard Annex XVI of EU directive 44/2014. Stability Requirement, Durability, Automatic Retraction while vehicle moving or disable vehicle propulsion if side stand is on.
- AIS 147 (External Projections) : Reference Standard : Annex VIII of EU directive 44/2014.
- AIS 148 (Foot Rest) : Reference Standard : Annex XIII of EU directive 44/2014. Strength Requirement.
- **Implementation from January 2022.**

### Key Emission norms notified in India

- Implementation of Bharat Stage VI (BS VI) emission norms for L, M and N category vehicles.
- Real Driving Emissions.
- Next Stage Emission Norms for Agricultural Tractors, CEV and Combine Harvester.
- Alternate Fuels such as Methanol, Ethanol, Dual Fuel, LNG, Bio-diesel, CNG and Bio-CNG.

# Market Fuel Diesel Sulphur Content



## Key Safety provisions notified in India

### Emissions

- Diesel with Compressed Natural Gas (CNG) or Bio-Compressed Natural Gas (Bio-CNG) or Liquefied Natural Gas (LNG) as dual fuel
  - Mass emission standards for Di-Methyl Ether (DME or D100) Vehicles
  - Mass emission provisions for M85 Vehicles
- Implementation of BS VI norms for Quadricycles. From 22<sup>nd</sup> May 2020.
- OBD monitoring items for BS VI from 1<sup>st</sup> April 2020.
- OBD Stage II-A Thresholds for BS-VI vehicles from 1<sup>st</sup> April 2023.
- OBD Stage II-B Thresholds for BS-VI vehicles from 1<sup>st</sup> April 2025
- CNG/Bio CNG/HCNG as per AIS 024 & 028 (Rev.1) and fuel specs as per IS 17314:2019 from 25<sup>th</sup> September 2020

### Safety

- Approval of HSRP as per AIS-159 from 11<sup>th</sup> February 2020
- Overall Dimensions of Motor Vehicle 26<sup>th</sup> June 2020.
- Safety Glazing for materials conforming to IS 2553 (Part 2) from 1<sup>st</sup> April 2021.
- Tyre Pressure Monitoring System as per AIS 154, from 1<sup>st</sup> October 2020.
- Puncture repair kit for M1 category with tubeless Tyres from 20<sup>th</sup> July 2020.
- Hydrogen Fuel Cell Vehicles for Category M and N as per AIS 157: 2020 from 23<sup>rd</sup> September 2020.
- Safety Regulations for Construction Equipment Vehicles

- Setting up of model in - use vehicle Inspection and Certification Test Centers at various places in the country is in progress.
- AIS-129 on End of Life of Vehicles is published and implementation plan is under discussion.
- Draft Guidelines for setting up Authorized Vehicle Scrapping Facility has been issued.

**Thank You !**