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INDIA STATUS REPORT ON ROAD SAFETY 2024

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FOREWORD

I am delighted that the Transport Research and Injury Prevention (TRIP) Centre, IIT Delhi, is bringing out this India status report on road safety, which will be released at the workshop on "Traffic Safety: Challenges for Meeting the SDG Targets on Road Safety Governance and Leadership."

The report does well to focus attention on this important issue of road safety. It has documented well the issues of reliable data that are needed to understand the magnitude of fatalities and injuries that are incurred every year in India. It also, for the first time, provides information on the steps taken on promoting road safety in seven selected states in the country. Given the size of the country, the great differences in levels of development and composition of traffic on the roads in India, it is clearly extremely important to focus on both the conditions in different states, and the institutional development being carried out to promote safety in each state.

The importance of this activity can be appreciated by the continuing high level of fatalities and serious injuries that occur on our roads every year. Although there has been some plateauing of the number of deaths over the past 10 years, there is little evidence of a decline, as has taken place in many other countries because of the road safety measures taken. To appreciate the seriousness of the issue of road safety, the annual toll of deaths on our roads is of a magnitude like that suffered due to COVID in 2020 and 2021. The attention given to this issue is almost negligible compared to what was done on a national and international basis during the COVID years.

As this report documents, the highest number of victims because of road accidents are pedestrians, cyclists and motorised 2-wheeler riders, whereas trucks are responsible for the highest proportion of impacting vehicles. It also documents that there are only seven states where more than 50% of motorised 2-wheeler riders actually wear helmets. This is an example of a very easy measure that can have a huge impact on reducing both fatalities and serious injuries. I hope that this report, and the conference in which it is being released, will be used to launch a new campaign to enforce the use of helmets by both bicycle and motorised 2-Wheeler riders, both the drivers and pillion passengers. Similarly, the use of seatbelts by all passengers in motor vehicles can be enforced much more effectively, leading to significant reductions in fatalities and injuries in road accidents.

The conference will focus on Traffic Safety in cities. As documented, the largest proportion of casualties suffered by pedestrians and cyclists is in our cities. Presumably, they can be reduced significantly by the provision of easy-to-use pavements and cycle lanes that are effectively separated from motorized traffic. It is ironic that, in a low-income country where there is a large proportion of pedestrians and cyclists, walking pavements are notable for their almost total absence. What is observed is a continuous widening of urban roads at the cost of pavements even where they exist. This is done to accelerate the speeds of motorised traffic. It is interesting that in many developed country cities the opposite is being done: widening of pavements along with narrowing of road space to reduce traffic speeds, while improving public transport. These are some of the issues that need consideration for improving road safety.

This general issue of transportation safety needs to be pushed up in terms of priority in it both popular consciousness and government policy. The National Transport Development Policy Committee had recommended the formation of a National Transport Safety and Management Board. It had suggested that it must not be just a committee but should be set up as an independent statutory organisation with an adequate budget and mandate; it should be an expert organisation with technical and domain professionals in all areas related to transport safety in all modes; and that it should aim to assemble at least 250 to 300 professionals over a period of three years. The Committee had also proposed a major step up in R&D related to transport safety in all areas of transport: roads, railways, civil aviation, and shipping. This issue has assumed greater importance with the recent increase in railways accidents resulting in serious fatalities and injuries.

I hope that this report will help in promoting the spread of safety consciousness in transport and in setting up different institutional mechanisms aimed at an actual reduction in transport casualties.

Rakesh Mohan

President Emeritus, Centre for Social and Economic Progress (CSEP) | Member, Economic Advisory Council to the Prime Minister | Former Chairman, National Transport and Development Policy Committee

FOREWORD

The India Status Report on Road Safety: 2024, prepared by TRIP Centre IIT Delhi, is an eyeopener. The report not only throws light on India's extremely slow pace in meeting international goals towards its commitment to reducing road accident deaths, but it also illustrates the organic linkage between road infrastructure, mobility, and the need for a range of approaches for mitigating road accidents.

Road traffic injuries remain a significant public health challenge in India, with little progress in reducing fatalities, despite improvements in other health areas. Most states are unlikely to meet the United Nations Decade of Action for Road Safety's goal to halve traffic deaths by 2030. This report examines road safety in India, analyzing data from six states' First Information Reports (FIRs) and audits of state compliance with Supreme Court directives on road safety governance. It highlights disparities in road traffic death rates across states and emphasizes the vulnerability of motorcyclists and the prevalence of fatal crashes involving trucks.

The report also highlights the achievements in other public health challenges in the last few decades. However, road safety and traffic injuries continue to be at the fringes of the public health domain, and hence it calls for affirmative policy-level interventions. Based on their experiences while gathering data, the authors of the report point out the unreliable nature of the compilation of available road accident injury data. In the absence of a 'crash surveillance system', which would have provided much more reliable data, the report had to base its study on FIRs collected from six states and, as noted, on the audit reports of states on road safety governance.

Road Safety governance is another important area that needs to be looked into. It comprises many players, from road designers to road builders, the automobile sector, the public health sector, and the urban governance structure. How to bring in convergence in all of the above is another area that needs to be looked into for better road governance. The report has pointed out poor infrastructure audit of roads, both National Highways, and State Highways. In some states, these audits have never been done. Thus, a policy level shift needs to be brought in as early as possible.

Another interesting fact that the report highlights is the comparison of data from India with some of the developed nations like Sweden and other Scandinavian countries that have done considerably well in road safety governance. This reveals that in 1990, a person in India was 40 percent more likely to die in road accidents compared to a person in the above-mentioned countries. This difference has shot up to 600 percent in 2021, because of India's failure to improve road safety. Does the solution to such an epidemic lie in better-equipped automobiles with more bursting balloons, though the largest number of deaths are of two-wheelers, cyclists, and motorcyclists?

The report finds that states have made varying progress in implementing institutional frameworks, infrastructure improvements, enforcement measures, education, and medical care. While some states have created lead agencies for road safety, infrastructure audits and enforcement remain inconsistent. Helmet use is particularly low in rural areas, and trauma care facilities are inadequate. The report calls for scaling up road safety interventions, establishing comprehensive governance frameworks, and developing reliable crash surveillance systems. Tailored safety strategies are needed, with a focus on research, data collection, and field evaluations to address unique road safety challenges across different states.

The report serves as a baseline for monitoring progress in road safety across Indian states and underlines the need for targeted interventions to meet global road safety goals by 2030.

Tikender Singh Panwar
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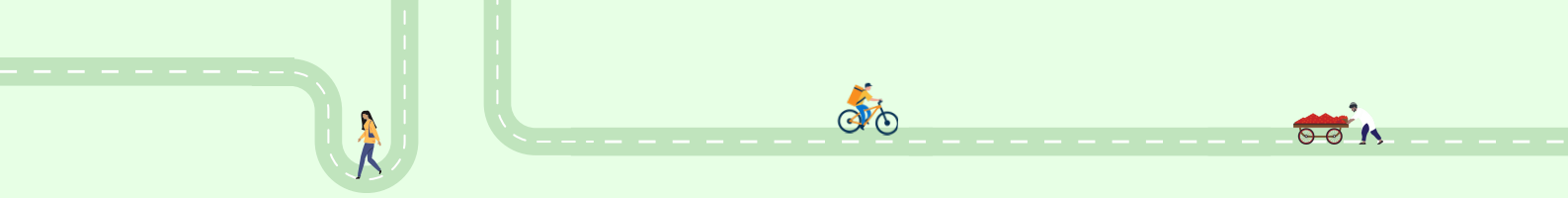


EXECUTIVE SUMMARY

Road traffic injuries present a significant public health challenge in India. In contrast to decades of progress in improving other aspects of health in the country, road traffic injuries remain a significant burden, with little improvement in their management or outcomes. With current trends, most states will fall far short of what is needed to meet the target of the United Nations Decade of Action for Road Safety 2021–2030 to halve deaths by 2030.

This report reviews the status of road safety in India, including the incidence of road traffic injuries and the efforts being undertaken by the state governments to address them. Although reliable crash data are a prerequisite for effective safety programs, India does not have a reliable crash surveillance system. Therefore, this report presents an analysis of data extracted from First Information Reports (FIRs) from six key states—Chhattisgarh, Chandigarh, Delhi, Haryana, Maharashtra, and Uttarakhand. Additionally, this report summarizes results from audits of the compliance of states with Supreme Court directives to establish robust road safety governance frameworks, including institutional arrangements, infrastructure enhancements, enforcement measures, educational initiatives, and medical care improvements.

The report identifies significant dramatic disparities in road safety performance across India. States like Tamil Nadu, Telangana, and Chhattisgarh reported among the highest road traffic death rates, more than twice the national average. States such as Bihar, Tripura, Chhattisgarh, Madhya Pradesh, and Assam have seen death rates rise by 20% or more in the last 5 years, while others, such as Punjab, Karnataka, Rajasthan, West Bengal, and Gujarat, observed reductions.

Motorcyclists face very high risks across the country. In contrast, occupants of 4-wheeled vehicles were much less likely to die, but these vehicles were involved as impacting vehicles at high rates. In particular, trucks were the leading type of impacting vehicle in deaths for most road users. While the most common crash configurations varied by state, fatal crashes were as likely to be due to rear impacts as head-on collisions. This is likely due to the large speed differentials that are common on Indian roads and reflects the need to address these issues through road design countermeasures.

State-level data showed large variations in the types of victims injured, impacting vehicles, and the most common crash configurations, highlighting the need for tailored safety interventions and programs grounded in detailed empirical data on local risk factors. Expansion of data from FIRs to a national scale can provide a starting point for such analysis. However, FIRs can only provide limited crash details. India needs to invest in establishing state-level units to systematically collect reliable data for fatal crashes by combining information from police reports, hospitals, and road-owning agencies.

States have made varying progress in complying with the directives issued by the Supreme Court Committee for Road Safety since 2015.

Institutional arrangements: Most states have established lead agencies by executive order and most have assigned the transport commissioner as the head of the agency. Several, but not all, states have complied with the committee's directive to staff these agencies with technical expertise and created dedicated funds to coordinate road safety activities. All states have notified road safety policies.

Enforcement: Most states record information in police reports and prepare tables, as suggested by the Transport Research Wing of MoRTH. Since 2021, most states have implemented an iRAD/eDAR system. However, helmet use remains low, with use much lower in rural areas. Helmet use was higher than 50% in only 7 states.

Infrastructure: Eight states have audited more than half of the national highway length, but very few states have audited more than half of their state highways. Many states have either not reported or not conducted road audits. Appropriate traffic safety measures, including traffic calming, markings, and signage, have not been implemented in most states.

Education: The education department of most states reported including a module on road safety in the school curricula.

Medical Care: Most states have not yet established trauma care facilities adequate to the scale of the problem.

State and central governments need to prioritize the scale-up of road safety interventions. This report underscores the importance of establishing comprehensive governance frameworks yet also reveals significant gaps in understanding the specific and unique road safety challenges and solutions in diverse settings across the country. Each Indian state exhibits distinct traffic dynamics and risk factors, which will remain poorly understood without significant efforts to establish reliable crash surveillance systems. Furthermore, developing safety solutions will require generating new insights into effective strategies, designing tailored interventions, and conducting thorough field evaluations. Consequently, India must commit substantial resources to the research and development necessary to drive improvements in road safety.



ABOUT THIS REPORT

The India Status Report on Road Safety 2024 presents findings on the status of road safety in Indian states. It includes statistical analysis of traffic fatalities at the state level from data extracted from First Information Reports (FIRs) in six states and provides the first complete overview of road safety management activities in twenty states based on data provided by the states for the safety audits commissioned by the Supreme Court Committee on Road Safety.

The report sets a baseline for monitoring progress in the second UN Decade of Action for Road Safety 2021–2030. This report looks at how and where the burden of traffic injuries is changing and at how the states are responding.

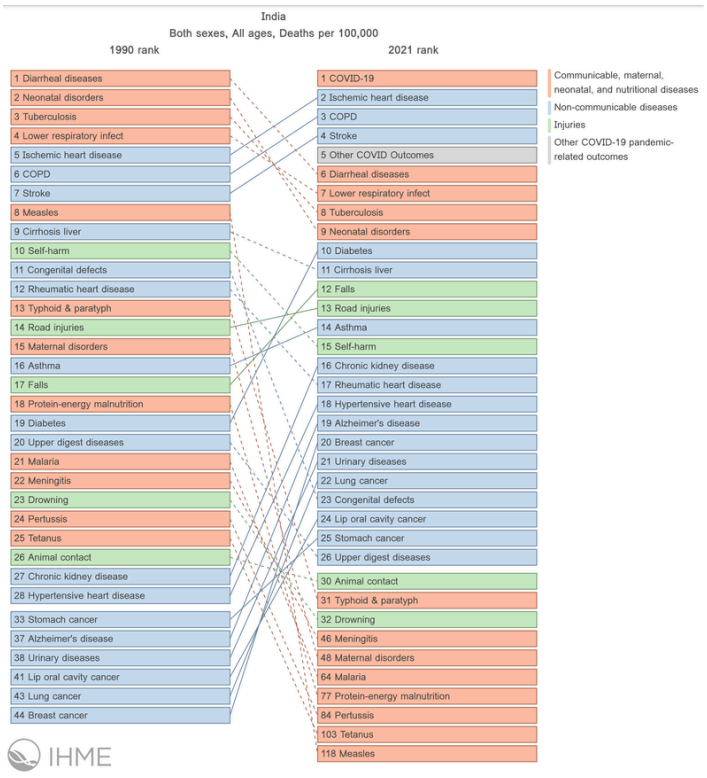
1.0 THE STATE OF ROAD SAFETY IN INDIA

1.1 Road Traffic Injuries: A Persistent Public Health Challenge in India

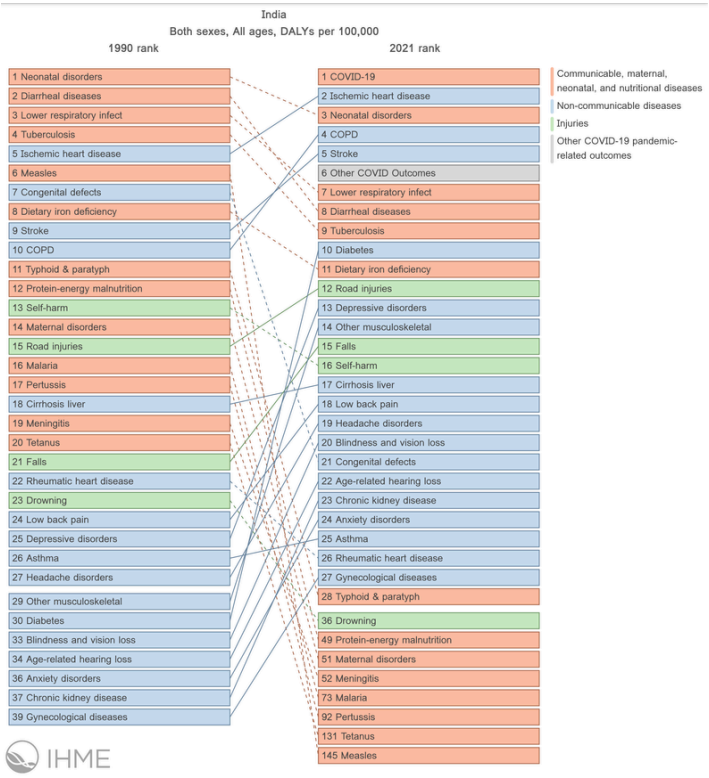
Road traffic injuries in India represent a significant public health crisis, particularly among young men. Despite making notable progress in combating a variety of diseases and health conditions over the past few decades, India has failed to reduce the burden road traffic injuries impose on society. This disparity underscores the urgent need for targeted interventions to address the high burden of road traffic injuries.

In 2021, road traffic injuries were the 13th leading cause of death in India and the 12th leading cause of health loss (DALYs)[1] (Figure 1). They were a top 10 cause of health loss in 6 states (Haryana, Jammu & Kashmir & Ladakh, Punjab, Rajasthan, Uttarakhand, Uttar Pradesh; Figure 2). At the national level, the health loss from traffic crashes (11 million DALYs) is comparable to the health loss attributable to unsafe sanitation (8.2 million DALYs),1 which includes inadequate access to proper infrastructure for managing human excreta – an issue that the government made the target of the world's largest sanitation program (Swachh Bharat Mission) with a US$28 billion budget.

Traffic injuries are a particular concern for young men. Health loss (DALYs) for men is over four times that among women, which is likely due to women having much lower exposure to traffic due to low rates of participation in the workforce. Among men aged 15-49 years, traffic-related deaths were the second leading cause of health loss, surpassed only by the impact of COVID-19. Before the pandemic (in 2019), traffic injuries were the leading cause of health loss among men in this age group.



(a) Leading causes of death



(b) Leading causes of health loss (DALYs)

Source: IHME/GBD-2021

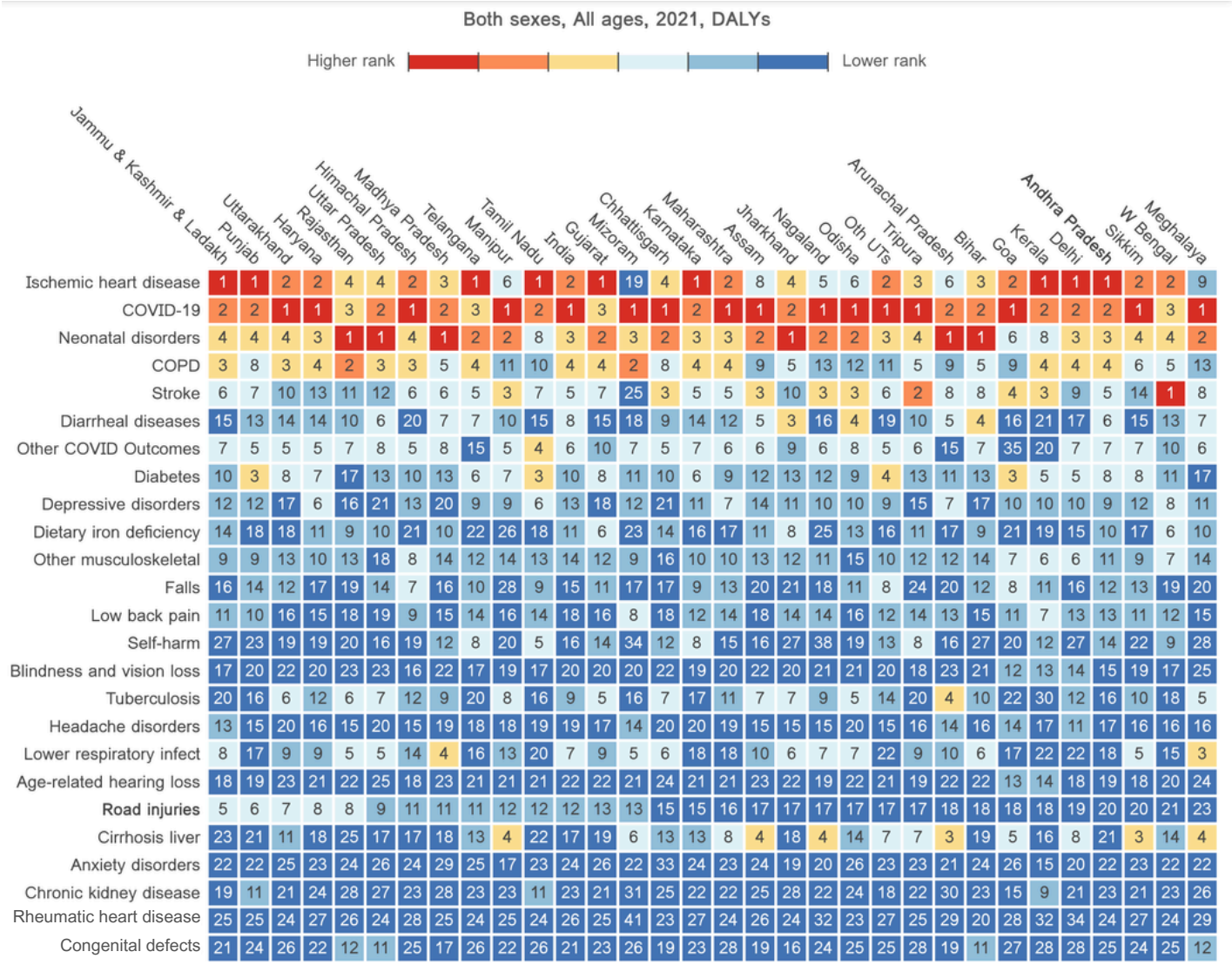
Figure 1 Change in leading causes of death and health loss in India in the last 3 decades

[1] *Health loss is commonly measured in terms of Disability-Adjusted Life Years (DALYs), a metric that combines both years of life lost due to premature mortality and years lived with disability.*

Over the last three decades, India has made substantial progress in addressing many diseases and health concerns, yet the progress in reducing traffic injuries has been small. A stark comparison can be made with maternal health. In the 1990s, maternal mortality was the leading cause of death among young women aged 15-49 years, but through concerted efforts, India achieved an 87% reduction in maternal death rates (per 100,000 women) by 2021. In contrast, the reduction in traffic injuries among young men (aged 15-49 years) has been less than 3% over the same period. Today, a young man is over three times more likely to die in a traffic crash than a young woman is to die during childbirth. This situation is a reversal from 1990 when a young woman was more than twice as likely to die in childbirth as a young man was to die in a traffic crash.

More generally, between 1990 and 2021, India achieved significant reductions in death rates from major health concerns: diarrheal diseases, neonatal disorders, and tuberculosis, which saw declines of 76%, 72%, and 60%, respectively. In stark contrast, the death rate from road traffic injuries (across all ages and sexes) in India increased by 6.3%.

The slow improvement in road safety in India is in stark contrast to countries such as Sweden, the UK, and the Netherlands, which are widely acknowledged for their mature road safety management programs. In 1990, a person living in India was about 40% more likely to be killed in a traffic crash than residents of these countries. In 2021, this safety gap has grown to more than 600%.



Source: IHME/GBD-2021

Figure 2 Leading causes of health loss (DALYs) in the States and Union Territories in 2021

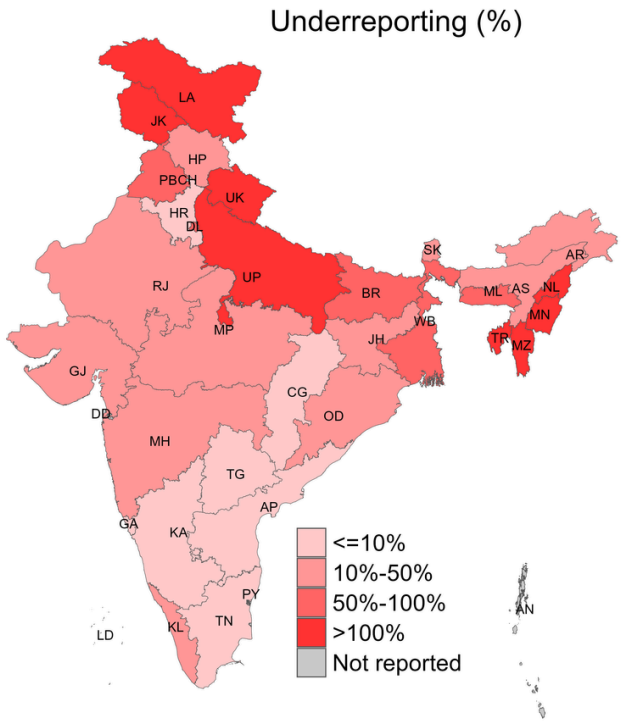
1.2 Need for Reliable Crash Surveillance Data for Road Safety Management

The quality of road traffic injury data is an important concern in India because (1) the underreporting of traffic deaths in official statistics leads to the low prioritization of traffic safety in national and state-level safety policy agendas, and (2), India's crash surveillance is unreliable and inadequate for guiding road safety programs.

Addressing Underreporting:
Official statistics in India are derived from police-reported crashes, which form the basis of MoRTH and NCRB reports. However, underreporting in police statistics has been an ongoing concern.[2] ICMR and IHME's GBD project estimates that there were 218,406 deaths (95th CI: 196,576-242,486) in India in 2021, 42% higher than official statistics (1,53,972 deaths). GBD uses nationally representative health-sector data sources, notably including the Registrar General of India's National Sample Registration System (SRS). An alternate estimate by WHO published in the Global Status Report on Road Safety (GSRRS), estimated 216,618 deaths (95th CI: 193,271 – 239,965), similar to the GBD estimate. At the state level, estimates of underreporting are higher in the Northeastern, and the North and North-central states compared with the southern states (Figure 3). The current pattern of state-level underreporting is broadly consistent with the estimates produced using SRS data in 2013,[3] suggesting that the situation has not improved.

The scale of underreporting is consequential for the prioritization of road safety in state policies. Consider, for instance, the state of Uttarakhand, where GBD estimates place traffic deaths in the top 10 causes of death (Rank 8), ahead of serious health concerns like diabetes, diarrheal diseases, and liver cirrhosis. However, official statistics of traffic deaths would not place them even in the top 20 causes of death.

Nevertheless, it is important to note that health-sector data in India are also unreliable and this is evident in the wide uncertainty ranges of GBD and GSRRS estimates, and the large difference between their mean estimates. Nevertheless, these studies strongly suggest the need for research on underreporting of official statistics of traffic deaths. This should include, for instance, studies that link police reports with traffic deaths identified in population-representative data sources (such as the SRS) to identify the proportion of deaths that are missed by police across the country.



% underreporting = 100(GBD estimate – MoRTH)/MoRTH*

Figure 3: Estimates of underreporting of traffic deaths in official statistics in 2021

Building a national crash surveillance system:
Reliable crash data systems are a prerequisite for effective safety programs. High-income countries were only successful in reducing traffic injuries starting in the 1960s after country governments initiated a rational and systematic approach to risk management.[4] This approach involves developing an intervention strategy based on assessing population-level risks, available interventions, and allocating resources to the most effectual approaches. Quantitative targets are set for final outcomes (deaths/injuries), intermediate outcomes (e.g., helmet-use prevalence), and the institutional outputs (e.g. enforcement levels) needed to achieve outcome targets. Furthermore, data are needed for monitoring performance and recalibrating safety activities on an ongoing basis.

Despite concerns of underreporting, police reporting is the only viable source for a national crash surveillance database. Other sources (e.g., hospital-based surveillance) do not have access to most of the information (e.g., location infrastructure details, vehicle characteristics, and use of protective equipment) that is needed for road safety management.

Nevertheless, India's national road safety data systems are inadequate for guiding public policy. At present, India does not have a national crash-level database. State and national level statistics are only available as tables that are generated at individual police stations, from where these tables flow to district, state, and national crime records bureaus, which publish the aggregated tables. These tables only allow the most rudimentary epidemiological analyses, ruling out most forms of intervention and program evaluations. Furthermore, comparisons with GBD, and SRS strongly suggest that the tables provide inaccurate information about variables, such as the victim's mode of transport, that are important for road safety management. [2]

In 2020, MoRTH launched the Integrated Road Accident Database (iRAD) / e-Detailed Accident Report (eDAR) Project, which aspires to be a national, record-level crash database. The iRAD/eDAR Project is an initiative of the Ministry of Road Transport and Highways (MoRTH), Government of India, and is funded by the World Bank. Its objective is to strengthen data systems and improve road safety in the country. However, running a high-quality crash surveillance system requires much more than the provision of technological infrastructure. Notably, the underlying institutional purpose of police investigations is to adjudicate legal responsibility (i.e. assign fault for the crash). Therefore, substantial efforts are needed to ensure adequate human resources are available to collect relevant and standardized crash data. Furthermore, an ongoing data assurance program is needed to ensure that the information collected is accurate and reliable.

Unfortunately, despite having existed for over four years, iRAD/eDAR data are not shared with researchers, and there have been no independent assessments of the quality and reliability of the information captured. Therefore, this India Status Report was produced from a database developed from information extracted from First Information Reports (FIRs) in states. See the Appendix for details of data extraction. Briefly, FIRs are short written documents prepared by the police when they receive information about a cognizable crime. Despite logistical difficulties in accessing FIRs and the relatively limited information included in them, researchers in India have used them for evaluating road design,[5] pedestrian risk factors,[6] urban safety,[7] truck safety, [8] work zone crashes,[9] urban public transport safety,[10] trauma systems,[11] and other applications.[12] While these studies used FIRs for targeted investigations, for this India Status Report, data was systematically extracted data from all FIRs of traffic deaths in six states into a purpose-built hierarchical database. This Report presents descriptive statistics from this first record-level multi-state crash database in India.

1.3 Road Safety Performance of the States

Road safety in India shows significant variability, with per capita death rates differing more than threefold across states (Figure 4). Tamil Nadu, Telangana, and Chhattisgarh had the highest death rates, at 21.9, 19.2, and 17.6 per 100,000 people, respectively, while West Bengal and Bihar had the lowest rates, at 5.9 per 100,000 in 2021. A significant proportion of traffic deaths in India is concentrated in six states—Uttar Pradesh, Maharashtra, Madhya Pradesh, Karnataka, Rajasthan, and Tamil Nadu —accounting for nearly half of all such fatalities. An additional quarter of traffic deaths are contributed by Andhra Pradesh, Gujarat, Bihar, Telangana, and West Bengal.

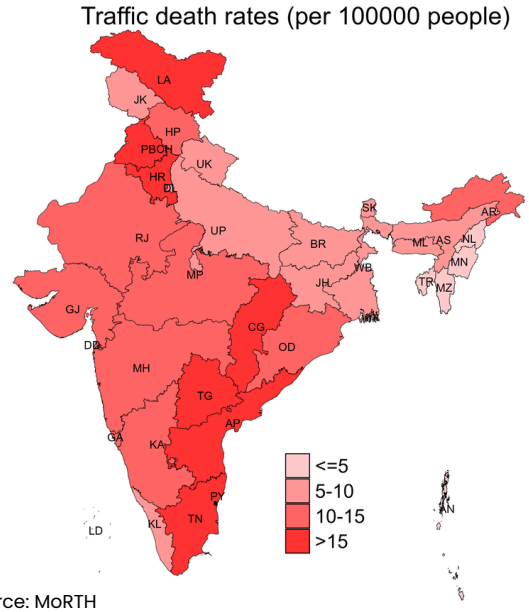
While national traffic death rates have remained relatively stable, with a modest 3% increase over the last five years, this overall trend conceals substantial regional disparities (Figure 5). Notably, states such as Bihar, Tripura, Chhattisgarh, Madhya Pradesh, and Assam have seen death rates rise by 20% or more. Conversely, significant reductions have been observed in several states, including Punjab, Kerala, Karnataka, and Gujarat. Among states with populations exceeding 10 million, Delhi and Uttarakhand were the only ones that achieved a decline of more than 10% in traffic death rates.

Since previous investigations have highlighted concerns about misclassification of road user types in MoRTH tabulations,2 we present disaggregated death rates for pedestrians, motorcyclists, and vehicle occupants only for the six states where data was extracted from FIRs.

Motorcyclists are at very high risk across the country. Motorcyclist death rates are higher than those for pedestrians and vehicle occupants, with Delhi being the only exception where pedestrian death rates slightly surpass those of motorcyclists. (Figure 6) In fact, there is a strong association between overall traffic death rates and motorcyclist death rates (Figure 6) – in states where motorcyclist fatalities are high, overall traffic fatalities also tend to be high. Taken together, these facts highlight the importance of focusing on motorcyclist safety in the country. In particular, it is notable that Delhi, where the motorcyclist death rate is less than half the average of the other states (Figure 6), has among the highest helmet use rates in the country due to aggressive enforcement.

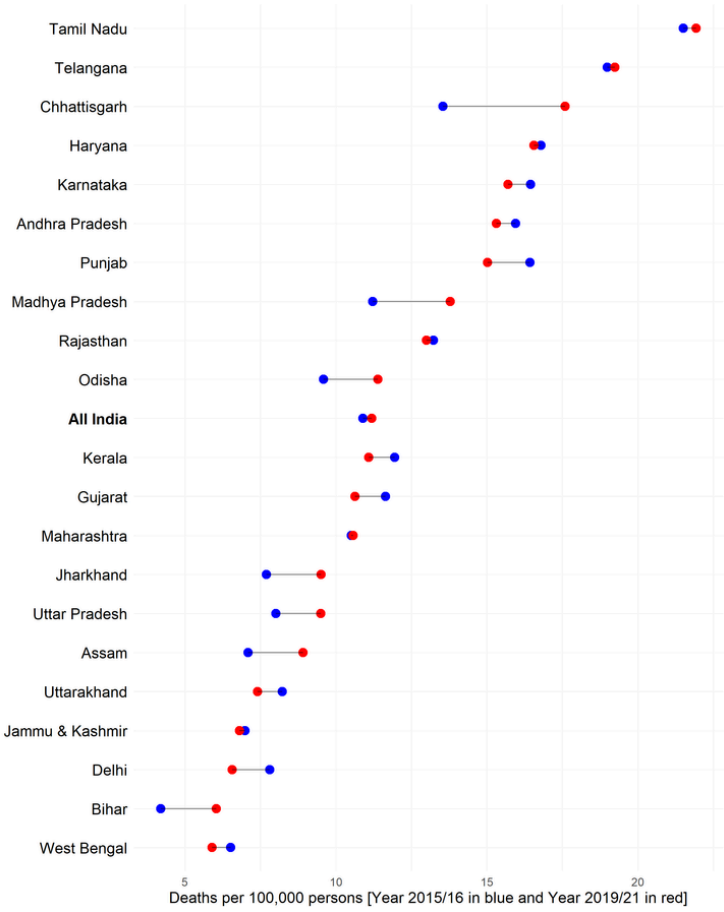
In contrast, occupants of 4-wheeled vehicles are much less likely to die (motorcycle death rates average 3.8 times higher in the 6 states, Figure 6) but these vehicles are implicated at high rates as impacting vehicles.

For example, in Chandigarh, only 4% of all deaths are car occupants, but 36% of all deaths are due to impacts with cars. In all other states, trucks were the leading impacting vehicle in all 6 states (Figure 5). In fact, for the six states combined, trucks were the leading impact vehicle for pedestrians, bicyclists, motorcyclists, car occupants, and other trucks. In crashes involving two vehicles, motorcyclists struck by trucks accounts for nearly one-third of all fatalities. Addressing the high risk posed by trucks to motorcyclists is among the most important road safety concerns in India.



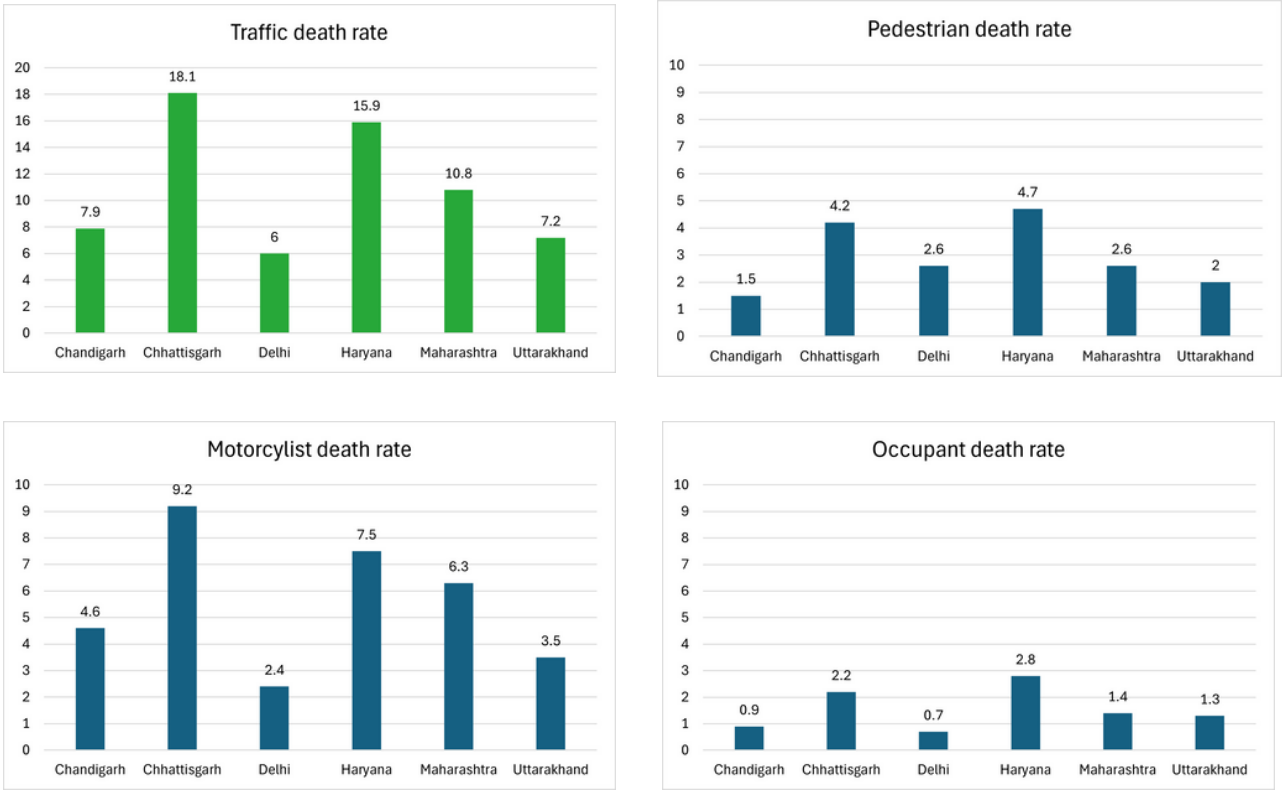
Source: MoRTH

Figure 4: Road traffic death rates (per 100,000 people) in 2021



Source: MoRTH

Figure 5: Change in road traffic death rates in 5 years (2016-2021)



Source: Estimated from data extracted from FIRs

Figure 6: Death rates (per 100,000 people) of pedestrians, motorcyclists, and occupants of 4-wheeled vehicles in 2021.

Table 1: Percentage of road traffic deaths by victims mode of transport in 6 states

	Chhattisgarh	Chandigarh	Delhi	Haryana	Maharashtra	Uttarakhand
Pedestrian	19	23	44	29	24	28
Bicycle	4	13	3	3	1	3
Motorized two-wheeler	58	51	40	47	58	48
Motorized three-wheeler	1	7	4	3	1	3
Car	4	4	5	8	6	7
Bus	1	1	0	1	1	4
Truck	5	1	2	5	5	4
Farm Tractor	6	0	0	2	2	0
Others	0	1	1	1	2	1
Unknown	0	1	1	0	0	1
Total	100%	100%	100%	100%	100%	100%

Table 2: Percentage of road traffic deaths by type of impacting vehicle in 6 states

	Chhattisgarh	Chandigarh	Delhi	Haryana	Maharashtra	Uttarakhand
Bicycle	0	0	1	0	1	0
Motorized two-wheeler	13	11	6	10	14	10
Motorized three-wheeler	0	7	2	1	0	1
Car	7	36	14	25	14	21
Bus	3	5	6	4	4	7
Truck	24	12	18	32	27	28
Farm Tractor	5	1	1	7	4	6
Other	11	12	5	1	5	2
None	16	9	3	2	16	5
Unknown	18	9	45	17	15	21
Total	100%	100%	100%	100%	100%	100%

Victims	Impacting Vehicle					
	Motorized 2-wheeler	Motorized 3-wheeler	Car	Bus	Truck	Other
Pedestrian	25%	1%	29%	6%	30%	9%
Bicycle	22%	1%	29%	6%	35%	7%
Motorized 2-wheeler	14%	1%	22%	4%	33%	26%
Motorized 3-wheeler	3%	2%	25%	6%	28%	36%
Car	2%	0%	13%	5%	47%	33%
Bus	3%	0%	1%	4%	27%	65%
Truck	3%	0%	3%	3%	57%	34%
Farm Tractor	1%	0%	3%	1%	21%	74%
Others	5%	1%	25%	4%	28%	37%

(Table excludes unknown; Other impacting vehicle includes single-vehicle crashes)

Figure 7: Who-hit-whom in the six states combined

	Single Vehicle					Multi Vehicle				
	Overturn	Hit fixed object	Hit parked vehicle	Passenger Fall off	Other	Head - on	Side impact	Rear-end	Side-swipe	Other
Bicycle	1%	0%	1%	0%	1%	23%	4%	63%	4%	2%
Motorized 2-wheeler	9%	5%	4%	3%	2%	35%	2%	33%	5%	1%
Motorized 3-wheeler	24%	4%	3%	4%	2%	24%	4%	24%	8%	2%
Car	12%	13%	10%	1%	2%	31%	3%	19%	7%	3%
Bus	15%	5%	7%	31%	9%	12%	2%	10%	2%	7%
Truck	17%	7%	19%	4%	3%	21%	1%	21%	3%	2%
Farm Tractor	39%	5%	2%	20%	5%	6%	1%	14%	3%	5%
Others	22%	4%	2%	6%	2%	21%	1%	37%	2%	3%

Figure 8: Crash configurations in the six states combined

Across the six states, rear-end crashes dominate. This is especially true for victims on slow-moving vehicles, such as bicycles, where nearly two-thirds of fatalities are due to being struck from the rear. However, even in faster vehicles, rear impacts are as common as head-on collisions, a situation that is not common in high-income countries, where head-on collisions typically dominate. This is likely due to high-speed motorised vehicles moving on roads used by pedestrians, bicycles, autorickshaws, and other slow-moving vehicles. This reflects the need to address these issues through road design countermeasures, such as separating modes based on speed.

Disaggregated data for the six states (see appendix) shows large variations in crash patterns. For instance, in Chhattisgarh, the number of agricultural tractor occupants killed exceeded the number of deaths among occupants of cars, buses, trucks, and autorickshaws (Table 1). This is surprising because, despite Chhattisgarh being a rural agrarian state with a high presence of agricultural vehicles, tractors are relatively slow-moving vehicles. However, the distribution of crash configurations (see appendix) reveals that most of these fatalities involve single-vehicle rollovers. It is likely that tractors, which are often used to transport unrestrained passengers, are prone to overturning when they inadvertently stray off the roadway in locations with high pavement drop-offs and/or steep embankments. In contrast, in Haryana, also traditionally an agrarian society, tractor-occupant fatalities primarily involve rear-end impacts usually by a truck

Our analysis of FIRs from six states reveals significant variations in crash patterns, driven by unique traffic environments and risk factors such as economic activity, transport infrastructure, geography, climate, and socio-demographic characteristics. These findings underscore

the necessity of customizing safety interventions and programs to address specific local risk factors. Therefore developing targeted and evidence-based interventions will require analysis of empirical data on crashes and associated risks in these states. In the absence of a comprehensive crash surveillance system (as discussed in the previous section) expanding the FIR-based database from six states to the entire country could offer valuable insights for shaping road safety policy nationwide. However, it is important to recognize that FIRs provide limited crash details; ideally, such analyses should be based on crash surveillance data obtained from detailed crash investigations.

2.0 STATUS OF ROAD SAFETY MANAGEMENT FRAMEWORK

Designating a lead agency for road safety has been widely recommended by experts as essential for addressing road safety. For instance, the WHO and World Bank's 2004 World Report on Road Traffic Injury Prevention13 emphasized the need for a lead agency to coordinate government efforts, reduce fragmentation, and achieve better outcomes. Such an agency must be adequately funded and publicly accountable for its performance. It must also actively engage and collaborate with all sectors of society that can contribute to improved safety outcomes. The central role of a lead agency lies in directing and sustaining efforts to achieve better road safety results.

In India, a National Road Safety Management Board is currently being established to serve as the lead agency. In 1991, a National Road Safety Council was established in 1991 under the Motor Vehicle Act of 1988 and was reconstituted every five years, with the last reconstitution occurring in 2015. The Council is chaired by the Minister of Road Transport and Highways (MoRTH), with members including senior bureaucrats from various departments and representatives of non-governmental organizations focused on road safety. State and district-level road safety councils have also been notified by all states. The Motor Vehicle Act was amended in 2019 to include provisions for the National Road Safety Management Board as an advisory organization to coordinate and monitor road safety activities across all states. The Ministry of Roads and Highways officially announced the formation of the board in October 2021.

While the Board has yet to begin operations, the Supreme Court of India established the Supreme Court Committee on Road Safety in 2014 to monitor the implementation of road safety laws across the states. This Committee directed the states to implement various policies, institutional arrangements, and infrastructure-related measures to improve road safety standards and reduce traffic crashes and fatalities. The committee has issued 51 directives to the states, addressing five key areas: institutional arrangements, road engineering, enforcement, education and capacity building, and emergency care systems.

At the direction of the Supreme Court Committee, MoRTH initiated a study to assess state compliance with the Committee's directions.14 The study focused on the following areas:

1. Institutional framework: State initiatives in road safety institutional arrangements.
2. Infrastructure: Improvement efforts related to road geometry and engineering.
3. Enforcement: Initiatives by state police and transport departments to enforce traffic regulations.
4. Education: Road user awareness programs led by education departments.
5. Medical Care: Enhancements in trauma care, paramedical services, and emergency health care systems by health departments.

The findings from this study provide an overview of road safety across states.

2.1 Institutional Framework

The Supreme Court Committee directed states to establish a road safety lead agency, headed by a senior officer with a dedicated appointment, and a professional staff to develop road safety policies, action plans, and to coordinate activities across various departments. The committee also recommended the creation of a non-lapsable road safety fund in each state. Table 3 provides a summary of the status of these lead agencies and funds across states.

All 24 states assessed have now established lead agencies. In most states, lead agencies were notified by executive order, although some states, such as Kerala, established them through legislative action. In most states, the role of heading the lead agency has been assigned to the transport commissioner. Some states have complied with the committee's directive to staff these agencies with technical expertise and created dedicated funds to coordinate road safety activities.

All states have notified road safety policies.

Table 3: Compliance of states with Supreme Court Committee directives on institutional arrangements

	YES	No
Have established a lead agency as a separate entity?	AP, AS, BR, CG, DL, GA, GJ, HR, HP, JK, JH, KA, KL, MP, MH, OD, PY, PB, RJ, TN, TG, UP, UK, WB	-
Head has at least rank of Additional Commissioner /Joint Commissioner?	AP, AS, BR, CG, DL, GJ, HR, HP, JK, JH, KA, KL, MP, MH, OD, PY, PB, TN, UP, WB	GA, RJ, TG, UK
Head has dedicated appointment?	AP, AS, BR, DL, GA, JK, JH, KA, KL, OD, PY, RJ, TN, UP, UK	GJ, HR, MH, PB, TG, WB
Road safety policy has been notified?	AS, BR, DL, GA, GJ, JK, JH, KA, KL, MH, OD, PY, PB, RJ, TN, UP, UK, WB	AP, HR, TN, TG
Road safety fund is notified	AP, AS, BR, DL, GA, GJ, HR, JK, JH, KA, KL, MH, OD, PY, PB, RJ, TN, TG, UP, UK, WB	DL, GJ, HR, KA, PB, TG
Is fund non-lapsable?	AS, BR, DL, GA, GJ, HR, JK, JH, KA, KL, MH, OD, PY, PB, RJ, TN, TG, UP, UK, WB	Fund not notified: DL, GJ, HR, KA, PB, TG Fund notified but lapsable: AP, UP

Andhra Pradesh: AP, Assam: AS, Bihar: BR, Chhattisgarh: CG, Delhi: DL, Goa: GA, Gujarat: GJ, Haryana: HR, Himachal Pradesh: HP, Jammu & Kashmir: JK, Jharkhand: JH, Karnataka: KA, Kerala: KL, Madhya Pradesh: MP, Maharashtra: MH, Odisha: OD, Puducherry: PY, Punjab: PB, Rajasthan: RJ, Tamil Nadu: TN, Telangana: TG, Uttar Pradesh: UP, Uttarakhand: UK, West Bengal: WB

2.2 Road Engineering

The states were assessed for initiatives taken to rectify black spots on National Highways and State Highways. The field audits included 100 km of road segments of National Highways, State Highways, and Other Roads. The audits reported the presence of traffic calming measures at appropriate locations. Four cities in each state were audited for the presence of safe pedestrian paths, appropriate signage and makings as per IRC standards.

Only 8 states had audited more than half the length of their National Highways, only 3 had audited more than half the length of State Highways (Figure 9). Other states had either not reported or not conducted a road safety audit. Most states had not implemented appropriate traffic calming measures and markings and signage that were compliant with IRC standards.

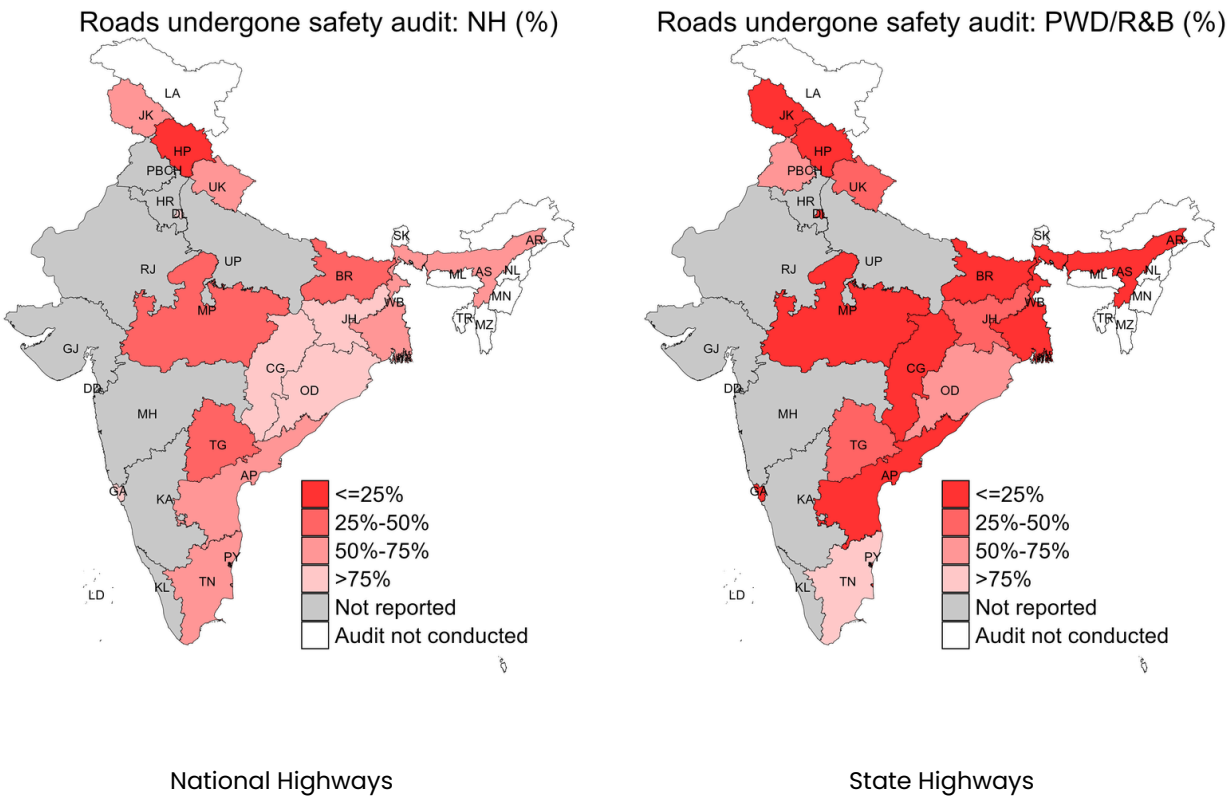


Figure 9: Percent of length on National and State Highways that have undergone a safety audit

2.3 Enforcement

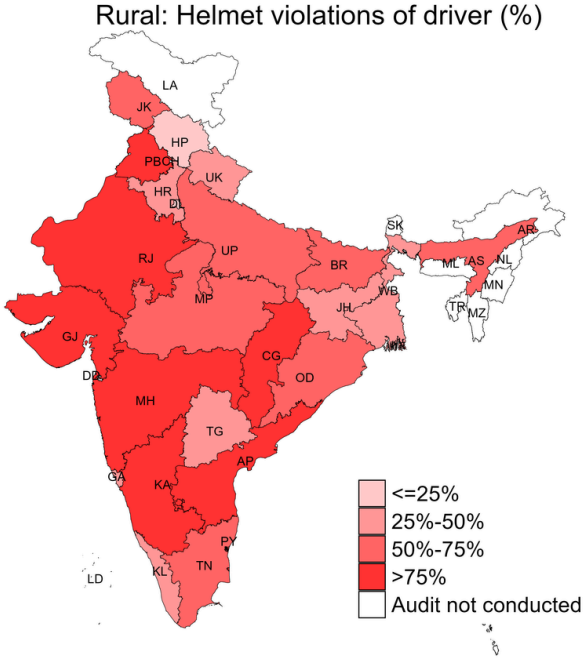
Audits of the state police departments reviewed their accident data recording and reporting processes, and the availability of enforcement equipment, such as speed-checking devices, alcohol meters, and CCTV cameras. Field observations were undertaken to record the use of helmets, seat belts, and mobile phones. Audits of the state transport departments assessed the status of processes for driver licensing and vehicle inspection.

At the time of the audit, most states recorded information in police reports and prepared tables as suggested by the Transport Research Wing of MoRTH. Since 2021, most states have implemented the iRAD/eDAR system.

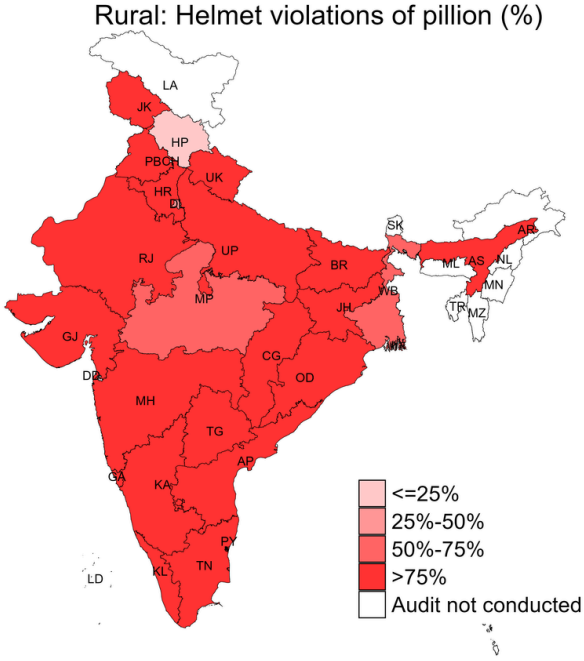
In all states, helmet violations in rural areas were much higher than in urban areas. Only seven states show helmet violations less than 50% (Figure 10).

	YES	NO
Accident recording system in the state adheres to the MoRTH Format	Recording and Reporting: AP, AS, BR, CG, GA, HP, JK, JH, MP, MH, OD, PY, TG, WB Only Recording: KA Only Reporting: DL, TN, UP, UK	GJ, HR, KL, PB, RJ
State has implemented helmet rule for both driver and pillion riders, seat belt laws and mobile phone usage laws	Drivers and Pillion Riders: AS, BR, CG, DL, GJ, HR, HP, JK, JH, KA, KL, MP, MH, OD, PY, PB, TN, UP, WB Only Drivers: AP, GA	PY

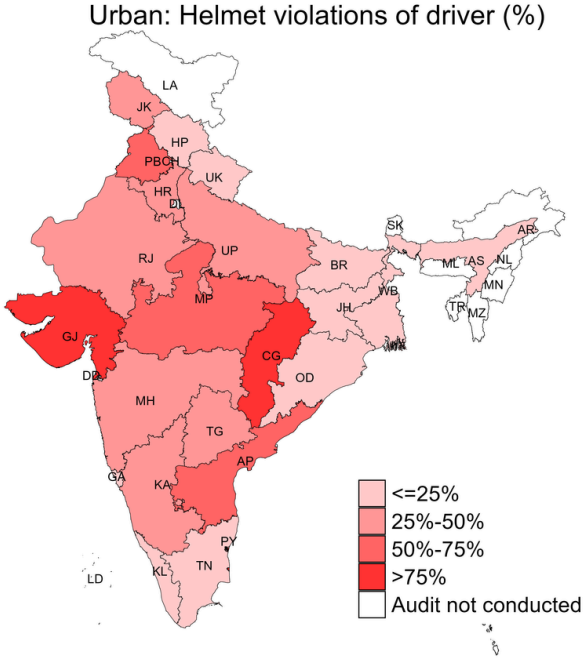
Rural: Helmet violations of driver (%)



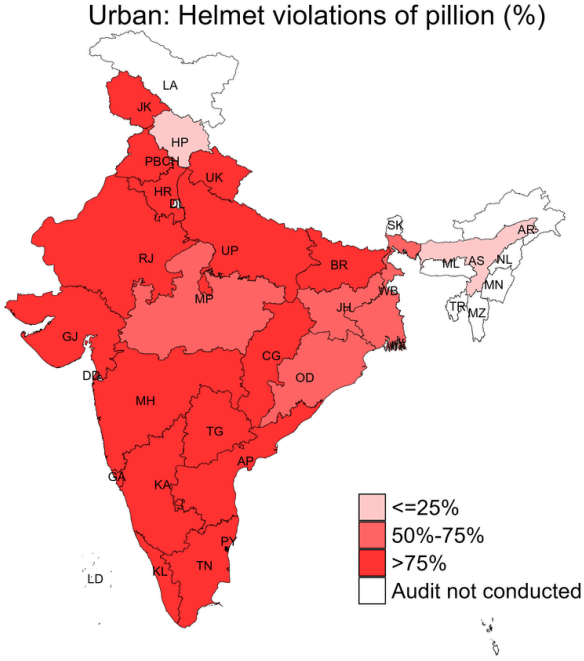
Rural: Helmet violations of pillion (%)



Urban: Helmet violations of driver (%)



Urban: Helmet violations of pillion (%)



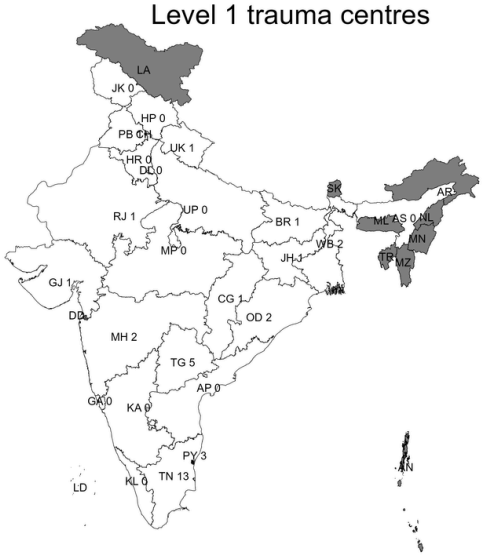
2.4 Capacity Building Efforts

Road-owning agencies, transport, police, and health departments in the states were assessed for the status of road safety training programs. Few states were found to be conducting training programs on a regular basis. In general, health departments did not conduct road safety training programs for health professionals. The education departments of most states reported including a module on road safety in the school curricula.

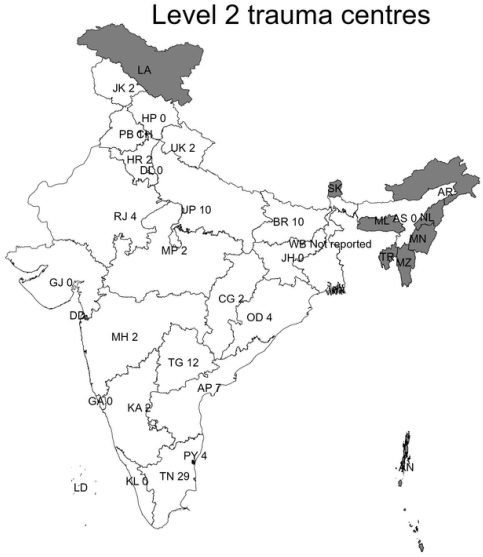
2.5 Trauma Care

The audits asked states to report whether a comprehensive trauma care system plan had been developed as suggested by the Ministry of Health and Family Welfare. Most states have not yet established trauma care facilities adequate to the scale of the problem (Figure 11). In ten states, a Level -1 trauma care system does not exist. States were also asked to assess whether they had established a network of ambulances for emergency response, a database for injury data, and had conducted a gap analysis on infrastructure, manpower and equipment needs.

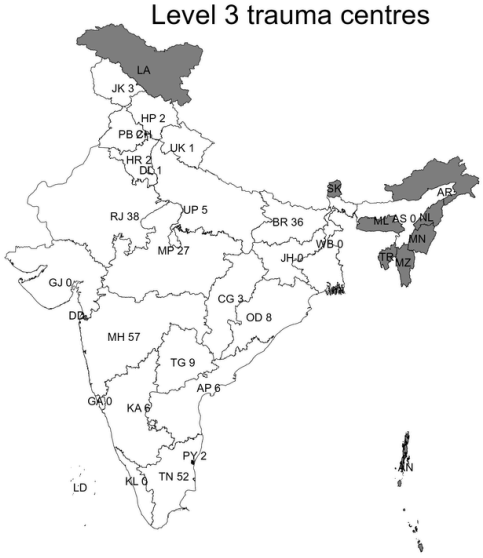
Level 1 trauma centres



Level 2 trauma centres



Level 3 trauma centres



3.0 THE WAY AHEAD

Reliable crash data systems are a prerequisite for all aspects of running effective safety programs. The Safe System approach involves developing an intervention strategy based on assessing population-level crash risks, identifying available interventions, and allocating resources to the most effectual approaches. This evidence-based management approach involves setting detailed quantitative targets for final outcomes (deaths or injuries), intermediate outcomes (e.g., the prevalence of helmet use), and the institutional outputs (e.g., enforcement levels) needed to achieve outcome targets. Furthermore, data are needed for monitoring performance and recalibrating efforts on an ongoing basis.

This report highlights that while states are making progress in building data systems, the progress is slow. Notably, India does not have a national road traffic injury surveillance system. At the national level, and in most states, details of traffic crashes are reported in tabulations that cannot be used for policy planning. For instance, using data sourced from FIRs, this report highlights that trucks are the most common impacting vehicle in most fatal crashes. However, such information is not available from MoRTH annual reports, which instead focus on providing information on *"crime vehicles"*, which may be important for legal adjudication of responsibility for a crash but have little policy relevance.

Thus, a record-level crash database is needed to identify road safety priorities at the highest level. More importantly, a crash-level database is needed because even the most detailed tabulations do not allow for identifying the most important crash scenarios that require intervention. For instance, using crash-level data from FIRs, this report highlights the importance of single-vehicle rollovers of agricultural tractors as a common issue in Chhattisgarh, but this is not possible to identify from tabulations. Finally, identifying the potential causes of the most common crash scenarios and tracking the effectiveness of interventions to address them requires data from a surveillance system.

The iRAD/eDAR system suggested by MoRTH provides a common platform for creating a comprehensive database collected by police, hospital and transport departments. The states are in the process of implementing it bit there are large gaps. E.g., data from Lalitpur district shows a large gap between reported crashes and information fed into the eDAR system. Furthermore, the quality of data from eDAR is not validated, and is not made available to researchers.

Therefore, we recommend developing capacity at the state level to collect high-quality data as part of iRAD/eDAR. Within such data collection, data on fatal crashes needs to be prioritized over non-fatal crashes. Routing and ongoing quality control practices should be established. These should focus on, for instance, tracking completeness, assessing missingness in priority variables, and periodic checks to assess misclassification. We recommend that states should establish dedicated crash surveillance units, and build the capacity to undertake statistical analysis of their data. Furthermore, processes need to be developed to allow iRAD/eDAR data to be shared with researchers for analysis, as is standard practice in countries that perform well in road safety.

States must comply with the directives of the Supreme Court to establish robust road safety governance frameworks, including institutional arrangements, infrastructure enhancements, enforcement measures, educational initiatives, and medical care improvements. Some specific recommendations to move towards these goals are provided below:

1. Institutional arrangements

a. Statutory Backing—Most states have established lead agencies by executive order and most have assigned the transport commissioner as the head of the agency. These executive orders must be ratified by the state legislatures in the form of legislation, and gazetted to meet the requirement of Section 135(1)(a) of the Motor Vehicles Act, 1988, which says in relevant part: (1) The State Government may, by notification in the Official Gazette, make one or more schemes to provide for—(a) an in-depth study on causes and analysis of motor vehicle accidents.

b. In-House Technical Expertise—State level road safety agencies must be staffed properly. Each lead road safety agency must have technical experts on staff who can evaluate crash sites for infrastructure enhancements and enforcement measures. The same must be done at the district level.

c. Funding—Some states have created dedicated funds to coordinate road safety activities. The sourcing of these funds is done by collecting a percentage of driving license fees, vehicle licensing and registration fees, and traffic violation fines as a road safety cess. All states need to create such funding mechanisms. Such funds must not be

lapsable and shielded from merger into the state general fund.

d. Integrate road safety into other processes such as urban planning, environment policy, reduction of economic inequality, and so on

2. Infrastructure

a. Safety Audits—All states must conduct regular road safety audit of all new and existing roads based on international road design standards. As noted in this report, more than half of the national highway length has been audited in eight states but very few states have audited more than half of their state highways. Many states have either not reported or not conducted road audits. Appropriate traffic calming measures and markings and signage have not been implemented in most states.

b. Set 2030 as the Target Date for Enhancing Road Design and Construction Standards—By 2030, all new roads must be built to technical standards for all road users that take into account road safety. The same should be done for at least 75% of the existing roads.

c. Leverage technology, such as CCTV systems, for real-time monitoring of road rule compliance.

3. Enforcement

a. Helmet Use—helmet use remains low with use being much lower in rural areas. Helmet use was higher than 50% in only 7 states. States must overcome political opposition and enforce the usage of helmets. With increasing use of powered two-wheelers, specifications for helmets for children must also be developed and enforced.

b. Speed Limit—Ensuring compliance with the speed limit through safe road design measures such as traffic calming on identified blackspots on highways and urban roads

c. Commercial Drivers—Legislation and enforcement measure for rest periods for professional drivers

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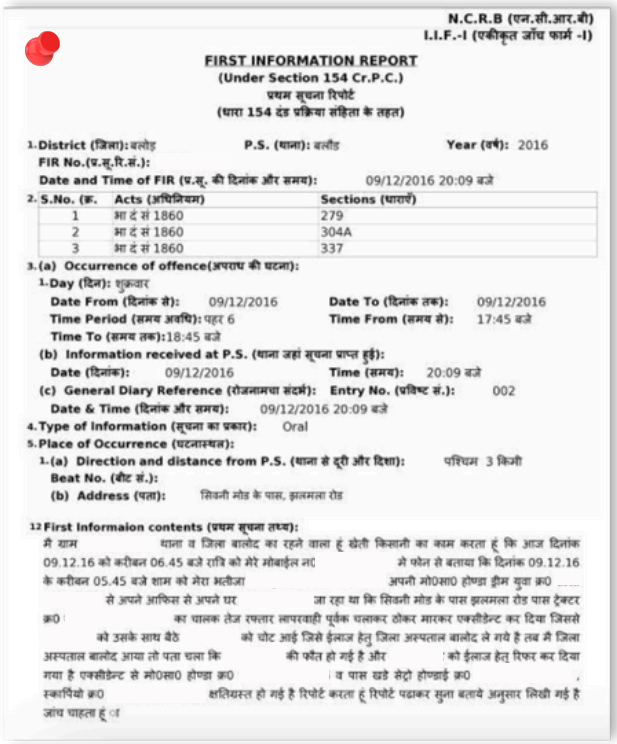
Appendix A1:
Methodology

1.0 Road Traffic Injury Statistics

1.1 Data from First Information Reports (FIRs) from 6 six states

In the absence of record-level crash databases in India, road safety researchers have typically had to obtain paper copies of crash reports from individual police stations, in the form of FIRs for analysis. Over the last decade, a federal project (Crime and Criminal Tracking Networks and Systems, CCTNS) has sought to standardize and integrate state record keeping, including FIRs. FIRs are considered public documents and many state allow FIRs to be downloaded from the CCTNS web portals. The figure below shows a sample FIR, which includes narrative text describing the events of the crash, as shown in Figure A1.



N.C.R.B (एन.सी.आर.बी)
I.I.F.-I (एकीकृत जाँच फार्म -I)

FIRST INFORMATION REPORT
(Under Section 154 Cr.P.C.)
प्रथम सूचना रिपोर्ट
(धारा 154 दंड प्रक्रिया संहिता के तहत)

1. District (जिला): बलोड P.S. (थाना): बलौद Year (वर्ष): 2016
FIR No.(प्र.सू.रि.सं.):
Date and Time of FIR (प्र.सू. की दिनांक और समय): 09/12/2016 20:09 बजे

2.

S.No. (क्र.	Acts (अधिनियम)	Sections (धाराएँ)
1	भा द सं 1860	279
2	भा द सं 1860	304A
3	भा द सं 1860	337

3. (a) Occurrence of offence(अपराध की घटना):
1. Day (दिन): शुक्रवार
Date From (दिनांक से): 09/12/2016 Date To (दिनांक तक): 09/12/2016
Time Period (समय अवधि): पहर 6 Time From (समय से): 17:45 बजे
Time To (समय तक):18:45 बजे
(b) Information received at P.S. (थाना जहां सूचना प्राप्त हुई):
Date (दिनांक): 09/12/2016 Time (समय): 20:09 बजे
(c) General Diary Reference (रोजनामचा संदर्भ): Entry No. (प्रविष्ट सं.): 002
Date & Time (दिनांक और समय): 09/12/2016 20:09 बजे
4. Type of Information (सूचना का प्रकार): Oral
5. Place of Occurrence (घटनास्थल):
1. (a) Direction and distance from P.S. (थाना से दूरी और दिशा): पश्चिम 3 किमी
Beat No. (बीट सं.):
(b) Address (पता): सिवनी मोड के पास, झलमला रोड

12 First Informaion contents (प्रथम सूचना तथ्य):
मै राम थाना व जिला बालोद का रहने वाला हूं खेती किसानी का काम करता हूं कि आज दिनांक 09.12.16 को करीबन 06.45 बजे रात्रि को मेरे मोबाईल नं0 मे फोन से बताया कि दिनांक 09.12.16 के करीबन 05.45 बजे शाम को मेरा भतीजा अपनी मो0सा0 होण्डा ड्रीम युगा क्र0 से अपने आफिस से अपने घर जा रहा था कि सिवनी मोड के पास झलमला रोड पास ट्रेक्टर क्र0 का चालक तेज रफ्तार लापरवाही पूर्वक चलाकर ठोकर मारकर एक्सीडेन्ट कर दिया जिससे को उसके साथ बैठे को चोट आई जिसे ईलाज हेतु जिला अस्पताल बालोद ले गये हैं तब मै जिला अस्पताल बालोद आया तो पता चला कि की फौत हो गई है और को ईलाज हेतु रिफर कर दिया गया है एक्सीडेन्ट से मो0सा0 होण्डा क्र0 व पास खडे सेट्टी होण्डाई क्र0 स्कार्पियो क्र0 क्षतिग्रस्त हो गई है रिपोर्ट करता हूं रिपोर्ट पढाकर सुना बताये अनुसार लिखी गई है जांच चाहता हूं ।

Figure A1. Key Excerpts from a Sample FIR

We downloaded all FIRs for six states: Chhattisgarh, Chandigarh, Delhi, Haryana, Maharashtra, and Uttarakhand.

We developed a manual for crash recording and a relational database to record relevant information available from the available online FIRs. The database was developed in Microsoft Access and comprised of three linked entry forms: crash, vehicle, and person We trained a team of research assistants to extract the data from the downloaded FIRs using the steps recorded in the manual. Relevant information such as the district, police station, year, FIR number, date and time when the FIR was recorded, and occurrence of the crash (i.e., the date and time), place of occurrence (i.e., direction and distance from police station, and address of location) were extracted.

1.2 Other Datasets

In addition to the FIRs data, this report makes extensive use of publicly available government and agency reports. Among these, the key sources are:

- MoRTH's Road Accidents in India that is produced annually based on accident data from police reports
- Institute of Health Metrics and Evaluation's Global Burden of Disease Project which produces estimates of mortality and morbidity from all diseases and injuries, including traffic injuries, based on analysis of health sector data

2.0 Audits of State Road Safety Governance Activities

In April 2014, the Supreme Court of India constituted a Committee on Road Safety whose objective was to scrutinize and monitor the enforcement of statutory provisions, including the Motor Vehicles Act, for making roads safer. This Committee sent directives to the States to implement various policies and institutional and infrastructure-related measures to improve the road safety standards. Subsequently, the Committee commissioned expert-led detailed road safety audits of the implementation status of the Committee's directives.

The Ministry of Road Transport and Highways (MoRTH) took the initiative to prepare the compliance report for 12 states dividing them into 3 groups with 4 States in each group. The audit findings were discussed with the states, and final reports were submitted to the Supreme Court. In the second phase, another 12 states were audited following the same audit methodology. In this report, we summarize the findings of the audits of these 24 states.

2.1 Brief description of the road safety audit reports

The audits aimed to evaluate the level of compliance (quantify) of the Supreme Court Committee directives, to identify problems in complying with the recommendations, to evaluate the impact of various recommendations on safety outcomes, and to identify the most effective recommendations for impacting traffic safety outcomes. The audits considered five key dimensions: institutional arrangements, road geometry & engineering of the roads, enforcement by the Police, education/awareness by the Education Department, and emergency healthcare system for road traffic crash victims.

2.2 Audit Methodology

A two-level audit approach was used. The first level involved meeting stakeholders and head officials of the agencies responsible for implementing the Supreme Court Committee directives. A structured questionnaire was used to collect information from the following departments: the Road Safety Lead Agency, Transport Department, State Transport Undertaking (STU), Police, Traffic Police, National Highway Authority of India (NHAI), C&M- Highway Department, Health Department, and Education Department. The Second level of audit involved field investigations and verification of the implementation and effectiveness of on the ground.

Field surveys were conducted for traffic violations, network inventory, safety equipment availability, infrastructure availability for driver training and vehicle inspections, and highway inspections and inventory. Field surveys covered four cities in each state and 100 kms each of National Highway, State Highway, and Municipal and District Roads.

a. For the review, the 51 Supreme Court directives were classified to 5 key dimensions:

b. Initiatives in road safety institutional arrangements

c. Improvement initiatives related to road geometry & engineering of the roads

d. Improvements initiatives related to enforcement by the state police and transport departments

e. Improvement initiatives related to Road user awareness by the education department

f. Improvement initiatives related to trauma, paramedical and emergency health care system

The key indicators that were shortlisted for which the audit findings have been finalised and were made available to us are shown in Table A1.

Table A1: Description of the key indicators in the state-level audits

Institutional	
Established as a separate entity	As described by the Supreme Court Committee on Road Safety in its letter dated 24 November 2016, Lead Agency is mandated to be set up as a separate entity by a state to coordinate all activities on road safety. Response: Yes/No
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher	As described by the Supreme Court Committee on Road Safety in its letter dated 24 November 2016, Lead Agency has to be headed by a senior officer not below the rank of Addl. Commissioner/ Jt. Commissioner. Response: Yes/No/Not appointed
Type of appointment of the head	The appointment of the head of the Lead Agency should be regular appointment, not a joint responsibility. Response: Dedicated/Not Dedicated
Road Safety Policy has been notified	Whether a State Road Safety Policy has been notified by the state. Response: Yes/No
Road Safety Fund has been notified	A Road Safety Fund should be established by the state as described by the SCCRS in its letter dated 24th November, 2016. Response: Yes/No
Road Safety Fund is non-lapsable	The Road Safety Fund should be non-lapsable. State whether the Fund, if established, is non-lapsable. Response: Yes/No
Sources of Road Safety Funds	The Road Safety Fund to be sourced from Budgetary Allocation & Transport Challans. Response: Names of the current sources (Budgetary Allocation, Traffic Challans, Transport Challans, Special Funds/Not identified by state)
Engineering Dimension	
National Highway (NH)	
Road length undergone road safety audit (%)	The SCCRS audit verifies whether Road Safety Audits are being conducted during the design, construction and operation of roads and the recommendations of the Road Safety Audits are being implemented by the National Highway Authority of India (NHAI). Response: Percentage of roads which have been subjected to road safety audits for the design stage, construction stage, and operation stage of roads.
Total number of intersections identified for traffic calming measures	The SCCRS audit verifies the extent of traffic calming measures adopted by the state like rumble strips, speed breakers, road signage etc. where lower hierarchy roads merge with higher hierarchy roads and are accidents prone.Response: Number of such intersections identified by the NHAI and PWD for implementing traffic calming measures
Intersections with all traffic calming measures (%)	The SCCRS audit was conducted on a sample of 50 intersections to verify the extent of traffic calming measures. Measures are divided into two types: visual measures (Traffic Signs, Road Markings, Flashing Beacons) and physical measures (provision of Rumble Strips, Speed Breakers, Speed Tables, Deceleration/ Acceleration Lanes, etc.)Response: Percentage of audited intersections with all traffic calming measures

Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)	The SCCRS audit verifies the existence of safety barriers on hilly roads, near water bodies, and other vulnerable locations as per IRC standards on all stretches of National Highways and other high-speed roads coming under urban areas are checked for crash barriers. As reported in the audit scope, "the parameters considered for the Crash Barrier adequacy check are Height, Installation Material, Clear distance between the crash barrier and the embankment drop-down, overlapping in case of semi-flexible barriers, and end treatment of the crash barriers." A certain number of locations on NH were sampled and audited. Response: Percentage of sample locations on NH where crash barriers installed were as per the IRC standards.
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)	
Road length undergone road safety audit (%)	The SCCRS audit verifies whether Road Safety Audits are being conducted during the design, construction and operation of roads and the recommendations of the Road Safety Audits are being implemented by the Public Works Department (PWD). Response: Percentage of roads which have been subjected to road safety audits for the design stage, construction stage, and operation stage of roads.
Total number of intersections identified for traffic calming measures	The SCCRS audit verifies the extent of traffic calming measures adopted by the state like rumble strips, speed breakers, road signage etc. where lower hierarchy roads merge with higher hierarchy roads and are accidents prone.Response: Number of such intersections identified by the state road transport department and other agencies for implementing traffic calming measures on SH, MDR and Urban roads
Intersections with all traffic calming measures (%)	The SCCRS audit was conducted on a sample of 50 intersections to verify the extent of traffic calming measures, divided into two types: visual measures (Traffic Signs, Road Markings, Flashing Beacons) and physical measures (provision of Rumble Strips, Speed Breakers, Speed Tables, Deceleration/ Acceleration Lanes, etc.)Response: Percentage of audited intersections with all traffic calming measures
Pedestrian Facilities	
Availability of footpath on expected length (%)	Pedestrian facilities must ensure continuous flow of pedestrians, minimizing their conflicts with vehicular traffic. Key planning objectives are continuity, comfort, and safety. The SCCRS audit focuses on adherence to IRC guidelines, verifying if footpaths meet specifications, are provided at necessary locations, and are free from encroachments. This has been verified in 4 Cities in each State.Response: Percentage of audited road length with availability of footpath. Presented as: Average of observations from 4 audited cities (Minimum-Maximum)
Footpath width as per IRC standards (%)	The Audit verifies whether the footpath design complies with IRC standards in terms of width.Response: Percentage of footpath length in compliance with the IRC standards of footpath width. Presented as: Average of observations from 4 audited cities (Minimum-Maximum)

Footpath height as per IRC standards (%)	The Audit verifies whether the footpath design complies with IRC standards in terms of height.Response: Percentage of footpath length in compliance with the IRC standards of footpath height. Presented as: Average of observations from 4 audited cities (Minimum-Maximum)
Enforcement Dimension	
Accident recording and reporting system adheres to the MoRTH format	The SCCRS audit verifies whether Road Accident data is being collected by the state in the format as prescribed by the MoRTH and is analysed properly to identify causes for high accidents.Response: Yes/No
State has implemented the helmet rule for both driver and pillion riders, seat belt laws and mobile phone usage laws	The SCCRS audit verifies whether the state implemented the Helmet rule for both driver and pillion rider, and whether Seat Belt Laws and Mobile Phone Usage Laws have been implemented 100%.Response: Yes/No
Helmet violations among drivers (%)	Helmet use by driver has been verified through field survey in 4 Cities in each state and at a stretch of 100 Km each on National Highways, State Highways, and Major District Roads.Response: Percentage of motorised two-wheeler drivers wearing helmet
Helmet violations among pillion riders (%)	Helmet use by pillion riders has been verified through field survey in 4 Cities in each state and at a stretch of 100 Km each on National Highways, State Highways, and Major District Roads.Response: Percentage of motorised two-wheeler pillion riders wearing helmet
Capacity Building	
Training of Lead Agency, Transport Department, and Traffic Police	Capacity building exercises should be taken up by the state to train the key stakeholders in the best practices of road safety. Lead Agency, Transport Department and Traffic Police are three key stakeholders among others which have been audited to verify progress on this indicator. Response: Yes/No (for each of the three agencies)
Emergency Response and Healthcare	
Development of Comprehensive Trauma System Care plan	States must develop a comprehensive State Trauma Care System plan for setting the way forward with regard to all components of an organized trauma care system with specific strategies and timelines as per the template provided to the States by Dte.GHS/ MoHFW. The Audit verifies whether the state has prepared such a plan. Response: Yes/No
Centralised database for injury and trauma records	The Audit verifies whether there the state has a centralised database for injury and trauma recordsResponse: Yes/No
Single unified toll-free helpline number for accident emergency care	The Audit verifies the status against the SCC benchmark of Single unified toll-free helpline number Response: Yes/No
Number of Level-I, Level-II and Level-III Trauma Centres along/near National Highways	States have to verify and designate existing health care facilities (both public and private) along/ near the highways as Level III, Level II or Level I hospitals based on the operational definition provided by MoH&FW.Response: Number of each Levels of Trauma Centres
Action plan prepared based on gap analysis with definite timelines	States have to conduct a gap analysis in terms of infrastructure, manpower, equipment and organizational functions at the identified trauma care facilities in the State and work out a realistic plan for filling the critical gaps with definite timeline in its implementation. The Audit verifies whether an action plan has been prepared with definite timelines. Response: Yes/No

Appendix A2:
State-specific Status of Road Safety

Andhra Pradesh

Demographics 2022	
Total population (million) [% urban]	53.0 [36.1]
Population density (per km2)	325

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	13
Cause of DALYs	18

Road Infrastructure	
Total length of National Highways 2022 (km)	8683
Road infrastructure 2019 (%):	
National Highway	13.0
State Highway	25.4
District Road	61.6

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	14.5	15.3	13.4	15.5	15.6
Female	4.1	4.6	4.3	4.5	4.5
Male	24.9	25.9	22.5	26.5	26.8
Non-fatal Injuries per 100 000 population	45.1	47.1	37.4	39.8	40.2
% road traffic deaths on National Highways	38.8	39.0	40.6	44.0	45.7

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	5.7	18.2	25.0	23.7	18.7	8.7	100
Female	8.2	13.7	24.5	23.3	19.5	10.8	100
Male	5.3	18.9	25.1	23.8	18.6	8.3	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
39.9	4.5	30.1	24.2	1.2	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
19.3	1.9	44.7	7.6	10.8	8.0	2.7	14.9	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
194.6	11.8	17.2	1.8	9.7	14.2

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	30.9	47	2.8
Urban	29.9	56	5.8
Rural	31.4	43	1.4

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
30.6	16.3	19.8	2.8	8.4	20.3	1.9

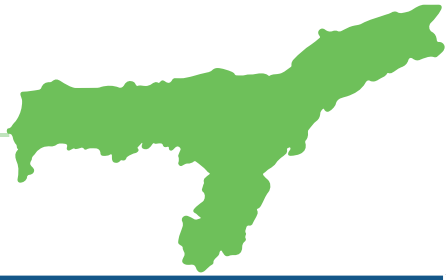
The cases with Unknown age were proportionally distributed among the age categories.

Andhra Pradesh: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2024
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		No
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		No
Sources of Road Safety Funds		Budgetary Allocation
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		61
Total number of intersections identified for traffic calming measures		1587
Intersections with all traffic calming measures (%)		0
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		6
State Highways (SH) & Major District Roads (MDR)		
Road length undergone road safety audit (%)		18
Total number of intersections identified for traffic calming measures	SH	272
	MDR	632
Intersections with all traffic calming measures (%)	SH	0
	MDR	0
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		29 (3-51)
Footpath width as per IRC standards (%)		36 (7-83)
Footpath height as per IRC standards (%)		36 (7-83)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	74 (31-95)
	Rural roads (NH, SH & MDR)	78 (68-92)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	98 (94-100)
	Rural roads (NH, SH & MDR)	99
Capacity Building		
Training of Lead Agency		Yes
Training of Transport Department		Yes
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		Yes
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		0
Number of Level-II Trauma Centers along/near National Highways		7
Number of Level-III Trauma Centers along/near National Highways		6
Action plan prepared based on gap analysis with definite timelines		Yes

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Assam



Demographics 2022	
Total population (million) [% urban]	35.5 [15.5]
Population density (per km2)	452

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	12
Cause of DALYs	19

Road Infrastructure	
Total length of National Highways 2022 (km)	4,077
Road infrastructure 2019 (%):	
National Highway	31.2
State Highway	20.2
District Road	48.6

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	8.7	9.3	7.6	8.6	8.4
Female	2.3	2.1	2.2	2.6	3.9
Male	14.9	16.3	12.7	14.5	12.8
Non-fatal Injuries per 100 000 population	21.7	21.7	15.1	16.4	15.9
% road traffic deaths on National Highways	52.0	52.7	50.3	51.8	47.7

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	5.9	27.2	32.5	20.8	12.6	1.1	100
Female	7.4	18.8	25.0	28.1	20.3	0.3	100
Male	5.5	29.6	34.7	18.7	10.3	1.3	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
34.4	10.7	28.4	26.3	0.2	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
16.9	10.3	29.1	8.7	12.4	9.8	4.6	8.2	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
82.8	3.9	24.4	0.7	10.5	2.9

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	70.3	29	8.1
Urban	48.4	43.6	19.3
Rural	74.6	26.2	5.9

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
45.4	27.2	8.6	2.4	3	12.2	12.2

The cases with Unknown age were proportionally distributed among the age categories.

Assam: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2022
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Road Safety Cess, Compounding Fee collected by Transport Department
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		53
Total number of intersections identified for traffic calming measures		497
Intersections with all traffic calming measures (%)		Rumble Strips: 40 Junction priority signs: 35 Standard Speed Humps: 10 All measures: Not Reported
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		Not Reported Auditor's Comment: Several crash barriers were found missing and damaged
State Highways (SH) & Major District Roads (MDR)		
Road length undergone road safety audit (%)		3
Total number of intersections identified for traffic calming measures		6523
Intersections with all traffic calming measures (%)		Junction priority signs: 60 Standard Speed Humps: 8 All measures: Not Reported
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		49 (35-70)
Footpath width as per IRC standards (%)		100
Footpath height as per IRC standards (%)		38 (10-60)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	11 (2-35)
	Rural roads (NH, SH & MDR)	52 (40-65)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	19 (2-52)
	Rural roads (NH, SH & MDR)	76 (69-80)
Capacity Building		
Training of Lead Agency		Yes
Training of Transport Department\		Yes
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		No
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		Not Reported
Number of Level-I Trauma Centers along/near National Highways		0
Number of Level-II Trauma Centers along/near National Highways		0
Number of Level-III Trauma Centers along/near National Highways		0
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Bihar

Demographics 2022	
Total population (million) [% urban]	125.5 [12.2]
Population density (per km2)	1333

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	11
Cause of DALYs	18

Road Infrastructure	
Total length of National Highways 2022 (km)	5,969
Road infrastructure 2019 (%):	
National Highway	24.2
State Highway	18.1
District Road	57.7

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	5.7	6.0	5.5	6.2	7.1
Female	1.7	1.9	1.9	2.6	2.8
Male	9.4	9.8	8.8	9.5	11.0
Non-fatal Injuries per 100 000 population	5.6	6.0	5.8	6.4	5.6
% road traffic deaths on National Highways	45.3	47.7	49.0	45.9	44.4

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	12.5	25.0	22.4	19.5	14.4	6.2	100
Female	9.3	15.4	23.7	21.0	18.6	14.4	100
Male	11.9	25.3	22.8	19.6	14.3	6.0	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
52.8	4.7	24.1	18.1	0.2	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
37.6	5.9	33.5	5.8	6.2	2.4	1.2	7.4	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
62.8	3.3	6.0	0.4	2.2	6.5

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	64.8	27.2	2
Urban	59.5	43.6	6.4
Rural	65.8	24.2	1.2

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
40.7	28.9	11.3	1.8	3.6	12.6	1.1

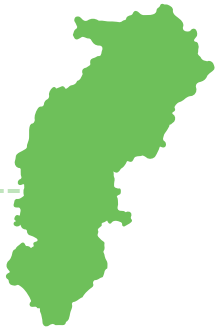
The cases with Unknown age were proportionally distributed among the age categories.

Bihar: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2024
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Budgetary Allocation
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		40
Total number of intersections identified for traffic calming measures		1298
Intersections with all traffic calming measures (%)		27
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		3%
State Highways (SH) & Major District Roads (MDR)		
Road length undergone road safety audit (%)		5
Total number of intersections identified for traffic calming measures	SH	44
	MDR	40
Intersections with all traffic calming measures (%)	SH	25
	MDR	13
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		19 (0-70)
Footpath width as per IRC standards (%)		27 (0-54)
Footpath height as per IRC standards (%)		27 (0-54)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	23 (3-44)
	Rural roads (NH, SH & MDR)	54 (17-80)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	85 (47-98)
	Rural roads (NH, SH & MDR)	94 (87-100)
Capacity Building		
Training of Lead Agency		Not Applicable
Training of Transport Department		Yes
Training the Traffic Police		Not Reported
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		No
Centralised database for injury and trauma records		Yes
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		1
Number of Level-II Trauma Centers along/near National Highways		10
Number of Level-III Trauma Centers along/near National Highways		36
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Chhattisgarh



Demographics 2022	
Total population (million) [% urban]	29.9 [26.9]
Population density (per km2)	222

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	12
Cause of DALYs	18

Road Infrastructure	
Total length of National Highways 2022 (km)	3,620
Road infrastructure 2019 (%):	
National Highway	18.0
State Highway	20.9
District Road	61.1

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	16.1	17.3	15.8	18.1	19.5
Female	3.8	4.2	3.6	4.2	4.7
Male	28.4	30.4	27.9	32.0	34.1
Non-fatal Injuries per 100 000 population	44.7	45.4	35.9	36.1	39.0
% road traffic deaths on National Highways	30.1	28.4	30.2	31.0	32.3

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	6.3	23.2	25.3	21.7	16.8	6.6	100
Female	8.6	12.5	19.4	21.9	25.5	12.1	100
Male	6.0	24.7	26.1	21.7	15.6	5.8	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
25.4	9.3	41.0	23.0	1.4	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
12.7	2.9	66.1	0.8	6.2	3.4	0.8	7.1	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
195.0	1.8	15.1	2.8	9.5	14.7

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	70.8	54.8	4.3
Urban	62.2	69.5	11.2
Rural	73.3	50.6	2.3

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
31.6	32.6	24.6	2.1	1.7	6.6	0.7

The cases with Unknown age were proportionally distributed among the age categories.

Chhattisgarh: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2023
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Dual Role
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Compounding fee levied by Police Department under MVA
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		83
Total number of intersections identified for traffic calming measures		1904
Intersections with all traffic calming measures (%)		Rumble Strips: 50 Junction priority sign: 75 Standard Speed Humps: 0 All measures: Not Reported
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		Not Reported Auditor's Comment: Several Crash barriers were missing and damaged
State Highways (SH) & Major District Roads (MDR)		
Road length undergone road safety audit (%)		3
Total number of intersections identified for traffic calming measures		2120
Intersections with all traffic calming measures (%)		Junction priority signs: 48 Standard Speed Humps: 8 All measures: Not Reported
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		48 (40-60)
Footpath width as per IRC standards (%)		100
Footpath height as per IRC standards (%)		41 (25-60)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	79 (74-84)
	Rural roads (NH, SH & MDR)	89 (84-95)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	90 (86-93)
	Rural roads (NH, SH & MDR)	94 (91-96)
Capacity Building		
Training of Lead Agency		No
Training of Transport Department		No
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		No
Centralised database for injury and trauma records		Yes
Single unified toll-free helpline number for accident emergency care		No
Number of Level-I Trauma Centers along/near National Highways		2
Number of Level-II Trauma Centers along/near National Highways		Not Reported
Number of Level-III Trauma Centers along/near National Highways		0
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Delhi

Demographics 2022	
Total population (million) [% urban]	21.1 [99.5]
Population density (per km2)	14225

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	10
Cause of DALYs	17

Road Infrastructure	
Total length of National Highways 2022 (km)	157
Road infrastructure 2019 (%):	
National Highway	61.1
State Highway	0
District Road	38.9

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	8.6	7.3	5.9	6.0	6.9
Female	2.0	2.0	1.1	1.0	1.4
Male	14.4	12.0	10.1	10.3	11.8
Non-fatal Injuries per 100 000 population	31.1	25.8	18.0	20.6	24.7
% road traffic deaths on National Highways	15.6	19.0	12.5	16.2	17.2

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	3.0	21.1	25.1	26.7	19.3	4.9	100
Female	4.8	21.0	19.4	26.6	18.5	9.7	100
Male	2.8	21.1	25.6	26.7	19.4	4.4	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
31.0	10.2	30.1	27.8	0.9	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
43.1	3.3	37.7	2.6	3.4	0.6	0.3	9.0	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
391.7	9.9	169.0	1.6	12.8	0.3

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	27.2	53.1	19.4
Urban	26.9	52.8	19.2
Rural	39.4	68.7	27.9

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
26.3	10.7	16.7	12.8	2.7	29.4	1.4

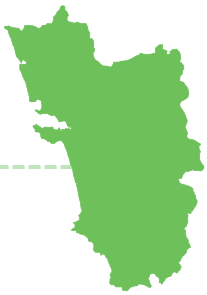
The cases with Unknown age were proportionally distributed among the age categories.

Delhi: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2024
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		No
Road Safety Fund is non-lapsable		No
Sources of Road Safety Funds		Not identified by state
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		100
Total number of intersections identified for traffic calming measures		23
Intersections with all traffic calming measures (%)		0
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		
Public Works Department (PWD) & Municipal Corporation of Delhi (MCD)		
Road length undergone road safety audit (%)		0
Total number of intersections identified for traffic calming measures	PWD	142
	MCD	14
Intersections with all traffic calming measures (%)	PWD	1
	MCD	0
Pedestrian Facilities (NH, PWD & MCD)		
Availability of footpath on expected length (%)		56 (48-65)
Footpath width as per IRC standards (%)		26 (16-37)
Footpath height as per IRC standards (%)		26 (16-37)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Reporting only
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	12
	Rural roads (NH, SH & MDR)	8
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	35
	Rural roads (NH, SH & MDR)	31
Capacity Building		
Training of Lead Agency		Yes
Training of Transport Department		Yes
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		No
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		0
Number of Level-II Trauma Centers along/near National Highways		0
Number of Level-III Trauma Centers along/near National Highways		1
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Goa



Demographics 2022	
Total population (million) [% urban]	1.6 [75.1]
Population density (per km2)	424

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	10
Cause of DALYs	16

Road Infrastructure	
Total length of National Highways 2022 (km)	299
Road infrastructure 2019 (%):	
National Highway	21.0
State Highway	20.0
District Road	59.0

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	17.1	19.2	14.4	14.5	17.3
Female	6.1	5.9	3.3	3.2	4.6
Male	27.9	32.3	25.3	25.5	29.7
Non-fatal Injuries per 100 000 population	101.0	93.8	56.7	54.0	69.5
% road traffic deaths on National Highways	39.7	36.0	27.4	36.7	46.9

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	0.7	19.9	19.9	24.4	22.9	12.2	100
Female	2.8	11.1	16.7	25.0	30.6	13.9	100
Male	0.4	21.3	20.4	24.3	21.7	11.9	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
34.2	3.3	43.6	18.2	0.6	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
18.8	0.7	66.4	0.0	10.3	1.1	0.0	2.6	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
665.9	3.1	211.7	8.1	43.7	6.0

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	35.7	86.7	45.2
Urban	35	88.1	49.1
Rural	36.6	84.5	39.6

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
19.8	3.1	31.2	7.3	2.1	35.2	1.3

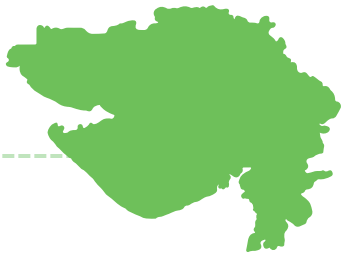
The cases with Unknown age were proportionally distributed among the age categories.

Goa: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2023
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		No
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Traffic Challans
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		84
Total number of intersections identified for traffic calming measures		41
Intersections with all traffic calming measures (%)		37
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		0
State Highways (SH) & Major District Roads (MDR)		
Road length undergone road safety audit (%)		13
Total number of intersections identified for traffic calming measures	SH	60
	MDR	80
Intersections with all traffic calming measures (%)	SH	40
	MDR	31
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		30 (7-41)
Footpath width as per IRC standards (%)		32 (0-78)
Footpath height as per IRC standards (%)		32 (0-78)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	19 (14-29)
	Rural roads (NH, SH & MDR)	30 (12-46)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	97 (95-99)
	Rural roads (NH, SH & MDR)	94 (91-97)
Capacity Building		
Training of Lead Agency		Not Applicable
Training of Transport Department		Yes
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		Yes
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		0
Number of Level-II Trauma Centers along/near National Highways		0
Number of Level-III Trauma Centers along/near National Highways		0
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Gujarat



Demographics 2022	
Total population (million) [% urban]	70.9 [48.4]
Population density (per km2)	361

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	12
Cause of DALYs	18

Road Infrastructure	
Total length of National Highways 2022 (km)	7885
Road infrastructure 2019 (%):	
National Highway	12.2
State Highway	30.3
District Road	57.5

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	11.9	10.8	8.9	10.6	10.7
Female	3.7	3.5	2.4	2.9	3.1
Male	19.3	17.5	14.9	17.6	17.7
Non-fatal Injuries per 100 000 population	25.9	23.8	17.4	19.5	21.3
% road traffic deaths on National Highways	27.2	25.7	29.1	27.9	27.7

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	5.9	20.5	29.3	24.1	15.2	5.0	100
Female	10.0	18.5	27.4	22.4	15.1	6.6	100
Male	5.2	20.8	29.7	24.3	15.2	4.8	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
23.8	4.8	38.0	32.8	0.6	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
20.6	2.1	44.4	5.0	13.7	8.5	1.4	4.3	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
283.7	13.1	52.2	1.3	18.5	19.2

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	29.9	61.1	10.9
Urban	31.6	69.8	17.2
Rural	28.6	54.5	6.2

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
28.1	16.1	30.9	4.0	10.1	9.6	1.3

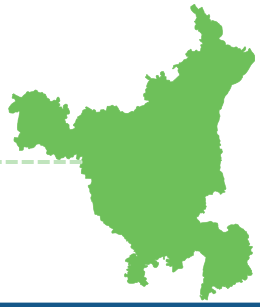
The cases with Unknown age were proportionally distributed among the age categories.

Gujarat: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2017
Institutional		
Lead Agency		
Established as a separate entity		No
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		No
Road Safety Fund is non-lapsable		No
Sources of Road Safety Funds		No
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures		21
Intersections with all traffic calming measures (%)		38
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		Not Applicable
State Highways (SH) & Major District Roads (MDR)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures	SH	25
	MDR	9
Intersections with all traffic calming measures (%)	SH	8
	MDR	8
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		33 (7-66)
Footpath width as per IRC standards (%)		Not Applicable
Footpath height as per IRC standards (%)		Not Applicable
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		No
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	81 (66-97)
	Rural roads (NH, SH & MDR)	81 (66-96)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	99 (97-100)
	Rural roads (NH, SH & MDR)	99 (98-100)
Capacity Building		
Training of Lead Agency		Not Applicable
Training of Transport Department		Not Applicable
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		Yes
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		1
Number of Level-II Trauma Centers along/near National Highways		0
Number of Level-III Trauma Centers along/near National Highways		0
Action plan prepared based on gap analysis with definite timelines		In process of approval

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Haryana



Demographics 2022	
Total population (million) [% urban]	29.9 [41.7]
Population density (per km2)	678

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	11
Cause of DALYs	17

Road Infrastructure	
Total length of National Highways 2022 (km)	3391
Road infrastructure 2019 (%):	
National Highway	11.8
State Highway	6
District Road	82.2

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	18	17.6	15.4	15.9	16.4
Female	3.6	4.3	2.4	3.5	5.7
Male	30.7	29.3	27	26.9	25.9
Non-fatal Injuries per 100 000 population	35.3	32.5	26.2	27.4	28.4
% road traffic deaths on National Highways	40.8	37.6	36.9	37.5	41.5

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	10.9	20.3	28.7	19.4	14.3	6.4	100
Female	16.0	22.6	25.0	13.8	14.7	7.8	100
Male	9.9	19.8	29.5	20.6	14.2	6.1	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
28.1	8.3	37.2	25.7	0.8	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
25.0	3.9	29.4	3.0	12.6	7.3	4.4	14.4	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
197.0	11.8	19.0	2.1	46.3	18.0

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	44.3	63.3	15.3
Urban	44.7	64.9	22
Rural	44	62.4	11.6

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
29.8	18.6	19.2	7.5	5.5	18.3	1.2

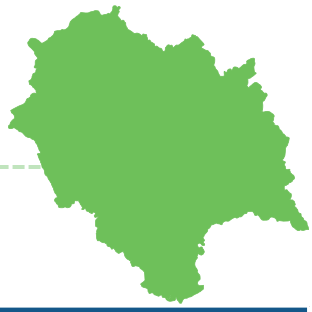
The cases with Unknown age were proportionally distributed among the age categories.

Haryana: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2017
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		No
Road Safety Fund		
Road Safety Fund has been notified		No
Road Safety Fund is non-lapsable		-
Sources of Road Safety Funds		Not identified by state
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		37
Total number of intersections identified for traffic calming measures		18
Intersections with all traffic calming measures (%)		0
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		Not Applicable
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures	SH	12
	MDR	15
	UR	15
Intersections with all traffic calming measures (%)	SH	0
	MDR	0
	UR	0
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		20 (5-34)
Footpath width as per IRC standards (%)		Not Applicable
Footpath height as per IRC standards (%)		Not Applicable
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		No
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	34 (17-52)
	Rural roads (NH, SH & MDR)	36 (23-49)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	90 (72-99)
	Rural roads (NH, SH & MDR)	96 (90-100)
Capacity Building		
Training of Lead Agency		Not Applicable
Training of Transport Department		Not Applicable
Training the Traffic Police		Not reported
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		Under Preparation
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		No
Number of Level-I Trauma Centers along/near National Highways		0
Number of Level-II Trauma Centers along/near National Highways		2
Number of Level-III Trauma Centers along/near National Highways		2
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Himachal Pradesh



Demographics 2022	
Total population (million) [% urban]	7.4 [10.3]
Population density (per km2)	134

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	11
Cause of DALYs	15

Road Infrastructure	
Total length of National Highways 2022 (km)	2,607
Road infrastructure 2019 (%):	
National Highway	33.8
State Highway	10.7
District Road	55.5

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	16.6	15.7	12.1	14.2	13.9
Female	5.3	4.8	3.3	3.9	3.6
Male	27.6	26.2	20.8	24.2	23.9
Non-fatal Injuries per 100 000 population	76.4	67.0	43.8	46.6	54.6
% road traffic deaths on National Highways	38.9	42.5	35.2	40.4	42.9

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	7.1	17.9	27.7	21.7	17.8	7.8	100
Female	13.7	13.7	16.0	22.9	19.1	14.5	100
Male	6.2	18.5	29.5	21.5	17.6	6.8	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
20.0	6.7	27.1	45.8	0.4	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
19.3	0.4	26.5	0.2	37.7	8.8	3.3	3.9	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
123.1	8.1	74.8	1.6	21.9	3.0

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	12.7	32.3	22.1
Urban	14.9	37	38.1
Rural	12.4	31.6	19.4

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
49.2	2.8	7.9	4.0	1.1	34.5	0.5

The cases with Unknown age were proportionally distributed among the age categories.

Himachal Pradesh: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2023
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Traffic Challans
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		14
Total number of intersections identified for traffic calming measures		55
Intersections with all traffic calming measures (%)		Rumble Strips: 20 Junction priority signs: 20 Standard Speed Humps: 0 All measures: Not Reported
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		Not Reported Auditor's Comment: Several Crash barriers were missing and damaged
State Highways (SH) & Major District Roads (MDR)		
Road length undergone road safety audit (%)		5
Total number of intersections identified for traffic calming measures		Not Reported
Intersections with all traffic calming measures (%)		Junction priority signs: 12 Standard Speed Humps: 0 All measures: Not Reported
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		48 (30-60)
Footpath width as per IRC standards (%)		100
Footpath height as per IRC standards (%)		57 (50-60)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	3 (2-4)
	Rural roads (NH, SH & MDR)	7 (2-12)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	9 (4-14)
	Rural roads (NH, SH & MDR)	12 (10-14)
Capacity Building		
Training of Lead Agency		No
Training of Transport Department		No
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		No
Centralised database for injury and trauma records		Yes
Single unified toll-free helpline number for accident emergency care		No
Number of Level-I Trauma Centers along/near National Highways		2
Number of Level-II Trauma Centers along/near National Highways		Not Reported
Number of Level-III Trauma Centers along/near National Highways		0
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Jammu & Kashmir

Demographics 2022	
Total population (million) [% urban]	13.5 [30.4]
Population density (per km2)	248

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	7
Cause of DALYs	11

Road Infrastructure	
Total length of National Highways 2022 (km)	1752
Road infrastructure 2019 (%):	
National Highway	10.8
State Highway	1.4
District Road	87.8

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	7.5	7.5	5.5	5.8	5.9
Female	2.2	2.2	1.5	3.5	3.0
Male	12.3	12.3	9.0	7.8	8.7
Non-fatal Injuries per 100 000 population	59.7	56.9	44.2	51.9	61.8
% road traffic deaths on National Highways	40.7	38.6	35.4	34.6	32.2

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	24.8	22.4	22.1	17.3	9.6	3.8	100
Female	11.0	33.5	29.8	14.1	8.4	3.1	100
Male	29.6	18.5	19.5	18.4	10.0	4.0	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
36.3	3.5	25.0	34.6	0.5	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
16.3	1.4	24.3	1.5	23.9	10.6	2.1	20.0	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
74.7	2.3	48.8	5.6	12.9	3.2

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	18.3	30.3	23.7
Urban	24.4	41.8	38.9
Rural	15.9	25.8	17.9

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
39.2	3.1	6.6	6.1	2.8	40.6	1.5

The cases with Unknown age were proportionally distributed among the age categories.

Jammu & Kashmir: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2023
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Budgetary Allocation, Traffic Challans & Special Funds
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		71
Total number of intersections identified for traffic calming measures		26
Intersections with all traffic calming measures (%)		27
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		0
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		16
Total number of intersections identified for traffic calming measures	SH	25
	MDR	6
Intersections with all traffic calming measures (%)	SH	24
	MDR	50
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		3 (0-10)
Footpath width as per IRC standards (%)		58 (46-70)
Footpath height as per IRC standards (%)		58 (46-70)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	36 (10-61)
	Rural roads (NH, SH & MDR)	69 (39-89)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	82 (61-100)
	Rural roads (NH, SH & MDR)	97 (92-100)
Capacity Building		
Training of Lead Agency		No
Training of Transport Department		No
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		Kashmir: Yes, Jammu: No
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		0
Number of Level-II Trauma Centers along/near National Highways		2
Number of Level-III Trauma Centers along/near National Highways		3
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Jharkhand

Demographics 2022	
Total population (million) [% urban]	39.1 [26.1]
Population density (per km2)	491

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	11
Cause of DALYs	18

Road Infrastructure	
Total length of National Highways 2022 (km)	3430
Road infrastructure 2019 (%):	
National Highway	21.6
State Highway	7.9
District Road	70.5

Road Traffic Crash Characteristics in 2018-22	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	9.6	10.1	8.0	9.1	10.0
Female	2.1	2.4	1.4	1.9	2.2
Male	16.7	17.5	14.3	15.9	17.4
Non-fatal Injuries per 100 000 population	10.7	10.2	8.6	8.4	9.6
% road traffic deaths on National Highways	31.7	40.9	40.8	42.6	43.6

Road Traffic Deaths 2022 (%): Sex and Age	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	7.6	26.4	25.0	22.4	13.4	5.2	100
Female	10.5	19.6	19.6	22.5	18.3	9.4	100
Male	7.3	27.2	25.6	22.4	12.9	4.7	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
41.3	8.5	16.9	33.2	0.1	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
12.3	2.6	47.8	5.6	12.3	7.5	2.4	9.5	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
99.7	3.9	15.8	0.3	6.0	7.2

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	66.3	41.1	4.1
Urban	56.4	60.3	12.4
Rural	69.4	35	1.5

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
38	28.6	16.7	2.2	5.3	8.5	0.7

The cases with Unknown age were proportionally distributed among the age categories.

Jharkhand: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2024
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Budgetary Allocation & Traffic Challans
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		84
Total number of intersections identified for traffic calming measures		89
Intersections with all traffic calming measures (%)		35
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		0
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		27
Total number of intersections identified for traffic calming measures	SH	51
	MDR	68
Intersections with all traffic calming measures (%)	SH	8
	MDR	6
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		23 (9-46)
Footpath width as per IRC standards (%)		27 (0-63)
Footpath height as per IRC standards (%)		19 (1-39)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	21 (3-48)
	Rural roads (NH, SH & MDR)	43 (35-54)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	64 (14-99)
	Rural roads (NH, SH & MDR)	85 (81-91)
Capacity Building		
Training of Lead Agency		Yes
Training of Transport Department		Yes
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		No
Centralised database for injury and trauma records		Yes
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		1
Number of Level-II Trauma Centers along/near National Highways		0
Number of Level-III Trauma Centers along/near National Highways		0
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Karnataka

Demographics 2022	
Total population (million) [% urban]	67.4 [44.1]
Population density (per km2)	351

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	13
Cause of DALYs	18

Road Infrastructure	
Total length of National Highways 2022 (km)	8037
Road infrastructure 2019 (%):	
National Highway	9.6
State Highway	25.5
District Road	64.9

Road Traffic Crash Characteristics in 2018-22	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	16.8	16.6	14.7	15.0	17.4
Female	4.7	4.4	3.5	4.4	4.3
Male	28.6	28.4	25.6	25.3	30.0
Non-fatal Injuries per 100 000 population	78.8	76.5	59.4	60.8	71.4
% road traffic deaths on National Highways	36.3	35.1	34.1	34.7	35.6

Road Traffic Deaths 2022 (%): Sex and Age	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	3.7	19.4	28.6	23.0	18.4	7.0	100
Female	7.5	12.3	24.3	21.7	23.3	10.9	100
Male	3.2	20.4	29.2	23.1	17.7	6.5	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
28.6	3.9	38.9	28.0	0.6	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
18.0	0.7	48.6	3.4	13.1	6.0	2.5	7.7	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
278.4	13.1	63.3	4.2	18.7	15.1

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	32.2	61.1	9.1
Urban	31.7	67.2	14
Rural	32.6	56.9	5.6

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
33.6	8	18.2	5.7	4.7	28.7	1

The cases with Unknown age were proportionally distributed among the age categories.

Karnataka: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2018
Institutional		
Lead Agency		
Established as a separate entity		No
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		No
Road Safety Fund is non-lapsable		Not Reported
Sources of Road Safety Funds		No
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures		24
Intersections with all traffic calming measures (%)		8
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures	SH	21
	MDR	8
Intersections with all traffic calming measures (%)	SH	14
	MDR	13
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		25 (7-48)
Footpath width as per IRC standards (%)		38 (0-71)
Footpath height as per IRC standards (%)		61 (23-91)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Recording only
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	41 (9-60)
	Rural roads (NH, SH & MDR)	85 (73-99)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	75 (36-99)
	Rural roads (NH, SH & MDR)	96 (89-100)
Capacity Building		
Training of Lead Agency		Not Applicable
Training of Transport Department		Not Applicable
Training the Traffic Police		Not Reported
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		No
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		0
Number of Level-II Trauma Centers along/near National Highways		2
Number of Level-III Trauma Centers along/near National Highways		6
Action plan prepared based on gap analysis with definite timelines		Yes

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Kerala

Demographics 2022	
Total population (million) [% urban]	35.7 [73.9]
Population density (per km2)	918

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	12
Cause of DALYs	16

Road Infrastructure	
Total length of National Highways 2022 (km)	1782
Road infrastructure 2019 (%):	
National Highway	5.3
State Highway	12.9
District Road	81.8

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	12.3	12.6	8.4	9.6	12.1
Female	3.8	3.7	2.5	2.4	3.4
Male	21.4	22.3	14.9	17.5	21.5
Non-fatal Injuries per 100 000 population	129.9	130.9	86.3	103.5	138.2
% road traffic deaths on National Highways	29.0	28.4	29.8	28.4	27.7

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	3.4	13.9	14.6	14.0	25.9	28.2	100
Female	7.6	4.3	9.1	12.4	29.3	37.4	100
Male	2.7	15.5	15.5	14.3	25.3	26.6	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
36.5	8.4	36.1	18.6	0.4	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
26.8	2.1	56.2	5.3	7.0	0.8	1.0	0.8	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
260.3	19.8	90.2	3.8	18.6	8.2

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	24.5	58.2	24.2
Urban	27.9	61.3	26.4
Rural	21.4	55.4	22.1

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
33	5.1	13.8	3.9	3.1	40	1.2

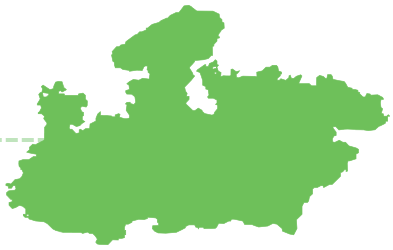
The cases with Unknown age were proportionally distributed among the age categories.

Kerala: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2018
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Traffic Challans & Transport Challans
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures		32
Intersections with all traffic calming measures (%)		13
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		Not Applicable
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures	SH	18
	MDR	26
Intersections with all traffic calming measures (%)	SH	11
	MDR	4
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		30 (14-54)
Footpath width as per IRC standards (%)		39 (12-64)
Footpath height as per IRC standards (%)		85 (75-91)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		No
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	19 (7-29)
	Rural roads (NH, SH & MDR)	47 (40-54)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	99 (96-99)
	Rural roads (NH, SH & MDR)	99 (98-99)
Capacity Building		
Training of Lead Agency		Not Applicable
Training of Transport Department		Not Applicable
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		Yes
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		No
Number of Level-I Trauma Centers along/near National Highways		0
Number of Level-II Trauma Centers along/near National Highways		0
Number of Level-III Trauma Centers along/near National Highways		0
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Madhya Pradesh



Demographics 2022	
Total population (million) [% urban]	85.9 [28.9]
Population density (per km2)	279

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	12
Cause of DALYs	18

Road Infrastructure	
Total length of National Highways 2022 (km)	9,105
Road infrastructure 2019 (%):	
National Highway	12.4
State Highway	16.1
District Road	71.6

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	13.1	13.6	13.3	14.2	15.6
Female	3.6	4.0	4.0	4.8	4.8
Male	22.1	22.6	22.0	23.0	25.8
Non-fatal Injuries per 100 000 population	67.1	63.9	55.5	57.7	64.2
% road traffic deaths on National Highways	24.3	25.8	27.1	28.1	30.0

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	6.8	23.4	29.1	23.4	13.3	4.0	100
Female	9.0	21.7	28.4	22.9	13.1	5.0	100
Male	6.4	23.7	29.2	23.5	13.4	3.8	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
30.4	7.8	33.0	28.0	0.8	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
12.5	1.0	47.3	2.7	13.4	8.9	2.3	11.9	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
170.8	2.4	16.1	2.6	5.6	16.6

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	24.5	58.2	5.3
Urban	27.9	61.3	11.4
Rural	21.4	55.4	3

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
40.4	21.6	21.7	2.3	2.7	10.6	0.7

The cases with Unknown age were proportionally distributed among the age categories.

Madhya Pradesh: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2023
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Traffic Challans
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		27
Total number of intersections identified for traffic calming measures		Not Reported
Intersections with all traffic calming measures (%)		Rumble Strips: 59 Junction priority signs: 38 Standard Speed Humps: 10 All measures: Not Reported
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		Not Reported Auditor's Comment: Several Crash barriers were found missing and damaged
State Highways (SH) & Major District Roads (MDR)		
Road length undergone road safety audit (%)		10
Total number of intersections identified for traffic calming measures		Not Reported
Intersections with all traffic calming measures (%)		Junction priority signs: 23 Standard Speed Humps: 5
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		36 (30-40)
Footpath width as per IRC standards (%)		100
Footpath height as per IRC standards (%)		35 (30-50)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	62 (52-73)
	Rural roads (NH, SH & MDR)	72 (58-81)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	69 (52-83)
	Rural roads (NH, SH & MDR)	72 (66-76)
Capacity Building		
Training of Lead Agency		No
Training of Transport Department		No
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		No
Centralised database for injury and trauma records		Yes
Single unified toll-free helpline number for accident emergency care		No
Number of Level-I Trauma Centers along/near National Highways		2
Number of Level-II Trauma Centers along/near National Highways		Not Reported
Number of Level-III Trauma Centers along/near National Highways		0
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Maharashtra

Demographics 2022	
Total population (million) [% urban]	125.7 [48.3]
Population density (per km2)	409

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	12
Cause of DALYs	18

Road Infrastructure	
Total length of National Highways 2022 (km)	18,459
Road infrastructure 2019 (%):	
National Highway	11.2
State Highway	20.2
District Road	68.5

Road Traffic Crash Characteristics in 2018-22	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	10.9	10.4	9.4	10.8	12.1
Female	2.9	2.6	2.1	2.3	2.7
Male	18.3	17.7	16.1	18.7	20.8
Non-fatal Injuries per 100 000 population	25.8	23.4	16.1	18.5	21.7
% road traffic deaths on National Highways	30.8	29.7	30.5	30.2	32.3

Road Traffic Deaths 2022 (%): Sex and Age	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	3.0	18.4	28.5	26.6	18.5	5.0	100
Female	5.2	16.1	24.0	25.3	21.3	8.0	100
Male	2.8	18.6	29.1	26.7	18.2	4.6	100

Road Traffic Deaths by Road User Type									
Estimated Deaths 2021 (%): GBD									
Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant				Other	Total	
30.9	3.9	42.0	22.4				0.8	100	
Reported Deaths 2022 (%): MoRTH									
Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor		Bus	Other	Total
19.0	1.1	50.8	2.9	14.6	5.3		0.8	5.5	100

Vehicle Ownership					
Number of registered vehicles per 1000 persons 2020					
2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
224.5	8.4	45.3	1.6	14.7	16.6

Household vehicle ownership 2019-2021 (%)	Bicycle	2-wheeler	Car
Total	29.3	53.9	8.7
Urban	28.1	60.1	14
Rural	30.4	48.2	3.9

Travel Mode Share for Work Trips 2011 (%)						
Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
30.2	10.7	20	4.0	5.5	28.5	1.2

The cases with Unknown age were proportionally distributed among the age categories.

Maharashtra: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2018
Institutional		
Lead Agency		
Established as a separate entity		Not Established
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Not Appointed
Type of appointment of the head		Not Appointed
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Budgetary Allocation & Special Funds
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures		22
Intersections with all traffic calming measures (%)		9
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		Not Applicable
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures	SH	21
	MDR	6
	UR	0
Intersections with all traffic calming measures (%)	SH	14
	MDR	0
	UR	-
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		73 (43-91)
Footpath width as per IRC standards (%)		54 (4-94)
Footpath height as per IRC standards (%)		76 (41-96)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	39 (7-78)
	Rural roads (NH, SH & MDR)	77 (68-85)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	98 (96-99)
	Rural roads (NH, SH & MDR)	99 (98-100)
Capacity Building		
Training of Lead Agency		Not Applicable
Training of Transport Department		Not Applicable
Training the Traffic Police		No
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		Yes
Centralised database for injury and trauma records		Yes
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		2
Number of Level-II Trauma Centers along/near National Highways		2
Number of Level-III Trauma Centers along/near National Highways		57
Action plan prepared based on gap analysis with definite timelines		Yes

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Puducherry

Demographics 2022	
Total population (million) [% urban]	1.6 [70.1]
Population density (per km2)	3308

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	11
Cause of DALYs	17

Road Infrastructure	
Total length of National Highways 2022 (km)	64
Road infrastructure 2019 (%):	
National Highway	6.4
State Highway	0
District Road	93.6

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	15.3	9.7	9.4	8.8	11.2
Female	4.3	2.8	1.9	1.6	5.8
Male	27.0	17.1	17.5	16.8	17.1
Non-fatal Injuries per 100 000 population	116.6	106.9	65.8	69.4	79.1
% road traffic deaths on National Highways	49.1	55.8	49.0	62.1	39.2

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	5.0	8.8	9.4	18.2	21.5	37.0	100
Female	4.1	2.0	6.1	12.2	18.4	57.1	100
Male	5.3	11.4	10.6	20.5	22.7	29.5	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
28.1	8.3	37.2	25.7	0.8	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
25.4	1.7	69.6	1.1	1.1	0.0	1.1	0.0	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
617.0	6.9	77.5	6.0	10.3	4.4

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	–	–	–
Urban	–	–	–
Rural	–	–	–

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
15.6	20.3	37.7	2.7	2.3	18.8	2.6

The cases with Unknown age were proportionally distributed among the age categories.

Puducherry: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2023
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Traffic Challans
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		57
Total number of intersections identified for traffic calming measures		18
Intersections with all traffic calming measures (%)		11
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		0
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		21
Total number of intersections identified for traffic calming measures	SH	26
	MDR	26
Intersections with all traffic calming measures (%)	SH	4
	MDR	4
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		5 (0-10)
Footpath width as per IRC standards (%)		54 (50-58)
Footpath height as per IRC standards (%)		33 (4-61)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	93
	Rural roads (NH, SH & MDR)	94 (93-94)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	97
	Rural roads (NH, SH & MDR)	100
Capacity Building		
Training of Lead Agency		Yes
Training of Transport Department		No
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		No
Centralised database for injury and trauma records		Yes
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		3
Number of Level-II Trauma Centers along/near National Highways		4
Number of Level-III Trauma Centers along/near National Highways		2
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Punjab

Demographics 2022	
Total population (million) [% urban]	30.6 [41.6]
Population density (per km2)	608

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	10
Cause of DALYs	13

Road Infrastructure	
Total length of National Highways 2022 (km)	4,239
Road infrastructure 2019 (%):	
National Highway	29.2
State Highway	10.1
District Road	60.7

Road Traffic Crash Characteristics in 2018-22	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	16.0	15.1	12.9	15.1	15.5
Female	5.0	11.8	3.2	5.3	3.8
Male	25.8	18.1	21.7	24.0	26.2
Non-fatal Injuries per 100 000 population	11.4	12.7	9.6	10.1	10.9
% road traffic deaths on National Highways	44.0	37.4	38.3	42.5	39.6

Road Traffic Deaths 2022 (%): Sex and Age	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	3.4	21.7	24.7	22.4	17.2	10.5	100
Female	4.7	23.0	25.2	21.7	15.8	9.6	100
Male	3.2	21.5	24.6	22.5	17.4	10.7	100

Road Traffic Deaths by Road User Type						
Estimated Deaths 2021 (%): GBD						
Pedestrian 26.0	Cyclist 12.4	Motorcyclist 37.4	Motor vehicle Occupant 23.4	Other 0.8	Total 100	
Reported Deaths 2022 (%): MoRTH						
Pedestrian 12.8	Cyclist 4.3	2-wheeler 48.5	3-wheeler 3.7	Car 24.5	Truck/Tractor 1.4	Bus 0.5	Other 4.3	Total 100

Vehicle Ownership					
Number of registered vehicles per 1000 persons 2020					
2-wheeler 276.4	3-wheeler 2.8	4-wheeler 63.7	Bus 1.7	Goods Vehicle 13.3	Other 17.8

Household vehicle ownership 2019-2021 (%)	Bicycle	2-wheeler	Car
Total	67.8	75.6	21.9
Urban	60.6	74	27
Rural	72.4	76.6	18.6

Travel Mode Share for Work Trips 2011 (%)						
Walk 26.5	Bicycle 29	MTW 24.8	Car 4.3	IPT 3.1	Bus & Train 11.1	Other 1.3

The cases with Unknown age were proportionally distributed among the age categories.

Punjab: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2017
Institutional		
Lead Agency		
Established as a separate entity		No
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		No
Road Safety Fund is non-lapsable		No
Sources of Road Safety Funds		No
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures		17
Intersections with all traffic calming measures (%)		12
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		Not Applicable
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		56
Total number of intersections identified for traffic calming measures	SH	22
	MDR	14
	UR	5
Intersections with all traffic calming measures (%)	SH	0
	MDR	21
	UR	20
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		36 (17-63)
Footpath width as per IRC standards (%)		44 (32-64)
Footpath height as per IRC standards (%)		34 (7-61)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		No
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	58 (49-63)
	Rural roads (NH, SH & MDR)	91 (83-98)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	96 (91-99)
	Rural roads (NH, SH & MDR)	99 (98-99)
Capacity Building		
Training of Lead Agency		Not Applicable
Training of Transport Department		Not Applicable
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		Yes
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		1
Number of Level-II Trauma Centers along/near National Highways		1
Number of Level-III Trauma Centers along/near National Highways		2
Action plan prepared based on gap analysis with definite timelines		Not Reported

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Rajasthan

Demographics 2022	
Total population (million) [% urban]	80.4 [26.5]
Population density (per km2)	235

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	9
Cause of DALYs	13

Road Infrastructure	
Total length of National Highways 2022 (km)	10,706
Road infrastructure 2019 (%):	
National Highway	20.7
State Highway	30.2
District Road	49.0

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	13.5	13.6	11.8	12.6	13.8
Female	3.1	3.2	2.7	2.9	3.4
Male	23.2	23.4	20.3	21.8	23.7
Non-fatal Injuries per 100 000 population	28.1	29.6	21.3	24.3	27.7
% road traffic deaths on National Highways	37.5	36.6	35.9	38.1	37.4

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	4.4	25.0	32.0	23.1	12.6	2.7	100
Female	7.8	20.1	32.0	23.5	13.8	2.9	100
Male	4.0	25.7	32.0	23.1	12.5	2.7	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
28.1	5.5	40.1	25.4	0.9	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
15.7	0.5	43.1	1.3	20.0	7.6	2.0	9.7	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
185.9	3.4	26.3	1.6	10.2	17.4

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	32.2	66.4	8.2
Urban	36.5	77.2	16.3
Rural	30.7	62.9	5.6

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
37.2	13.1	22.6	3.6	3.9	18.3	1.2

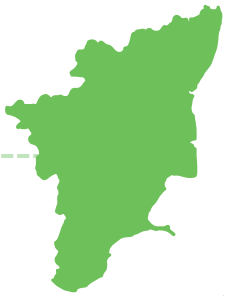
The cases with Unknown age were proportionally distributed among the age categories.

Rajasthan: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2018
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		No
Type of appointment of the head		Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Budgetary Allocation, Traffic Challans & Transport Challans
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures		25
Intersections with all traffic calming measures (%)		25
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		Not Applicable
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures	SH	14
	MDR	7
	UR	12
Intersections with all traffic calming measures (%)	SH	29
	MDR	0
	UR	38
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		28 (3-65)
Footpath width as per IRC standards (%)		33 (7-100)
Footpath height as per IRC standards (%)		62 (15-100)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		No
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	38 (13-53)
	Rural roads (NH, SH & MDR)	77 (71-86)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	79 (41-100)
	Rural roads (NH, SH & MDR)	97 (95-99)
Capacity Building		
Training of Lead Agency		Not Applicable
Training of Transport Department		Not Applicable
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		No
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		1
Number of Level-II Trauma Centers along/near National Highways		4
Number of Level-III Trauma Centers along/near National Highways		38
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Tamil Nadu



Demographics 2022	
Total population (million) [% urban]	76.7 [53.74]
Population density (per km2)	590

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	11
Cause of DALYs	16

Road Infrastructure	
Total length of National Highways 2022 (km)	7,000
Road infrastructure 2019 (%):	
National Highway	10.2
State Highway	16.9
District Road	72.9

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	16.2	23.9	19.1	20.1	23.3
Female	6.1	4.2	3.5	6.0	6.5
Male	26.3	23.6	17.7	34.3	40.1
Non-fatal Injuries per 100 000 population	98.8	83.3	62.5	73.2	88.3
% road traffic deaths on National Highways	36.8	36.7	37.5	34.2	33.4

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	3.2	11.9	18.7	17.9	25.8	22.5	100
Female	4.9	5.7	11.1	14.5	29.2	34.6	100
Male	3.0	13.0	19.9	18.5	25.2	20.5	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
30.6	10.2	34.6	23.7	0.8	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
24.8	2.4	62.3	1.5	5.9	1.9	1.2	0.2	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
341.6	6.8	44.9	3.1	13.8	11.3

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	43.3	63.9	6.5
Urban	42.6	67.6	9.9
Rural	44	60.5	3.3

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
24.1	15	21.7	3.6	1.7	32.7	1.2

The cases with Unknown age were proportionally distributed among the age categories.

Tamil Nadu: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2024
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Dedicated
Road Safety Policy has been notified		No
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Budgetary Allocation
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		54
Total number of intersections identified for traffic calming measures		79
Intersections with all traffic calming measures (%)		1
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		3
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		96
Total number of intersections identified for traffic calming measures	SH	79
	MDR	83
Intersections with all traffic calming measures (%)	SH	0
	MDR	4
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		38 (18-65)
Footpath width as per IRC standards (%)		50 (0-75)
Footpath height as per IRC standards (%)		26 (6-83)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Reporting only
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	23 (3-41)
	Rural roads (NH, SH & MDR)	56 (48-63)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	90 (70-98)
	Rural roads (NH, SH & MDR)	97 (95-98)
Capacity Building		
Training of Lead Agency		Yes
Training of Transport Department		Yes
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		Yes
Centralised database for injury and trauma records		Yes
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		13
Number of Level-II Trauma Centers along/near National Highways		29
Number of Level-III Trauma Centers along/near National Highways		52
Action plan prepared based on gap analysis with definite timelines		Yes

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Telangana

Demographics 2022	
Total population (million) [% urban]	37.9 [47.1]
Population density (per km2)	339

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	12
Cause of DALYs	16

Road Infrastructure	
Total length of National Highways 2022 (km)	4,926
Road infrastructure 2019 (%):	
National Highway	12.1
State Highway	6.9
District Road	81.0

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	17.8	18.7	18.3	20.0	19.9
Female	5.7	5.4	4.9	5.0	5.3
Male	29.9	31.8	31.6	34.8	34.4
Non-fatal Injuries per 100 000 population	63.8	59.0	49.7	53.2	53.2
% road traffic deaths on National Highways	31.3	35.8	38.1	36.2	39.8

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	4.1	16.1	26.5	26.4	19.1	7.8	100
Female	7.5	9.1	20.5	27.9	23.9	11.0	100
Male	3.5	17.2	27.4	26.2	18.4	7.3	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
39.1	4.9	30.8	24.1	1.1	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
19.3	0.9	52.6	4.4	7.8	5.3	1.3	8.4	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
257.5	11.6	43.6	3.2	12.4	15.6

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	24.0	55.3	5.2
Urban	21.0	66.2	10.8
Rural	25.7	49.4	2.1

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
–	–	–	–	–	–	–

The cases with Unknown age were proportionally distributed among the age categories.

Telangana: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2022
Institutional		
Lead Agency		
Established as a separate entity		No
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		No
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		No
Road Safety Fund		
Road Safety Fund has been notified		No
Road Safety Fund is non-lapsable		No
Sources of Road Safety Funds		No
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		39
Total number of intersections identified for traffic calming measures		48
Intersections with all traffic calming measures (%)		31
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		31
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		48
Total number of intersections identified for traffic calming measures	SH	31
	MDR	27
Intersections with all traffic calming measures (%)	SH	0
	MDR	0
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		43 (5-80)
Footpath width as per IRC standards (%)		95 (85-100)
Footpath height as per IRC standards (%)		95 (85-100)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	41 (11-84)
	Rural roads (NH, SH & MDR)	33 (9-80)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	95 (81-100)
	Rural roads (NH, SH & MDR)	83 (59-100)
Capacity Building		
Training of Lead Agency		Yes
Training of Transport Department		Yes
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		Yes
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		5
Number of Level-II Trauma Centers along/near National Highways		12
Number of Level-III Trauma Centers along/near National Highways		9
Action plan prepared based on gap analysis with definite timelines		Yes

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Uttar Pradesh

Demographics 2022	
Total population (million) [% urban]	234.1 [23.9]
Population density (per km2)	972

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	11
Cause of DALYs	15

Road Infrastructure	
Total length of National Highways 2022 (km)	12,270
Road infrastructure 2019 (%):	
National Highway	15.7
State Highway	9.9
District Road	74.4

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	10.0	10.0	8.4	9.2	9.7
Female	3.2	3.2	2.3	2.5	2.8
Male	16.2	16.3	14.0	15.2	15.9
Non-fatal Injuries per 100 000 population	13.3	12.8	9.8	10.7	12.2
% road traffic deaths on National Highways	39.6	39.0	41.0	40.1	37.5

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	8.8	25.3	26.2	20.9	13.2	5.6	100
Female	9.6	25.6	26.2	20.3	12.8	5.4	100
Male	8.6	25.3	26.1	21.0	13.2	5.7	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
37.1	8.9	34.4	19.2	0.5	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
8.7	6.2	30.8	6.3	15.6	9.7	5.7	17.0	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
122.1	3.1	15.6	0.6	3.8	7.3

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	75.6	51.1	5.5
Urban	63	61.3	11.9
Rural	80	47.6	3.3

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
31.9	31.1	16.7	3	4.3	11.7	1.3

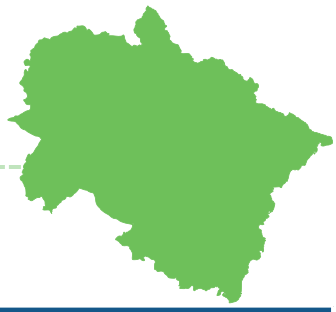
The cases with Unknown age were proportionally distributed among the age categories.

Uttar Pradesh: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2018
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		No
Sources of Road Safety Funds		Traffic Challans & Transport Challans
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures		24
Intersections with all traffic calming measures (%)		0
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		Not Applicable
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		Not Reported
Total number of intersections identified for traffic calming measures	SH	23
	MDR	21
Intersections with all traffic calming measures (%)	SH	9
	MDR	0
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		25 (9-38)
Footpath width as per IRC standards (%)		48 (14-87)
Footpath height as per IRC standards (%)		43 (37-56)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Reporting Only
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	38 (27-51)
	Rural roads (NH, SH & MDR)	71 (69-73)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	92 (80-98)
	Rural roads (NH, SH & MDR)	98 (98-99)
Capacity Building		
Training of Lead Agency		Not Applicable
Training of Transport Department		Not Applicable
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		Yes
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		0
Number of Level-II Trauma Centers along/near National Highways		10
Number of Level-III Trauma Centers along/near National Highways		5
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Uttarakhand



Demographics 2022	
Total population (million) [% urban]	11.5 [35.6]
Population density (per km2)	216

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	9
Cause of DALYs	8

Road Infrastructure	
Total length of National Highways 2022 (km)	3,664
Road infrastructure 2019 (%):	
National Highway	24.0
State Highway	36.7
District Road	39.3

Road Traffic Crash Characteristics in 2018-22	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	9.5	7.8	6.0	7.2	9.0
Female	3.9	2.4	1.5	1.7	2.3
Male	14.8	12.9	10.2	12.3	15.4
Non-fatal Injuries per 100 000 population	14.2	13.0	7.5	9.5	14.0
% road traffic deaths on National Highways	60.3	49.4	54.2	52.4	52.3

Road Traffic Deaths 2022 (%): Sex and Age	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	6.4	18.9	26.8	23.7	18.1	6.0	100
Female	11.0	11.8	27.6	18.9	21.3	9.4	100
Male	5.7	19.9	26.7	24.4	17.7	5.5	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
25.7	9.9	34.0	29.8	0.6	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
27.8	2.0	31.4	0.4	26.7	1.8	0.3	9.6	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
186.8	2.5	50.8	1.6	9.4	5.1

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	30.2	46.1	12.7
Urban	35.9	62.1	21.8
Rural	27.5	38.4	8.3

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
41	17	18.2	5.4	4.6	12.7	1.2

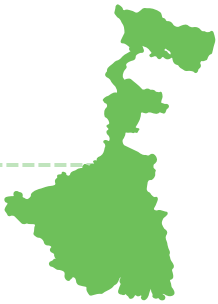
The cases with Unknown age were proportionally distributed among the age categories.

Uttarakhand: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2022
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		No
Type of appointment of the head		Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Budgetary Allocation & Traffic Challans
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		63
Total number of intersections identified for traffic calming measures		43
Intersections with all traffic calming measures (%)		37
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		30
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		42
Total number of intersections identified for traffic calming measures	SH	60
	MDR	41
Intersections with all traffic calming measures (%)	SH	18
	MDR	10
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		51 (28-76)
Footpath width as per IRC standards (%)		51 (34-66)
Footpath height as per IRC standards (%)		56 (25-84)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Reporting Only
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	15 (5-35)
	Rural roads (NH, SH & MDR)	38 (27-49)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	76 (20-96)
	Rural roads (NH, SH & MDR)	79 (53-96)
Capacity Building		
Training of Lead Agency		No
Training of Transport Department		Yes
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		No
Centralised database for injury and trauma records		No
Single unified toll-free helpline number for accident emergency care		Yes
Number of Level-I Trauma Centers along/near National Highways		1
Number of Level-II Trauma Centers along/near National Highways		2
Number of Level-III Trauma Centers along/near National Highways		1
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

West Bengal



Demographics 2022	
Total population (million) [% urban]	98.8 [36.5]
Population density (per km2)	1113

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	12
Cause of DALYs	18

Road Infrastructure	
Total length of National Highways 2022 (km)	3,675
Road infrastructure 2019 (%):	
National Highway	20.7
State Highway	20.4
District Road	59.0

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	5.9	5.9	5.2	5.9	6.1
Female	1.7	1.5	1.4	1.9	2.3
Male	9.9	9.6	8.6	9.8	9.7
Non-fatal Injuries per 100 000 population	12.4	12.1	9.9	10.6	13.0
% road traffic deaths on National Highways	37.6	34.9	35.6	37.5	33.6

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	5.9	12.0	23.5	20.3	26.3	12.0	100
Female	10.7	11.1	15.0	16.3	30.7	16.1	100
Male	4.8	12.3	25.4	21.2	25.3	11.1	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
46.3	10.6	19.6	22.9	0.6	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
49.0	4.3	14.4	6.5	8.4	8.2	3.8	5.5	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
86.9	1.5	14.3	0.5	6.0	2.5

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	78.9	28.5	2.8
Urban	71.9	39.3	6.4
Rural	82.3	23.2	1

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
32	30.2	5.7	2.6	1.8	26	1.7

The cases with Unknown age were proportionally distributed among the age categories.

West Bengal: Summary of Road Safety Audit directed by the Supreme Court Committee on Road Safety

Year of Audit		2023
Institutional		
Lead Agency		
Established as a separate entity		Yes
Head of the Lead Agency has the rank of Additional Commissioner/Joint Commissioner or higher		Yes
Type of appointment of the head		Not Dedicated
Road Safety Policy has been notified		Yes
Road Safety Fund		
Road Safety Fund has been notified		Yes
Road Safety Fund is non-lapsable		Yes
Sources of Road Safety Funds		Traffic Challans
Engineering		
National Highway (NH)		
Road length undergone road safety audit (%)		75
Total number of intersections identified for traffic calming measures		25
Intersections with all traffic calming measures (%)		16
Crash barriers compliant with all parameters of Indian Road Congress (IRC) (%)		44
State Highways (SH), Major District Roads (MDR) & Urban Roads (UR)		
Road length undergone road safety audit (%)		11
Total number of intersections identified for traffic calming measures	SH	45
	MDR	54
Intersections with all traffic calming measures (%)	SH	16
	MDR	6
Pedestrian Facilities (Based on survey of 4 cities)		
Availability of footpath on expected length (%)		48 (30-68)
Footpath width as per IRC standards (%)		43 (9-96)
Footpath height as per IRC standards (%)		43 (9-96)
Enforcement		
Accident recording and reporting system adheres to the MoRTH format		Yes
Helmet violations among drivers (%)	Urban roads (based on survey of 4 cities)	23 (7-68)
	Rural roads (NH, SH & MDR)	36 (31-43)
Helmet violations among pillion riders (%)	Urban roads (based on survey of 4 cities)	51 (10-100)
	Rural roads (NH, SH & MDR)	75 (65-88)
Capacity Building		
Training of Lead Agency		No
Training of Transport Department		No
Training the Traffic Police		Yes
Emergency Response and Healthcare		
Development of Comprehensive Trauma System Care plan		No
Centralised database for injury and trauma records		Yes
Single unified toll-free helpline number for accident emergency care		No
Number of Level-I Trauma Centers along/near National Highways		2
Number of Level-II Trauma Centers along/near National Highways		Not Reported
Number of Level-III Trauma Centers along/near National Highways		0
Action plan prepared based on gap analysis with definite timelines		No

Not Applicable: Indicator was not included in the scope of the road safety audit.
Not Reported: Though the indicator was included in the scope of the audit, the information was not reported by the state, or not verified by the consultant, or was found irrelevant by the research team.

Arunachal Pradesh

Demographics 2022	
Total population (million) [% urban]	1.6 [25.5]
Population density (per km2)	19

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	12
Cause of DALYs	19

Road Infrastructure	
Total length of National Highways 2022 (km)	4,285
Road infrastructure 2019 (%):	
National Highway	10.3
State Highway	54.8
District Road	34.9

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	11.7	8.4	4.8	10.2	9.5
Female	3.3	3.3	2.8	2.1	1.7
Male	19.7	13.3	6.6	17.8	16.9
Non-fatal Injuries per 100 000 population	21.6	20.5	12.2	22.6	12.0
% road traffic deaths on National Highways	32.0	42.5	43.8	55.4	49.3

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	8.1	30.4	21.6	26.4	11.5	2.0	100
Female	7.7	23.1	30.8	30.8	7.7	0.0	100
Male	8.1	31.1	20.7	25.9	11.9	2.2	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
21.3	6.9	28.2	43.2	0.0	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
4.7	0.0	30.4	3.4	21.6	22.3	2.7	14.9	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
71.1	7.4	48.6	6.1	11.7	6.3

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	25.6	43.6	19.3
Urban	27.4	50.5	30.8
Rural	25.3	42.3	17.1

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
65.2	5.5	9	10	2.2	4.9	3.1

The cases with Unknown age were proportionally distributed among the age categories.

Manipur

Demographics 2022	
Total population (million) [% urban]	3.2 [32.3]
Population density (per km2)	143

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	9
Cause of DALYs	17

Road Infrastructure	
Total length of National Highways 2022 (km)	1,840
Road infrastructure 2019 (%):	
National Highway	31.1
State Highway	13.9
District Road	55.0

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	4.4	5.0	4.0	3.5	4.0
Female	0.9	1.7	1.2	0.6	1.4
Male	7.7	8.3	6.9	6.3	6.5
Non-fatal Injuries per 100 000 population	33.8	33.9	21.1	15.9	25.5
% road traffic deaths on National Highways	65.7	71.2	70.9	70.0	58.3

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	6.3	22.8	34.6	22.0	11.8	2.4	100
Female	21.7	30.4	26.1	0.0	13.0	8.7	100
Male	2.9	21.2	36.5	26.9	11.5	1.0	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
41.4	4.1	27.1	26.7	0.8	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
25.2	4.7	31.5	3.1	14.2	9.4	7.1	4.7	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
77.2	5.1	24.4	0.9	6.4	1.2

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	45.3	40.8	17
Urban	48.9	52.3	23.9
Rural	43.1	33.8	12.8

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
32.6	14.9	17.1	5.6	11.4	15.1	3.4

The cases with Unknown age were proportionally distributed among the age categories.

Meghalaya

Demographics 2022	
Total population (million) [% urban]	3.3 [20.6]
Population density (per km2)	148

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	15
Cause of DALYs	20

Road Infrastructure	
Total length of National Highways 2022 (km)	1,156
Road infrastructure 2019 (%):	
National Highway	17.7
State Highway	11.7
District Road	70.6

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	5.7	5.5	4.4	5.7	4.9
Female	2.8	4.8	0.8	1.2	1.6
Male	8.6	6.2	8.0	10.1	8.2
Non-fatal Injuries per 100 000 population	6.4	6.9	6.7	8.0	9.3
% road traffic deaths on National Highways	40.1	49.7	56.3	59.9	60.5

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	4.9	16.0	34.6	25.9	13.0	5.6	100
Female	19.2	15.4	15.4	23.1	15.4	11.5	100
Male	2.2	16.2	38.2	26.5	12.5	4.4	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
32.4	6.1	12.8	47.8	0.7	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
25.9	1.9	29.0	2.5	30.9	7.4	0.6	1.9	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
40.5	4.9	46.6	1.8	14.7	3.4

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	18.4	20.2	12.9
Urban	14.6	30.2	29
Rural	19.4	17.5	8.4

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
54.7	2.2	3.9	13.0	13.6	10.8	1.8

The cases with Unknown age were proportionally distributed among the age categories.

Mizoram

Demographics 2022	
Total population (million) [% urban]	1.2 [54.9]
Population density (per km2)	58

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	11
Cause of DALYs	18

Road Infrastructure	
Total length of National Highways 2022 (km)	1,499
Road infrastructure 2019 (%):	
National Highway	43.0
State Highway	5.1
District Road	51.8

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	3.8	4.0	3.5	4.6	9.2
Female	1.9	0.2	1.3	1.7	2.5
Male	5.7	7.8	5.6	7.5	15.8
Non-fatal Injuries per 100 000 population	6.8	4.7	5.6	5.3	8.7
% road traffic deaths on National Highways	33.3	39.6	47.6	41.1	63.7

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	14.2	18.6	28.3	23.0	10.6	5.3	100
Female	20.0	6.7	20.0	20.0	20.0	13.3	100
Male	13.3	20.4	29.6	23.5	9.2	4.1	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
16.7	3.9	49.4	29.4	0.6	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
8.0	0.9	33.6	4.4	33.6	17.7	0.0	1.8	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
141.7	5.5	54.3	0.6	19.3	0.1

Household vehicle ownership 2019-2021 (%)

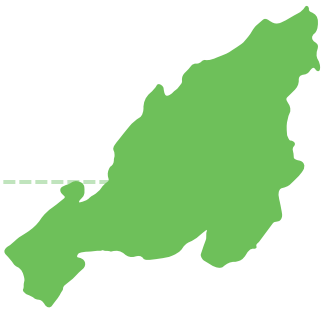
	Bicycle	2-wheeler	Car
Total	9.3	41.5	15.5
Urban	12.1	53.5	22
Rural	5.9	26.8	7.4

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
58.1	1.9	11	6.8	5.9	15.2	1.2

The cases with Unknown age were proportionally distributed among the age categories.

Nagaland



Demographics 2022	
Total population (million) [% urban]	2.2 [44.9]
Population density (per km2)	134

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	13
Cause of DALYs	19

Road Infrastructure	
Total length of National Highways 2022 (km)	1,670
Road infrastructure 2019 (%):	
National Highway	21.1
State Highway	8.9
District Road	70.0

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	1.8	1.2	2.4	2.5	3.3
Female	0.7	0.0	0.6	0.3	0.6
Male	2.9	2.3	4.2	4.6	5.9
Non-fatal Injuries per 100 000 population	15.7	11.4	13.1	17.3	13.1
% road traffic deaths on National Highways	30.8	69.2	54.7	45.5	75.3

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	6.3	31.7	25.4	19.0	9.5	7.9	100
Female	33.3	33.3	0.0	16.7	16.7	0.0	100
Male	3.5	31.6	28.1	19.3	8.8	8.8	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
22.3	2.7	32.6	41.9	0.5	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
13.7	1.4	24.7	4.1	27.4	28.8	0.0	0.0	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
48.1	9.9	64.9	3.6	95.8	16.6

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	5.5	16.7	21.3
Urban	7.6	21.7	32.1
Rural	4.6	14.3	16.1

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
59.9	3.4	5.4	11.4	10	8.5	1.5

The cases with Unknown age were proportionally distributed among the age categories.

Sikkim

Demographics 2022	
Total population (million) [% urban]	0.7 [47.7]
Population density (per km2)	96

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	13
Cause of DALYs	18

Road Infrastructure	
Total length of National Highways 2022 (km)	709
Road infrastructure 2019 (%):	
National Highway	17.8
State Highway	25.5
District Road	56.6

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	12.9	11.0	7.0	8.3	13.5
Female	6.1	2.9	4.1	4.4	4.6
Male	19.0	18.2	9.6	11.7	21.3
Non-fatal Injuries per 100 000 population	56.1	47.8	32.4	36.0	51.8
% road traffic deaths on National Highways	36.5	39.7	29.8	41.1	29.3

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	4.7	29.4	32.9	20.0	10.6	2.4	100
Female	13.3	6.7	46.7	20.0	0.0	13.3	100
Male	2.9	34.3	30.0	20.0	12.9	0.0	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
28.6	2.9	15.7	51.4	1.4	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
9.8	0.0	21.7	0.0	21.7	31.5	15.2	0.0	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
7.5	0.0	63.8	0.5	8.1	0.6

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	5.9	11.4	20.9
Urban	4.7	9.4	25.8
Rural	6.7	12.8	17.2

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
62.4	0.5	1.5	21.1	9.5	3.9	1.1

The cases with Unknown age were proportionally distributed among the age categories.

Tripura

Demographics 2022	
Total population (million) [% urban]	4.1 [38.5]
Population density (per km2)	393

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	13
Cause of DALYs	18

Road Infrastructure	
Total length of National Highways 2022 (km)	889
Road infrastructure 2019 (%):	
National Highway	36.0
State Highway	44.6
District Road	19.4

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	5.4	6.0	4.8	4.8	5.9
Female	1.3	1.4	1.1	1.3	1.6
Male	9.3	10.4	8.3	8.0	9.9
Non-fatal Injuries per 100 000 population	18.7	20.4	11.6	13.4	13.1
% road traffic deaths on National Highways	36.2	44.4	40.6	48.5	43.6

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	4.1	19.1	34.9	17.4	17.0	7.5	100
Female	9.1	18.2	39.4	9.1	15.2	9.1	100
Male	3.4	19.2	34.1	18.8	17.3	7.2	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
40.0	9.3	13.9	36.2	0.6	100

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
33.6	4.1	40.7	5.8	6.6	6.6	0.8	1.7	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
98.3	8.5	18.1	0.7	9.1	1.6

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	50.9	27.4	4.6
Urban	50.2	37.2	6.7
Rural	51.3	23.2	3.7

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
46.1	25	7.9	4.4	7.2	8.6	0.9

The cases with Unknown age were proportionally distributed among the age categories.

Andaman & Nicobar (UT)

Demographics 2022	
Total population (million) [% urban]	0.4 [43.8]
Population density (per km2)	49

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	_
Cause of DALYs	_

Road Infrastructure	
Total length of National Highways 2022 (km)	331
Road infrastructure 2019 (%):	
National Highway	43.1
State Highway	33.5
District Road	23.4

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	4.8	5.0	3.5	5.0	4.7
Female	1.6	1.1	1.1	0.0	1.6
Male	7.7	8.6	5.7	9.4	7.5
Non-fatal Injuries per 100 000 population	65.7	52.0	36.3	24.2	33.8
% road traffic deaths on National Highways	42.1	35.0	57.1	25.0	57.9

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	0.0	21.1	36.8	21.1	15.8	5.3	100
Female	0.0	33.3	33.3	0.0	0.0	33.3	100
Male	0.0	18.8	37.5	25.0	18.8	0.0	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
_	_	_	_	_	_

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
15.8	5.3	52.6	0.0	10.5	0.0	10.5	5.3	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
266.0	12.1	83.4	4.4	7.9	2.3

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	-	-	_
Urban	-	-	_
Rural	-	-	_

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
34.5	6.8	18.5	5.5	2.9	27.7	4.0

The cases with Unknown age were proportionally distributed among the age categories.

Chandigarh (UT)

Demographics 2022	
Total population (million) [% urban]	1.2 [99.9]
Population density (per km2)	10728

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	_
Cause of DALYs	_

Road Infrastructure	
Total length of National Highways 2022 (km)	15
Road infrastructure 2019 (%):	
National Highway	14.0
State Highway	8.4
District Road	77.6

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	8.4	8.8	4.4	7.9	6.8
Female	2.8	3.7	1.3	3.1	2.7
Male	13.1	13.1	7.1	12.0	10.3
Non-fatal Injuries per 100 000 population	25.6	23.2	12.4	14.2	16.6
% road traffic deaths on National Highways	16.3	12.5	11.3	21.9	10.8

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	3.6	12.0	32.5	15.7	20.5	15.7	100
Female	13.3	13.3	20.0	0.0	20.0	33.3	100
Male	1.5	11.8	35.3	19.1	20.6	11.8	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
_	_	_	_	_	_

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
27.7	14.5	48.2	6.0	0.0	0.0	1.2	2.4	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
403.3	5.9	458.6	2.5	13.3	0.3

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	-	-	_
Urban	-	-	_
Rural	-	-	_

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
16.3	30.4	25.3	14.6	3.5	8.3	1.7

The cases with Unknown age were proportionally distributed among the age categories.

Dadra and Nagar Haveli and Daman and Diu (UT)

Demographics 2022	
Total population (million) [% urban]	1.2 [80.5]
Population density (per km2)	1682

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	_
Cause of DALYs	_

Road Infrastructure	
Total length of National Highways 2022 (km)	59
Road infrastructure 2019 (%):	
National Highway	15.7
State Highway	15.5
District Road	68.8

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	9.6	7.7	10.9	12.2	13.5
Female	3.1	3.1	1.3	4.0	2.6
Male	13.3	10.5	17.4	17.7	20.5
Non-fatal Injuries per 100 000 population	18.2	18.2	20.3	27.4	40.8
% road traffic deaths on National Highways	0.0	0.0	0.0	0.0	10.0

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	7.8	30.0	20.0	15.6	15.6	11.1	100
Female	0.0	28.6	0.0	42.9	14.3	14.3	100
Male	8.4	30.1	21.7	13.3	15.7	10.8	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
_	_	_	_	_	_

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
23.3	6.7	61.1	1.1	6.7	1.1	0.0	0.0	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
_	_	_	_	_	_

Household vehicle ownership 2019-2021 (%)

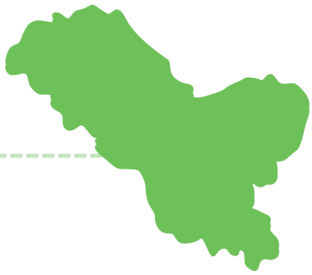
	Bicycle	2-wheeler	Car
Total	-	-	_
Urban	-	-	_
Rural	-	-	_

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
54.3	10.7	16.0	2.6	6.4	9.4	1.7

The cases with Unknown age were proportionally distributed among the age categories.

Ladakh (UT)



Demographics 2022	
Total population (million) [% urban]	0.3 [30.4]
Population density (per km2)	1.8

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	_
Cause of DALYs	_

Road Infrastructure	
Total length of National Highways 2022 (km)	806
Road infrastructure 2019 (%):	
National Highway	_
State Highway	_
District Road	_

Road Traffic Crash Characteristics in 2018-22	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	_	_	_	18.8	20.7
Female	_	_	_	6.9	3.8
Male	_	_	_	28.1	33.9
Non-fatal Injuries per 100 000 population	_	_	_	81.2	115.7
% road traffic deaths on National Highways	-	_	_	48.2	48.4

Road Traffic Deaths 2022 (%): Sex and Age	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	0.0	25.8	37.1	32.3	4.8	0.0	100
Female	0.0	40.0	60.0	0.0	0.0	0.0	100
Male	0.0	24.6	35.1	35.1	5.3	0.0	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
_	_	_	_	_	_

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
6.5	0.0	6.5	0.0	50.0	14.5	19.4	3.2	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
0.0	0.0	0.0	0.0	0.0	0.0

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	-	-	_
Urban	-	-	_
Rural	-	-	_

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
_	_	_	_	_	_	_

The cases with Unknown age were proportionally distributed among the age categories.

Lakshadweep (UT)

Demographics 2022	
Total population (million) [% urban]	0.1 [98.2]
Population density (per km2)	2300

Traffic Injuries as Public Health Problem	
Ranking of road traffic injury among all causes 2021:	
Cause of deaths	11
Cause of DALYs	15

Road Infrastructure	
Total length of National Highways 2022 (km)	_
Road infrastructure 2019 (%):	
National Highway	_
State Highway	_
District Road	_

Road Traffic Crash Characteristics in 2018-22

	2018	2019	2020*	2021	2022
Road traffic deaths per 100 000 population [Total]	1.5	0.0	0.0	1.5	2.9
Female	0.0	0.0	0.0	0.0	0.0
Male	2.9	0.0	0.0	2.9	5.7
Non-fatal Injuries per 100 000 population	4.5	1.5	1.5	8.8	2.9
% road traffic deaths on National Highways	0.0	0.0	0.0	0.0	0.0

Road Traffic Deaths 2022 (%): Sex and Age

	0-18	18-25	25-35	35-45	45-60	60+	Total
Total	0.0	50.0	50.0	0.0	0.0	0.0	100
Female	_	-	-	-	-	-	-
Male	0.0	50.0	50.0	0.0	0.0	0.0	100

Road Traffic Deaths by Road User Type

Estimated Deaths 2021 (%): GBD

Pedestrian	Cyclist	Motorcyclist	Motor vehicle Occupant	Other	Total
_	_	_	_	_	_

Reported Deaths 2022 (%): MoRTH

Pedestrian	Cyclist	2-wheeler	3-wheeler	Car	Truck/Tractor	Bus	Other	Total
0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	100

Vehicle Ownership

Number of registered vehicles per 1000 persons 2020

2-wheeler	3-wheeler	4-wheeler	Bus	Goods Vehicle	Other
0.0	0.0	0.0	0.0	0.0	0.0

Household vehicle ownership 2019-2021 (%)

	Bicycle	2-wheeler	Car
Total	-	-	_
Urban	-	-	_
Rural	-	-	_

Travel Mode Share for Work Trips 2011 (%)

Walk	Bicycle	MTW	Car	IPT	Bus & Train	Other
36.6	41	17.1	0.4	0.4	0.5	4.0

The cases with Unknown age were proportionally distributed among the age categories.