

The 12th Public and Private Joint Forum In Asian Region
(December 7-8, 2021)

Country Report on
Process of developing measures related to Vehicle
Safety and Environmental Protection
India



Automotive Standards, Central Motor Vehicle Rules (CMVR) & Motor Vehicle Act (MVA) - Hierarchy

MVA

- The powers of the Government to prescribe CMVR as per the safety and environment needs.

CMVR – Mandatory

- Mandatory requirements to be met by the specified vehicle category as per the prescribed standards.

CMVR – Non Mandatory

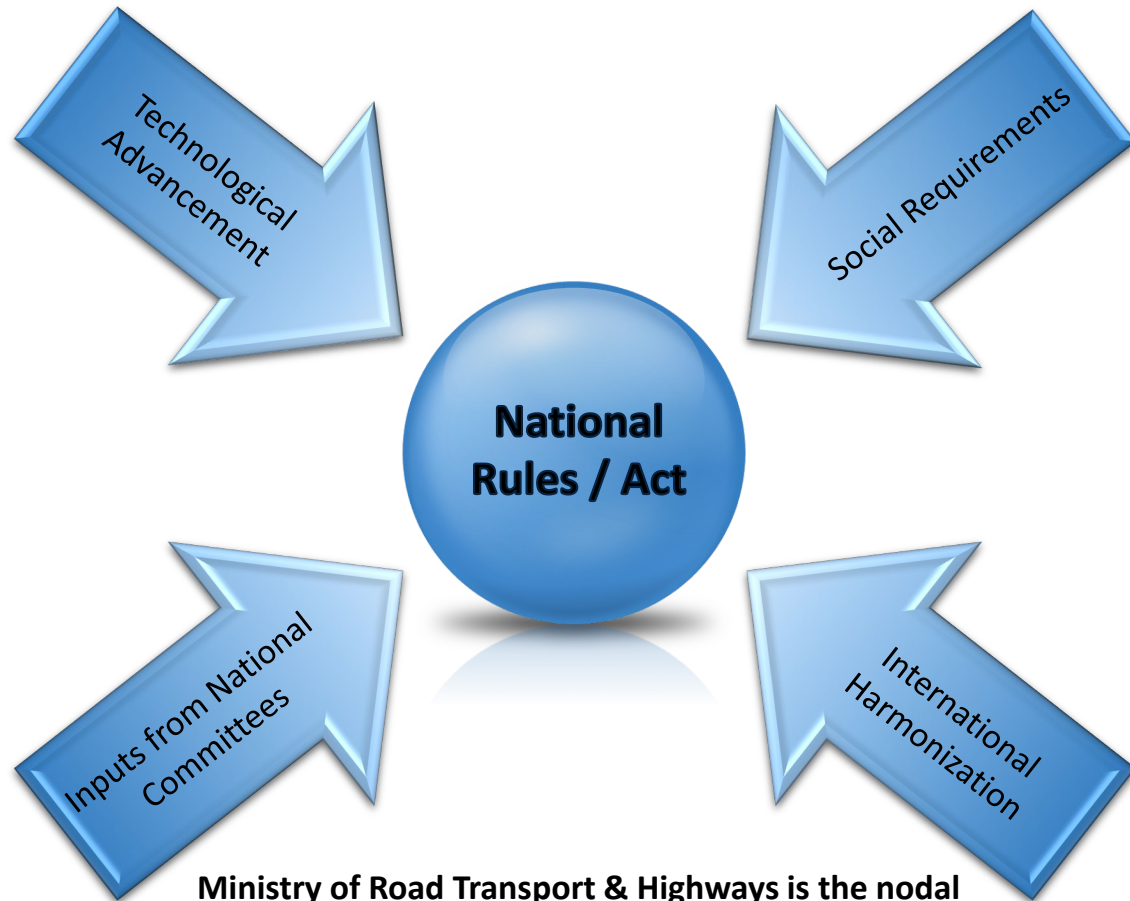
- New technologies can be introduced and need to be tested as per prescribed standards. Only on if fitted basis.

Automotive standards

- Automotive Industry Standards (AIS) – Formulated by Automotive Industry Standards Committee (AISC)
- Indian Standards (IS) – Formulated by Bureau of Indian Standards (BIS)



Governing Factors



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

National Committees - Composition

**Central Motor Vehicle Rules –
Technical Standing Committee :**
Members: MoHI&PE, NATRiP, Test
Agencies, BIS, SIAM, TMA, ACMA,
Academia & Others.

Chairman:
Joint Secretary (MoRT&H)

Safety

**CMVR-
TSC**

Emissions

SCoE

**Standing Committee on
Emissions :**
Members: MoP&NG, MoHI&PE,
MoEF, NATRiP, Test Agencies,
SIAM, TMA & Others.

Chairman:
Joint Secretary (MoRT&H)

Chairman:
Joint Secretary (MoRT&H)

Members: MoHI&PE, MoEF, DoC,
DIPP, NATRiP, Test Agencies, BIS,
SIAM, TMA, ACMA & Others.
**National Standing Committee
on WP.29**

**WP.29
related
matters**

WP.29

AISC

**Technical
Standards**

Chairman:
Director, ARAI
Members: MoRT&H, MoHI&PE,
MoSSI, NATRiP, Test Agencies,
BIS, SIAM, TMA, ACMA &
Others.
**Automotive Industry Standards
Committee**

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

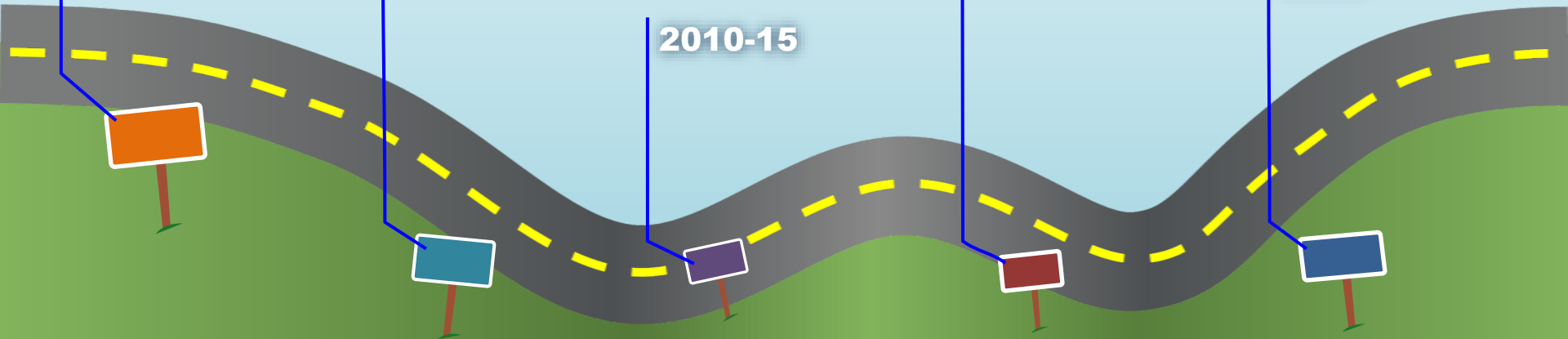
- ❖ Crash Norms
- ❖ Airbags, CRS
- ❖ Speed and seat belt alert
- ❖ Pedestrian Safety
- ❖ ABS
- ❖ EMI / EMC
- ❖ AHO
- ❖ Sleeper Coaches
- ❖ Double Deck Buses

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-



Global Plan for the Decade of Action for Road Safety 2021-2030

Front and Side Impact

Offset Frontal and Lateral collision requirements are mandated for passenger cars.

Standards are based on earlier version of UN Rs.



Safety Belts and Safety Belt Anchorages

Mandatory for outboard seats for passenger cars.

Driver and Co-driver seat belt requirements for Buses and trucks.



Pedestrian Protection

Pedestrian Protections requirements in line with UN GTR 9 are mandated for all passenger cars.



Motorcycle Helmets

Standards and Rules are in place.

Enforcement is an issue.



ABS and DRL – Motorcycles

ABS and DRL / Auto Headlamp On is mandatory



Electronic Stability Control Systems

Standards are in place. To be tested if fitted for passenger Cars.

Mandatory for Buses from April 2023.



Advanced Emergency Braking Systems

Standard formulation in line with UN Regulations is in progress.



DECADE OF ACTION FOR
ROAD SAFETY

2021 - 2030



ISOFIX child restraint

Standard formulation is in progress.

Draft norms for Child Restraint Systems for
Two wheelers are issued.



Intelligent Speed Assistance Systems

Speed Alert systems already notified.

Speed limits on different roads are specified.



Accident Emergency Call Systems

Subject not initiated.



DECADE OF ACTION FOR
ROAD SAFETY



2021 - 2030

Passenger Car – Key New Requirements



Airbag

Driver and Co-driver Airbag are 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

Speed Alert Systems

Warning above 80 km/h at every 2 minutes.
Continuous warning after 120 km/h.

5

Safety Rating

Safety Rating Program is under consideration

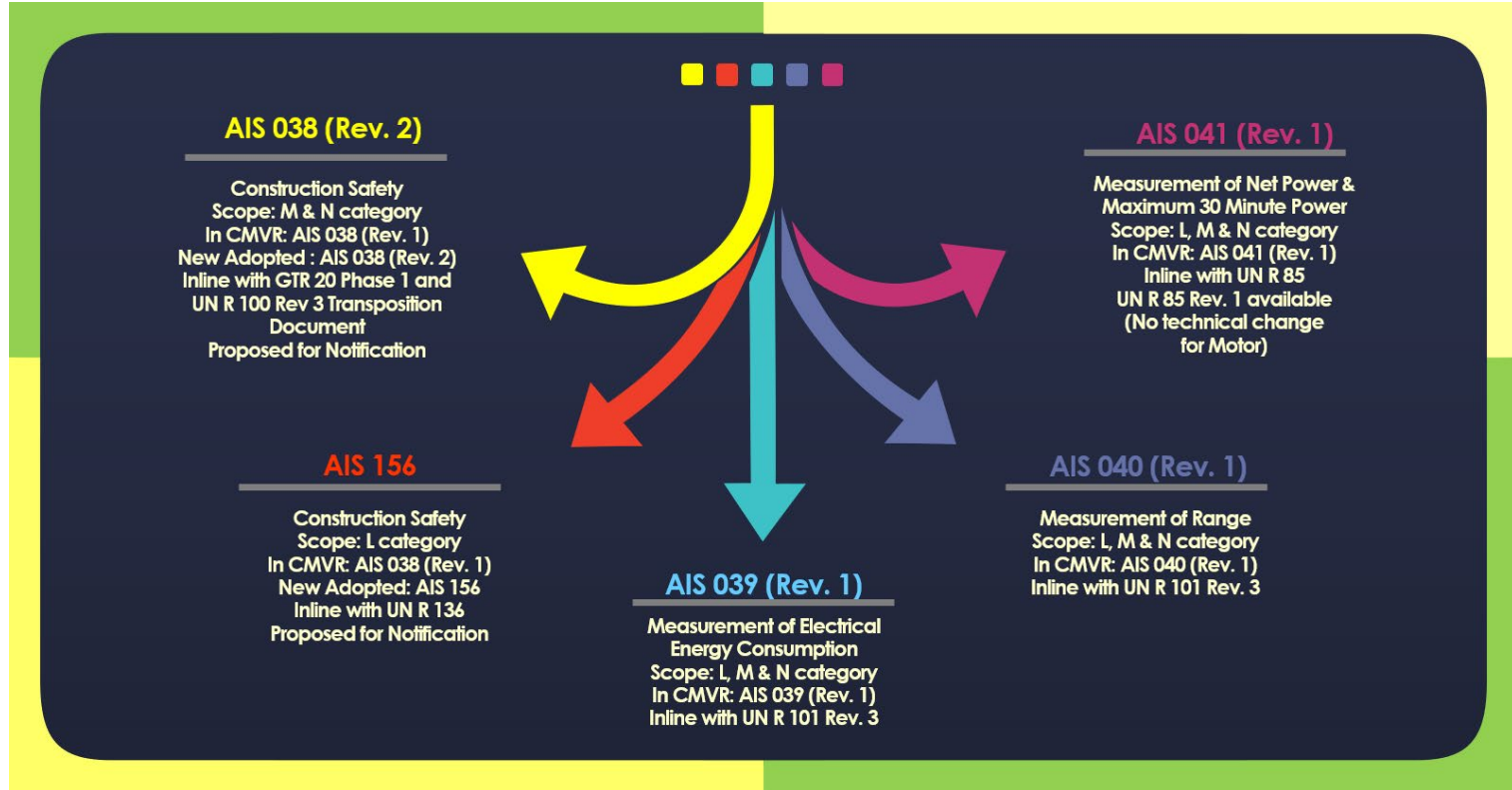
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Fire Safety - Buses



FDAS – Fired Detection System
FDSS – Fire Detection and Suppression System
FPS – Fire Protection System

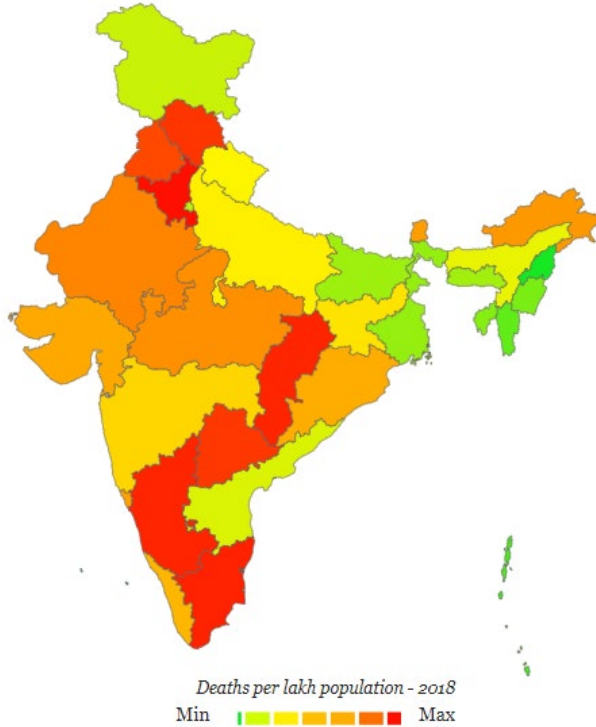
Electric Vehicles



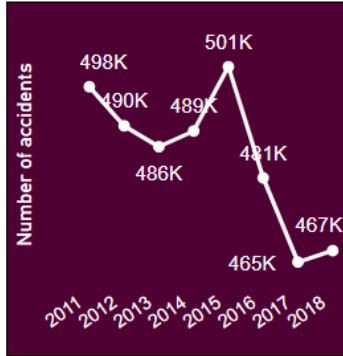
New Standard based on UN GTR 20 on Battery Durability is under formulation

Trends – Accidents and Fatalities

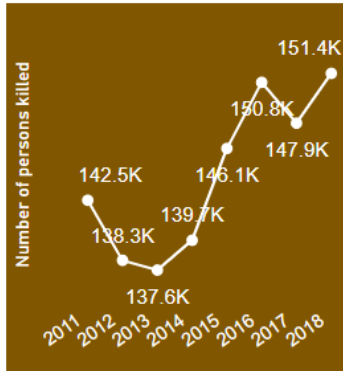
National Figures



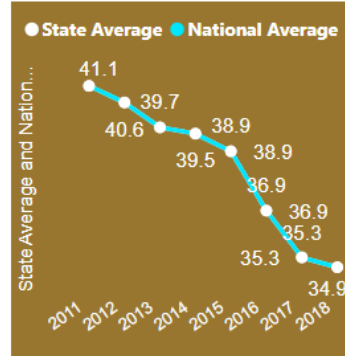
Total road accidents YoY 2011 to 2018



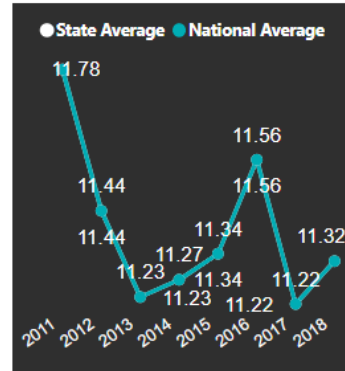
Total road deaths YoY 2011 to 2018



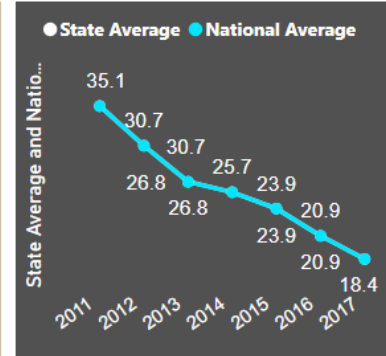
Total road accidents per lakh population



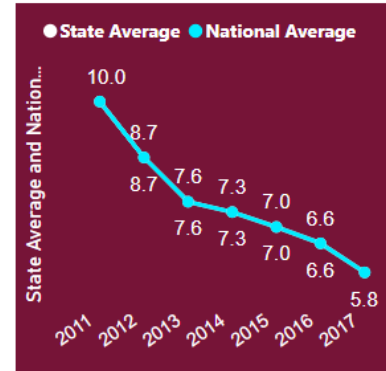
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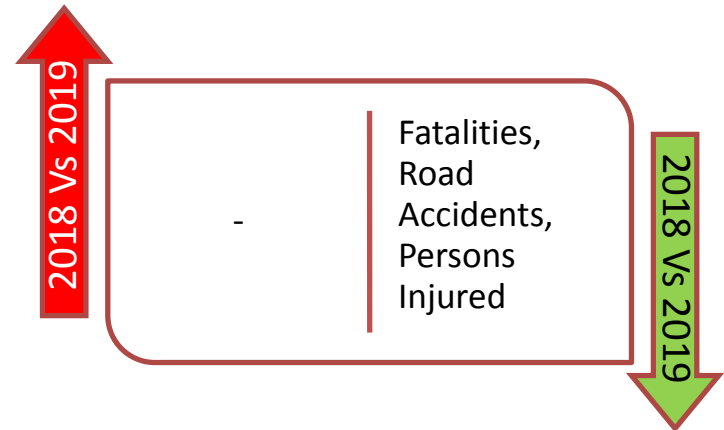
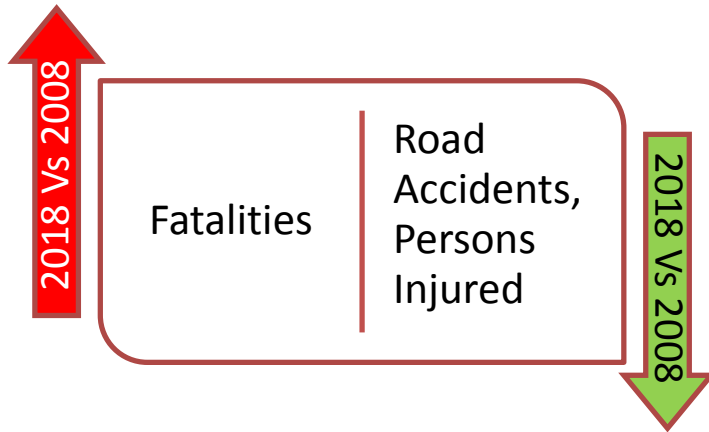
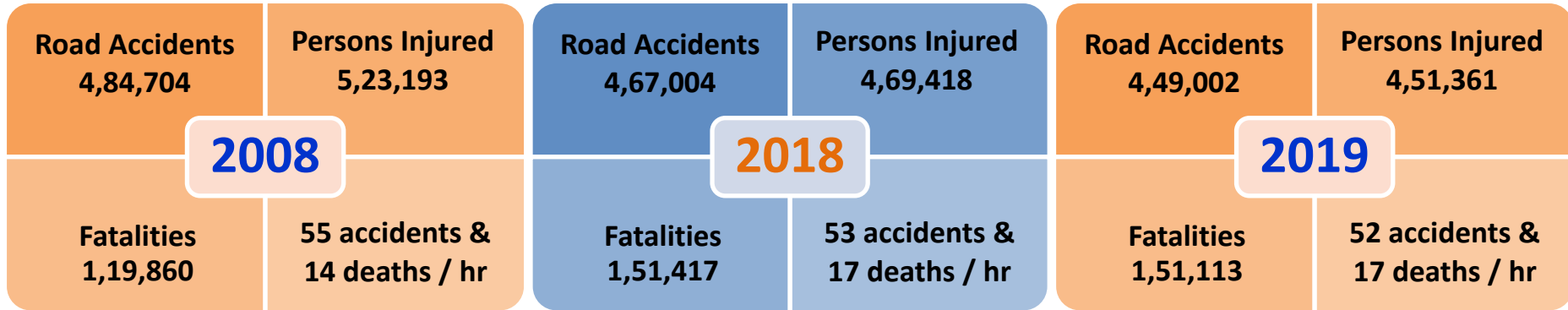
Total road accidents per 10,000 vehicles



Total road deaths per 10,000 vehicles



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	2,72,988	19.2	6.2	40
2019	13,12,241	34.2	11.5	2,97,190	16.8	5.7	-

≈3 times reduction

≈3 times increase

*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

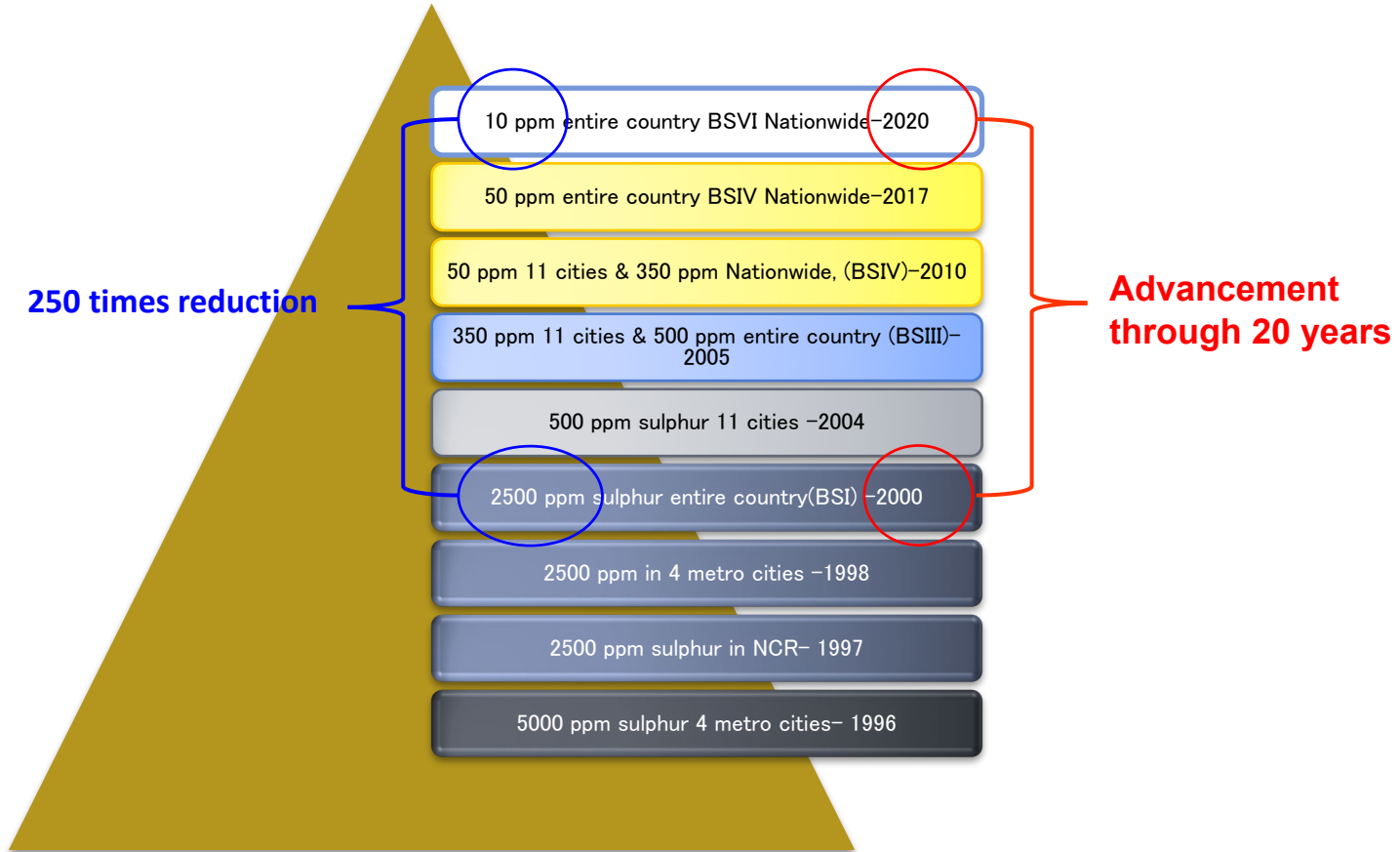
Source: MoRTH - Road Accidents in India (2018)

Emission Regulations

Key Emission norms notified in India

- Implementation of Bharat Stage VI (BS VI) emission norms for L, M and N category vehicles.
- India migrated to BS VI norms directly from BS IV norms.
- Real Driving Emissions.
- Next Stage Emission Norms for Agricultural Tractors, CEV and Combine Harvester.

Market Fuel Diesel Sulphur Content



Alternate Fuels

Flex-fuel Methanol M15, M85 or M100 and Methanol MD 95
(Implemented from 24th May 2018)

Flex-fuel ethanol (E85), (E100) and (ED95)
(Implemented from 19th May 2015)

Ethanol (E-20)
(Implemented from 8th March 2021)

Ethanol Blends (E12, E15)
(Implemented from 11th October 2021)



Di-Methyl Ether (DME or D100)
(Implemented from 17th January 2020)

Bio-CNG or LNG
(Implemented from 29th November 2018)

BioDiesel (B-20 and B-100)
(Implemented from 11th April 2016)

Dual Fuel - Diesel with CNG or Bio-CNG or LNG as dual fuel
(Implemented from 17th January 2020)

Control of In-Use Vehicles

- Setting up of model in - use vehicle Inspection and Certification Test Centers at various places in the country is in progress.
- Policy for Authorized Vehicle Scrapping Facility has been notified recently.
- Vehicle recall procedures are notified.

Thank You !

