The George Institute
for Global Health

WHO Collaborating Centre for
Injury Prevention and Trauma Care

सड़क परिवहन
एवं राजमार्ग मंत्रालय
MINISTRY OF
**ROAD TRANSPORT
AND HIGHWAYS**
सत्यमेव जयते

**World Health
Organization**
India

CONSENSUS STATEMENT

FOR ROAD SAFETY
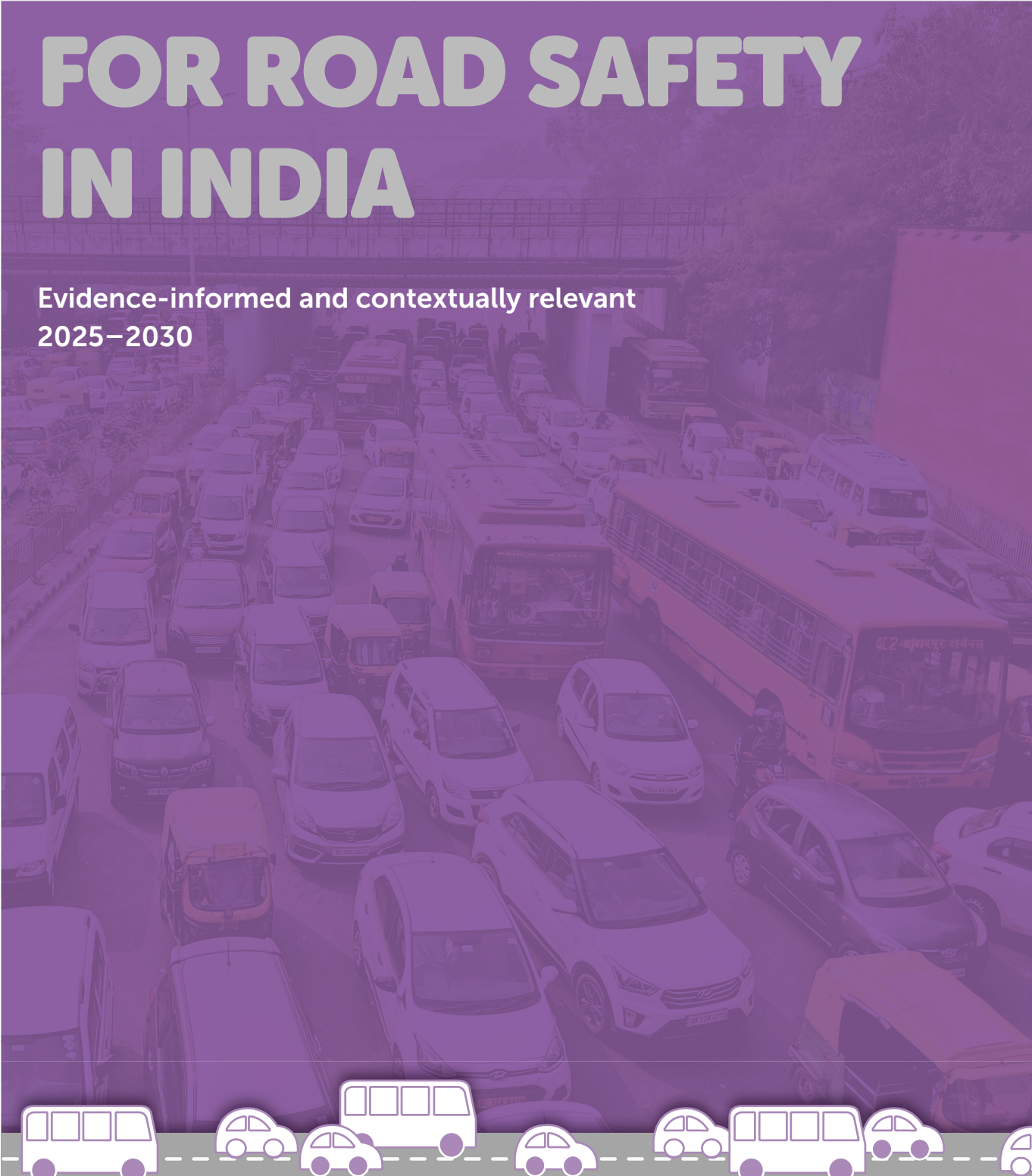# IN INDIA

**Evidence-informed and contextually relevant
2025–2030**

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Contributors

This report is one of the legacy products from the 15th World Safety Conference held in New Delhi, India in September 2024. It has been prepared by the George Institute for Global Health India and is endorsed by the Indian Ministry of Road Transport and Highways and the World Health Organization India office. We hope this report acts as a springboard for the 4th Global Ministerial Conference on Road Safety, to be held in Marrakech, Morocco in February 2025. We would like to thank the efforts of contributors and acknowledge Pratishtha Singh and Reha Chitkara for their support in coordination and compiling of the report.

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Executive Summary

India is experiencing a significant increase in motorization and an expansion of its road network. As a developing economy, it is crucial for the country to decouple economic growth from traffic safety issues. Infrastructure development should prioritize safety and environmental sustainability as key markers of progress. According to the Annual Report on Road Accidents in India for 2022, the country witnessed 4,61,312 road crashes, resulting in 1,68,491 fatalities and injuries to 4,43,366 individuals. This represents an increase of 11.9% in crashes, 9.4% in fatalities, and 15.3% in injuries compared to the previous year. On average, there are 1,264 crashes and 462 deaths daily, translating to 53 crashes and 92 deaths every hour. A country does not at any time have an "acceptable" number of traffic fatalities. In countries with a growing number of traffic fatalities, one cannot count on this trend to turn by itself; active, evidence informed policy interventions are needed to turn the trend.

Several Road Safety Initiatives by Ministry of Road Transport and Highways (MoRTH), embedded in the 4 E's – Engineering (Road and Vehicle), Enforcement, Education and Emergency care are underway. However, this is a siloed approach and limits the scope from a systems thinking, sustainable development and equity perspective, that are much needed for an accelerated action on road safety and sustainable development.

Road safety is critically important for the wellbeing of Indians and a connected approach across governments is the best way to ensure we deliver the most efficient system possible and make the greatest difference. This document proposes a holistic approach, informed by the developments since the Motor Vehicle Amendment Acts, 2019 and the initiative aligns with the insights and recommendations from the World Health Organization's Global Status Report on Road Safety 2023 and the 15th World Conference on Injury Prevention and Safety Promotion. The Safe System approach prioritizes preventing serious injuries, not just crashes. It recognizes the interconnectedness of speed, vehicles, roads, and driver behavior, aiming to manage this complex system.

The Road Safety Action Plan, aligned with the Decade of Action for Road Safety and the Motor Vehicles Act of 2019, is guided by best available evidence, contextual implementation readiness and actionable policy changes.

Abbreviation

AEB	Automated Emergency Braking
AI	Artificial Intelligence
BNCAP	Bharat New Car Assessment Program
DUI	Driving Under Influence
ESC	Electronic Stability Control
EV	Electric Vehicle
GG	Greenhouse Gas
GoI	Government of India
IRC	Indian Road Congress
ITMS	Integrated Traffic Management Systems
MoETY	Ministry of Electronics and Information Technology
MoEFCC	Ministry of Environment, Forest, and Climate Change
MoHFW	Ministry of Health and Family Welfare
MoHUA	Ministry of Housing and Urban Affairs
MoRTH	Ministry of Road Transport and Highways
MoWCD	Ministry of Women and Child Development
MVA	Motor Vehicles Act
NHAI	National Highway Authority of India
PWD	Public Works Department
RTC	Road Traffic Crashes
SDG	Sustainable Development Goals
UMTA	Unified Metropolitan Transport Authority
VRU	Vulnerable Road Users
WHO	World Health Organization

Introduction

India's commitment to road safety is unwavering. As a signatory to the United Nations Decade of Action for Road Safety (2021-2030), India is dedicated to achieving a significant reduction in road traffic deaths and injuries. Further aligning with Sustainable Development Goal (SDG) Target 3.6, which aims to halve the global number of deaths and injuries from road traffic accidents by 2030, India recognizes the critical need for a comprehensive road safety strategy.

The Motor Vehicles Act (MVA) 2019 serves as a strong foundation for these efforts. By strengthening regulations and enforcement mechanisms, the MVA paves the way for a more robust road safety ecosystem. However, the challenge remains significant. India continues to face a high number of road crashes, fatalities, and injuries. This action plan, informed by the MVA 2019 and global road safety commitments, outlines a collaborative approach that addresses the multifaceted nature of this crisis.
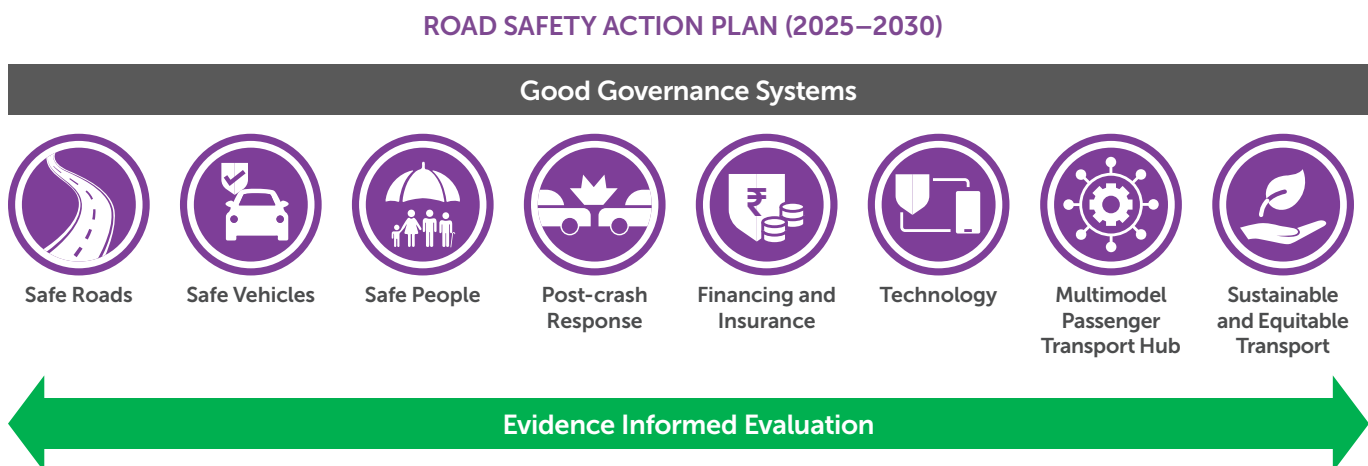
Our Vision:

We envision a future where Indian roads are exemplars of safety, fostering a sustainable transportation system for all users.

Our Mission:

Drawing upon the principles of the UN Decade of Action and SDG 3.6, this action plan establishes a data-driven and evidence-based roadmap to significantly reduce road crashes, fatalities, and injuries in India.

Figure 1 visualises the proposed eight domains that is supported by good governance framework and an adaptive responsive action based of good evidence, evaluation, and accountable systems.

Figure 1: Accelerating road safety framework in India

ROAD SAFETY ACTION PLAN (2025–2030)

Good Governance Systems

Safe Roads | Safe Vehicles | Safe People | Post-crash Response | Financing and Insurance | Technology | Multimodel Passenger Transport Hub | Sustainable and Equitable Transport

Evidence Informed Evaluation

Context

India			Year 2021
Population (million)	1407.6	GDP per capita (current USD)	2256.6
Population Density (per sq. km.)	749.7	Country Income Level Category	Lower-Middle Income
WHO-estimated road traffic deaths per 100 000 persons	15.4	Total Paved Road Length (1000 km)	4095.7
Total registered vehicles per 100 persons	23.2	% share of motorised 2/3-wheelers in total registered vehicles	-

National

India recognizes the severity of road traffic injuries and has made various national commitments to improve road safety.

1. **National Road Safety Policy (NRSP):** Established by the Ministry of Road Transport and Highways (MoRTH), this policy serves as the foundation for India's multi-pronged approach to road safety. Key areas of focus include:

   - *Infrastructure Development:* Improving road design, signage, and addressing black spots (high accident zones) to enhance safety.
   - *Licensing and Training:* Strengthening driver training and licensing procedures to ensure competence and responsible behaviour.
   - *Traffic Law Enforcement:* Enhancing enforcement of traffic laws with stricter penalties for violations like drunk driving and speeding.
   - *Public Awareness Campaigns:* Implementing ongoing educational campaigns to promote safe driving practices among all road users (drivers, pedestrians, cyclists).
   - *Emergency Medical Services:* Ensuring prompt and effective medical response for road crash victims to minimize fatalities and injuries.

2. **Legislative Framework:** The Motor Vehicles (Amendment) Act, 2019 strengthens road safety through vehicle engineering, road engineering enforcement, education, and emergency response measures.

3. **Institutional Bodies:**

   - *National Road Safety Board:* Chaired by the Hon'ble Minister, MoRTH for administrating road safety initiatives is underway.
   - *National Road Safety Council (NRSC):* This apex body functions under MoRTH and coordinates road safety efforts across various government agencies.
   - *Special Road Safety Cell:* An umbrella body focusing on areas of monitoring for road engineering measures, revision of blackspot definition, distributive power to field officers responsible for implementation of road safety rules, and development for standard operating procedure post-crash care and establishment of trauma registry.

Global

India has made several global commitments to improve road safety, aligning with international goals and frameworks. These commitments are relevant and guide the nation's efforts to reduce road traffic crashes and fatalities. Key global commitments include:

1. **Sustainable Development Goals (SDGs):**
   - *Goal 3.6: By 2030,* halve the number of global deaths and injuries from road traffic accidents.
   - *Goal 11.2: By 2030,* provide access to safe, affordable, accessible, and sustainable transport systems 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.

2. **Second Decade of Action for Road Safety (2021-2030):** Following the UN Decade of Action for Road Safety (2011-2020), the Second Decade of Action aims to reduce road traffic deaths and injuries by at least 50% from 2021 to 2030. India has showcased strong commitment to implementing measures and policies to meet this target.

3. **Stockholm Declaration (2020):** Adopted during the 3rd Global Ministerial Conference on Road Safety, the Stockholm Declaration emphasizes the need for an integrated approach to road safety, including sustainable and safe transport systems. India is working towards the declaration's target of reducing road traffic deaths and injuries by at least 50% by 2030.

4. **Global Road Safety Performance Targets:** India has committed to achieving the 12 voluntary global performance targets for road safety, which include:
   - *Establishing a comprehensive multi-sectoral national road safety action plan.*
   - *Acceding to one or more of the core road safety-related UN legal instruments.*
   - *Ensuring that all new roads are built to the highest safety standards.*
   - *Improving the safety of existing road infrastructure.*
   - *Enhancing vehicle safety standards.*
   - *To halve the proportion of vehicles traveling over posted speed limits.*

   - *Increasing the proportion of motorcycle riders correctly using standard helmets.*
   - *Increasing proportion of motor vehicle occupants using safety belts or standard child restraint systems*
   - *Reducing road traffic injuries and fatalities related to drivers using alcohol.*
   - *Implementing national laws to restrict or prohibit the use of mobile phones while driving.*
   - *Enacting regulations for driving time and rest periods for professional drivers.*
   - *Promoting safer road user behaviours through education and enforcement.*
   - *Strengthening post-crash response and trauma care systems.*

5. **United Nations Road Safety Fund (UNRSF):** India supports the UNRSF, which aims to finance actions designed to improve road safety and assist countries in achieving the road safety targets of the SDGs. This includes projects focused on road safety management, safer roads and mobility, safer vehicles, safer road users, and post-crash response.

6. **Brasilia Declaration on Road Safety (2015):** Although adopted earlier, the principles of the Brasilia Declaration continue to guide India's road safety policies and strategies. The declaration calls for strengthening legislation, enhancing infrastructure, improving vehicle safety standards, and promoting safe road user behaviour.

These global commitments have been instrumental in shaping India's road safety strategies and policies, ensuring they align with international best practices and standards. By upholding these commitments, India is dedicated to significantly enhancing road safety and reducing the burden of road traffic injuries and fatalities by 2030 and beyond. India's country profile as part of the Global Road Safety Status Report 2023 has been added in Annexure 1.

Scientific framework informing the plan

The Safe System approach prioritizes preventing serious injuries, not just fatal crashes. It recognizes the interconnectedness of speed, vehicles, roads, and driver behavior, aiming to manage this complex system. Even if one element fails (like human error), other safeguards (like infrastructure design or vehicle safety features) protect road users. This "defense in depth" approach, similar to aviation and rail safety, builds layers of protection to minimize consequences of mistakes. Inspired by Reason's "Swiss Cheese" model, the Safe System proactively creates these layers, promoting a preventive (not reactive) approach to road safety through risk assessments and system-wide interventions. Ultimately, by rejecting the idea that fatalities are an inevitable cost of mobility, the Safe System challenges both the public and policymakers to strive for zero road deaths.

Thus, to accelerate action that moves above and beyond the domains are informed by the principals of equity and sustainability.

Figure 2: The evolution of road safety agenda
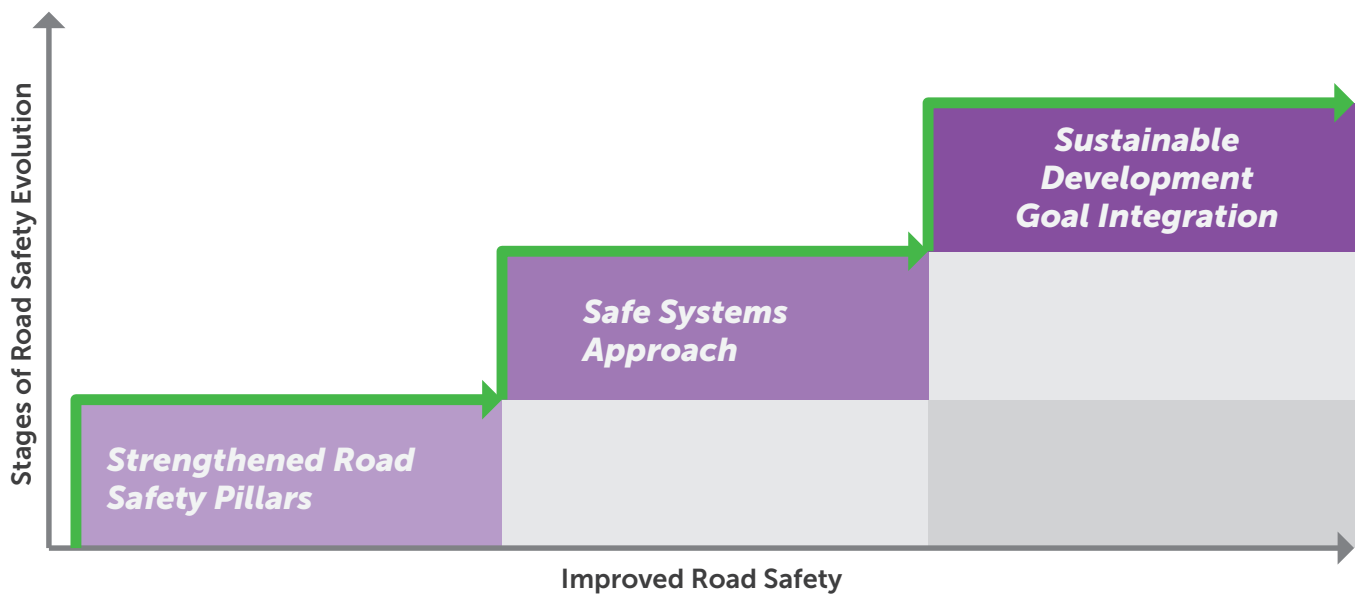
Domains at a Glance

Domains	Key Priorities
1. Safe Roads	Highways
	Urban roads
	Inspections and audits
2. Safe Vehicles	Safety Technologies
	Public transport vehicles
	Vehicular fitness and scrappage
3.Safe People	Alcohol and other drugs
	Safety gear- Helmets and seatbelts
	Illegal Parking
	Driver licensing
4.Post Crash Response	Integration of Emergency Helplines
	Strengthening Framework for Rescue and Extraction
	Strengthening of Pre and In-hospital Care
	Minimum Standards for Ambulances
5. Financing and Insurance	Usage Based Insurance
	Cashless Treatment for Vulnerable Road Users
	Underinvestment in targeted initiatives
6.Technology	Strengthening Road and Vehicular Engineering
	Intelligent Traffic Management Systems (ITMS) for prompt violation detection
	Leveraging digitization and technology for safer behaviors
7. Multimodal Passenger Transportation Hub	Shared mobility and regional transportation planning
	Integration of mechanized and non-mechanized modes
	Gaps in laws and regulations
8. Sustainability and Equity	Decarbonization and climate-resilient transportation
	Accessibility and affordability for urban poor
	Safe mobility for women

1. Safe Roads

Road infrastructure design plays a crucial role in road safety outcomes. Road designs influence road user behaviour by encouraging appropriate speed adoption, using cycle lane, pedestrian path, safe crossing facilities and correct lane position. In case of driver error, it can provide a self-explaining and forgiving road environment reducing the severity of injuries.

Gaps in Priority Areas

1. Highways

A significant proportion of black spots are located on sections of highways passing through habitations, without any speed calming measures.

- The absence or inadequacy of crash barriers along highways contributes to the severity of single-vehicle crashes.

2. Urban roads

- The lack of separate pedestrian paths and bicycle tracks on urban roads increases the risk of crashes involving vulnerable road users.
- High speeds near intersections are common, with insufficient traffic calming measures leading to a higher incidence of crashes in these areas.
- There is a scarcity of safe crossing facilities near bus stops and other high-footfall areas, compromising pedestrian safety and accessibility.

3. Inspections and audits

- Road crash investigations often focus on "at-fault" driver, deterring evidence informed systematic road design and infrastructure.
- The investigative methods for road crashes are basic and lack thoroughness, preventing a comprehensive understanding of crash dynamics and contributing factors.
- Regular road safety audits and inspections are not consistently conducted, leading to overlooked hazards and deficiencies in road infrastructure that compromise safety.

Actionable priorities

Priority Areas		Key Stakeholders
Highways	• At-grade sections should be classified as urban roads. Six-lane divided sections can function as arterial roads with service lanes and a maximum speed limit of 50Km/h. Sections with fewer than six lanes can be designated as collector roads without service lanes and a speed limit of 30Km/h. • Prepare an action plan for implementing IRC 99 recommendations for appropriate speed limits. • Implement comprehensive roadside safety assessments to identify hazardous areas & prioritize infrastructure improvements.	Central and State governments, MoRTH, NHAI, State PWD
Urban roads	• Develop masterplan and action plan with specific targets for urban roads to ensure safety and convenience of pedestrians and bicyclists. • Implement pedestrian and cyclist-friendly infrastructure, including dedicated bicycle lanes, pedestrian crossings, and traffic calming measures.	Urban local bodies and PWD to conduct safety assessments. Capacity building workshops on appropriate IRC codes and global best practices.
Inspections and audits	• Train practicing engineers to make inferences based on objective data and explore the deficiencies in the road design contributing to road crashes and identify corrective actions. • Use the star-based road safety scoring system developed by iRAP or other global best practice systems to rate roads.	IRC along with the NHAI, with the MoRTH

Considerations for implementation of priorities

Priority Area	Grade of evidence	Contextual Relevance	Readiness for Implementation
Highways	🟢	🟢	🟢
Urban roads	🟢	🟢	🟢
Inspections and audits	🟢	🟢	🟡

🟢 Strong   🟡 Medium   🔴 Weak

OTHER POTENTIAL PRIORITIES:

- **Enhance the quality and connectivity of village roads to improve safety and accessibility in remote areas.**
- **Prioritize the integration and safety of vulnerable road users such as pedestrians, cyclists, and motorcyclists.**
- **Regular maintenance schedules to promptly repair potholes and road damages that pose safety hazards.**

Quick facts

- *India is signatory to 1998 agreement administered by the UNECE World Forum for Harmonization of Vehicle Regulations (WP.29)*

- *Bharat New Car Assessment Program (NCAP)- a consumer awareness program has been implemented*

- *India follows a third-party approval mechanism for type approval of vehicles, similar to the one followed in Europe, Japan, etc.*

2. Safe Vehicles

MoRTH is the nodal ministry for overseeing the regulations with respect to motor vehicles. MVA 2019 specifies the authorities of the Central and State Governments to make rules with respect to various aspects of vehicle registration, construction, maintenance etc. The GoI has proactively notified numerous new rules pertaining to safety of vehicles in the Central Motor Vehicle Rules 1989.

Gaps in Priority Areas

1. **In-vehicle safety technologies**
- The incorporation of Advanced Driver Assistance Systems (ADAS) in Indian vehicles, such as Electronic Stability Control (ESC), Autonomous Emergency Braking (AEB), Lane Departure Warning (LDW), and Driver Drowsiness and Alert Systems (DDAS), holds significant potential to minimize driver-induced errors and consequently reduce road crashes.
- Continuing to review, upgrade, and formulate new standards to address passive safety is needed in India.

2. **Public transport vehicles**
- With the focus on reducing the use of personalized modes and to provide for a low-cost transport solution for public at large, use of public transport vehicles becomes imperative.
- The mass rapid transport systems, such as Metro and other high-capacity systems, in urban areas, needs to be supplemented with low-cost last mile mobility solutions.

3. **Vehicular fitness and scrappage.**
- Various safety technologies have been introduced in recent past. On one hand where the new vehicles are getting equipped with safe technologies, regular inspection and maintenance regime for fitness and vehicle licensing is lacking.
- To supplement activities of automated test stations and for the protection of environment safe disposal of unfit vehicle and end of life vehicle is needed.

Actionable priorities

	Priority Areas	Key Stakeholders
In-vehicle safety technologies	• Enforce regulations requiring the installation of safety features such as airbags, anti-lock braking systems (ABS), and seatbelt reminders in all new vehicles manufactured. • Establish a standardized vehicle inspection and certification system to ensure that vehicles meet safety standards. • Develop and enforce technologies for occupant safety, especially rear occupants.	MoRTH, BNCAP
Public transport vehicles	• Improving the safety of buses via the use of intelligent transport solutions via advanced systems that combine information on traffic congestion, mobility, bus location, and in-bus crowd status in real-time. • ADAS features to be introduced on buses to enhance safety. • Use of Intelligent transport systems to provide live location, online ticketing, etc. • The mass rapid transport systems, such as Metro and BRT in urban areas, needs to be supplemented with low-cost last mile mobility solutions. • Standards to address new vehicle categories such as L2-5 (combination of two and three wheeled vehicle), L1-1 (moped with three wheels) to be formulated.	MoRTH, Researchers, vehicle manufacturers
Vehicular fitness and scrappage	• New Automated testing stations and Authorized Vehicle Scrappage Centres to be set up across the country.	MoRTH, State governments

Considerations for implementation of priorities

Priority Area	Grade of evidence	Contextual Relevance	Readiness for Implementation
In-vehicle safety technologies	🟢	🟢	🟢
Public transport vehicles	🟢	🟢	🟡
Vehicular fitness and scrappage	🟢	🟡	🟡

🟢 Strong   🟡 Medium   🔴 Weak

OTHER POTENTIAL PRIORITIES:

• **Strengthen emission standards.**
• **Prioritize child safety measures such as safety harness while carrying children on motorcycles, use of child helmets, child restraint systems, etc.**
• **Strengthen safety of motorcycles and other two-wheeler vehicles.**
• **Regular inspection and maintenance regime for vehicle fitness.**

Quick facts

- *In India 168,491 persons were killed in road crashes in 2022, of which 60.5% were on National and State Highway network.*

- *75.2% of fatalities on National Highways are due to speeding and another 5.8% due to wrong side driving.*

- *44.5% of all road fatalities in 2022 were to the riders of motorized two-wheelers. A large proportion of MTW users do not use helmets.*

3. Safe People

This domain focuses on interventions targeting individual behaviours that contribute to road crashes or increase vulnerability to traffic injuries. Implementing strong enforcement systems for violations is crucial to promoting safe driving behaviours.

Gaps in Priority Areas

1. Alcohol and other drugs

- Alcohol and drug impairment significantly increases the likelihood of road crashes, contributing to a significant proportion of traffic fatalities and injuries globally.

- Substance-impaired drivers who drive under the influence (DUI) experience diminished cognitive abilities, impaired judgment, and reduced motor skills, making them more prone to causing or being involved in crashes.

2. Safety gear- Helmets and seatbelts

- Despite seatbelts being mandated by law in many regions, adherence to seatbelt laws remains low. The MVA does not make any distinction between drivers and passengers—whether seated in the front or back. Additionally, the mandatory seatbelt rules are for the drivers and children below age of 14 years seated in motor vehicles and not for individuals between the age group of 14 years and above.

- Helmet law, when enforced, is often done more strictly for the drivers and less so for pillion riders. The MVA does not make any distinction between drivers and pillion riders.

- Enforcement of such measures in India is currently limited to urban areas.

3. Illegal parking

- Illegal parking of vehicles on the shoulders of high-speed roads poses a serious hazard to other vehicles and results in severe injuries from rear-end collisions.

- In urban areas, parking of vehicles on footpaths, bicycle lanes, and shoulders forces pedestrians and cyclists to use the carriageway exposing them to the risk of collision. Parking enforcement is an integral part of road safety enforcement.

4. Driver licensing

- High demand for driver's licenses overwhelms licensing authorities, leading to rushed evaluations, and potentially compromising the thorough assessment of driving skills.
- Inadequate enforcement of medical fitness standards for driver licensing result in drivers operating vehicles under unsafe medical conditions as a result of failing to report relevant medical conditions to authorities.

Actionable priorities

	Priority Areas	Key Stakeholders
Alcohol and other drugs	• DUI checkpoints should be well-lit, visible to all drivers on the road, should not create a safety hazard, and their purpose should be clear. • Provision of access to support services for people struggling with substance abuse. • Besides the DUI checkpoints, police patrols should be used for greater temporal and spatial coverage of the enforcement.	Transport departments, Traffic police, Road safety lead agency, State legislatures
Safety gear- Helmets and seatbelt	• Public awareness campaigns emphasising helmet use among pillion riders, strapping of helmets, and standard quality of helmets. • Enhance enforcement of helmet and seatbelt violations via policing and advance technology. • Mandatory in-vehicle warning if occupants do not have their seatbelt fastened.	A joint action from NHAI, State PWD, automobile manufacturers, and transport departments, overseen by MoRTH is required.
Illegal parking	• Traffic wardens to enforce parking regulations. • Municipal corporations to designate on-street parking zones. • Emergency pull-out zones on highways • Rest areas for highway users including truckers	Traffic police, Road safety lead agency, Municipal corporations/ Urban local bodies, NHAI, PWD
Driver licensing	• Driver licensing examination officers should be appropriately trained and assessed around road safety regulations, traffic management, and digital license application systems. • Minimum legal eligibility standards for training and assessment of approved driving instructors. • Harmonization of medical standards for driver fitness and certification by ensuring standard guidelines.	MoRTH and State Road Safety Authorities

### Considerations for implementation of priorities

Priority Area	Grade of evidence	Contextual Relevance	Readiness for Implementation
Alcohol and other drugs	🟢	🟢	🟢
Safety gear- Helmets and seatbelts	🟢	🟢	🟡
Illegal Parking	🟢	🟡	🔴
Driver licensing	🟢	🟡	🔴

🟢 Strong   🟡 Medium   🔴 Weak

OTHER POTENTIAL PRIORITIES:

- **Promoting child safety in vehicles through the proper use of age-appropriate child restraint.**
- **Discourage distracted driving by ITS cameras and in-vehicle driver-monitoring systems.**
- **Use of personal protective equipment like lights, reflective jackets, and vests.**
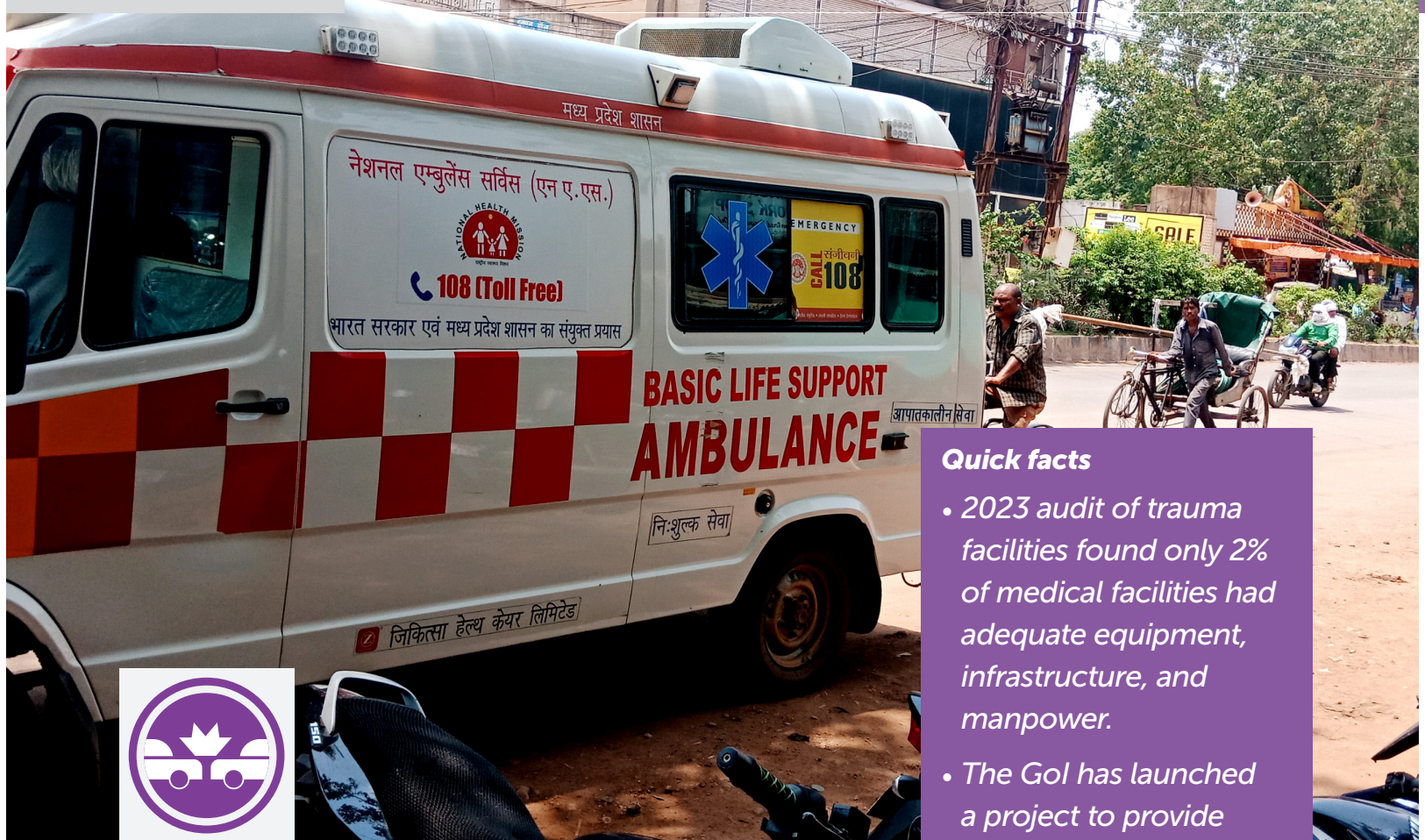
4. Post Crash Response

To improve mortality, timely hospital care is crucial for road crash victims. The time following a crash is critical, with prompt emergency response and hospital treatment being directly linked to better patient outcomes and reduced mortality rates. This highlights the need for efficient emergency medical services and well-coordinated trauma care systems.

Gaps in Priority Areas

1. Integration of Emergency Helplines

- Multiple emergency helpline numbers are currently operational in India depending on the geographical area covered as well as the type of services provided.

2. Strengthening Framework for Rescue and Extraction

- Guidelines around medical rescue operations, including safe extrication of road crash victims currently does not exist in India. Though the MVAA 2019 includes protection for Good Samaritans, such individuals continue to face harassment from the authorities due to a lack of an institutional framework.

3. Strengthening of Pre and In-hospital Care

- Poor communication and coordination between emergency departments and specialized units within hospitals can hinder the seamless transfer and treatment of patients.

- Limited availability of expert trauma teams and trauma centres in many regions, particularly rural areas, results in delayed medical intervention for crash victims.

- India lacks a national trauma registry or sentinel surveillance systems, impeding the ability to track, analyse, and improve trauma care outcomes. This makes it challenging to identify areas of improvement and implement evidence-based interventions.

4. Minimum Standards for Ambulances

- Ambulances in India are currently divided into Basic Life Support, Advanced Life Support, and Patient Transport Ambulances.

- Despite the availability of such standards in the National Ambulance Code (AIS-125), India struggles with inconsistent implementation across states and regions, resource shortages and inadequate equipment, insufficient training and staffing of personnel, weak regulatory enforcement, and limited coverage, especially in rural and remote areas.

Actionable priorities

Priority Areas		Key Stakeholders
Integration of Emergency Helplines	• Legislative framework for a single universal access number (such as 112) for all emergency services in India and integration of all other emergency numbers.	Central and State Governments, emergency medical service providers, and healthcare institutions.
Strengthening Framework for Rescue and Extraction	• Extrication guidelines and equipment for recovery of road crash victims • Implementation of the Good Samaritan law by hospitals by including publication of the Charter of Rights of Good Samaritans and setting up a grievance redressal mechanism for Samaritans facing harassment.	Central and State Governments, policymakers, and law enforcement agencies.
Strengthening of Pre and In-hospital Care	• Establishment of sentinel surveillance systems and dynamic data monitoring. • Adoption of the WHO IRTEC (International Registry for Trauma and Emergency care). • All ambulances or crash rescue vehicles and receiving medical facilities to be connected through a pre-hospital arrival notification system. • Additional seat in the 112 center by a trauma co-ordinator (preferably a physician) for a remote consultation and co-ordination of inter-hospital transfer.	Central and State Government, healthcare institutions, ambulance operators, technology partners and emergency service providers.
Standards for Ambulances	• Development of model frameworks for various elements of the trauma care system, including ambulances that can be adopted by the state governments.	Central and State Government, hospitals, healthcare providers, researchers.

Considerations for implementation of priorities

Priority Area	Grade of evidence	Contextual Relevance	Readiness for Implementation
Integration of Emergency Helplines	🟢	🟢	🟢
Strengthening Framework for Rescue and Extraction	🟢	🟢	🟡
Strengthening of Pre and In-hospital Care	🟢	🟢	🟢
Minimum Standards for Ambulances	🟢	🟢	🟡

🟢 Strong   🟡 Medium   🔴 Weak

OTHER POTENTIAL PRIORITIES:

- **Administration of Tranexamic acid to trauma patients.**
- **Improve health system preparedness for Integrated Emergency and Injury Care.**
- **Build national program for BTLS/PHTLS training of first responders.**
- **NELS training to be popularized and mandated for all doctors, nurses and paramedics posted in Emergency care facilities.**

5. Financing and Insurance

Financing and insurance play a crucial role in enhancing road safety by providing the necessary resources for infrastructure improvements, emergency response systems, and public awareness campaigns. Adequate funding ensures the implementation of advanced safety technologies, regular maintenance of roads, and construction of safer road designs.

Gaps in Priority Areas

1. Usage-based insurance

• The current insurance premium for motor vehicles is not equitable to the use of the vehicle.

• Insurance premiums and charges levied for the insurance should depend on the road safety behavior of the individual, including crash history.

• This will also help in reducing the premium for cars that are driven less or driven with acceptable road safety norms.

2. Cashless treatment for VRUs

• Vulnerable road users are at a greater disadvantage depending on their age or socio-economic background and thus require special attention.

• Currently there are no earmarked funds for road injuries faced by VRUs.

3. Underinvestment in targeted initiatives:

• Inadequate roads signal a prevailing level of underinvestment, with limited investment being reported in the road safety strategy.

• Current levels of investment in transportation have failed to provide safe public transport and safe infrastructure facilities for road users, particularly on high-speed roads.

• Funds are predominantly allocated to the construction of roads, rather than strengthening the ecosystem of the public transport system.

Actionable priorities

Priority Areas		Key Stakeholders
Usage Based Insurance	• Develop and install devices capable of recording the duration, speed, distances travelled, type of road and time of the day. • Data can also be collected through a phone and on-board diagnostic port of the device. • The data collected will then be used to plan insurance premiums for the vehicle and vehicle owners including third-party insurance premiums.	IRDAI, MeitY, and MoRTH,
Cashless treatment for Vulnerable Road Users	• Operationalize the National Accident Compensation Fund as envisaged in the MVAA 2019 and establish a dedicated body for the disbursement of such funds at the National Level. • Earmark a portion of toll revenue and national road construction budget for road safety measures and incident management for VRUs. • The pooling of these funds can be utilized in in-hospital and ambulatory care including medications and surgery where necessary. • The services can be extended to all hospitals having a trauma unit to address emergency care requirements.	IRDAI, MoRTH, and private road maintenance companies.
Underinvestment in targeted initiatives	• Scaled-up road safety investment will also potentially produce the added benefits of contributing to the achievement of other sustainable mobility goals. • Coordinated finance approaches like public-private partnerships and seeking the support of multilateral banks can be effective ways to build and implement new infrastructure, or to renovate, operate or manage existing transport infrastructure facilities. • Establish state-level lead agencies and local financing to support road safety projects.	MoRTH, State transport authorities, Private entities, Public Sector Undertakings, Banks

Considerations for implementation of priorities

Priority Area	Grade of evidence	Contextual Relevance	Readiness for Implementation
Usage Based Insurance	🟢	🟢	🟡
Cashless Treatment for VRUs	🟡	🟢	🟢
Under investment in targeted initiatives	🟢	🟢	🔴

🟢 Strong 🟡 Medium 🔴 Weak

OTHER POTENTIAL PRIORITIES:

- **Mandatory third-party insurance.**
- **Encouragement of public private partnerships to cool resources.**
- **Subsidies and tax incentives for safety equipment.**
- **Improved road user insurance schemes to finance rehabilitation services.**

6. Technology

Technology is a pivotal catalyst in advancing road safety management strategies. The principle of 'Vision Zero,' which asserts that no loss of life is acceptable, can be a tangible reality with the adoption of technological solutions. Advanced technology-based enforcement systems, such as the Intelligent Traffic Management Systems (ITMS) can improve road safety management.

Gaps in Priority Areas

1. Strengthening Road and Vehicular Engineering

- The adoption of data analytics and GIS for mapping crash-prone areas and road defects is minimal, leading to ineffective hazard identification and higher crash rates.

- Currently very limited vehicles are equipped with in-vehicle driver fatigue detection & assisted driving systems.

- Insufficient technological infrastructure, especially in rural areas, leads to inconsistent safety measures and higher road crash risks.

2. Intelligent Traffic Management Systems (ITMS) for prompt violation detection

- Insufficient enforcement of Section 136A of the MVA, which mandates standards for electronic enforcement equipment, hinders effective traffic violation management.

- Limited implementation of technologies like CCTV, speed cameras, and video analytics leads

to inadequate detection and management of traffic violations.

- Poor utilization of big data and digital data collection methods for systems like iRAD/e-DAR hampers comprehensive traffic management and violation tracking.

3. Leveraging digitization and technology for safer behaviors

- Limited use of technology-based evaluation and automated testing tracks results in inconsistent and unreliable driver competence assessments.

- The potential of in-vehicle sensors & telematics for analysing and improving driver behavior is largely untapped, leading to missed opportunities in addressing user errors that cause collisions.

- Social media is not sufficiently leveraged to promote good road user behavior, reducing the reach and impact of safety awareness campaigns.

Actionable priorities

Priority Areas		Key Stakeholders
Strengthening Road and Vehicular Engineering	• Adopt AI and GIS to identify black spots, crash-vulnerable zones. • Undertake crash simulation of possible crashes and identify potentially dangerous road engineering measures. • Develop and implement in-vehicle technologies for driver-monitoring, such as fatigue and distraction detection to alert drivers promptly. • Uniform implementation of a crash data recording system (e-DAR) to be adopted across all states for crash investigation and adjudication.	NHAI and PWD of State Governments, IRC.
Intelligent Traffic Management Systems (ITMS) for prompt violation detection	• Incorporate state of the art technologies for detection of road traffic violations. • Cities should implement ITMS that use AI and Data Analytics to analyse traffic flow and monitor traffic on a real-time basis. • Routine inspections to ensure functioning and calibration of equipment. • Training of enforcement officials on digital data collection systems such as "e-DAR," for codifying road crashes.	MoRTH, NHAI, Transport and Police Departments of State Governments, Municipal Corporations, Police and RTOs.
Leveraging digitization and technology for safer behaviors	• Technology-based automated testing tracks for driver licensing. • Social media utilization to create and raise awareness of good road safety practices. • A built system with sensors that inform drivers about speeding and selecting safe speed limits for different types of roads.	MoRTH, State Governments, Civil Society Members, State Licensing Authorities, Public-private partnership.

Considerations for implementation of priorities

Priority Area	Grade of evidence	Contextual Relevance	Readiness for Implementation
Strengthening Road and Vehicular Engineering	🟢	🟢	🟢
Intelligent Traffic Management Systems for prompt violation detection	🟢	🟢	🟡
Leveraging digitization and technology for safer behaviors	🟢	🟢	🟡

🟢 Strong   🟡 Medium   🔴 Weak

OTHER POTENTIAL PRIORITIES:

- **Conduct conflict analysis for high-density areas in urban limits via Surrogate Safety Measures (SSM).**
- **Legislation should mandate the use of speed limiters on trucks and buses across all states.**
- **ADAS can be made mandatory for all vehicle types.**

7. Multimodal Passenger Transportation Hub

Multimodal transportation integrates various travel modes – walking, cycling, public transit, and micro-mobility – to create a safer and more efficient system through a passenger terminal. This reduces reliance on private vehicles, leading to fewer crashes and improved air quality. In India, some of elements of multimodal transportation have been implemented at the subnational level such as through Haryana Vision Zero, 2017 and Gurgaon Vision Zero.

Gaps in Priority Areas

1. **Shared mobility and regional transportation planning**

- India's urban population is on the rise. Over 475 cities and towns have a population higher than 100,000, and the overall urban population is expected to reach 40% by 2030.
- With the rise of population, India needs sustainable modes of transport in urban and non-urban areas to achieve efficient movement patterns.
- Cities in India have very limited transportation infrastructure and services, and most medium and small towns are yet to have any.

2. **Integration of mechanized and non-mechanized modes**

- The current transit terminal stops and terminals are designed at different points in time in such a way that it becomes challenging to design facilities for drop-offs/ pick-up areas, as well as auto-rickshaw and other IPT stands at transit stations.

3. **Gaps in laws and regulations**

- There are no laws and by-laws that thoroughly cover the urban transport necessities in an integrated way.
- Critical issues like integrated land use-transport interaction and multimodal integration are not addressed in any laws, thereby increasing inefficiencies in the urban transport framework.
- A coordinating authority like Unified Metropolitan Transport Authority (UMTA) supervising all other agencies is avoided by most state governments, which leaves urban transport developments in a confused state.

Actionable priorities

Priorities		Key Stakeholders
Shared mobility and regional transportation planning	• Data-driven planning for urban transport, with a clear hierarchy amongst different modes- from non-motorized to public and lastly private transport. • Engage in public-private partnerships to develop transit-supportive land uses.	MoRTH, Metropolitan planning bodies, local government, public transit agencies
Integration of mechanized and non-mechanized modes	• Ensuring accessibility to a diverse range of users by design of multimodal terminals, public awareness campaigns, user-friendly interfaces, and affordable pricing models. • Provide improved transit, walking, and cycling alternatives to underserved commuters. • Better organization and location of land use with integration of transport infrastructure and services.	Public transit agencies, NGOs, Local governments, metropolitan planning bodies, MoHUA
Gaps in laws and regulations	• Develop a robust regulatory framework, and standardized protocols addressing safety concerns, data privacy issues, and interoperability of different systems. • Promote implementation of UMTA as a coordinating authority over all participating organizations.	MoHUA, MoRTH, MoEIT, Independent regulatory bodies.

Considerations for implementation of priorities

Priority Area	Grade of evidence	Contextual Relevance	Readiness for Implementation
Shared mobility and regional transportation planning	🟢	🟢	🟡
Integration of mechanized and non-mechanized modes	🟢	🟢	🟡
Gaps in laws and regulations	🟢	🟢	🟢

🟢 Strong   🟡 Medium   🔴 Weak

OTHER POTENTIAL PRIORITIES:

- **Formation of an interoperable multimodal transit system to eliminate non-standardized fare collection.**
- **Coordination among different transport agencies and departments by UMTA.**
- **Integration of intelligent transport system and electric vehicles into road policy framework to make multimodal transportation accessible to citizens.**

8. Sustainable and Equitable Transportation

The transportation system we currently use are huge energy consumers and does not help us on the road to reducing emissions. Transitioning to sustainable transport would help us remove toxic greenhouse gases from the atmosphere and reduce emissions, contributing to overall environmental sustainability. Sustainable modes of transport are equitable and affordable to lower cadres of socio-economic groups of the society.

Gaps in Priority Areas

1. Decarbonization and climate-resilient transportation

- The transport sector in India is presently powered by carbon-intensive gasoline-based fuels. It accounts for 70% and 99% of the total high-speed diesel and petrol consumption in the country, respectively.

- Decarbonization of the transport sector is essential to reduce greenhouse gas emissions and to meet the target of achieving net-zero emissions by 2070.

- EV strategy and Green Hydrogen Mission are to be accelerated to achieve the pollution free transport environment.

2. Accessibility and affordability for urban poor

- Inequitable distribution of road space prioritizes vehicles over pedestrians leading to very poor road safety outcomes.

- Small cities have limited resources and funding to support public transport, causing people to depend on informal shared modes of motorized transportation and other private modes.

- High fares in public transport makes it a non-sustainable mode of transportation, thereby putting a burden on people living below the poverty line.

- Studies show declining public transport use and high reliance on walking in the cities (e.g., in Delhi: 77% of low-income groups commute on foot.

3. Safe mobility for women

- Women's access to economic opportunities and their participation in the labor force is highly dependent on the availability of safe and secure mobility services.

- While in transit, they are at constant risk of theft, violence, and sexual harassment.

- A transportation system should be designed with an intersectional and equitable lens, ensuring accessibility, affordability, and efficiency for people with disabilities, older adults, all genders, and children.

Actionable priorities

	Priorities	Key Stakeholders
Decarbonization and climate-resilient transportation	• Policies for standardization and regularization of EVs. • Recognition of alternative fuels such as natural gas and hydrogen and focus on identifying a clear roadmap for enabling these fuel options. • Adoption of instruments such as scrappage policy and green taxes to incentivize newer and efficient vehicles with clean fuels. • Spatial location and transport planning to ensure an optimal density in urban development and mixed-use urban areas. • Creating "green" corridors that combine advantages of environmental safeguards with opportunities for active mobility.	Ministry of Environment, MoRTH, Automobile Industry, Research Institution and Academia, MoHUA, MoEFCC, MoRTH,
Accessibility and affordability for urban poor	• Improve intermediate public transport systems such as auto-rickshaws & ensure regulations as formal systems to ensure connectivity. • Adequate to mobility services in areas inhabited by low-income groups. • Promotion of adequate infrastructure such as dedicated cycle lanes & pedestrian walkways	Urban local bodies, Transportation authorities, state governments, MoHUA
Safe mobility for women	• Constituting the Women Safety Committee in transit authorities to ensure regular monitoring of issues related to the safety. • Introduce women-only compartments or seating areas in public transportation such as buses and metro to provide a safe and comfortable environment for female passengers. • Enhance lighting and install surveillance cameras at bus stops, train stations, and along pedestrian pathways to increase safety and deter potential perpetrators.	MoWCD, MoRTH, State governments, urban local bodies.

Considerations for implementation of priorities

Priority Area	Grade of evidence	Contextual Relevance	Readiness for Implementation
Shared mobility and regional transportation planning	🟡	🟢	🔴
Integration of mechanized and non-mechanized modes	🟢	🟢	🟡
Gaps in laws and regulations	🟢	🟢	🟢

🟢 Strong 🟡 Medium 🔴 Weak

OTHER POTENTIAL PRIORITIES:

- **Implementation of universal design accessibility standards by IRC**
- **Development of carbon-free fuel options**
- **Equitable fare policing supporting urban poor**
- **Promotion of non-motorized transport.**

Opportunities for Accelerated Action

Strengthening of Good Governance Structure

A well-resourced and mandated road safety lead agency is crucial. Permanent institutions are needed for government intervention across key areas: research, funding, legislation, regulation, licensing, and maintaining a focus on road safety as a national priority.

Existing Initiatives: Over the past four year several bodies have been established or are under formation by MoRTH; these include:

- **National Road Safety Board (NRSB):** MoRTH has initiated the NRSB's formation, including inviting applications for leadership positions. The approval process is underway.

- **National Road Safety Council (NRSC):** This council, proposed under the MVA 2019, can formulate and oversee road safety programs, suggest research areas, and monitor implementation. While its formation awaits DoPT approval, it presents a promising approach.

- **Special Road Safety Cell:** This cell brings together stakeholders for education, engineering, enforcement, and emergency care initiatives. They focus on key areas like road safety audits, blackspot identification, and emergency care strategies. However, equity, system strengthening, and sustainability are some of the areas that need to be strengthened.

There is a need for urgency but also being well-resourced is important for an effective NRSB and the other authorities. The Board will be staffed by highly qualified professionals with expertise in various aspects of road safety. Its independence from operational agencies ensures objective decision-making and avoids conflicts of interest.

Effective implementation of road safety measures requires robust data collection and analysis capabilities. This framework proposes the creation of a central agency dedicated to this task. This agency will collaborate with existing institutions like the NCRB to ensure comprehensive and accurate data collection. Additionally, dedicated safety departments within the MoRTH and other relevant agencies will be established. These departments will be responsible for ensuring policy compliance, data collection, and effective liaison with the Board.

Continuous improvement in road safety necessitates ongoing research and development. This framework recommends establishing multidisciplinary research centres at academic institutions. These centres will focus on various disciplines relevant to road safety, fostering innovation and generating new knowledge to address emerging challenges.

To foster a collaborative and inclusive approach, a "Road Safety Reference/ Technical Group" will be established within the NRSC. This group will comprise diverse stakeholders, including representatives from government, businesses, and community organizations.

Local and state governments play a crucial role in implementing effective road safety measures. This framework proposes providing local governments with training and resources on the road safety evidence base and the "safe systems approach." This will empower them to implement: Network safety plans, Infrastructure improvements near schools, Collaboration with various community groups, and Tailored Regional Strategies. A situational analysis in consideration of available evidence, implementation readiness, and stakeholder analysis.

To address the specific challenges faced by different regions, the following strategies are proposed:

- **Regional Trend Analysis:** Identification of unique road safety challenges faced by each state (e.g., high pedestrian fatalities, rural road crashes).

- **Targeted Interventions:** Design and implementation of interventions that address specific regional needs and road infrastructure conditions.

- **Knowledge Sharing:** Facilitation of exchange of best practices and successful initiatives between states to achieve a nationwide impact.

By implementing these comprehensive recommendations, India can create a robust and responsive institutional framework for road safety. This framework will be equipped to address the complex challenges of road safety and pave the way for a significant reduction in traffic fatalities and injuries.

Evidence-informed implementation and evaluation

Evidence-informed road safety plans are essential for maximizing success in reducing crashes and injuries. They provide a data-driven approach that optimizes resource allocation, promotes measurable progress, and leads to sustainable solutions for a safer road environment for all.

1. Equity-Related Evaluation Questions:

- *Mixed Traffic Street Design:* How will the effectiveness of new street designs and traffic calming measures be evaluated in terms of safety improvements and increased accessibility for all user groups, disaggregated by gender, age, ability, and socio-economic background?

- *Safe Highway Design for Slow Traffic:* To what extent do highway design changes improve safety and travel times for slow-moving vehicles used by lower-income populations, particularly women? Additionally, how do these changes impact access to public transportation for these populations?

- *Pedestrian Impact Standards:* Evaluate the impact of implementing pedestrian impact standards on the affordability and gender-inclusiveness of public transportation. Can alternative solutions be explored that meet safety goals without disproportionately affecting low-income communities and women who rely heavily on public transit?

- *Policing Techniques:* Assess if current or proposed traffic enforcement strategies have a disparate impact on different socioeconomic groups and genders. Evaluate whether the new enforcement approaches are effective in achieving fair and equitable treatment for all users?

- *Outcome orientation:* Reduction of fatal and serious road injuries is the desired. An independent evaluation framework and investment in evaluation should be made.

2. Multi-Disciplinary Inclusion for Strengthening Public Transportation and Gender:

- *Multi-Disciplinary Research Teams:* How effectively do research teams, structured to include transportation engineering, urban planning, public health, gender studies, and social sciences, collaborate to develop solutions that address the specific needs of women in public transportation?

- *Public Transportation Needs Assessment:* How effectively does the needs assessment capture the specific challenges faced by women, including safety concerns, accessibility of routes and stops, affordability, and time constraints?

- *Gender-Responsive Design Evaluation:* Evaluate the effectiveness of gender-responsive design principles in public transportation systems. Do these principles translate into increased ridership, improved safety, and greater comfort for women of all ages and abilities?

- *Integration with Social Services:* Assess the effectiveness of integrating public transportation systems with social services and employment opportunities, particularly for women seeking economic empowerment. Does this integration improve access to opportunities and reduce transportation-related barriers for women?

3. Sustainability-Related Questions:

- *Mixed Traffic Street Design:* How effectively do street designs and traffic calming measures promote sustainable transportation modes like cycling, walking, and improved public transportation, particularly for women? Do these measures lead to a measurable reduction in gender disparities in ridership of sustainable transportation options?

- *Safe Highway Design for Slow Traffic:* Evaluate the environmental impact and land use requirements of highway designs incorporating safe facilities for slow traffic. Do these designs promote a shift towards more sustainable transportation choices for women, particularly those relying on slow-moving vehicles?

- *Pre-Hospital Care Effectiveness:* Assess the sustainability, accessibility, and gender-sensitivity of pre-hospital care systems in rural and remote areas. Do these systems provide adequate and equitable care for women involved in traffic incidents?

4. Additional Considerations for Research:

- Mixed Traffic Street Design: Explore the potential for reallocating road space currently dedicated to cars for the benefit of pedestrians, cyclists, slow-moving vehicles, and improved public transportation infrastructure. Evaluate the impact of such reallocation on promoting a more equitable and sustainable transportation system that benefits all users, including women.

- Helmet design conducive to Indian weather: the exploration and potential adoption of a design standard for half-head, or "tropical" helmets, specifically catering to India's climate. These helmets would prioritize coverage of the top of the head, a critical area for injury protection, while offering increased ventilation compared to full-face helmets.

Proposed evaluation framework

Inputs	Activities	Outputs	Outcomes	Impact
Safe Roads	• Highways • Urban roads • Inspections and audits	Change in Fatal Crashes	Better Health	Fewer Deaths
Safe Vehicles	• Safety Technologies • Public transport vehicles • Vehicular fitness and scrappage		Safety for all	
Safe People	• Alcohol and other drugs • Safety gear- Helmets and seatbelts • Illegal Parking • Driver licensing		Reduced Traffic Crashes	More Human Development
Technology	• Strengthening Road and Vehicular Engineering • Intelligent Traffic Management Systems for violation detection • Leveraging digitization and technology for safer behaviors	Change in Non-fatal Injury Crashes	Reduced Cost of Healthcare	
Post Crash Response	• Integration of Emergency Helplines • Strengthening Framework for Rescue and Extraction • Strengthening of Pre and In-hospital Care • Minimum Standards for Ambulances		Behavior Change	Empowerment
Financing and Insurance	• Usage Based Insurance • Cashless Treatment for Vulnerable Road Users • Underinvestment in targeted initiatives	Change in Property Damage Only Crashes	Reduced Air Pollution	
Multimodal Passenger Transport Hub	• Shared mobility and regional transportation planning • Integration of mechanized and non-mechanized modes • Gaps in laws and regulations		Increases Safe Road Use Practices	Happiness
Sustainability and Equity	• Decarbonization and climate-resilient transportation • Accessibility and affordability for urban poor • Safe mobility for women	Change in Mobility Patterns	Better Access to Social Determinants of Health	Sustainable Infrastructure

Good Governance

Evidence-informed Responsive Policies and Plans

Annexure 1

Global status report on road safety 2023

India

World Health Organization

Population: 1 407 563 842 ↑	**Income group:** Lower middle income =	**WHO Region:** South-East Asia Region	**GSRRS participation:** 2009, 2013, 2015, 2018, 2023

BURDEN ⓔ

Reported fatalities (year)	153 972 (2021)	↑
Reported fatalities sex distribution (Male; Female)	86%; 14%	N/A
Reported fatalities user distribution[1]	13%; 45%; 19%; 3%; 20%	N/A
WHO estimated road traffic fatalities (95% CI) (year)	216 618 (95% CI 193 271 - 239 965) (2021)	↑
WHO estimated rate per 100 000 population (year)	15.4 (2021)	↑

SAFE ROAD INFRASTRUCTURE

Total paved kilometers (year)	**4 095 726 (2019)**	N/A
Presence of technical standards for new roads that take account of all road-user safety, or align with relevant UN Conventions and regulate compliance with them[2]	Yes†	N/A
Presence of systematic approaches to assess/audit new roads[2]	Yes	⟳
National law requiring a formal road safety inspection/assessment	Yes	N/A
Target for roads to meet technical safety standards for all users (year)	Yes (2024)	N/A
Investments to upgrade high risk locations	Yes	=

SAFE VEHICLES

Total registered vehicles [rate per 100 000 pop] (year)	**326 300 000 [23 181.9] (2021)**	↑
Four-wheel vehicles	43 650 000	↑
Powered 2- and 3-wheelers	–	N/A
Heavy trucks	14 288 000	↑
Buses	2 196 000	↑
Other	22 483 000	↑
Legislation on periodic vehicle technical inspection[2]	Yes	N/A
National laws on front and side impact protection	Yes	N/A
National laws on seat-belt and seat-belt anchorages	Yes	N/A
National law on electronic stability control	Yes†	N/A
National law on pedestrian protection	Yes†	N/A
National law on anti-lock braking systems	No	N/A
Government vehicle procurement practices include safety prerequisites	Yes	N/A
Presence of high-quality safety standards for used-vehicle imports[2]	No	N/A

POST-CRASH RESPONSE

National law on universal access to emergency care	Yes	N/A
National law guaranteeing free-of-charge access to rehabilitative care for all injured	Yes	N/A
National law guaranteeing free-of-charge access to psychological services to road crash victims and their families	–§	N/A
National good Samaritan law	Yes	N/A
National emergency care access number	National, multiple numbers	⟳
National target for time between serious crash and initial provision of professional emergency care (year)	–	N/A

INSTITUTIONAL FRAMEWORK

Presence of strategies to promote alternatives to individuals use of powered vehicles	No	=
National road safety strategy[2]	Yes	=
Fatality reduction target (year)	50% (2030)	⟳
Non fatal reduction target (year)	50% (2030)	N/A
Funding to implement strategy	Yes, fully funded	⟳
National law mandating third-party liability insurance for powered vehicles	Yes	N/A
National law on driving time and rest periods for professional drivers[2]	Yes	N/A
Adherence to one or more of the 7 UN road safety conventions[2]	3	N/A
Presence of national lead agency to implement national road safety strategy[2]	Yes	↗
Presence of agencies that coordinate pre-hospital and emergency medical services[2]	Yes, national	N/A

ROAD USER BEHAVIOUR ⓔ

Legislation on urban speed limits for passenger cars and motorcycles[2]	🔴	=
National law setting a speed limit	Yes	=
Maximum urban speed limit	70 km/h	↓
Maximum rural speed limit	70 km/h	↓
Maximum motorway speed limit	120 km/h	↑
Local authorities can modify limits	Yes	=
Presence of targets to reduce speeds nationally (year)[2]	National	N/A
Available types of enforcement	Manual	↗
Legislation on drink driving[2]	🟠	=
National law on drink-driving	Yes	=
BAC limit – general population	≤ 0.03 g/dl	=
BAC limit – young or novice drivers	≤ 0.03 g/dl	=
Random breath testing carried out	Yes	⟳
Presence of targets to reduce driving after drinking nationally (year)[2]	National	N/A
Testing carried out in case of fatal crash	Some (not all) drivers are tested	⟳
Legislation on drug driving	**Yes**	=
Legislation on distracted driving (mobile phones)	**Yes**	N/A
Ban on mobile phone use[2]	Hand held; Hand free	=
Presence of targets to reduce distracted driving nationally (year)[2]	National	N/A
Legislation on helmets for motorcycle riders[2]	🟢	=
National motorcycle helmet law	Yes	=
Legislation requires helmet fastening	Yes	=
Legislation applies to:	Drivers and Passengers	⟳
Legislation applies to all road types	Yes	=
Legislation applies to all engine types	Yes	=
Legislation refers to and/or specifies helmet standard[2]	Yes	=
Presence of targets to increase helmet use (year)	Yes, national	N/A
Helmet wearing rate[2] (Driver; Passenger)	–	N/A
Minimum age/height children are allowed as passengers	No	N/A
Legislation on seat-belts for motor vehicle occupants[2]	🟢	=
National seat-belt law	Yes	=
Legislation applies to front and rear seat occupants	Yes	=
Presence of targets to increase seat belt use (year)[2]	Yes, national	N/A
Seat-belt wearing rate[2] (Drivers; Front seat occupants; Rear seat occupants)	–	N/A
Legislation on child restraint systems[2]	🟠	↗
National child restraints use law	Yes	↗
Children seated in front seat	No	↗
Age or height specified for children requiring child restraint	14 y	↗
Child restraint standard referred to and/or specified	No	=
Presence of targets to increase child safety restraint use (year)	Yes, national	N/A

NATIONAL DATA SYSTEMS ON...

Civil Registration and Vital Statistics (2021)	Group 2A	=
Frequency and distribution of journeys by modal type	No	N/A
Speeding violations and speeding related injuries and fatalities[2]	Yes	N/A
Driving under the influence of alcohol or drugs and related road traffic-related fatalities and injuries[2]	Yes	N/A
Seat belt and child-restraint systems use[2]	Yes	N/A
Powered 2- and 3- wheeler helmet use[2]	Yes	N/A
Mobile phone use while driving[2]	Yes	N/A

Legend

🟢 Strong 🟠 Moderate 🔴 Weak/None

↑ Increase ↓ Decrease = No change ⟳ Change ↗ Advancement

⊘ None or unknown — Not provided **N/A** Not applicable

ⓔ Evolution since 2010 or closest year possible

1 4W= Four-wheel vehicles, 2/3W= Powered 2/3 wheelers, P=pedestrian, C=Cyclist; O=Other & Unknown

2 UN voluntary target indicator

* Alcohol consumption prohibited in country

† Country adheres to corresponding UN or equivalent international safety regulation

‡ Corresponding EU regulation mandatory for country

§ Not validated

Legislative review and mortality estimations conducted by WHO. International regulation, population and income level from external sources. All other data collected by WHO via survey and cleared by government-designated National Data Focal Points. See Methods for more detail.

Global status report on road safety 2023: Country and territory profiles.

NOTES

NOTES

CONSENSUS STATEMENT

FOR ROAD SAFETY IN INDIA

Evidence-informed and contextually relevant
2025–2030