



# Road Safety and Traffic Management Policies, Regulations and Strategies

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# **Sustainable Development Goals (SDGs): 2030**

**To quote our Hon'ble Prime Minister at UN Session in September 2015**

**“Today, much of India’s development agenda is mirrored in the Sustainable Development Goals .... Our attack on poverty today includes expanded conventional schemes of development, but we have also launched a new era of inclusion and empowerment ....**

**.... we are focusing on the basics: housing, power, water and sanitation for all**

**.... we are reviving our manufacturing, improving our services sector, investing on an unprecedented scale in infrastructure; and making our cities smart, sustainable and engines of progress” .**

# **Sustainable Development Goals (SDGs): 2030**

**(Key Goals relating to Transport Infrastructure)**

- **Goal 3 Target 3.6: By 2020, halve the number of global deaths and injuries from road traffic accidents**
- **Goal 7 Target 7.3: By 2030, double the global rate of improvement in energy efficiency**
- **Goal 9 Target 9.1: Develop quality, reliable, sustainable and resilient infrastructure including regional and trans-border infrastructure to support economic development and human well-being with a focus on affordable and equitable access for all.**
- **Goal 10: Reduce inequality within and among countries**
- **Goal 11 Target 11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport for all, improving road safety, notably by expanding public transport with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.**

# Roads: A Critical Component of Transport Infrastructure

- **Transport infrastructure is also necessary for achievement of several other SDG's such as:**
  - **Agriculture productivity**
  - **Air pollution**
  - **Access to safe drinking water**
  - **Sustainable cities**
  - **Reduction of food loss**
  - **Climate change adaptation and mitigation**
- **A powerful engine of socio-economic growth**

# Road Development

- Sector gained importance sequel to Hon'ble PM Shri Atal Behari Vajpayee Declaration in 1998 and 2000
- Roads recognized as infrastructure critical to socio-economic development and GDP growth
- Several Initiatives and Schemes by:
  - Central government (NHDP, PMGSY, .....
  - State governments (SHDP, MMGSY, .....
  - Urban Local Bodies (Urban Roads, Flyovers, Bypasses, Tunnels)
  - Gram Panchayats (recent push by 14<sup>th</sup> Finance Commission)
- Contribute to Mobility and Accessibility

# Road Development

- Support by World Bank, Asian Development Bank, JICA, NABARD (RIDF)
- Revamping of Central Road Fund
- Expenditure on roads
  - 1992-97 : Rs. 13,200 crore
  - 1997-02 : Rs. 39,300 crore
  - 2002-07 : Rs. 130,000 crore
  - 2007-12 : Rs. 430,000 crore
  - 2012-17 : Rs. 799,000 crore (estimates NITI Aayog)
- Current Outlook: Rs.250,000 crore per year
- Push Needed:
  - Expressways, Service Roads on Multilane Highways
  - SARDP:NE (plus replacing SPT bridges)
  - Rural connectivity
  - Capacity augmentation of SHs, MDRs
  - Bypasses (Access controlled)

# Bharatmala Pariyojana

- **Hon'ble PM Narendra Modi's Umbrella Highway Improvement Project**
- **First Phase approved by Cabinet**
- **Main Components**
  - **Economic Corridors** 9,000 km
  - **Inter – Corridor and Feeder Routes** 6,000 km
  - **National Corridors Efficiency Programme** 5,000 km
  - **Border and International connectivity roads** 2,000 km
  - **Coastal and Port connectivity roads** 2,000 km
  - **Expressways** 800 km
  - Bharatmala Phase – 1** 24,800 km
- **Balance length of NHDP** 10,000 km
- **Total Investment Rs. 5.35 trillion (Rs. 5,35,000 crore)**

# Projected Investments in Roads

(Rs. crore)

No.	Scheme	2017-22	2022-27
1.	Expressways	60,000	120,000
2.	National Highways	315,000	420,000
3.	Special Schemes SARDP-NE + Arunachal Package (central sector)	40,000	50,000
4.	Other special schemes (central sector)	15,000	20,000
5.	State Highways	270,000	320,000
6.	Major District Roads	130,000	160,000
7.	Rural Roads including PMGSY	185,000	130,000
	<b>Total</b>	<b>1,015,000</b>	<b>1,220,000</b>

(excludes urban roads)

Source: NTDPC



# Major Challenges in Road Sector

- **Enhanced transport productivity**
- **Attracting private financing**
- **Safe roads**
- **Well-maintained roads (asset preservation)**
- **User charges on rational principles**
- **Addressing social concerns**
- **Reducing environment harm**
- **Promoting green technologies**
- **Resource efficiency**
- **Knowledge development and dissemination**
- **Capacity building and skills development**
- **Efficient and effective delivery**
- **Traffic operations and congestion management**

# Topics Proposed

- UN Declaration, Five Pillars of Road Safety
- Government Initiatives, Policies, Regulations
- Geometric Design
- Intersections, Interchanges
- Road Signs, Pavement Markings
- Crash Barriers
- Traffic Calming Measures
- ITS and Incident Management
- Star Rating of Highways
- Safety Week: Participation
- Human Factors in Safety
- Trauma Care
- Road Safety Audit
- Field Exposure

# Road Safety: A Health Issue

Life  
Health



Non-Exchangeable  
for other benefits

WHO:

Road safety a health issue

Safety  
Mobility



cannot and should not  
be traded against each other

# Global Road Safety Developments

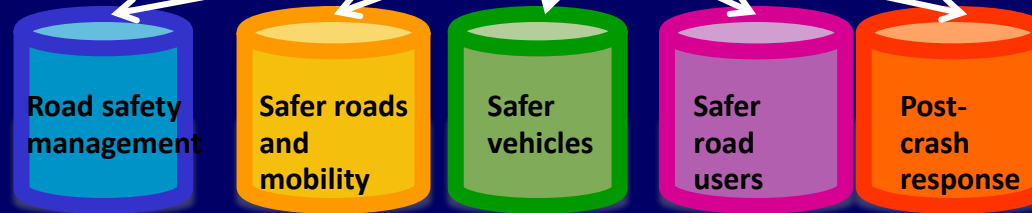
- **Decade of Action for Road Safety 2011-20**
  - The overall goal is to save at least one million lives around the world during the decade.
- **UN Global Road Safety Targets 2030**
  - Following the request of UN General Assembly on Nov 22, 2017, Member countries reached consensus on 12 Global Road Safety Performance Targets.
  - India is one of the signatories of UN Declaration
- **Promotion of 'Safe Systems approach'**
  - Safe System approach requires a shift in responsibility from the people using roads to the people designing them. (Star rating of roads)

# Global Plan

## UN Decade of Action for Road Safety 2011-2020



### Five Pillars



## GLOBAL ROAD SAFETY PERFORMANCE TARGETS

TARGET  
1  
2020



Target 1: By 2020, all countries establish a comprehensive multisectoral national road safety action plan with time-bound targets.

TARGET  
2  
2030



Target 2: By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.

TARGET  
3  
2030



Target 3: By 2030, all new roads achieve technical standards for all road users that take into account road safety, or meet a three star rating or better.

TARGET  
4  
2030



Target 4: By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety.

# UN Road Safety Targets 2030

TARGET **5**  
2030



**Target 5:** By 2030, 100% of new (defined as produced, sold or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, Global Technical Regulations, or equivalent recognized national performance requirements.

TARGET **6**  
2030



**Target 6:** By 2030, halve the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities.

TARGET **7**  
2030



**Target 7:** By 2030, increase the proportion of motorcycle riders correctly using standard helmets to close to 100%.

TARGET **8**  
2030



**Target 8:** By 2030, increase the proportion of motor vehicle occupants using safety belts or standard child restraint systems to close to 100%.

TARGET **9**  
2030



**Target 9:** By 2030, halve the number of road traffic injuries and fatalities related to drivers using alcohol, and/or achieve a reduction in those related to other psychoactive substances.

TARGET **10**  
2030



**Target 10:** By 2030, all countries have national laws to restrict or prohibit the use of mobile phones while driving.

TARGET **11**  
2030



**Target 11:** By 2030, all countries to enact regulation for driving time and rest periods for professional drivers, and/or accede to international/regional regulation in this area.

TARGET **12**  
2030



**Target 12:** By 2030, all countries establish and achieve national targets in order to minimize the time interval between road traffic crash and the provision of first professional emergency care.

# **Brasilia Declaration on Road Safety: Time for Results (November 2015)**

- **Halve road traffic deaths by 2020**
- **Holistic Approach**
  - **Strengthen road safety management**
  - **Improve legislation and enforcement**
  - **Promote safer roads**
  - **Promote sustainable modes of transport**
  - **Protect vulnerable road users**
  - **Develop and promote use of safer vehicles**
  - **Increase awareness and build capacity of road users**
  - **Improve post crash response and rehabilitation services**
  - **Strengthen cooperation and coordination towards global road safety**

# Objectives of Road Safety

- **Achieve national, state level targets on reducing fatalities and accidents**
- **Develop coordinated approach with government, private sector, academia, industry and NGOs**
- **Enhance knowledge of all professionals and stakeholders**
- **Invest in research to identify home grown and evidence based solutions to enhance safety and reduce accident risk.**
- **Join League of Nations in combating the evil of road accidents.**



# **Safety on Radar of Government**

- **Motor Vehicles Amendment Bill in Parliament**
- **National/State Road Safety Councils exist**
- **Intention to set up Road Safety and Traffic Management Board**
- **Road Safety Cells in MORTH and NHAI**
- **Similar cells coming up in states**
- **Supreme Court set up Committee to oversee actions by stakeholders**
- **MORTH constituted GOM to recommend safety measures**
- **Focus on safety is getting intensified.**

# **Recent Directions of Supreme Court (November 2017)**

- **Most states have Road Safety Policy. Others to formulate by end January 2018**
- **Sate Road Safety Councils to periodically review laws and take remedial steps**
- **States to establish:**
  - **Lead agency by 31.01.2018**
  - **Road Safety Fund by 31.01.2018**
  - **Road Safety Action Plan by 31.03.2018**
  - **District Road Safety Committee by 31.01.2018**
  - **Permanent Road Safety Cells by 31.01.2018**
- **MORTH to publish protocol for identification and rectification of black spots**

- **Design stage audits for all new road projects of 5 km or more**
- **Steps for capacity building to create Road Safety Auditors**
- **Implement recommendations of MORTH Working Group on Engineering (Roads)**
- **Acquisition of Cameras and Surveillance Equipment by Police for identifying violators**
- **Special Patrol Forces along NHs, SHs by States**
- **Road Safety Education and Counselling as part of school curriculum**
- **At least one Trauma Care Centre in every district**
- **Publicity to Helpline 108 provided by National Health Mission**
- **Location tracking devices in public service vehicles**

# Road Safety: Critical Elements

- Road safety an inter/multi-disciplinary activity
- Coordination, integration – Challenge
- We talk of four E's
  - Engineering
  - Enforcement
  - Education (+ awareness)
  - Emergency
- Four alphabets before E
- A, B, C, D (Attitude, Behaviour, Culture, Discipline) – equally critical to enhance safety

There is one  
more 'E'  
Environment

# India – Current Scenario

- About 150000 fatalities and 500000 accidents annually – 17 persons die every hour
- Huge cost burden (3 percent of GDP), apart from adverse social impact
- No downward trend still
- Lack of commitment and policy
- Diffused institutional responsibility; institutional indifference so to say
- Weak enforcement of existing rules
- Low levels of driving discipline
- Poor post-crash emergency care
- Road safety just started receiving attention
- Lack of credible data on road accidents and causal analysis
- Lack of expertise

# **Initiatives by Government of India Towards Safer National Highways**

- **Updating of Road Safety Standards**
- **Road Safety Audit: Mandatory on PPP and EPC projects**
- **Timebound program for rectification of black spots**
- **Focus on integrating road safety engineering measures for all NHDP projects**
  - **Mobility, not at cost of safety**
  - **Facilities for Vulnerable Road Users and Local Communities**
  - **Well designed intersections, interchanges**
  - **Road Signs, Pavement Markings, Crash Barriers**
  - **Wayside amenities, highway patrol, tow-away cranes**
- **Wayside Amenities on PPP basis**
- **Focus on training**

# **Salient Recommendations of GOM**

## **(Chaired by Rajasthan Transport Minister)**

- **Implement directions of Supreme Court Committee**
- **Amendments in MV Act while Road Transport and Safety Bill under deliberation**
- **Protection of good Samaritans**
- **Create National Road Safety and Traffic Management Board**
- **Automated vehicle fitness testing**
- **Automated driving skills testing**
- **Create Highway Police Force**
- **Central funds for rectification of black spots**
- **Stricter penalties for violations**
- **Improve mechanism for emergency care**

# **Safety Enhancement: Lessons from Other Countries**

- **Political commitment at the highest level**
- **Road Safety Policy at national level**
- **Dedicated funds**
- **Legal framework**
- **Inter-departmental coordination - a key element**
- **A separate government agency having power and budget to plan and implement road safety programs (e.g. NHTSA, SNRA) - successful examples**
- **Domain expertise reside in the Agency**



# Some Glimpses



# Road Safety Management: Pillar -1

- Designate a lead agency on Road Safety
- High Level Working Groups on each of the four E's
  - (Engineering, Enforcement, Education & Emergency Care)
- Dedicated Funding
- Safety Engineering Wings in Road Agencies
- Strengthening of Crash-database management system
- Highway Police Patrol
- Training of engineers, police and transport officials
- Awareness programs for policy makers
- Centre of Excellence on road safety

## **Safer Roads: Pillar -2**

- **Strong design directorate with core competence in road safety and traffic engineering**
- **All roads to meet prescribed national standards**
- **Retrofitting road safety measures on existing roads**
- **IRC standards to be LIVE documents subject to review to be in line with international practices**
- **Some watchdog agency to ensure implementation on ground**
- **Make Road Safety Audit a practice**

# **Retrofitting Road Safety Measures on Existing Roads**

- **Junction improvements, sharp curves, shoulder improvement, narrow bridges, inadequate sight distance, treatment of congested locations, improved signs and lane marking, protection structures, narrow bridges, provision of foot paths, speed calming measures, Truck Lay byes, Bus bays**
- **Safe Corridor Demonstration Projects**
- **Road Safety guidelines for detailed engineering designs**
- **Treatment and rectification of black spots**

# **Road Infrastructure Safety Facilities**

## **Safety Engineering Measures**

- **Geometric design**
- **Universal Access**
- **Intersections, interchanges, grade separators**
- **Road signs, Pavement markings**
- **Crash Barriers, Crash Cushions**
- **Other traffic control devices**
- **Speed calming measures**
- **Wayside amenities, bus bays, truck laybys**
- **Incident management system**
- **Work zone safety**
- **Road safety audits, identify safety hazard locations**
- **IRC has formulated codes, manuals on all these measures**

# Sight Distance and Visibility

- Road Users should be able to see and react to
  - Road layouts
  - Road features
  - Pavement conditions
  - Manoeuvres of other road users
- Visibility is critical
  - Forward visibility
  - Overtaking visibility
  - Visibility at intersections, merges, diverges
  - Visibility towards road features: tunnels, toll plazas, lay byes, traffic islands, crash cushions
  - Visibility towards pedestrian crossings
  - Visibility towards road signs, pavement markings

# Sharp Curves

- Avoid at isolated sites
- If not, curves of smaller radii to be preceded with curves of larger radii, ratio not exceeding 1:1.5
- Curve warning sign, delineator, chevron
- Super elevation, extra widening
- Traffic calming measures

## **Contractor's Obligations regarding Safety**

- All safety activities at site
- Smooth and safe arrangements for traffic during construction
- Safety of public and contractor's personnel including workers
- Adequacy and safety of formwork
- Compliance with all labour laws, regulations requiring safety precautions and provisions

***Note: The "Engineer" has power and obligation to ensure compliance***



# **Traffic Management and Safety Plan (at work sites)**

- **Traffic safety devices as per IRC:SP:55**
- **Safety measures for construction workers, personnel**
- **First aid arrangements**
- **Diversions where necessary**
- **Payment**
  - **BOQ Item (NHDP)**
  - **Incidental to work (PMGSY)**

# Enhancing Safety during Maintenance

- Attend to road damage before it becomes a safety hazard, pot-hole repairs
- Upkeep of traffic control devices: signs, markings, guard rails, parapets, crash barriers
- Clearing bushes to enhance sight line
- Depth Gauges at causeways, fords
- Maintain shoulders in good shape
- Cleaning side drains
- Debris, rockfall removal
- Attend to edge break

# PPP Projects in Road Sector

## Concessionaire

- Need to secure safety of users and other persons
- Develop, implement, administer a surveillance and safety programme
- Comply with safety requirements

## Authority

- Engage safety consultant to carry out safety audit
- Safety expert and traffic planner

## Expenditure arising out of safety requirements

- Concessionaire responsible so long as this is within scope of project
- Otherwise, as per provisions under Change of Scope

# Safety Requirements on PPP Projects

- **Apply to all phases**
  - **Development**
  - **Construction**
  - **Operation and maintenance**
- **Measures include:**
  - **Traffic management**
  - **Traffic control devices**
  - **Highway design elements**
  - **Enforcement**
  - **Emergency response**
- **Safety report by Safety Consultant**
- **Reasons to be recorded in case of disagreement**
- **Views of Independent Engineer**
- **Authority directs the Concessionaire for safety works**
- **Highway Safety Management Unit during O&M**

# **MORTH Guidelines on RSAs**

- **Audit Team as per project size, complexity**
- **Manual on Road Safety Audit – IRC:SP:88-2010 plus stress on:**
  - **Look at each km**
  - **Not leave any significant safety concern unnoticed**
  - **Adequate time to Audit Team**
- **Commencement and completion meetings: mandatory with Road Authority (Client) and Design Team**
- **Audit Report (Recommendations) backed by reasoning**
- **Authority to furnish ‘Client Response’**
- **Audit to furnish observations on ‘Client Response’**
- **Pre-opening stage audit – Mandatory (Recall Railway System)**
- **Certificate of ‘Due Diligence’ from Auditor**

# Stages of Audit Mandated

- **Capacity Augmentation Projects**
  - **Design stage**
  - **Pre-opening stage**
- **Expressways**
  - **FR stage**
  - **DPR stage**
  - **During construction stage**
  - **Pre-opening stage**
- **PPP/EPC projects**
  - **As per provisions of contracts**

## **Special Needs on Rural Roads: PMGSY and Non-PMGSY**

- **Land being through voluntary donation, compromises on road geometrics not ruled out**
  - **Speed limit signs**
  - **Traffic calming measures**
- **Sometimes, lack of sight distance and visibility at intersection with main roads**
  - **Traffic calming measures and road signs**
- **Lack of awareness among local communities**
  - **Awareness and education campaigns**
  - **Convincing them for a little extra land for improving geometrics**

# **Special Needs on Rural Roads: PMGSY and Non-PMGSY**

- **Unmanned railway level crossings**
  - **Underpasses for VRUs and LCVs**
  - **Replacing them with manned-level crossings**
- **Retro-reflective road signs and pavement markings**
- **Crash barriers, crash cushions, guard rails, parapets for bridges, culverts, etc.**
- **Road safety audit for stretches more than 5 km.**
- **Maintenance of road assets**



## **Safer Vehicles: Pillar -3**

- **Improved safety features in vehicles**
- **Vehicle inspection and certification centres to regularly check fitness**
- **Auditing of Vehicle Inspection Centres**
- **Installation of GPS in commercial vehicles**
- **Enhanced Visibility of vehicles at night**

# **Safer Road Users: Pillar-4 (Education and Awareness)**

- **Road Safety Education in schools**
- **Training of drivers and first time license seekers**
- **Awareness program for road users and rural communities**
- **Telecasting & Broadcasting TV/Radio Jingles**
- **Support of NGOs, CSOs**

# **Safer Road Users: Pillar -4 (Traffic Regulations)**

- **City Surveillance system, ITS enabled enforcement**
- **Set and enforce speed limits**
- **Control on overloading**
  - **Use of weigh-in-motion facility on major highways**
- **Checking Drunken driving**
- **Enforcing use of helmets and seat belts**
- **Unauthorized parking of vehicles**
- **Set up Automated Vehicle Driving Test Tracks**
- **Digitization of Driving Licenses data**
- **Strengthening of Highway patrol system**
- **Highway Police Force on High Density Corridors**

# Control on Overloading

- **Dedicated lanes at toll plaza**
- **WIM stations at toll plaza**
- **Provide space at toll plaza for:**
  - **Static weigh bridge**
  - **Storage of off-loaded cargo**
  - **Parking of trucks**
  - **Vehicle inspection and testing**
  - **State Transport Authority**
  - **Police**
- **Penalties for violations as per MV Rules**

# Maximum Permissible Axle Loads

	No. of Axles	Prior to 16.07.2018	wef 16.07.2018
1.	Single Axle		
	• Two tyres	6.0 tonnes	7.5 tonnes
	• Four tyres	10.2 tonnes	11.5 tonnes*
2.	Tandem Axle	19.0 tonnes	21.0 tonnes*
3.	Tri-Axle	24.0 tonnes	27.0 tonnes*

**GVW: 49 tonnes (rigid), 55 tonnes (semi-trailers, truck-trailers)**

**\* One tonne extra permissible per axle for vehicles with pneumatic suspension**

# **Traffic Management Centres (Managing Traffic through Technology)**

- **Simple IT and ITS solutions**
  - **Detect traffic violations, e-challans**
  - **Decongest arterial streets**
- **Cameras at signals/intersections**
  - **Zoom into number plate**
  - **Demand for fine (bluetooth printer)**
  - **Store data on violations in Traffic Police Database**
- **Adjust signal timings to the hold-up of vehicles at intersections**
- **Variable message signs**

# **Control of National Highways (Land and Traffic) Act, 2002**

## **Provides for:**

- **Control of land within ROW**
- **Control of traffic**
  - **Control of access points**
  - **Regulation of different types of vehicles**
- **Control of land use for public utilities**
- **Removal of unauthorized occupation**
- **Need for different approaches for urban and non-urban areas for control of access points on highways**

# Post Crash Care: Pillar -5

- Golden hour
- Upgrade existing health care facilities along highways
- Training of doctors and technicians
- First aid facilities and training to identified people
- Linkage with disaster management agencies
- Incidence management system
- Use of existing 102, 108 ambulance services



# **Knowledge Production, Research and Institutional Linkages**

- **Government to lay stress on technology initiatives and knowledge production in enhancing safety**
- **Identify areas and subjects for research and collection of evidence from ground**
- **Commission research projects with support of academia and research institutions**
- **Network with international institutions**
- **Learn from international practices**
- **Dissemination: Workshops, seminars, interactive dialogues**
- **Seek support of Global Road Safety Facility**

# **World Bank: Global Road Safety Facility**

- **Provide Funding, Partnership and Knowledge Transfer**
- **Leverage Road Safety Investments in Existing Transport Projects**
- **Enhance Stronger Country Ownership and Road Safety Capacity Development**

# **What Kerala has done in Road Safety?**

- **Established the Lead Agency for Road Safety – The Kerala Road Safety Authority under the Kerala Road Safety Authority Act -2007**
- **The Act provides for:**
  - **Constitution of Kerala Road Safety Authority**
  - **Establishing a dedicated Road Safety Fund**
  - **Monitoring and implementation of Road Safety Programs in the State of Kerala**

# **Uniqueness of Kerala Road Safety Authority (KRSA)**

- **First of its kind in India with statutory powers to implement Road Safety Programs in a State.**
- **Govt. declared it as a Nodal Authority for Road Safety Activities in the State.**
- **MORTH and Supreme Court Committee consider it a Model for other states to follow.**

# Kerala Road Safety Fund

- Sources of fund:
  - 100% of Road Safety CESS collected from vehicle owners at the time of Regn of vehicle
  - 50% of fines and penalties collected by Police and MVD from traffic offenses
  - Grants, Loan or Advances made by the State and Central Govt.
  - Contributions from public or private institutions or other organizations
- \* **The Govt. shall contribute to the Fund every year, an amount equal to 50% of the compounding fee collected in the previous year under Section 200 of MV Act-1988 (Central Act 59 of 1988).**

# Functions of Road Safety Authority

- **Frame Rules as laid down in KRSA Act**
- **Initiate coordinated action in areas related to:**
  - **Road Safety among various Stake holder departments**
  - **Advice Govt. on Policies & Road Safety Actions for the state**
  - **Prescribe and enforce Road Safety Standards**
  - **Administration of the Road Safety Fund**
  - **Formulate and implement schemes/ projects and programs relating to Road Safety**
  - **Sanction expenditure for trauma-care programs**
- **Promote Road safety awareness, community engagement**
- **Sanction expenditure for purchase and installation of equipment connected with Road Safety**
- **Integrate functions of all agencies and Govt. Depts.**

# The Apex Body Of Kerala Road Safety Authority

1. Minister for Transport - Chairman
2. Minister for Works - Vice Chair
3. Chief Secretary, Kerala - Member
4. Principal Secy. Transport - Member
5. Law Secretary - Member
6. Principal Secy. Home - Member
7. Principal Secy. Finance - Member
8. Principal Secy. PWD - Member
9. Principal Secy. Health - Member
10. Principal Secy. Education - Member
11. Principal Secy. LSG Dept. - Member

12. Director General of Police - Member
13. Director, Health Services - Member
14. IGP (Traffic) - Member
15. Chief Engineer (R & B) - Member
16. Chief Engineer (NH) - Member
17. Director, NATPAC - Member
18. Secretary, STA - Member
19. Three Experts in Road Safety  
nominated by the Govt - Member
20. Road Safety Commissioner - Member Secy.

## Executive Committee of KRSA

For implementing the decisions of the KRSA, there is an Executive Committee under the Chairmanship of the Chief Secretary with heads of concerned stake holder departments

# **Factors Critical to Enhancing Road Safety**

- **Orientation to needs and concerns of users particularly VRUs and PwDs**
- **Guidelines by IRC, endorsement by centre/states**
- **Resources (technical plus financial) commensurate with the extent of safety problem seen on roads**
- **Capacity building of road agencies, police, transport, educational institutions**
- **Promoting use of IT and ITS in traffic management**
- **Road safety programs driven by scientific principles and evidence based research**
- **Safety engineering measures integral part of DPR**
- **Making road safety audit a practice**
- **Implementation in Project Mode**
- **Every bit counts**



**Thank you**

**For asking me to share some thoughts on  
enhancing safety on roads**

***Let us resolve to do our bit to achieve a  
vision of zero death and zero injury on  
roads in India***

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