



ROAD ACCIDENTS ANNUAL REPORT 2020



WEST BENGAL POLICE





ROAD ACCIDENTS

ANNUAL REPORT 2020

WEST BENGAL POLICE



মমতা ব্যানার্জী

ममता बनार्जी

ممتا بنرجی

Mamata Banerjee



মুখ্যমন্ত্রী, পশ্চিমবঙ্গ
मुख्यमंत्री, पश्चिम बंगाल

وزیر اعلیٰ مغربی بنگال

CHIEF MINISTER, WEST BENGAL

8th March, 2022



MESSAGE

I am happy to know that **West Bengal Traffic Police** will soon be bringing out the **Traffic Accidents Annual Report -2020**. Like before, the report provides a comprehensive account of accidents on roads - their frequency, nature, category and trend, and highlights the initiatives of the State Government in minimizing mishaps on roads.

Road safety has always been our mantra, one of our prime concerns. We are happy that the efforts of the State Government in this regard, spearheaded by the very popular 'Safe Drive Save Life' campaign, have been highly successful in reducing accidents and in spreading the message of safety, security, care and caution among vehicle operators, passengers and pedestrians alike.

I hope the compilation serves as a useful tool in the hands of all stakeholders and strengthens their efforts towards ensuring total safety on roads.

My heartiest greetings and best wishes to all members of the West Bengal Traffic Police on the occasion. I wish them health, happiness and success.

(Mamata Banerjee)

Nabanna, West Bengal Secretariat, Howrah - 711 102
West Bengal, India

Tel: +91-33-22145555, +91-33-22143101

Fax: +91-33-22144046, +91-33-22143528

ফিরহাদ হাকিম
फिरहाद हाकिम
فیرہاد حکیم
FIRHAD HAKIM



MINISTER-IN-CHARGE
TRANSPORT DEPARTMENT &
HOUSING DEPARTMENT
GOVERNMENT OF WEST BENGAL

No. 25/MIC/2022(11)

Date: 10/03/2022



MESSAGE

The West Bengal Traffic Police is publishing the second edition of annual report on accidents, related deaths, injuries and fatalities, namely "Annual Accidents Report-2020". It has been our constant endeavour to enrich this document, which remains a comprehensive source of accidents, related deaths and injuries in the State.

RTA is one of major contributor in loss of life world over. It leads to immense misery in the life of millions of people every year. Reduction in road fatality has been one of the important components of "Safe Drive Save Life" (SDSL) campaign launched under the guidance of the Hon'ble Chief Minister, West Bengal. Road engineering, traffic infrastructure and traffic law enforcement are the other major recourses in ensuring seamless traffic movement and safety of road users for all type of vehicles. A lot of effort has been put to improve infrastructure in terms of signals, road makings, CCTV cameras, guard rails, light gadgets etc.

As a result of better enforcement better compliance of regulations and further technological intervention by all the stake holders, I am sure, we will be able to significantly reduce the road accident fatalities in coming years.

It is hoped that the data on different facets of road accidents and analysis contained in this Report will be useful to all the Stake Holders. In 2020, the world witnessed the outbreak of the Pandemic "Covid-19", But in this difficult period, the West Bengal Traffic Police is to be commended, for bringing out this analytical report.

(Firhad Hakim)

ড. এইচ কে দ্বিবেদী, আই. এ. এস.
মুখ্য সচিব
পশ্চিমবঙ্গ সরকার
“নবান্ন”

৩২৫, শরৎ চ্যাটার্জী রোড, হাওড়া ৭১১১০২
দূরভাষ: ২২১৪ ৫৮৫৮, দূরবার্তা: ২২১৪ ৪৩২৮



e-mail: cs-westbengal@nic.in

Dr. H. K. Dwivedi, IAS
Chief Secretary
Government of West Bengal
“NABANNA”
325, Sarat Chatterjee Road
Howrah 711 102
Ph. 2214 5858; Fax : 2214 4328



MESSAGE

Date:- 17.03.2022

I am pleased that the second edition of Traffic Accidents Annual Report, 2020 is being published by the West Bengal Traffic Police. The report covers all aspects of road accidents and analyses accident-related data elaborately.

As we all know, road transport is an integral part of every human being. West Bengal Government relentlessly promotes and fosters an orderly and disciplined traffic culture that is conducive to the development of a safe traffic environment, through the conceptualisation, design and dissemination of a sustained programme of public information, education in schools, accident information and enforcement. To this effect, **Safe Drive Save Life** campaign launched by West Bengal Government in 2016 has helped in containing road accidents in West Bengal.

I am hopeful that this publication will help all stake holders involved in road safety in evaluating various factors responsible for road accidents and conceptualizing as well as executing policies and strategies towards road safety. I wish West Bengal Traffic Police all the success in its endeavour.

(Dr. H. K. Dwivedi)

বি. পি. গোপালীকা, আই. এ. এস
অতিরিক্ত মুখ্য সচিব
স্বরাষ্ট্র ও পার্বত্য বিষয়ক দপ্তর ও
পরিষদীয় বিষয়ক দপ্তর
পশ্চিমবঙ্গ সরকার
"নবান্ন"
৩২৫, শরৎ চ্যাটার্জী রোড
হাওড়া ৭১১১০২
দূরভাষ: ২২১৪ ৫৬৫৬; দূরবার্তা: ২২১৪ ৩০০১



B. P. Gopalika, IAS
Additional Chief Secretary
Home & Hill Affairs Department
and Parliamentary Affairs
Department
Government of West Bengal
"NABANNA"
325, Sarat Chatterjee Road
Howrah 711 102
Ph. 2214 5656; Fax : 2214 3001
e-mail: wb.secyhome@gmail.com



MESSAGE

Date:- 17.03.2022

It gives me immense pleasure that the 2nd edition of the West Bengal Traffic Annual Report-2020 is being published. This Annual Report is an excellent compilation of details and analysis of road accidents and I am confident that this publication will be of enormous help for both expert and general public in traffic management and road safety.

Road accidents are the most unfortunate events and it has been the endeavour of the State Government to reduce road accidents and loss of human life.

This compilation will also serve as a guide for other stakeholders and to initiate short, medium and long term measures to reduce the road accidents.

I am optimistic and confident that this information will enable the various stake holders plan and draw effective strategy to help reduce road accidents.

B.P. Gopalika

M. Malaviya
INDIAN POLICE SERVICE



Director General &
Inspector general of Police,
West Bengal,
Alipore, Kolkata - 700027
Government of West Bengal, India

March 17, 2022



MESSAGE

It gives me great pleasure to know that West Bengal Traffic Police shall soon be publishing "Traffic Accidents Annual Report -2020". It is pertinent to mention that the Annual Report on traffic accidents has always been the source of significant information on Traffic related matters which has not only benefited public but has also benefited the traffic police units inside the State as well as outside.

Fastest expanding towns and cities in the State has thrown new challenges to traffic police units in terms of traffic management. However, West Bengal Traffic Police, with effective co-ordination with Transport Department and other development authorities of the State Government and with introduction of modern technologies and holistic approach towards traffic issues, has been successful in achieving new heights in regulation and maintenance of traffic.

'Safe Drive Save Life' campaign has been one of the most successful campaign formulated by the West Bengal government on Road Safety and has played a significant role in reducing accidents .

I once again congratulate all the members of West Bengal Traffic Police for bringing out the "Traffic Accidents Annual Report — 2020".

With best wishes.

Manoj Malaviya

Dr. Rajesh Kumar, IPS



GOVT. OF WEST BENGAL

DGP, Traffic & Road Safety,
West Benga Araksha Bhawan,
Block Sector-II, Salt Lake City,
Kolkata-700-091

Phone & Fax : (033) 2359-3713/2359-4125



MESSAGE

Road safety and prevention of the Road Traffic Accidents (RTA) are the most concerning issues in India today. It is said that the road traffic injuries cause considerable economic losses to individuals, their families and to the nations as a whole. In West Bengal, Hon'ble Chief Minister, Miss Mamata Banerjee has brought the issue to the centre stage by launching "Safe Drive Save Life" Campaign. The road safety has become one of the core issues for all stakeholders including Police, Transport Department, Public Works Department and the Health and Family Welfare Department, after this noble initiative.

The road safety initiatives and programmes require the coordinated action for **Enforcement, Engineering, Education, Emergency Response and Healthcare** etc. The Commissioners of Police and District Superintendents of Police are taking several measures for education and enforcement of the traffic rules. They are also coordinating with other departments for effecting desired changes in the design, structural and engineering aspect to reduce the number of accidents on road. At the same time sincere efforts are being made for fast tracking the Emergency Response System and Healthcare to save the precious human lives. In order to achieve this goal, availability of data and analysis of the same are required to be done on a continuous basis so that the future action can be redesigned and reoriented to plug the mistakes and laying forth a renewed flawless course of action.

The officials at the Traffic Police Headquarters are engaged in collection, compilation, analysis and dissemination of the information to the field level officers. The formats designed by MoRTH and adding further layers of information have made such analytics facile. The unique initiative of West Bengal has been widely acknowledged and the performance of the State in terms of road safety has been applauded in the whole of the country. The second edition of the **Traffic Accidents Annual Report, 2020** is another such step in the right direction. The data provided in the Report shall become an effective tool in the hands of the stakeholders in further improving the road conditions by removing the bottlenecks, correcting the blackspots, utilization of available resources and better enforcement of the traffic rules by the ground level officials. This will definitely result in further reduction of number of accidents and fatalities. The Traffic Headquarters is committed to connect the dots of Education, Enforcement, Engineering and Emergency Response as contained in the State Road Safety Action Plan. We shall also take good number of digital initiatives to reach out to the people of the State and make their journey on the road safer.

This report is also a testimony of success in improving the road safety under the able guidance of Hon'ble Chief Minister of West Bengal for her transformative and visionary Safe Drive Save Life Campaign. The success of West Bengal Police would not have been possible without the unstinted support of the Transport Department and sincerity, dedication and excellent work of the Commissioners of Police and Superintendents of Police of the State and their entire team of police personnel, civic volunteers and Home Guards.

Dr. Rajesh Kumar

Rajesh Kumar Sinha, IAS
Principal Secretary



Government of West Bengal
Transport Department
Paribahan Bhawan,
12, R. N. Mukherjee Road, Kolkata- 700001



MESSAGE

Road accidents have always been and will be a worry for the planners and a challenge for the enforcement agencies. India despite having only 1% of the world's vehicles accounts for 11 per cent of all road accident deaths, witnessing 53 road accidents every hour. In pre-Covid year 2019, about 4.5 lakh road accidents took place in India, resulting in more than 1.51 lakh deaths. We lose 3% of country's GDP due to road accidents. In the same year West Bengal recorded a total of 10,158 road accidents resulting into 5,500 fatalities, which is 11th highest among 36 States & UTs.

Various factors like reckless driving, non-observance of traffic rules, over speeding, red light jumping, driving under influence of liquor, using mobile phones while driving, non-wearing of helmet and seat belt, etc., are the common reasons for road accident.

With increasing scientific knowledge being applied to traffic management and accident analysis, it is concluded that accidents are preventable by resorting to safety intervention strategies to minimize the adverse impact of above-mentioned factors leading to such accidents. Since the introduction of Safe Drive Save Life Campaign in West Bengal in 2016, 25% reduction in number of accidents and 16% reduction in number of fatalities have been observed in the state.

The Road Safety Annual Report being published by Traffic & Road Safety Branch of West Bengal Police will go a long way in helping the planning and enforcement for prevention of road accidents. I wish to record my deep appreciation for the team of Traffic & Road Safety Officers for the tireless work in improving and compiling this publication.

8.03.2022

Rajesh Kumar Sinha



Contents

Executive Summary	16
An Overview	18
Profiling Road Accidents by Road Category, Type and Features	26
Spatial and Temporal Distribution of Road Accidents	42
Involvement of Vehicles at Fault	45
Accidents classified according to Pedestrian Infrastructure	54
Profiles of Road Accident Victims by Age and Gender	59
Causes of Road Accidents	64
Black Spots	69
Road Safety Initiatives of the Government of West Bengal	73
Vision 2030	78
Cautionary Road Signs	80
Informatory Road Signs	82

Road accidents in the districts – 2020

WEST BENGAL

ACCIDENT CATEGORY

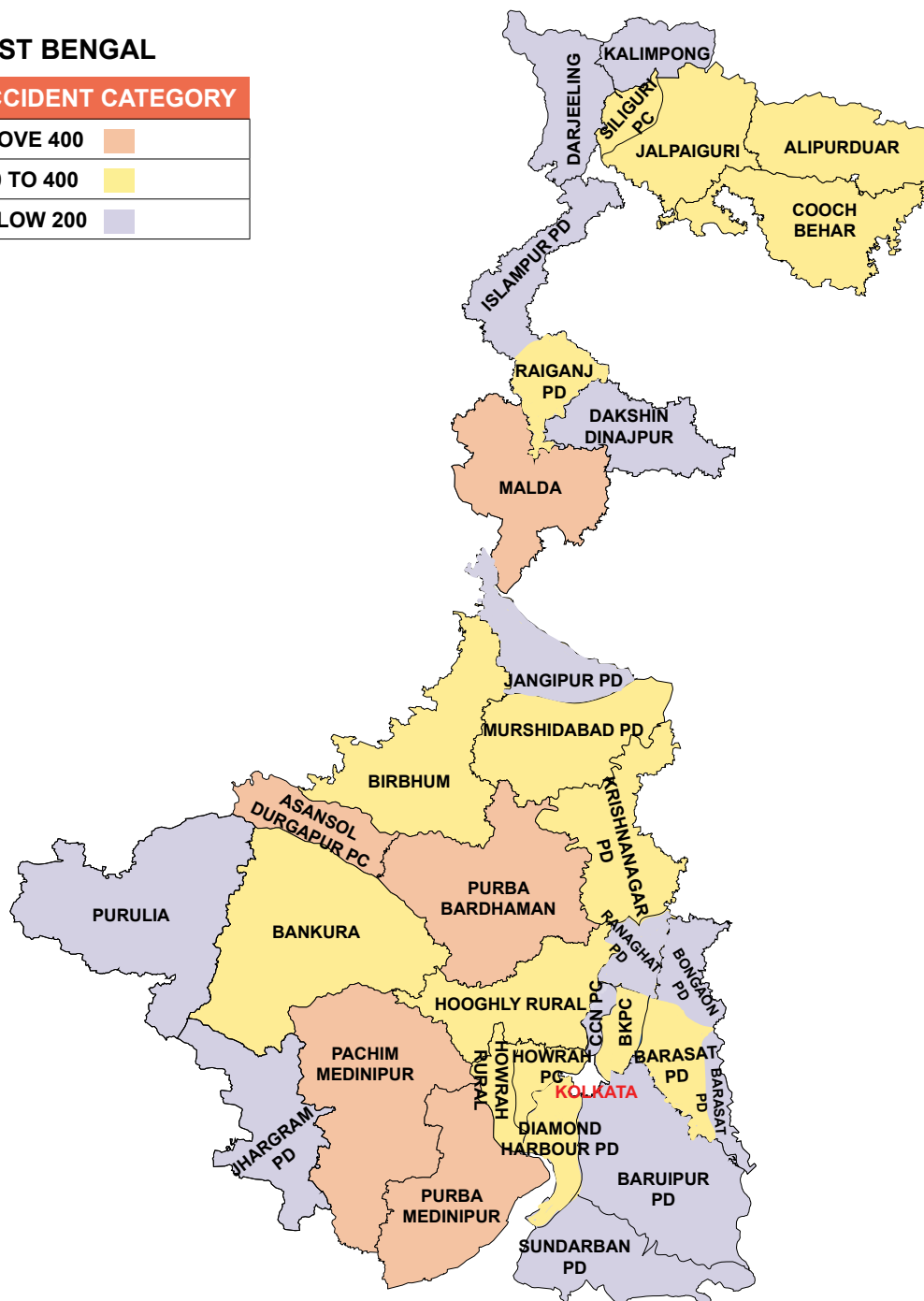
ABOVE 400



200 TO 400



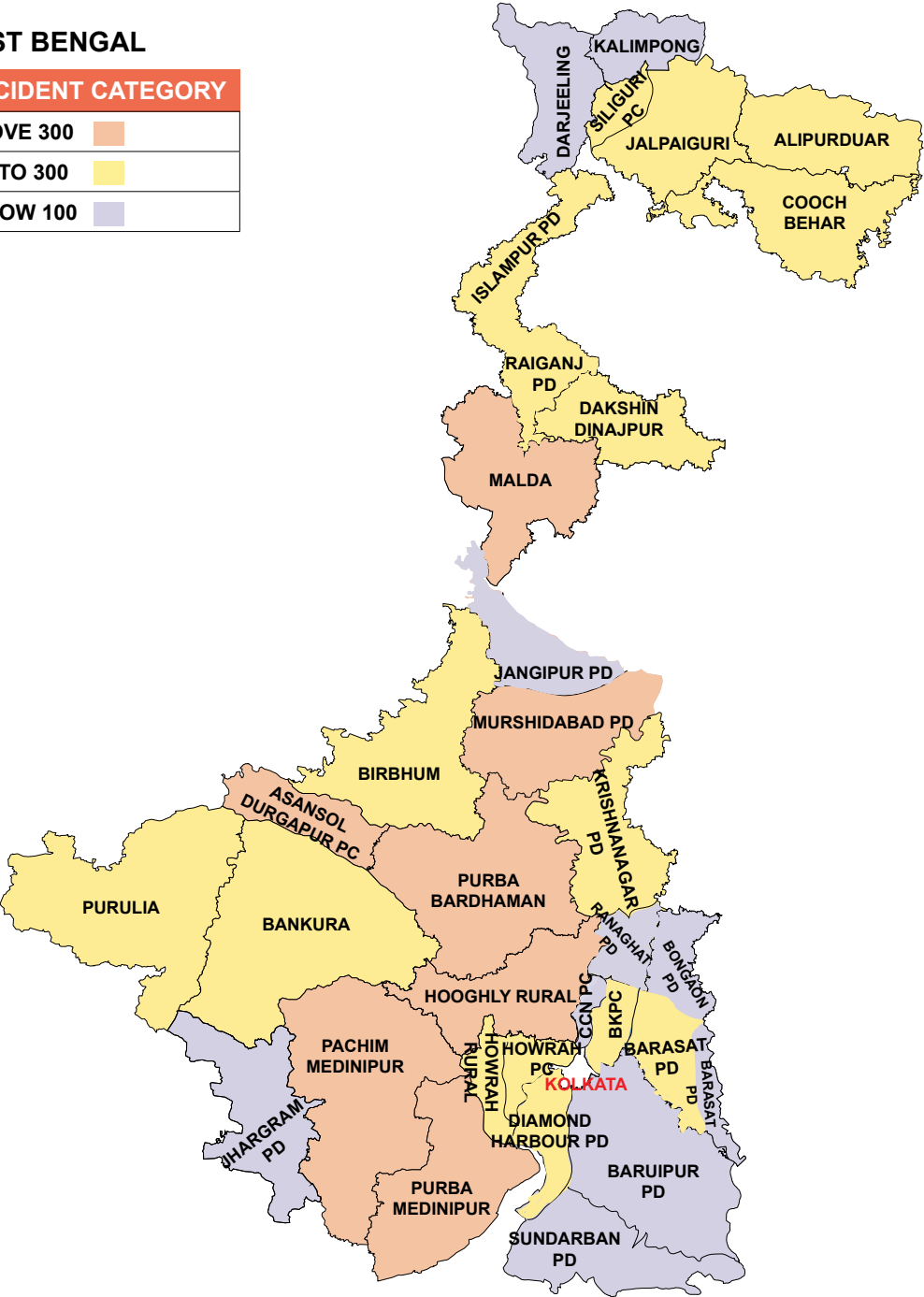
BELOW 200



Road fatalities in the districts – 2020

WEST BENGAL

ACCIDENT CATEGORY	
ABOVE 300	
100 TO 300	
BELOW 100	



Executive Summary

THE number of road accidents in West Bengal have gone down from 10,158 in 2019 to 9,180 in 2020. Similarly, fatalities have gone down from 5,500 to 4,927 and the number of injured persons from 9,757 to 8,314. In percentage terms, accidents decreased by 9.6%, the number of fatal accidents by 10.5% and the number of persons killed by 10.4%. Injuries, which have been decreasing since 2017, decreased by 12.66 %.

Purba Bardhaman recorded the highest number of road accidents in 2020, but the number of persons killed in road accidents has been highest in Paschim Medinipur. The districts which achieved a 10% reduction each in Road Traffic Accidents (RTA) and fatalities were Barasat PD, Baruipur PD, Birbhum, Dakshin Dinajpur, Diamond Harbour, Howrah PC, Jhargram, Purba Medinipur, Purulia and Raiganj PD

In terms of accidents by road categories, the National Highways (NH) accounted for 36.36 % of the road accidents and 36.73 % of the deaths in 2020. Accidents on State Highways (SH) and Other Roads (OR) constituted 21.51% and 42.12%, respectively. Fatalities on State Highways and Other Roads accounted for 22.02% and 41.24%, respectively. In percentage terms, accidents on NH, SH and Other Roads decreased by 5.63%, 17.78% and 8.34%, respectively in 2019. The percentage share of fatalities on NH, SH and Other Roads saw a decline of 9.59%, 19.03% and 5.84%, respectively. Attention has to be paid to enforcement and engineering on Other Roads.

In 2020, 805 accidents occurred at road junctions. That comprises 8.76 % of the 9,180 accidents

recorded in the State and resulted in 428 fatalities or 8.68% of fatalities.

In 2020, 26.38% of road accidents were recorded in urban areas and 73.26% per cent in rural areas. 23.30% of those killed in road accidents were in urban areas and 76.70% in rural areas. Compared to 2019, accidents and fatalities in rural areas in 2020 have decreased by 8.14% and 10.68 % respectively.

Accidents in residential areas constituted 28.12% of the accidents and 28.59% of the fatalities. Market and commercial areas accounted for 1,379 or 15.21% of the accidents and 14.12% of the fatalities. There were 902 accidents around Bus Stops and 311 next to Petrol Pumps.

The number of accidents recorded in 2020 in sunny weather was 4,579, in foggy weather 463 and rainy weather 295 accidents.

The violation of traffic rules and overspending have been the major reasons for accidents with 3,181 accidents.

In terms of road-user categories, the share of two-wheeler riders in the fatalities has been 25.09% in 2020. Pedestrian road users comprise 51.26% of persons killed in road accidents during 2020.

A total of 9,180 road accidents were reported from the districts in 2020, claiming 4,927 lives and causing injuries to 8,314.

Out of 805 RTAs at junctions, 284 (35.27%) junctions had some form of traffic control while the remaining

521 or 64.72% were uncontrolled.

Accidents on Curved Roads 1,000 (10.89%), Bridges and Culverts 310 (3.37%), Potholes (63), Steep Gradients (30) and Under Construction stretches (321). They together account for 4.50% of the total road accidents.

Among the vehicle categories involved in road accidents, Trucks Lorries and Motorized Two-Wheelers accounted for the highest share – 25.83% and 25.09%, respectively, in accidents and 26.67% and 13.26% in fatalities, respectively in 2020. Light vehicles comprising cars, jeeps and taxis as a category came next with a share of 23.67% in accidents and 20.17% in fatalities.

The percentage of pedestrian fatalities as a portion of all fatalities was 53.32% in 2019 and 51.26% in 2020. Of the 4,390 accidents in 2020, 1,811 happened during the night and 2,588 during the day. The largest number of accidents took place in Open Areas – 1,533 – resulting in the death of 930 people. Within this, rural roads accounted for 1,216 or 79.32% of the accidents

and 753 or 80.96% of the fatalities. Pedestrians suffered the most from Two-Wheelers (1,318 RTAs) and Truck/Lorries (1,038).

To implement the measures outlined in the State Road Safety Policy, the Government of West Bengal has formulated a multi-pronged road safety strategy based on 5 'Es', viz, Education, Engineering (both of roads and vehicles), Enforcement, Evaluation and Emergency Care. Road safety has been made an integral part of road design at the planning stages and a safety audit of selected stretches of National Highways and State Highways has been taken up.

A total of 9,85,628 prosecutions under various heads of traffic violations were submitted in 2020 against 17,71,680 in 2019 (a decrease of 44.36% – due to the COVID-19 pandemic) while the number of Driving Licenses suspended went down from 36,938 in 2019 to 21,285 in 2020.

Compared to 15,538 'Safe Drive, Save Life' road safety awareness activities in 2019, 9,964 were held in 2020 (because of Covid-19).



In percentage terms, accidents decreased by 9.6%, the number of fatal accidents by 10.5% and the number of persons killed by 10.4%. Injuries, which have been showing a downward trend since 2017, decreased by 12.66 %.

An Overview



NDIA is one of the busiest countries in the world in terms of road traffic. The automotive industry across the south Asian country became the fourth largest in the world in 2017. In 2019, there were almost three million new car registrations in the country. The Indian road network, spanning over five million kilometres, carried almost 90 percent of the country's passenger traffic and about 65 percent of the goods. With the rapid increase in the number of cars and the extremely congested Indian roads, road safety has turned into a factor of utmost importance for the country's citizens.

Road accidents have become a major concern for the people as well as the government. India roughly accounts for just about one percent of the global vehicle population. However, it accounted for about six percent of the total global road accidents. About three to five percent of the GDP is spent on road accidents each year.

In 2018, there were around 151,000 deaths due to road accidents in India. One of the contributing factors could be the ever-increasing vehicle population. In the last decade, the road network across the country grew by about a third of its original length. Vehicle registrations on the contrary, increased by almost three times. The majority of the accidents involved two-wheelers, which also dominate the Indian automotive industry in terms of production and sales. Over-speeding was another significant contributor to road accidents in India. Driving under the influence of alcohol, hit-and-run cases, and general traffic violations resulted in almost 80 percent of the accidents being the driver's

fault. Citizens aged between 18 and 45 years were involved in about 70 percent of the road accidents.

Motor vehicle insurance is one of the ways for victims to be compensated. Under the Motor Vehicle Act of 1988, third-party insurance was made compulsory for all motor vehicles. The insurance has unlimited liability and the premium amounts were calculated by courts based on a victim's age and financial earnings. Between 2009 and 2014, there was an increase of about 250 percent in third-party insurance earned premium.

To further reduce damage to lives, the fine for speeding was increased by ten times under the new Motor Vehicles Act of 2019. The fines for drunk driving were also raised. The possibility of imprisonment for illegal street racing was also introduced by the law. Strict enforcement of these laws, however, will likely be a key factor in mitigating road accident cases across India. Proper driver training and meticulous planning of the fast-growing road networks could also be key factors towards improving road safety in India.

A brief outline of the road accidents in West Bengal in 2019 and 2020

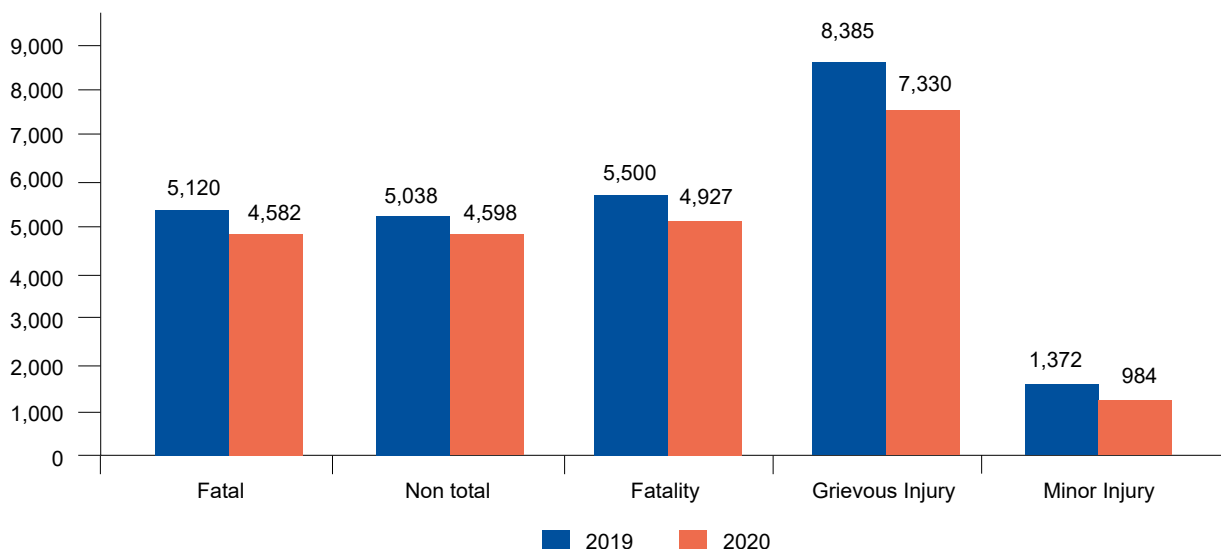
The number of road accidents in state has declined by 9.6% in 2020 in comparison to 2019. As Table-1 shows, a comparison of major parameters of road accidents in 2020 and the number of fatal accidents declined by 10.5%. Similarly there is a fall in the rate of persons killed by 10.4% in 2020 and 9.4% in total injuries.

Table-1A (page 20) shows the district-wise road accidents in 2020 vis-à-vis 2019. The four police units of Chandannagar PC, Malda, Purbo Bardhaman, and Howrah Rural contributed to 1,786 or 19.45% of

Table-1: Major parameters of road accidents in 2020 vis-à-vis 2019

Parameter		2019	2020	% change over previous year
Number of Road Accidents	Total	10,158	9,180	-9.6
	Fatal	5,120	4,582	-10.5
	Non-fatal	5,038	4,598	-8.7
Number of Persons Killed		5,500	4,927	-10.4
Number of Persons Injured	Total	9757	8,314	-14.7
	Grievous	8,385	7,330	-12.2
	Minor	1,372	984	-28.2
Accidents Severity (Persons killed per 100 accidents)		54.1	53.6	-0.9

Major parameters of road accidents – 2019 and 2020



road accidents in 2020 and 753 or 15.28% of total fatalities. The targeted annual decline of 10% in RTAs and fatalities has been seen in Barasat PD, Baruipur PD, Birbhum, Dakshin Dinajpur, Diamond Harbour, Howrah PC, Jhargram, Purba Medinipur, Purulia and Raiganj PD. Only Kalimpong saw more than a 10% rise in fatalities.

Nature of road accidents in 2020

The nature of accidents or collisions at aggregated state level data shows that 'hit from back' accounted for 24.07% of the total road accidents in 2020. The

other major types of collisions are 'hit from side' or lateral collisions at 9.34% and 'head-on collision' at 11.75%. Compared to 2019, 'Hit from back, and 'Hit form Side" have shown a significant increase in 2020. Almost all collisions came down in 2020 compared to 2019. Hit to pedestrian is a major cause for concern because it stood at 44.91% of all accidents in 2020.

Collision types and their spread

Table-3 (page 21) shows the occurrence of various collisions, while Table-4 (page 22) is a statement

Table-1A: RTAs in the districts – 2020 vis-à-vis 2019

SL. No.	Dist/Commissionerate	2019			2020			% change of RTA	% change of Fatality
		RTA	Fatalities	Injuries	RTA	Fatalities	Injuries		
1	Alipurduar	221	111	227	205	102	267	-7.2	-8.1
2	Asansol-Durgapur PC	446	313	352	428	315	246	-4.0	0.6
3	Bankura	274	187	241	255	193	166	-6.9	3.2
4	Barasat PD	338	150	302	269	112	231	-20.4	-25.3
5	Barrackpore PC	374	148	331	354	134	297	-5.3	-9.5
6	Baruipur PD	203	95	161	167	62	142	-17.7	-34.7
7	Basirhat PD	135	85	102	122	81	78	-9.6	-4.7
8	Bidhannagar PC	218	35	283	186	37	224	-14.7	5.7
9	Birbhum	421	242	411	353	165	373	-16.2	-31.8
10	Bongaon PD	102	51	77	88	56	71	-13.7	9.8
11	Chandannagar PC	120	73	113	147	69	108	22.5	-5.5
12	Cooch Behar	257	162	203	251	168	164	-2.3	3.7
13	Dakshin Dinajpur	267	144	245	190	108	150	-28.8	-25.0
14	Darjeeling	158	83	206	155	83	192	-1.9	0.0
15	Diamond Harbour PD	292	109	309	222	98	232	-24.0	-10.1
16	Hooghly Rural	427	233	554	384	221	387	-10.1	-5.2
17	Howrah PC	371	178	356	274	141	197	-26.1	-20.8
18	Howrah Rural	221	159	169	226	172	134	2.3	8.2
19	Islampur PD	215	149	138	197	139	95	-8.4	-6.7
20	Jalpaiguri	361	103	494	310	102	435	-14.1	-1.0
21	Jangipur PD	118	78	109	108	69	91	-8.5	-11.5
22	Jhargram	142	87	142	111	63	103	-21.8	-27.6
23	Kalimpong	44	14	60	36	23	49	-18.2	64.3
24	Krishnanagar PD	305	154	294	285	147	249	-6.6	-4.5
25	Malda	485	281	382	528	269	435	8.9	-4.3
26	Murshidabad PD	383	257	307	358	241	232	-6.5	-6.2
27	Paschim Medinipur	665	401	701	599	427	444	-9.9	6.5
28	Purba Bardhaman	835	363	979	885	243	1180	6.0	-33.1
29	Purba Medinipur	694	419	596	593	360	465	-14.6	-14.1
30	Purulia	224	175	153	156	118	240	-30.4	-32.6
31	Raiganj PD	265	176	198	226	138	166	-14.7	-21.6
32	Ranaghat PD	143	88	141	132	90	71	-7.7	2.3
33	Siliguri PC	264	108	234	224	113	183	-15.2	4.6
34	Sundarban PD	170	89	187	156	68	217	-8.2	-23.6
Total		10,158	5,500	9,757	9,180	4,927	8,314	-9.6	-10.4

Table 2: Types of road accidents in 2020 vis-à-vis 2019

Type of Road accident	2019	2020	% change over previous year
Fatal Accidents	5120 (50.4%)	4582 (45.1%)	-10.5
Grievous injury accidents	8385 (82.5%)	7330 (72.2%)	-12.5
Minor injury accidents	1372 (13.5%)	984 (9.7%)	-28.2
TOTAL	10158	9180	-9.6

Note : Figures in parentheses are the percentage share in total accidents

Table 3: Road accidents by type of collisions in 2020 vis-à-vis 2019

Type of collision	2019	2020	% change over previous year
1. With Parked Vehicle	123 (1.21)	112 (1.22)	-8.94
2. Hit from the Back	2,129 (20.95)	2,210 (24.07)	3.80
3. Hit from the side	806 (7.93)	858 (9.34)	6.45
4. Run off the road	256 (2.52)	211 (2.29)	-17.57
5. Fixed object	522 (5.13)	436 (4.74)	-16.47
6. Vehicle overturn	248 (2.44)	151 (1.64)	-39.11
7. Head-on collision	1,208 (11.89)	1,079 (11.75)	-10.67
8. With pedestrians	4,866 (47.90)	4,123 (44.91)	-15.26
Total	10,158	9,180	

Comparison of road accidents by type of collisions

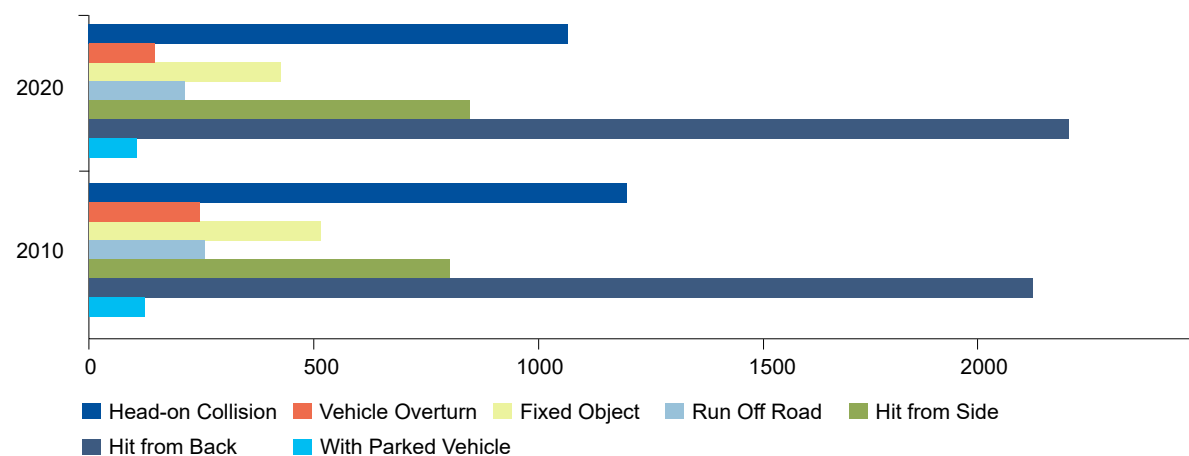


Table-4: District-wise RTA data of collision types – 2020

SL No.	District / PC	WITH PARKED VEHICLE	HIT FROM BACK	HIT FROM SIDE	RUN OF ROAD	FIXED OBJECT	VEHICLE OVERTURN	HEAD ON COLLISION	HIT TO PEDESTRIAN	Total
1	Alipurduar	3	34	21	4	18	10	54	61	205
2	Asansol-Durgapur PC	2	165	33	4	16	3	30	175	428
3	Bankura	3	67	20	10	10	4	21	120	255
4	Barasat PD	4	59	25	1	5	3	50	122	269
5	Barrackpore PC	2	94	57	2	8	3	27	161	354
6	Baruipur PD	2	37	15	7	7	3	27	69	167
7	Basirhat PD	0	26	7	2	4	1	15	67	122
8	Bidhannagar PC	0	83	29	0	17	2	7	48	186
9	Birbhum	1	71	19	2	12	5	52	191	353
10	Bongaon PD	0	12	4	0	0	1	21	50	88
11	Chandannagar PC	2	46	24	1	3	2	7	62	147
12	Cooch Behar	3	53	19	1	14	3	30	128	251
13	Dakshin Dinajpur	0	31	19	1	8	5	31	95	190
14	Darjeeling	9	23	16	13	27	10	10	47	155
15	Diamond Harbour PD	1	54	26	6	9	4	8	114	222
16	Hooghly Rural	13	116	37	11	20	9	76	102	384
17	Howrah PC	2	81	30	0	9	1	37	114	274
18	Howrah Rural	2	72	26	13	11	5	14	83	226
19	Islampur PD	3	25	13	0	8	0	12	136	197
20	Jalpaiguri	4	78	23	7	26	4	68	100	310
21	Jangipur PD	2	26	7	3	5	2	8	55	108
22	Jhargram	0	32	8	1	11	1	19	39	111
23	Kalimpong	0	3	4	15	4	5	1	4	36
24	Krishnanagar PD	2	63	15	0	12	4	37	152	285
25	Malda	6	87	40	17	17	8	60	293	528
26	Murshidabad PD	4	86	17	5	10	4	23	209	358
27	Paschim Medinipur	14	117	29	9	21	9	44	356	599
28	Purba Bardhaman	12	244	153	40	62	3	88	283	885
29	Purba Medinipur	10	161	42	6	25	13	48	288	593
30	Purulia	2	28	20	5	9	10	24	58	156
31	Raiganj PD	0	37	9	0	4	7	35	134	226
32	Ranaghat PD	0	32	5	5	3	3	29	55	132
33	Siliguri PC	2	40	23	18	14	2	54	71	224
34	Sundarban PD	2	27	23	2	7	2	12	81	156
Total		112	2210	858	211	436	151	1079	4123	9180

Table-4A: RTA data on collision types with road categories – 2020

Type of Collision	NH		SH		OR	
	Divided	Undivided	Divided	Undivided	Divided	Undivided
With parked vehicle	34	25	3	20	4	26
Hit from Back	626	366	80	384	128	626
Hit from Side	175	140	38	156	89	260
Run off Road	28	44	6	33	5	95
Fixed Object	75	67	17	67	27	183
Vehicle Overturn	28	34	5	24	11	49
Head on Collision	104	275	23	247	29	401
Hit to pedestrian	647	670	148	724	237	1697
Total	1,717	1,621	320	1,655	530	3,337

***Note: Over speeding and lane jumping may be the reasons for side swipes.

Table-4B: RTA data on traffic collisions at junctions – 2020

Type of collision	T-Junction	Y-junction	Four arm junctions	Staggered junction	Round about junction	Median Cut	Total
1. With Parked Vehicle	2	1	4	0	1	1	9
2. Hit from Back	74	40	53	5	8	60	240
3. Hit from side	28	19	28	0	5	20	100
4. Run Off Road	1	0	1	0	1	1	4
5. Fixed Object	7	7	2	1	0	7	24
6. Vehicle Overturn	4	2	4	0	0	1	11
7. Head on Collision	17	13	15	2	5	19	71
8. Hit to pedestrian	106	64	84	9	12	71	346

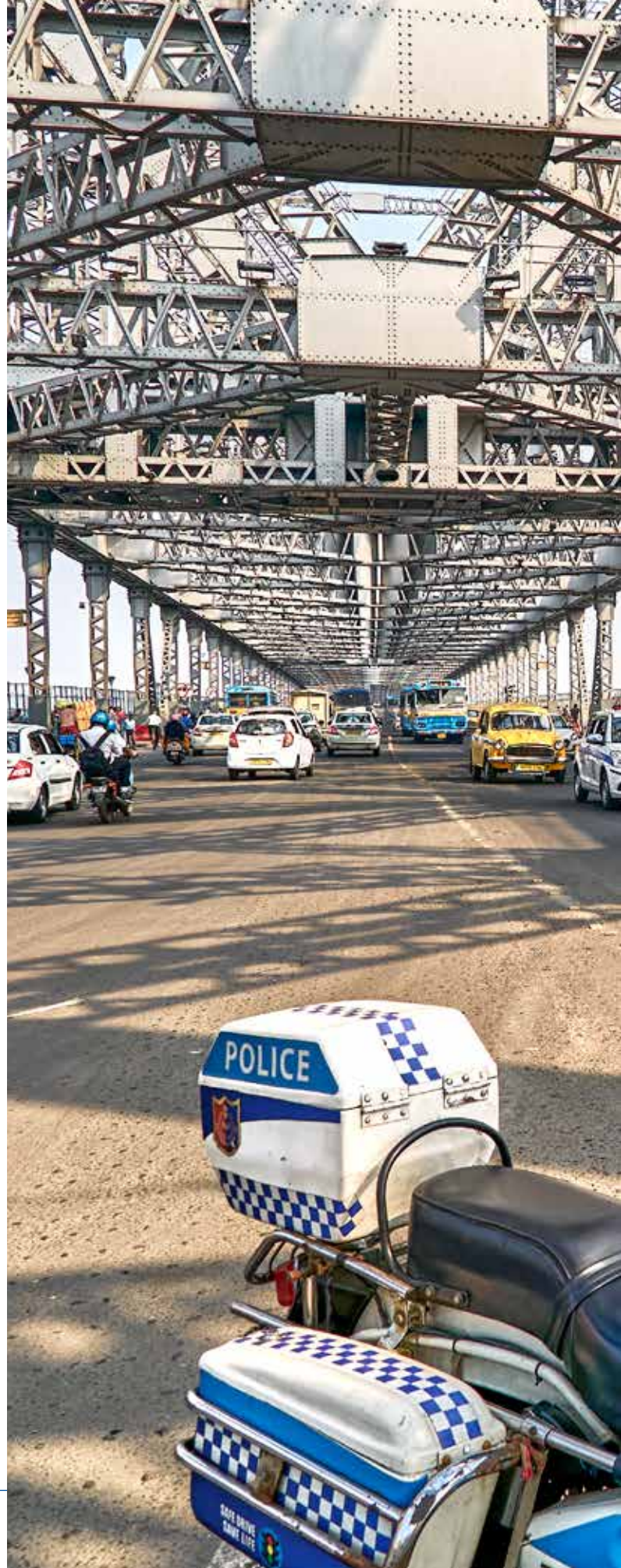
on the collision across districts. **Table-4A** shows collision types across divided- undivided carriageway. **Table-4B** shows collision types across various junctions.

The large number of head-on collisions on divided carriageways on NH (104), 23 on SH and 29 on OR point to the menace of foul driving, and enforcement authorities have to attend to it vigorously.

Out of the 1,079 Head-on collisions, 923 occurred on undivided carriageways. Out of the 923, 275 occurred on NH, 247 on SH and 401 on Other Roads. Similarly, 71 out of the 1,079 of head-on collisions, which accounted for 6.58% of all accidents, occurred at various kinds of junctions. Therefore, an increase in the stretch of divided carriageways and improvement in junction management by road-building agencies will be a prime requirement to reduce accidents and fatalities.

“

India roughly accounts for just about one percent of the global vehicle population. However, it accounts for about six percent of the total global road accidents. About three to five percent of the GDP is spent on road accidents each year





Profiling Road Accidents by Road Category, Type and Features



THE State of West Bengal in eastern India has a vast network of 33 National Highways (NH) with a total length of 3,857 km (16.35%), 195 State Highways (SH) with a total length of 3,700 km (15.68%) and the remaining 16,025 km (67.84%) consist of Other Roads (OR) – a total road network of 23,582 km (Data from the Public Works Department, West Bengal.)

The long-run trend of the relative share of road categories: The share of different categories of roads in the number of accidents, persons killed and injured has remained largely stable over the years. The number of road accidents on National Highways in 2020 has been lower than the previous year, i.e., 2019. The number of road accidents has also decreased in 2020 for State Highways and Other Roads categories. The fatalities in road accidents on National Highways, State Highways and Other Roads have decreased in 2020 in absolute terms as well as in percentage share.

Table-5 (facing page) gives the percentage share of the three broad categories of roads from 2017 to 2020.

District-wise distribution of accidents, injury and fatalities across different road categories and types of carriageways is given in **Table-5A** (page 28). Accidents across different National Highways are given in

Table-5B (page 29) and State Highways and other Roads in **Table-5C** (page 30).

In 2020, out of a total 9,180 road accidents, 3,338 (36.36%) took place on the National Highways (NH), 1,975 (21.51%) on State Highways (SH) and 3,867 (42.12%) on Other Roads. In case of fatalities, NH accounted for 1,810 (36.73%) deaths, SH 1,085 (22.02%) and Other Roads 2,032 (41.24%).

It is seen that the highest number of RTAs on NH, SH and Other Roads is in Purba Bardhaman district. The highest number of RTAs on NH is in NH 34 (729) followed by NH 2 (573), NH 6 (332) and NH-31 (324).

SH-7 is the highest affected state highway with 205 RTAs. On the Other Roads, the maximum RTAs (276) took place in Purba Bardhaman.

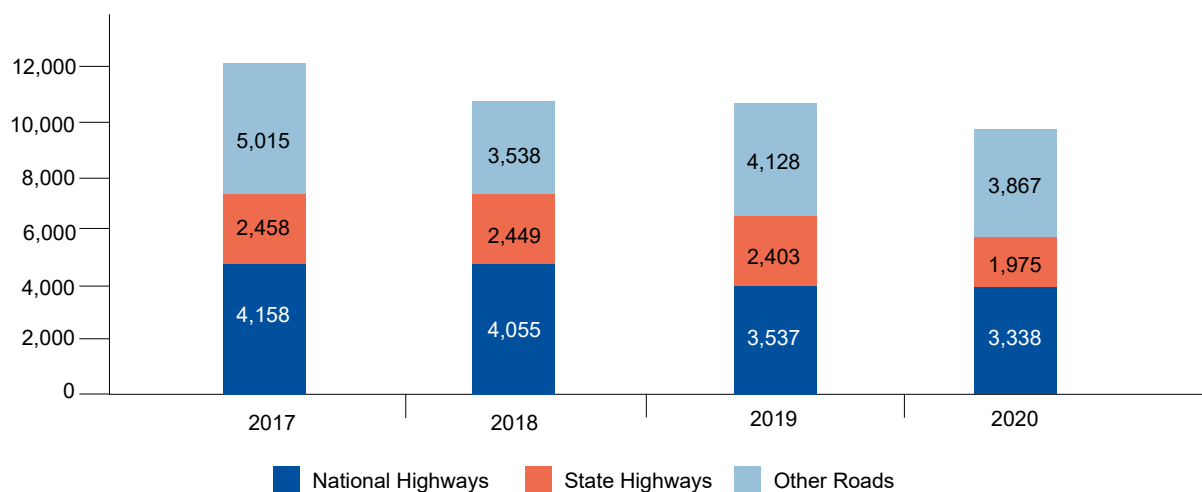
It was also seen that undivided carriageways accounted for 6,613 accidents (72.03%) with 3,580 (72.66 %) of them fatal.

The graph on the opposite page makes it evident that the rate of accidents related to the road categories of National Highways, State Highways and Other Roads show an absolute rate of decline from 2019 to 2020. Accidents on National Highways reduced by 5.6%.

Table-5: Road accidents, fatalities and injuries by road categories

Year	National Highways			State Highways			Other Roads		
	RTA	Fatalities	Injuries	RTA	Fatalities	Injuries	RTA	Fatalities	Injuries
2017	4,158	2,135	3,959	2,458	1,294	2,281	5,015	2,340	3,851
2018	4,055	2,137	4,199	2,449	1,427	2,522	3,538	1,853	3,114
2019	3,537	2,002	3,714	2,403	1,341	2,389	4,218	2,157	3,654
2020	3,338	1,810	3,259	1,975	1,085	1,832	3,867	2,032	3,223
TOTAL	15,088	8,084	15,131	9,285	5,147	9,024	16,638	8,382	13,842

Road accidents year-wise – 2017-2020



Similarly, accidents on State Highways and Other Roads also reduced by 17.8% and 8.3%, respectively.

Accidents by road environment

Road environment refers to the nature of built-up areas on roads. The distribution of accidents and fatalities across different environments is given in **Table-6** (page 31); a similar distribution district-wise is given in **Table-6A** (page 32). Accidents in residential areas constitute 28.12% of all accidents with 28.59% of fatalities. The highest was in Malda District (265). Market and commercial areas accounted for 1,397 or 15.21% of total accidents and 14.12% of fatalities with the highest (134) in Purba Bardhaman. There were 902 accidents around bus stops (highest in Paschim Medinipur, 108), and 311 accidents next to petrol

pumps (Hooghly Rural had the highest with 41). Open areas constitute 40.27% of total accidents and 40.79% of total fatalities.

The data for 2020, however, showed that over 40.27% of accidents occurred in open areas, i.e. locations that normally do not have any human activities in the vicinity (**Table-6** and **6A** on pages 31 and 32). However, if accidents in open areas are combined with accidents at junctions, it can be seen (**Table-6B** on page 33) that out of 3,679 accidents in open areas, 218 (5.92%) took place at different kinds of junctions – 41 at T-Junctions, 33 at Y-Junctions, 43 at Four Arm Junctions, 94 at Median Cut Junctions and 139 at Uncontrolled junctions.

Hence, an analysis of accidents by road environment

Table-5A: District-wise road accidents, fatalities and injuries by road categories – 2020

District / PC	NH			SH			OR		
	Total RTA	RTA in Divide Carriageways	RTA in Undivided Carriageways	Total RTA	RTA in Divide Carriageways	RTA in Undivided Carriageways	Total RTA	RTA in Divide Carriageways	RTA in Undivided Carriageways
Alipurduar	96	15	81	33	1	32	76	6	70
Asansol-Durgapur PC	201	141	60	43	8	35	184	23	161
Bankura	65	11	54	107	24	83	83	16	67
Barasat PD	126	18	108	34	1	33	109	6	103
Barrackpore PC	27	26	1	97	65	32	230	67	163
Baruipur PD	0	0	0	37	5	32	130	12	118
Basirhat PD	0	0	0	47	0	47	75	3	72
Bidhannagar PC	23	23	0	35	33	2	128	81	47
Birbhum	83	20	63	84	7	77	186	15	171
Bongaon PD	19	1	18	27	17	10	42	0	42
Chandannagar PC	27	27	0	91	42	49	29	2	27
Cooch Behar	61	10	51	56	10	46	134	17	117
Dakshin Dinajpur	83	11	72	12	0	12	95	9	86
Darjeeling	95	49	46	14	1	13	46	10	36
Diamond Harbour PD	82	3	79	0	0	0	140	21	119
Hooghly Rural	97	77	20	165	13	152	122	7	115
Howrah PC	119	90	29	47	2	45	108	24	84
Howrah Rural	99	96	3	16	0	16	111	10	101
Islampur PD	111	81	30	0	0	0	86	8	78
Jalpaiguri	195	33	162	1	0	1	114	4	110
Jangipur PD	59	54	5	17	3	14	32	7	25
Jhargram	33	29	4	33	1	32	45	0	45
Kalimpong	24	1	23	1	0	1	11	1	10
Krishnanagar PD	127	91	36	102	4	98	56	4	52
Malda	272	158	114	49	7	42	207	32	175
Murshidabad PD	100	55	45	131	7	124	127	12	115
Paschim Medinipur	209	115	94	125	23	102	265	34	231
Purba Bardhaman	302	249	53	307	8	299	276	20	256
Purba Medinipur	243	142	101	104	11	93	246	29	217
Purulia	27	3	24	72	8	64	57	9	48
Raiganj PD	110	36	74	31	8	23	85	5	80
Ranaghat PD	40	1	39	42	5	37	50	3	47
Siliguri PC	105	43	62	14	5	9	105	20	85
Sundarban PD	78	8	70	1	1	0	77	13	64
Total	3,338	1,717	1,621	1,975	320	1,655	3,867	530	3,337

Table-5B: District-wise RTA data on National Highways – 2020

District / PC	Total RTA	National Highway																				
		2	2B	6	10	31	31A	31C	31D	32	34	35	41	55	60	60A	81	116B	117	131A	327B	512
Alipurduar	96					32		63	1													
Asansol-Durgapur PC	201	177													24							
Bankura	65														53	12						
Barasat PD	126										47	79										
Barrackpore PC	27										27											
Baruipur PD	0																					
Basirhat PD	0																					
Bidhannagar PC	23										23											
Birbhum	83		2												81							
Bongaon PD	19											19										
Chandannagar PC	27	27																				
Cooch Behar	61					52		9														
Dakshin Dinajpur	83																					83
Darjeeling	95					42	15	23						12							3	
Diamond Harbour PD	82																		82			
Hooghly Rural	97	97																				
Howrah PC	119	20		78															21			
Howrah Rural	99			99																		
Islampur PD	111					99					12											
Jalpaiguri	195					34		49	112													
Jangipur PD	59										57				2							
Jhargram	33			33																		
Kalimpong	24						24															
Krishnanagar PD	127										127											
Malda	272										186						50			20		16
Murshidabad PD	100										100											
Paschim Medinipur	209			77											132							
Purba Bardhaman	302	252	50																			
Purba Medinipur	243			45									83					115				
Purulia	27									15						12						
Raiganj PD	110										110											
Ranaghat PD	40										40											
Siliguri PC	105				14	65			25					1								
Sundarban PD	78																		78			
Total	3,338	573	52	332	14	324	39	144	138	15	729	98	83	13	292	24	50	115	181	20	3	99

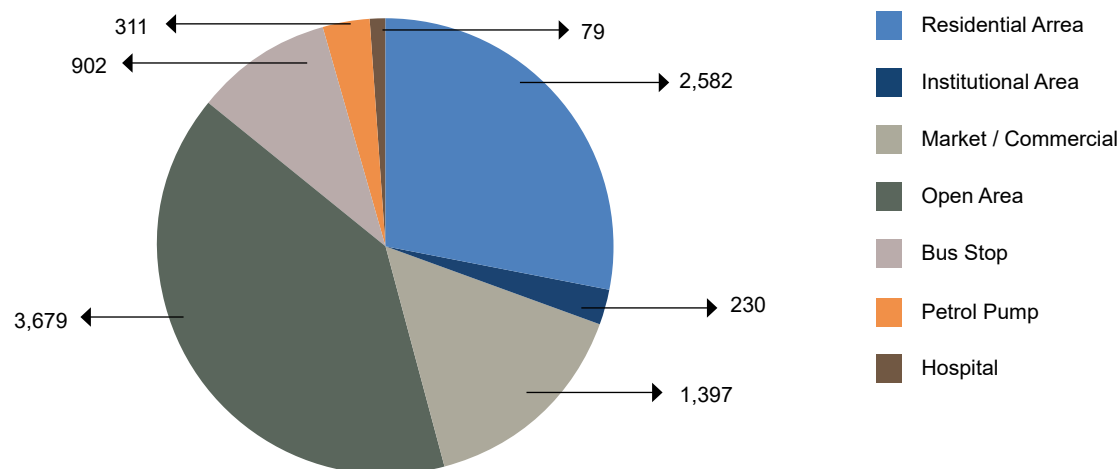
Table-5C: District-wise RTA data on State Highways – 2020

District / PC	Total RTA	State Highway																			OR
		1	2	3	4	4A	5	6	7	8	9	10	10A	11	11A	12	12A	13	14	15	
Alipurduar	33															20	13				76
Asansol-Durgapur PC	43						11				11								21		184
Bankura	107		37		7		2			25	36										83
Barasat PD	34		29	5																	109
Barrackpore PC	97	96	1																		230
Baruipur PD	37	24	13																		130
Basirhat PD	47		22	25																	75
Bidhannagar PC	35	1	34																		128
Birbhum	84							26	11					20				2	25		186
Bongaon PD	27	18		9																	42
Chandannagar PC	91		3					40										26		22	29
Cooch Behar	56																56				134
Dakshin Dinajpur	12												12								95
Darjeeling	14															14					46
Diamond Harbour PD	0																				140
Hooghly Rural	165		62					11	17									36		39	122
Howrah PC	47							44												3	108
Howrah Rural	16																			16	111
Islampur PD	0																				86
Jalpaiguri	1																1				114
Jangipur PD	17														17						32
Jhargram	33						19				14										45
Kalimpong	1															1					11
Krishnanagar PD	102			7				2		20				67					6		56
Malda	49											49									207
Murshidabad PD	131								44					73	14						127
Paschim Medinipur	125				61		35		29												265
Purba Bardhaman	307							74	104	5								28	43	53	276
Purba Medinipur	104				67		37														246
Purulia	72				9	8	53			2											57
Raiganj PD	31												31								85
Ranaghat PD	42	22		8										12							50
Siliguri PC	14															9	5				105
Sundarban PD	1	1																			77
Total	1,975	162	201	54	144	8	157	197	205	52	61	49	43	172	31	44	75	92	95	133	3867

Table-6: Accidents, fatalities and injuries by road environment – 2020

Sl No.	Type of Area	RTAs	Fatalities	Injuries
1	Residential Area	2,582 (28.12)	1,409 (28.59)	2,075 (24.95)
2	Institutional Area	230 (2.50)	135 (2.74)	154 (1.85)
3	Market/Commercial Area	1,397 (15.21)	696 (14.12)	1,165 (14.01)
4	Open Area	3,679 (40.27)	2,010 (40.79)	3,779 (45.45)
5	Bus Stop	902 (9.82)	473 (9.60)	736 (8.85)
6	Petrol Pump	311 (3.38)	159 (3.22)	322 (3.87)
7	Hospital	79 (0.86)	45 (0.91)	83 (0.99)
Total		9,180	4,927	8,314

Note : Figures in parentheses are percentage share in the total of respective columns



points to a great need for appropriate road engineering interventions – proper traffic calming at Market areas, better design and location of Bus Stops, safety at Petrol Pumps, appropriate markings, signages and signals as well as road calming measures at junctions.

Similarly, districts that have a very high number of accidents in residential areas of Malda (235), Raiganj PD (168), Murshidabad (162), Jalpaiguri (136), Purba Medinipur (122), Purba Bardhaman (113), Purba Medinipur (110) and Barasat PD (106) should increase awareness campaigns on road safety in those areas.

Table-6A: District-wise RTAs by road environment – 2020

District / PC	Residential Area	Institutional Area	Market/Comm. Area	Open Area	Bus Stop	Petrol Pump	Hospital
Alipurduar	83	1	25	84	6	5	1
Asansol-Durgapur PC	85	26	59	196	40	17	5
Bankura	61	5	19	120	40	6	4
Barasat PD	106	6	85	52	8	11	1
Barrackpore PC	99	8	58	118	59	9	3
Baruipur PD	71	3	34	50	7	1	1
Basirhat PD	64	1	36	12	7	2	0
Bidhannagar PC	73	5	29	18	59	2	0
Birbhum	81	0	20	170	66	13	3
Bongaon PD	37	5	21	24	0	0	1
Chandannagar PC	29	17	33	51	6	5	6
Cooch Behar	72	3	30	125	11	10	0
Dakshin Dinajpur	60	8	35	61	18	6	2
Darjeeling	41	3	13	93	1	4	0
Diamond Harbour PD	50	12	21	111	20	7	1
Hooghly Rural	63	3	92	166	19	41	0
Howrah PC	53	23	40	108	40	6	4
Howrah Rural	83	8	27	76	23	7	2
Islampur PD	36	2	22	102	20	13	2
Jalpaiguri	136	2	28	130	7	6	1
Jangipur PD	39	2	18	31	11	6	1
Jhargram	16	2	10	68	9	6	0
Kalimpong	6	0	1	29	0	0	0
Krishnanagar PD	69	4	38	124	32	15	3
Malda	235	10	68	126	69	16	4
Murshidabad PD	162	9	25	104	41	16	1
Paschim Medinipur	110	10	102	236	108	24	9
Purba Bardhaman	113	9	134	565	29	20	15
Purba Medinipur	122	12	123	225	85	24	2
Purulia	37	1	9	96	7	3	3
Raiganj PD	168	2	29	19	4	4	0
Ranaghat PD	26	10	35	38	18	2	3
Siliguri PC	67	18	51	79	4	4	1
Sundarban PD	29	0	27	72	28	0	0
Total	2,582	230	1,397	3,679	902	311	79

Table-6B: RTAs at accident spots in open areas, junction type-wise –2020

T-Junction		Y-Junction		Four-Arm Junction		Staggered Junction		Roundabout Junction		Median Cut		Uncontrolled Junction	
RTA	Fatalities	RTA	Fatalities	RTA	Fatalities	RTA	Fatalities	RTA	Fatalities	RTA	Fatalities	RTA	Fatalities
41	19	33	17	43	909	1	0	6	4	94	68	139	86

Table-7: Accidents, fatalities and injuries by road features – 2020

Road Type	RTA	Fatalities	Injuries
1. Straight Road	7456 (81.22)	3962 (80.41)	6713 (80.74)
2. Curved Road	1000 (10.89)	541 (10.98)	948 (11.40)
3. Bridge	202 (2.20)	105 (2.13)	190 (2.29)
4. Culvert	108 (1.18)	72 (1.46)	98 (1.18)
5. Pot Holes	63 (0.69)	39 (0.79)	57 (0.69)
6. Steep Grade	30 (0.33)	17 (0.35)	39 (0.47)
7. On-going Road Works / Under Construction	321 (3.50)	191 (3.88)	269 (3.24)
Total	9,180	4,927	8,314

Accidents by road features – 2020

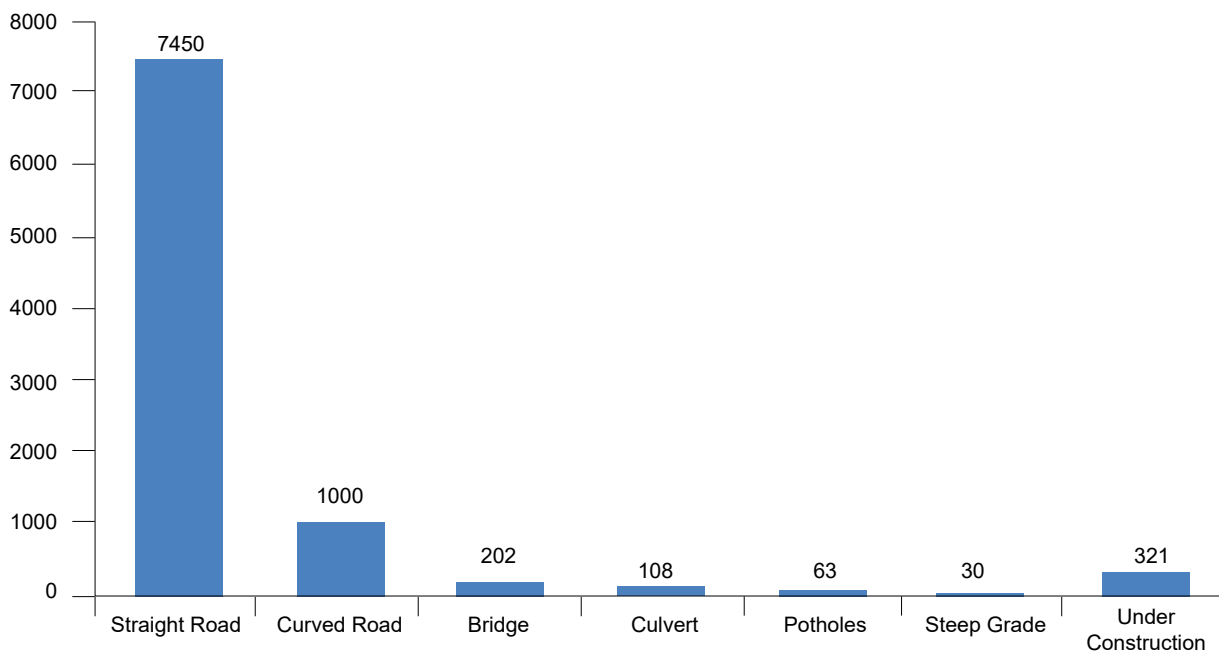


Table-7A: Accidents, fatalities and injuries on Curved Roads – 2020

District / PC	RTA	Fatalities	Injuries
Alipurduar	19	7	21
Asansol-Durgapur PC	26	24	11
Bankura	32	25	32
Barasat PD	22	8	21
Barrackpore PC	43	13	36
Baruipur PD	26	6	31
Basirhat PD	11	8	5
Bidhannagar PC	19	4	19
Birbhum	41	26	48
Bongaon PD	12	8	6
Chandannagar PC	3	1	2
Cooch Behar	31	17	26
Dakshin Dinajpur	12	8	6
Darjeeling	28	12	59
Diamond Harbour PD	15	6	18
Hooghly Rural	41	23	49
Howrah PC	15	3	15
Howrah Rural	33	21	28
Islampur PD	17	14	4
Jalpaiguri	34	13	34
Jangipur PD	20	15	12
Jhargram	21	16	16
Kalimpong	29	15	42
Krishnanagar PD	13	7	11
Malda	82	42	57
Murshidabad PD	17	10	9
Paschim Medinipur	66	41	45
Purba Bardhaman	90	30	111
Purba Medinipur	86	56	61
Purulia	26	20	65
Raiganj PD	27	19	14
Ranaghat PD	13	10	3
Siliguri PC	9	5	7
Sundarban PD	21	8	24
Total	1,000	541	948

Table-7B: RTAs at accident spots on straight stretches, junction type-wise – 2020

T-Junction		Y-Junctions		Four Arm Junctions		Staggered Junctions		Roundabout Junctions		Median Cuts		Uncontrolled Junctions	
RTA	Fatalities	RTA	Fatalities	RTA	Fatalities	RTA	Fatalities	RTA	Fatalities	RTA	Fatalities	RTA	Fatalities
189	88	86	44	179	84	13	7	29	15	168	117	337	191

Accidents by road features

Road features such as curved roads, potholes and steep gradients tend to be accident-prone as it takes skill, extra care and alertness to negotiate these road features. Accidents on curved roads (1,000 or 10.89%), Bridges and Culverts 310 (3.38%), Potholes (63), Steep Gradients (30) and Under Construction stretches (321) together accounted for 4.50% of the total road accidents (**Table-7** on page 33). The district-wise distribution of accidents on curved roads is given in **Table-7A** (page 34).

The data for 2020 has shown that 81.22 % or 7,456 of accidents took place on Straight Roads which are normally considered less risky. However, a finer analysis by overlaying the data of junction control with road features (see **Table-7B** above) shows that out of 7,456 RTAs recorded on stretches of Straight Roads, 664 (8.90%) were at spots where there was a kind of junction – 189 were at T junctions, 179 at Four-Arm junctions, 168 at Median Cuts, etc. Out of 664 accidents on Straight Roads which took place at Junctions, 337 were uncontrolled junctions.

Hence, an analysis of accidents by road feature showed the great need for appropriate road engineering interventions – such as highlighting approaches to bridges as well as the curvatures of curved stretches (both during the day and night), better design and location of Bus Stops, safety at Petrol Pumps, appropriate markings, signages and signals as well as road calming measures at the junctions and on stretches under repair.

Accidents by type of road junctions

Road junctions are points where traffic merges and hence are prone to accidents. They are also major challenges to vulnerable road users like pedestrians.

In 2020, 805 accidents occurred at road junctions which comprises 8.76 % of the total 9,180 accidents recorded in the State and resulted in 428 fatalities or 8.68 % of fatalities (**Table-8** on page 36).

Among road junctions, T-junctions accounted for the highest number of accidents – 29.68%. This is a major challenge to Road Safety brought about by the mushrooming of a very large number of lower hierarchy roads merging into the main carriageways. Accidents at Four Arm junctions was 191 or 23.72%, followed by Median Cuts 180 or 22.36%, Y-junctions 146 or 18.13% and Roundabout junctions 32 or 3.97%.

The distribution of accidents at junctions across different road features is given in **Table-8A** (page 36). It is seen that out of 7,456 RTAs on Straight roads, 664 occurred at junctions. Some kind of junction existed at 1,000 RTA spots on Curved roads.

The distribution of accidents at different types of junctions across road categories is given in **Table-8B** (page 36). Of the 805 accidents at junctions, 355 or 44.09% occurred on National Highways, 185 or 22.98 % on State Highways and 265 or 32.91% on Other Roads.

The distribution of accidents at different types of junctions covering vulnerable road users like

Table-8: Accidents at road junctions – 2020

SI No.	Junction types	Number of Accidents	Persons Killed	Persons Injured
1	T Junction	239 (29.68)	117 (27.33)	205 (31.29)
2	Y Junction	146 (18.13)	75 (17.52)	125 (19.08)
3	Four Arm Junction	191 (23.72)	90 (21.02)	153 (23.35)
4	Staggered Junction	17 (2.11)	7 (1.63)	15 (2.29)
5	Median Cut	180 (22.36)	124 (28.97)	128 (19.54)
6	Round About Junction	32 (3.97)	15 (3.50)	29 (4.42)
Total		805	428	655

Note : Figures in parentheses are percentage share in the total of respective columns

Table-8A: Road feature-wise RTA data at junctions – 2020

SI No.	Road Features	Type of Junctions						
		T Junction	Y Junction	Four Arm Junction	Staggered junction	Round About Junction	Median Cut	Total
1	Straight Road	189	86	179	13	29	168	664
2	Curve Road	42	50	0	0	2	0	94
3	Bridge	0	1	0	0	0	0	1
4	Culvert	0	0	0	0	0	0	0
5	Pot Holes	4	0	3	1	0	1	9
6	Steep Grade	1	2	0	0	1	1	5
7	Under Construction	1	2	0	0	1	1	5
Total		237	141	182	14	33	171	778

Table-8B: RTA at junctions with NH/SH/OR – 2020

Junction Type	Total RTA			NH			SH			OR		
	RTA	Fatality	Injury	RTA	Fatality	Injury	RTA	Fatality	Injury	RTA	Fatality	Injury
1. T Junction	239	117	205	95	41	101	49	28	41	95	48	63
2. Y Junction	146	75	125	48	26	38	27	12	21	71	37	66
3. Four Arm Junction	191	90	153	86	44	67	55	28	41	50	18	45
4. Staggered Junction	17	7	15	8	2	9	5	3	2	4	2	4
5. Roundabout Junction	32	15	29	14	8	6	10	6	9	8	1	14
6. Median cut	180	124	128	104	69	72	39	27	32	37	28	24
Total	805	428	655	355	190	293	185	104	146	265	134	216

Table-8C: RTA data on vulnerable roads, user-wise, junction type-wise – 2020

Sl No.	Road users	Type of Junctions						
		T Junctions	Y Junction	Four Arm	Staggered	Roundabouts	Median Cuts	Total
1	Pedestrian	107	70	91	9	14	84	375
2	Bus	25	12	15	3	5	9	69
3	Lorry	70	40	59	2	11	60	242
4	Four-Wheeler	65	40	68	7	7	55	242
5	Two-wheeler	93	60	70	9	12	61	305

Table-8D: RTAs at junctions types – 2020

Junction Type	Total RTAs			DAY			NIGHT		
	RTAs	Fatalities	Injuries	RTAs	Fatalities	Injuries	RTAs	Fatalities	Injuries
1. T Junction	239	117	205	136	62	109	103	55	96
2. Y Junction	146	75	125	97	44	98	49	31	27
3. Four-arm Junction	191	90	153	95	46	77	96	44	76
4. Staggered Junction	17	7	15	9	5	7	8	2	8
5. Roundabout Junction	32	15	29	19	8	21	13	7	8
6. Median cut	180	124	128	95	70	68	85	54	60
Total	805	428	655	451	235	380	354	193	275

Table-9: Accidents at road junctions by type of traffic control – 2020

Junction type	Total No. of Accident	Persons Killed	Persons Injured
1. Traffic Light Signal	134 (16.55)	117 (27.33)	205 (31.29)
2. Police Control	219 (27.20)	116 (27.10)	173 (26.14)
3. Stop Sign	26 (3.23)	16 (3.74)	31 (4.73)
4. Flashing Signal/Blinker	5 (0.62)	1 (0.23)	6 (0.92)
5. Uncontrolled	421 (52.30)	235 (54.91)	339 (51.76)
Total	805	428	655

Note : Figures in parentheses are percentage share in the total of respective columns

Road junctions by type of Traffic Control

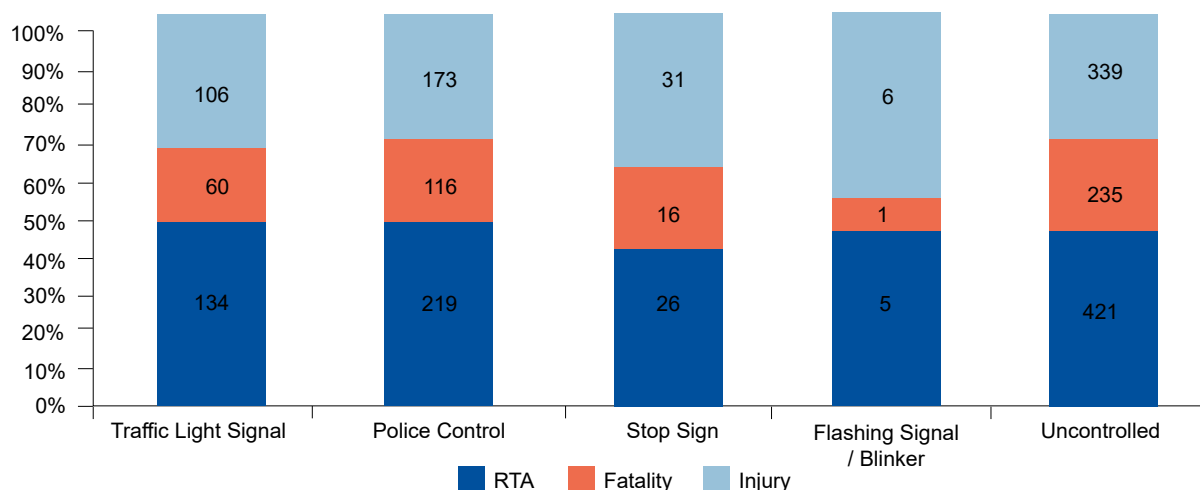


Table-9A: RTA with junction controls with NH/SH/OR – 2020

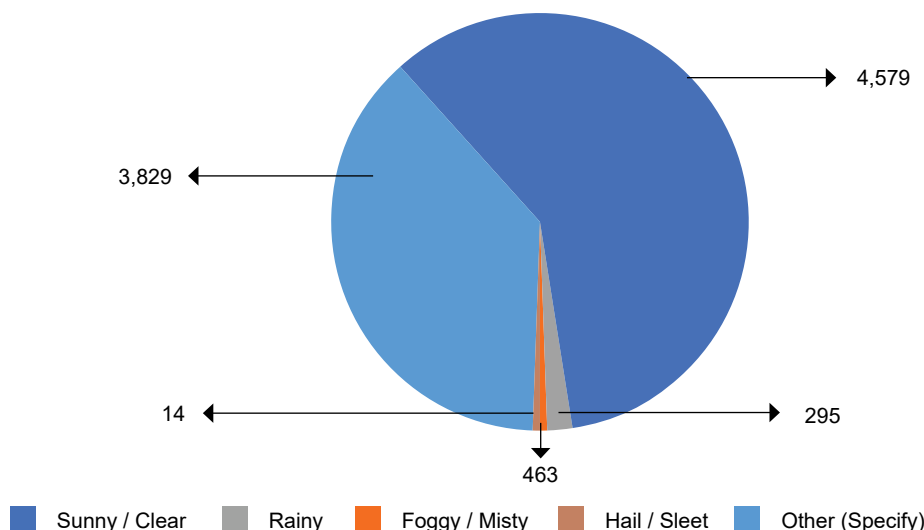
Traffic Control	Total			NH			SH			OR		
	RTA	Fatality	Injury	RTA	Fatality	Injury	RTA	Fatality	Injury	RTA	Fatality	Injury
Traffic Light Signal	134	60	106	50	29	40	42	17	32	42	14	34
Police Control	219	116	173	122	63	95	54	34	45	43	19	33
Stop Sign	26	16	31	13	9	12	5	3	6	8	4	13
Flashing Signal / Blinker	5	1	6	4	1	5	0	0	0	1	0	1
Uncontrolled	421	235	339	166	88	141	84	50	63	171	97	135
Total	805	428	655	355	190	293	185	104	146	265	134	216

Table-10: Road accidents by weather conditions – 2020

Sl No.	Weather Condition	RTA	Fatality	Injury
1	Sunny/Clear	4,579 (49.88%)	117 (27.33%)	205 (31.29%)
2	Rainy	295 (3.21%)	75 (17.52%)	125 (19.08%)
3	Foggy / Misty	463 (5.04%)	90 (21.02%)	153 (23.35%)
4	Hail/Sleet	14 (0.15%)	13 (0.26%)	9 (0.10%)
5	Others (Specify)	3,829 (41.71%)	2,129 (43.21%)	3,364 (40.46%)
Total		9,180	4,927	8,314

Note : Figures in parentheses are percentage share in the total of respective columns

Road accidents by weather condition



pedestrians as well as by major vehicle categories like Bus, Lorry, Four-wheelers and two-wheelers is given in **Table-8C** (page 37). Out of the 4,927 accidents involving pedestrians, 375 or 7.61 % occurred at junctions. It clearly shows the need for road engineering interventions at junctions like protective railings at intersection arcs, signages, road marking and traffic calming measures. Out of 2,593 accidents involving lorries, 9.33% occurred at junctions.

The distribution of accidents at junctions by day and night is given in **Table-8D** (page 37). It is seen that 43.97% of such accidents take place at night, clearly showing the need for adequate night traffic control devices at junctions

Accidents by Traffic Control type

Out of the 805 accidents at road junctions, 384 (47.70%) took place at junctions that had traffic control measures such as traffic light signals, police control, stop signs and flashing signals/blinders, The remaining 421 (52.29%) took place at uncontrolled junctions (**Table-9** on page 37). This highlights the

importance and also the inadequacy of traffic control mechanisms at road junctions and a major traffic engineering shortcoming. RTAs on junction control on different road categories are given in **Table-9A** (opposite page). It shows that of the 805 accidents at junctions, 355 or 44.09 % took place on NH, 185 or 22.98% on SH and 265 or 32.91% on Other Roads. Also, out of 421 accidents at uncontrolled junctions, 166 or 39.42% occurred on NH. Of the 384 controlled junctions where accidents took place, 219 or 57.03% were controlled by policemen. Further, out of 189 accidents on controlled junctions on NH, as many as 122 were controlled by policemen. This clearly shows the severe gap in placing non-manned traffic control mechanisms on National Highways and the limitations of police controls on such high-speed roads.

Accidents by weather condition

Table-10 (opposite page) shows that 49.88% of the accidents took place in sunny/clear weather. Accidents under adverse weather conditions such as rain, fog and hail/sleet accounted for only 8.4 % of the road accidents in 2020.





“

To implement the measures outlined in the State Road Safety Policy, the Government of West Bengal has formulated a multi-pronged road safety strategy based on 5 'Es', viz, Education, Engineering (both of roads and vehicles), Enforcement, Evaluation and Emergency Care

Spatial and Temporal Distribution of Road Accidents

Spatial and temporal factors have a huge impact on traffic behaviour in any area. This chapter explains how road accidents vary in accordance with spatial dynamics and temporal dynamics from 2019 to 2020. This section examines the distribution of road accident statistics of 2020 between rural areas and urban areas, and also across the months in a year and time during a day. As per the 2011 census, 67.8 per cent of India's population live in rural areas and 31.2 per cent live in urban areas. Urban areas have more population and more National Highways pass through these areas and therefore there are more road accidents compared to rural areas. Social

and economic activities and travel during a year and in a day have some seasonality and patterns which affect road traffic volume and, perhaps, incidences of accidents as well. This section presents a summary of the data for 2020 furnished by the districts.

Road accidents in urban and rural areas

In 2020, 26.38% of road accidents were recorded in urban areas and 73.61% were in rural areas. 23.30% of those killed in road accidents were in urban areas and 76.69 % rural areas. Compared to 2019, the share of accidents and fatalities in Urban Areas and Rural Areas has come down in 2020. The decline in the share of accidents and fatalities in the

Table-11: Number of road accidents, fatalities and injuries in Rural and Urban areas during 2019 and 2020

Area Type	2019			2020		
	RTA	Fatality	Injury	RTA	Fatality	Injury
Urban Area	2,801 (27.57)	1,269 (23.07)	2,612 (26.77)	2,422 (26.38)	1,148 (23.30)	2,005 (24.11)
Rural Area	7,357 (72.42)	4,231 (76.92)	7,145 (73.22)	6,758 (73.61)	3,779 (76.69)	6,309 (75.88)
Total	10,158	5,500	9,757	9,180	4,927	8,314
* Figures in parentheses indicate the percentage share in the total of share of the total.						

Urban Area and Rural Areas could be on account of a massive road safety awareness programme (Safe Drive Save Life) which probably touched urban areas and rural areas.

Month-wise distribution of road accidents

The aggregate data on the month-wise distribution of road accidents for 2020 shows that the numbers of accidents are the highest from October to December and fatalities peaked in January and November (see Table 12 below).

Time interval-wise distribution of road accidents

During the dark hours, i.e. between 6 p.m. to 6

a.m., 43.64% of the accidents took place although the number of vehicles could be hardly 30%. One of the reasons is inadequate non-manual traffic control on roads as mentioned in the preceding chapter. Further, the quality of the signage and road marking is quite poor. Another reason could be the non-compliance of vehicles with rear-end conspicuity signs. A big reason could be the high use of roads by lorries at night. The distribution of accidents by various road users is given in Table-13A (page 44). In 2020, the time between 3 p.m. and 6 p.m. recorded the maximum number of road accidents, accounting for 15.72% of the total accidents in the State (see Table-13 on page 44). The second-highest number of accidents – 15.61% – was recorded between 9 a.m. and 12 noon.

Table-12: Month-wise distribution of road accidents and fatalities - 2020

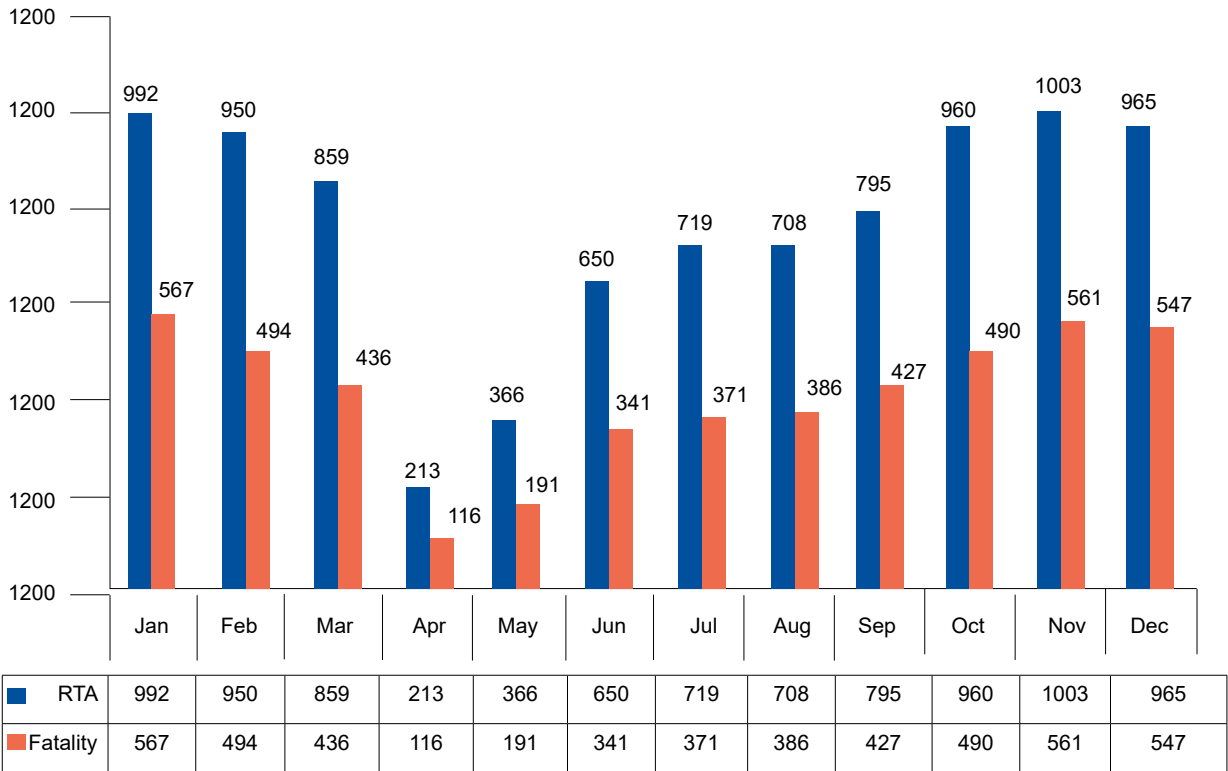




Table-13: Number of road accidents by time intervals of day – 2019 and 2020

SI No.	Time	2019		2020	
		Number of Accidents	% of share in total accidents	Number of Accidents	% of share in total accidents
1	06:00 – 09:00 hrs. (Day)	1,074	10.57	953	10.38
2	09:00 – 12:00 hrs. (Day)	1,698	16.72	1,433	15.61
3	12:00 – 15:00 hrs. (Day)	1,362	13.41	1,343	14.63
4	15:00 – 18:00 hrs. (Day)	1,453	14.30	1,444	15.73
5	18:00 – 21:00 hrs. (Night)	1,504	14.81	1,420	15.47
6	21:00 – 24:00 hrs. (Night)	1,016	10.00	844	9.19
7	00:00 – 03:00 hrs. (Night)	1,366	13.45	1,150	12.53
8	03:00 – 06:00 hrs. (Night)	685	6.74	593	6.46
TOTAL		10,158	100	9,180	100

Table-13A: The distribution of accidents by various kinds of road users during day and night

Road User	Total Accident	Day	Night
Pedestrian	4399	2588	1811
Bus	517	334	183
Lorry	2593	1489	1104
Four - Wheeler	2644	1484	1160
Two -Wheeler	3984	2221	1763

Involvement of Vehicles at Fault



VEHICLES sold in 80% of all countries worldwide fail to meet basic safety standards. The safety of vehicles plays a critical role both in averting crashes and reducing the likelihood of serious injury in the event of a crash (WHO: 10 facts on Global Road Safety). There are over 96 lakh registered vehicles in West Bengal. The level of vulnerability of road-users to accidents is high as the same road space is shared among a wide variety of motorized and non-motorized vehicles and pedestrians. Among motorized vehicles, trucks and lorries constitute 25.83%, motorized two-wheelers 25.09%, and cars, jeeps and taxis constitute 23.67 %. Non-motorized vehicles on the roads include cycles, cycle rickshaws, hand-drawn carts, and animal-drawn carts.

Vehicular composition of vehicles involved in accidents

Trucks/lorries, which constitute 2.46% of registered vehicles, accounted for 25.83% of the total road offenders in 2020. Under motorized vehicle categories, trucks and lorries accounted for the highest share in road accidents at 25.83% followed by two-wheelers 25.09%, Cars, Jeeps, Vans and Taxis 23.67%, Buses 5.08 % and other articulated vehicles 1.95%, Tempos and Tractors 4.03% and Auto-rickshaws 1.71%.

In the case of fatalities, 29.34% of deaths in road accidents in 2020 involved trucks or lorries against 29.35% in 2019. The number and percentage share of accidents, persons killed and injured during 2019 and 2020 based on vehicle type involved is given in **Table-14**

(page 46). The distribution of truck accidents across districts is given in **Table-14A** (page 47). It is seen that the highest number of lorry accidents were in Purba Bardhaman – 256, Paschim Medinipur – 187, Hooghly Rural – 153, Birbhum – 128, Purba Medinipur – 120, Malda – 146, Asansol-Durgapur – 132, Murshidabad – 129 and Krishnagar PD – 104. A list of stretches vulnerable to truck accidents is given in **Table-14B** (page 48). **Table-14C** (page 48) is a list of 15 Police Stations with the largest number of truck accidents.

Table-14D (page 49) shows the distribution of two-wheeler accidents across districts. The maximum number of accidents involving two-wheelers was in Purba Bardhaman – 457, Purab Medinipur – 295, Asansol Durgapur – 243, Malda – 238, Paschim Medinipur – 237, Hooghly Rural – 176, Jalpaiguri – 174, Barrackpore – 161 and Birbhum – 152. Stretches with high intensity of two-wheeler accidents are given in **Table-14E** (page 50). The distribution of the age of drivers of offending two-wheelers is given in **Table-14F** (page 50).

Age of vehicles involved in road accidents

The age of vehicles involved in road accidents throws some light on the prevalence of aged or over-aged vehicles on the roads, accidents due to vehicle defects, assuming that old vehicles tend to have more frequent malfunctions, and the number and share of old vehicles in accidents. In 2020, a total of 1,846 road accidents happened involving vehicles older than 10 years

Table-14: Road accidents, fatalities and injuries by offending vehicle types – 2019 and 2020

Type of Vehicle	2019			2020		
	RTA	Fatality	Injury	RTA	Fatality	Injury
1. Motorised Two Wheeler	2478 (24.39)	1287 (23.40)	1834 (18.80)	2303 (25.09)	1146 (23.26)	1776 (21.36)
2. Auto Rickshaw	249 (2.45)	97 (1.76)	250 (2.56)	157 (1.71)	69 (1.40)	162 (1.95)
3. Car/Jeep/Van/Taxi	2496 (24.57)	1199 (21.80)	2775 (28.44)	2173 (23.67)	994 (20.17)	2344 (28.19)
4. Bus	800 (7.88)	313 (5.69)	1434 (14.70)	466 (5.08)	203 (4.12)	836 (10.06)
5. Truck/Lorry	2893 (28.48)	1614 (29.35)	2818 (28.88)	2371 (25.83)	1314 (26.67)	2150 (25.86)
6. Heavy Articulated Veh./Trolley	197 (1.94)	105 (1.91)	182 (1.87)	179 (1.95)	98 (1.99)	190 (2.29)
7. Tempo/Tractor	384 (3.78)	229 (4.16)	333 (3.41)	370 (4.03)	192 (3.90)	315 (3.79)
8. E-Rickshaw / Toto	54 (0.53)	18 (0.33)	61 (0.63)	31 (0.34)	9 (0.18)	31 (0.37)
9. Bicycle	0 (0.00)	0 (0.00)	0 (0.00)	15 (0.16)	8 (0.16)	11 (0.13)
10. Cycle Rickshaw	1 (0.01)	0 (0.00)	1 (0.01)	5 (0.05)	0 (0.00)	7 (0.08)
11. Hand Drawn Cart	1 (0.01)	0 (0.00)	1 (0.01)	9 (0.10)	5 (0.10)	4 (0.05)
12. Animal Drawn Cart	0 (0.00)	0 (0.00)	0 (0.00)	1 (0.01)	1 (0.02)	0 (0.00)
13. Others	605 (5.96)	638 (11.60)	68 (0.70)	1100 (11.98)	888 (18.02)	488 (5.87)
Total	10,158	5,500	9,757	9,180	4,927	8,314

Note : Figures in parentheses are percentage share in the total of respective columns.

Share of vehicles in road accidents 2020

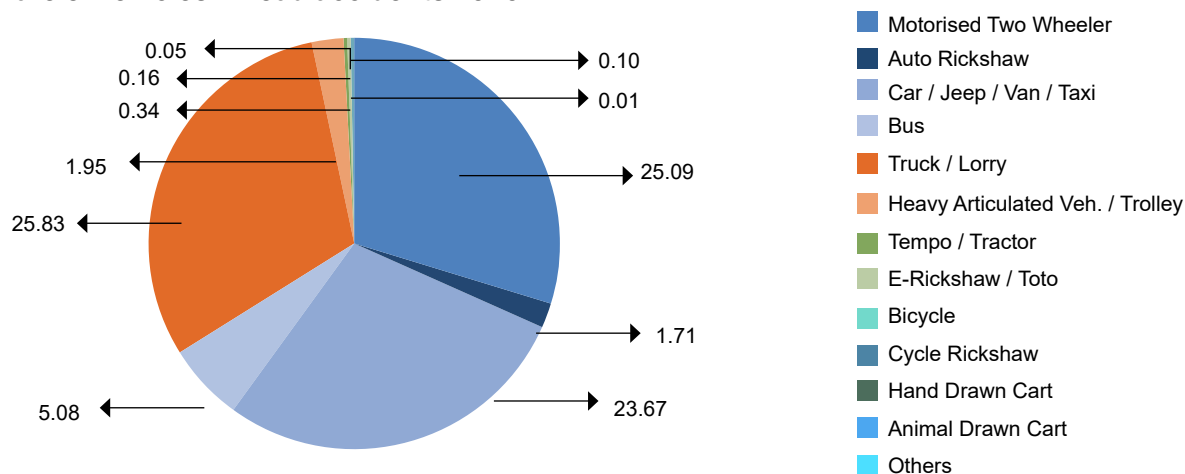


Table-14A: Trucks/lorries involved in RTAs district-wise – 2020

SI No.	District / PC	Total No. of RTAs in 2020	Trucks/lorries involved in RTAs in 2020			% of RTA
			RTA	Fatalities	Injuries	
1	Alipurduar	205	44	29	76	21.46
2	Asansol-Durgapur PC	428	132	96	98	30.84
3	Bankura	255	98	71	54	38.43
4	Barasat PD	269	81	31	74	30.11
5	Barrackpore PC	354	66	30	54	18.64
6	Baruipur PD	167	29	9	26	17.37
7	Basirhat PD	122	43	27	26	35.25
8	Bidhannagar PC	186	24	7	27	12.90
9	Birbhum	353	128	59	147	36.26
10	Bongaon PD	88	22	13	26	25.00
11	Chandannagar PC	147	63	24	51	42.86
12	Cooch Behar	251	52	33	45	20.72
13	Dakshin Dinajpur	190	40	20	54	21.05
14	Darjeeling	155	47	30	47	30.32
15	Diamond Harbour PD	222	48	25	46	21.62
16	Hooghly Rural	384	153	76	163	39.84
17	Howrah PC	274	73	44	58	26.64
18	Howrah Rural	226	53	47	45	23.45
19	Islampur PD	197	56	40	27	28.43
20	Jalpaiguri	310	82	20	130	26.45
21	Jangipur PD	108	46	32	28	42.59
22	Jhargram	111	28	9	39	25.23
23	Kalimpong	36	11	7	8	30.56
24	Krishnanagar PD	285	104	65	95	36.49
25	Malda	528	146	74	133	27.65
26	Murshidabad PD	358	129	84	73	36.03
27	Paschim Medinipur	599	187	122	155	31.22
28	Purba Bardhaman	885	256	83	325	28.93
29	Purba Medinipur	593	120	77	120	20.24
30	Purulia	156	42	36	53	26.92
31	Raiganj PD	226	63	37	62	27.88
32	Ranaghat PD	132	50	37	23	37.88
33	Siliguri PC	224	57	34	39	25.45
34	Sundarban PD	156	20	8	48	12.82
Total	9,180	2,593	1,436	2,475	28.25	

Table-14B: Top stretches where truck/lorry accidents occurred – 2020

District / Police Comm.	Police Station	Total RTA	RTA involved by Truck/Lorry	Stretches
Krishnanagar PD	Kotwali	72	39	Jorakuthi More, to Dignagar Talikhola Bas stand on NH-34, Naduria Khamar Simulia, side by Dharmadah Village, Bakultala to Tarakdaspur, beside of Karimpur on SH-11, Natun Bazar Soni Mandir, Bhaluka to Khapur Ramkrishna Prathamik Vidyalaya on SH-8
Murshidabad PD	Berhampore	78	35	in front Kishan mandi to near Nowdapara Railgate on NH-34 Radharghat Kandi State Highway to Kumeadahaghat Bridge on SH-11
Paschim Medinipur	Kharagpur (I)	92	34	Chowringee on NH-6 Khemasuli to
Purba Bardhaman	Galsi	134	33	Simnori More on NH-2 Goligram to near Goligram More on NH-2 Malleswar Rice Mill to near Subarna Rice Mill on NH-2 Sarul Cutting to Glasi Ashian Oil Mill on NH-2 Kulgoria to Kulgoria Bridge on NH-2
Malda	Malda	72	31	SAHAPUR to 8th Mile on NH-34, Sahapur Chhatianmore to Kadirpur on SH-10
Chandannagar PC	Dankuni	57	29	Near Maitypara Bridge PS Dankuni Dist. Hooghly to near Dankuni Toll Plaza on NH-2, Santrapara to Santrapara, near Saibaba Hotel on SH-15
Siliguri PC	New Jalpaiguri	76	28	Nera Biswabangla to Bothwabari Near Eye Hospital on NH-31D
Purba Bardhaman	Burdwan	95	27	Bishalakshmi Petrol Pump, Sbitala to Becharhat Olaichandi Temple Mirchoba on NH-2 Renessa Township, Nabahat more to Nabahat Bus Stand on NH-2
Malda	Gazole	95	25	Adina village to 21 Mile Bus stand on NH-34.
Malda	Kaliachak	66	25	Kaliachak collage More to madhughat on NH-34.

Table 14-C: Top 15 Police Stations where 10 or more accidents occurred due to trucks/lorries

SL No.	District / PC	Police Station	Total No. of RTA	Truck /Lorry involved in RTA	Fatalities	Injuries	% of RTA
1	Paschim Medinipur	Kharagpur (I)	92	41	27	34	44.57
2	Krishnanagar PD	Kotwali	72	40	24	39	55.56
3	Purba Bardhaman	Galsi	134	39	2	50	29.10
4	Murshidabad PD	Berhampore	78	36	24	23	46.15
5	Chandannagar PC	Dankuni	57	31	11	27	54.39
6	Malda	Malda	72	31	18	30	43.06
7	Malda	Gazole	95	29	22	24	30.53
8	Paschim Medinipur	Kotwali	59	29	17	20	49.15
9	Purba Bardhaman	Burdwan	95	28	16	21	29.47
10	Siliguri PC	New Jalpaiguri	76	28	14	24	36.84
11	Darjeeling	Phansedewa	53	27	18	27	50.94
12	Malda	Kaliachak	66	27	7	22	40.91
13	Hooghly Rural	Dadpur	37	26	5	38	70.27
14	Howrah PC	Sankrail	51	25	23	10	49.02
15	Purba Bardhaman	Memari	102	25	7	45	24.51

Table-14D: Motorised two-wheelers involved in RTA cases district-wise – 2020

SI No.	District / PC	Total RTA			Offender			Victim		
		RTA	Fatality	Injury	RTA	Fatality	Injury	RTA	Fatality	Injury
1	Alipurduar	121	49	139	68	26	68	53	23	71
2	Asansol-Durgapur PC	243	185	103	121	98	34	122	87	69
3	Bankura	94	72	68	52	41	28	42	31	40
4	Barasat PD	121	42	125	55	17	54	66	25	71
5	Barrackpore PC	161	64	127	78	23	65	83	41	62
6	Baruipur PD	85	35	63	54	20	45	31	15	18
7	Basirhat PD	39	27	22	23	15	14	16	12	8
8	Bidhannagar PC	107	20	110	45	13	43	62	7	67
9	Birbhum	152	59	163	69	28	62	83	31	101
10	Bongaon PD	41	23	32	22	7	16	19	16	16
11	Chandannagar PC	70	27	63	28	8	27	42	19	36
12	Cooch Behar	123	75	72	76	46	40	47	29	32
13	Dakshin Dinajpur	117	67	91	73	40	52	44	27	39
14	Darjeeling	71	35	80	35	17	36	36	18	44
15	Diamond Harbour PD	101	48	99	62	24	63	39	24	36
16	Hooghly Rural	176	107	134	73	45	46	103	62	88
17	Howrah PC	102	48	76	40	19	30	62	29	46
18	Howrah Rural	118	92	64	71	53	34	47	39	30
19	Islampur PD	78	54	35	65	46	24	13	8	11
20	Jalpaiguri	174	63	213	85	34	87	89	29	126
21	Jangipur PD	43	27	38	22	11	20	21	16	18
22	Jhargram	64	39	50	21	13	11	43	26	39
23	Kalimpong	4	0	5	3	0	4	1	0	1
24	Krishnanagar PD	95	38	74	56	17	41	39	21	33
25	Malda	238	99	209	139	53	121	99	46	88
26	Murshidabad PD	133	87	76	71	42	36	62	45	40
27	Paschim Medinipur	237	168	155	164	115	78	73	53	77
28	Purba Bardhaman	457	103	642	207	38	289	250	65	353
29	Purba Medinipur	295	180	218	171	95	118	124	85	100
30	Purulia	62	49	53	25	25	15	37	24	38
31	Raiganj PD	124	77	78	89	56	47	35	21	31
32	Ranaghat PD	50	35	27	24	14	13	26	21	14
33	Siliguri PC	144	74	116	67	30	57	77	44	59
34	Sundarban PD	64	24	77	49	17	58	15	7	19
Total		4,304	2,192	3,697	2,303	1,146	1,776	2,001	1,046	1,921

Table-14E: Top 10 stretches where motorised/two-wheeler accidents occurred – 2020

Sl No.	District / Police Comm.	Police Station	Total RTA	RTA involved by Motorised/Two wheeler	Stretches
1	Raiganj PD	Raiganj	88	35	Near Kalibari Petrol Pump to Krishnamuri, PS- Raiganj on NH-34, In-front of Vibekananda Suppliers shop to Mirual More on SH-10A
2	Paschim Medinipur	Kotwali	59	32	Mohanpur Bridge to Keranichati Bus Stoppage on NH-60
3	Asansol-Durgapur PC	Durgapur	50	29	Near Mewar Marble PS Durgapur to near Gopalmath over Bridge on NH-2
4	Islampur PD	Islampur	65	29	near petrol pump at Dhandola to Bhimdangi on NH-31
5	Purba Bardhaman	Kalna	71	28	On Other Roads
6	Alipurduar	Alipurduar	51	26	Sahebpota near Muskan Dhaba to Mahakal cold storage parerpar on NH-12
7	Howrah Rural	Bagnan	62	25	Nawpala to near Chandrapur Petrol Pamp on NH-6
8	Dakshin Dinajpur	Balurghat	47	23	Sukhar to Badamail on NH-512
9	Paschim Medinipur	Kharagpur (I)	92	23	Sankoti to Basantapur Bus Stoppage on NH-6
10	Purba Bardhaman	Memari	102	22	Memari Harijan Para (Gyanbharati) to Satgachia Monteswar road at Ayma Para more on SH-15

Table-14F: Age group of offending motorised two-wheelers

Sl. No.	Victim Age Group	RTA	Fatalities	Injuries
1	Less than 18 years	223	81	259
2	18-25	248	143	296
3	25-35	441	237	479
4	35-45	319	158	277
5	45-60	372	212	209
6	60 and above	148	89	69
7	Age not known	552	226	187
Total		2303	1146	1776

Table-15: Road accidents, fatalities and injuries by age of vehicles – 2019 and 2020

Age of Vehicle	2019			2020		
	RTA	Fatality	Injury	RTA	Fatality	Injury
1. Less than 5 years	3,625	1,916	3,528	3,114	1,552	3,021
2. 5 - 10 years	3,086	1,482	3,242	2,975	1,467	2,880
3. 10.1 - 15 years	889	484	873	802	413	709
4. > 15 years	1,447	695	1,563	1,044	502	1,102
5. Age Not Known	1,111	923	551	1,245	993	602
Total	10,158	5,500	9,757	9,180	4,927	8,314

Note : Only known age of vehicles as reported by District Including in the table.

Percentage share of age of vehicles involved in road accidents – 2019 and 2020

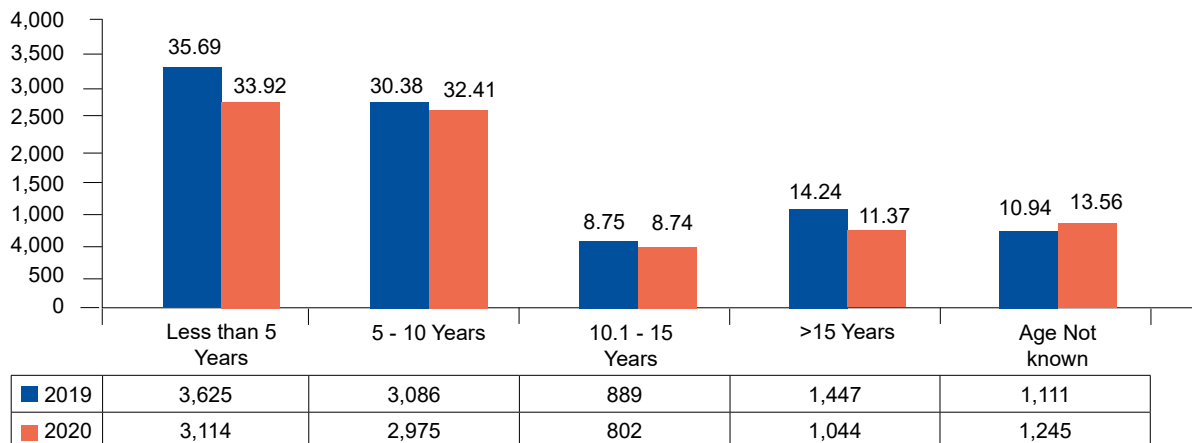
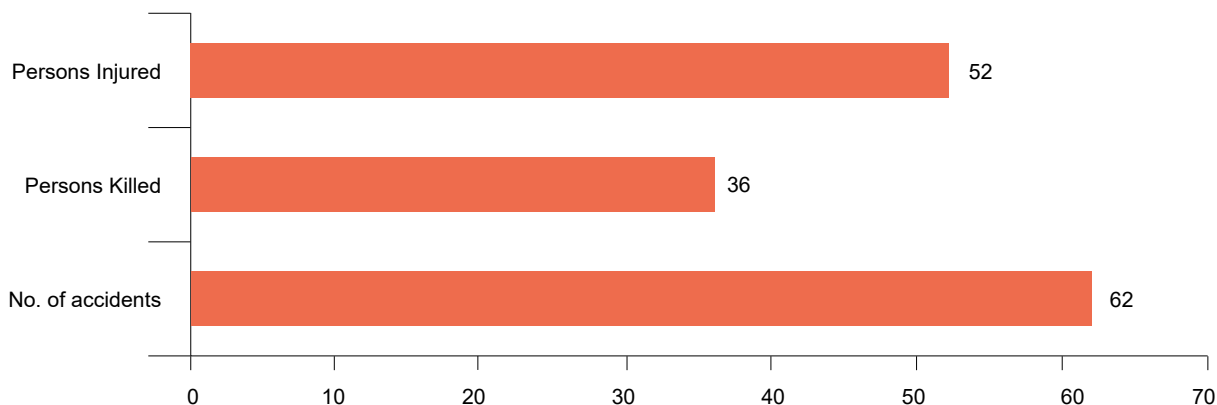


Table-15A: Road accidents by age of offending vehicles – 2020

Age-group	Bus	Truck /Lorries	Car/Van/Jeep/Taxi	Heavy Articulated Vehicle
Less than 5 years	91	789	884	69
5 - 10 years	189	935	849	78
10 - 15 years	101	292	198	19
> 15 years	85	355	242	13
Total	466	2,371	2,173	179

Accidents, fatalities and Injuries involving overloaded vehicles – 2020



(Table-15 – page 50).

Load condition of vehicles involved in accidents

Overloaded vehicles and those with loads protruding/

hanging are road hazards, risking accidents for themselves and also for other road users. 62 road accidents in 2020 involved overloaded vehicles. The above chart depicts the number of accidents, fatalities and injuries in cases involving overloaded vehicles.





“

The majority of the accidents involved two-wheelers, which also dominate the Indian automotive industry in terms of production and sales. Over-speeding was another significant contributor to road accidents in India. Driving under the influence of alcohol, hit-and-run cases, and general traffic violations resulted in almost 80 percent of the accidents being the driver's fault.

Accidents classified according to Pedestrian Infrastructure

EVERYONE has different preferences when it comes to transportation, but at one time or another, everyone is a pedestrian. When drivers maintain safe speeds and practice other safe-driving behaviour, safer walking environments are created for people in the community. Pedestrians are vulnerable road users. In many countries, collisions with pedestrians are a leading cause of death and injury. In some countries, over half of all road deaths are caused by collisions between vehicles and pedestrians.

This chapter examines accidents involving pedestrians who are considered to be the most vulnerable of road users. The data on accidents and fatalities involving pedestrians is given in **Table-16**. It is seen that RTAs of pedestrians in 2020 has gone down compared to 2019. The percentage of pedestrian fatalities as a portion of all fatalities was 53.32% in 2019 and 52.30 % in 2020. So, the number

of accidents decreased and the number of fatalities went down in 2020 by 356.

Of 4,399 pedestrian accidents in 2020, 1,144 numbers took place on urban roads and 3,255 numbers took place on rural roads. Similarly, of the 2,577 fatalities in 2020, 1,978 took place on rural roads and 599 on urban roads. Of the 4,399 accidents in 2020, 1,811 happened during night hours and 2,588 during day hours (**Table 16F** – page 58).

The number of accidents and fatalities of pedestrians in 2020 at various junctions was 375 (8.52%) and 211 (8.18%), respectively out of which the number of accidents at uncontrolled junctions was 196 and fatalities 109. The distribution of pedestrian accidents and fatalities across different road categories and districts is given in **Table-16A** (page 56). 1,391 or 31.62% RTAs involving pedestrians took place on NHs. Out of 3,338 RTAs on NHs in 2020, 1,391 or 41.67%

Table-16: RTA data on involvement of pedestrians in 2019 and 2020

Year	RTA		Fatality		Injury	
	Urban	Rural	Urban	Rural	Urban	Rural
2019	1,408	3,597	682	2,251	937	2,092
Total	5,005		2,933		3,029	
2020	1,144	3,255	599	1,978	696	2,001
Total	4,399		2,577		2,697	

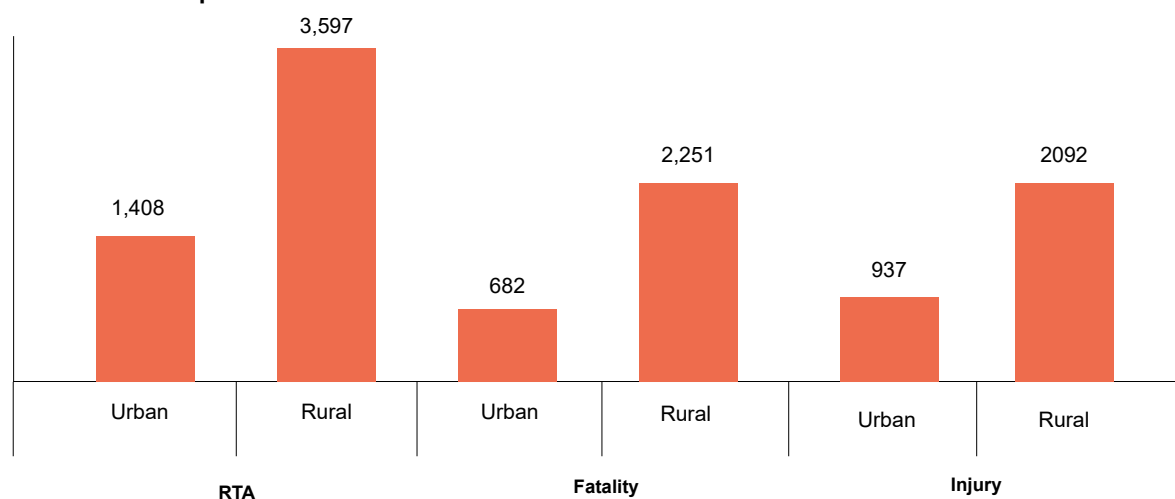
involved pedestrians. It is seen that the highest number of pedestrian RTAs took place in Paschim Medinipur – 372, Purba Bardhaman – 310, Paschim Medinipur – 305, Malda – 297, and Murshidabad – 230.

Similarly, pedestrian accidents were maximum on Other Roads (2,053 or 46.66%) accounting for 1,144 or 44.39% of all pedestrian deaths. The spot-wise involvements of pedestrians and by type of vehicles

are given in **Table-16B** and **Table-16C** (page 57), respectively. It is seen that the largest number of accidents took place in open areas – 1,533 with 930 persons dead. Within this, rural roads accounted for 1,216 or 79.38% of the accidents and 753 or 80.96% of fatalities.

The high incidence of pedestrian accidents and deaths on Other Roads and open areas in rural roads

Involvement of pedestrians area-wise in 2019



Involvement of pedestrians area-wise in 2020

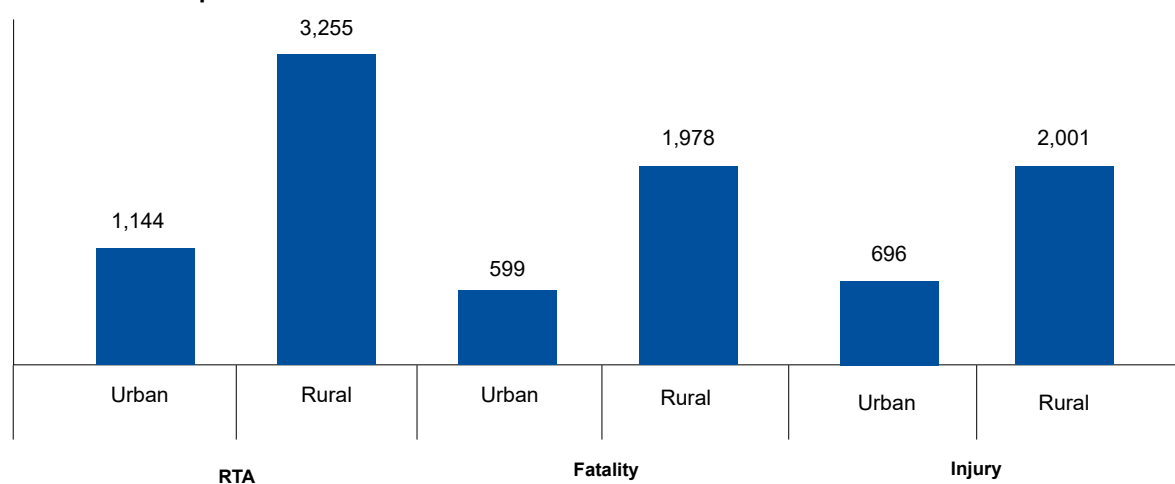


Table-16A: Involvement of pedestrians district-wise in RTAs – 2020

District / PC	Total RTA			NH			SH			OR		
	RTAs	Fatalities	Injuries	RTA	Fatalities	Injuries	RTAs	Fatalities	Injuries	RTAs	Fatalities	Injuries
Alipurduar	66	30	59	27	14	25	11	5	10	28	11	24
Asansol-Durgapur PC	188	141	72	75	56	32	24	20	9	89	65	31
Bankura	141	115	59	30	23	13	56	44	26	55	48	20
Barasat PD	125	60	94	55	26	40	19	13	11	51	21	43
Barrackpore PC	179	71	124	5	3	5	53	24	34	121	44	85
Baruipur PD	73	30	59	0	0	0	18	8	12	55	22	47
Basirhat PD	70	40	47	0	0	0	27	14	24	43	26	23
Bidhannagar PC	47	6	47	4	0	4	9	1	11	34	5	32
Birbhum	193	107	129	35	16	30	49	21	37	109	70	62
Bongaon PD	51	32	31	9	3	11	17	13	8	25	16	12
Chandannagar PC	64	36	33	6	5	1	48	28	25	10	3	7
Cooch Behar	144	98	54	36	25	15	22	17	7	86	56	32
Dakshin Dinajpur	105	64	52	42	21	25	7	4	3	56	39	24
Darjeeling	48	29	30	34	23	16	5	2	3	9	4	11
Diamond Harbour PD	128	51	128	39	16	39	0	0	0	89	35	89
Hooghly Rural	111	76	58	11	8	3	50	37	25	50	31	30
Howrah PC	115	77	46	45	42	10	17	12	5	53	23	31
Howrah Rural	82	62	29	28	26	9	2	1	1	52	35	19
Islampur PD	137	100	54	68	53	27	0	0	0	69	47	27
Jalpaiguri	102	40	84	51	20	36	0	0	0	51	20	48
Jangipur PD	57	38	29	28	18	16	7	5	5	22	15	8
Jhargram	40	23	24	10	3	10	9	4	6	21	16	8
Kalimpong	3	3	0	3	3	0	0	0	0	0	0	0
Krishnanagar PD	170	90	116	72	36	43	61	37	46	37	17	27
Malda	297	157	187	146	81	88	23	21	12	128	55	87
Murshidabad PD	230	156	103	65	45	33	83	60	34	82	51	36
Paschim Medinipur	372	288	195	104	90	44	96	74	53	172	124	98
Purba Bardhaman	310	94	301	91	24	101	108	25	111	111	45	89
Purba Medinipur	305	186	183	103	58	62	56	38	34	146	90	87
Purulia	64	54	27	11	8	4	30	31	10	23	15	13
Raiganj PD	138	98	72	58	44	28	19	12	10	61	42	34
Ranaghat PD	64	42	27	13	10	3	18	12	6	33	20	18
Siliguri PC	85	39	54	36	17	20	10	6	4	39	16	30
Sundarban PD	95	44	90	51	27	38	1	0	1	43	17	51
Total	4,399	2,577	2,697	1,391	844	831	955	589	583	2,053	1,144	1,283

Table-16B: Involvement of pedestrians spot-wise in RTAs – 2020

SL. No.	Accident Spot	RTA	Fatalities	Injuries
1	Residential Area	1376	802	821
2	Institutional Area	103	67	48
3	Market / Commercial Area	755	401	488
4	Open Area	1533	930	960
5	Bus Stop	486	285	290
6	Petrol Pump	109	70	59
7	Hospital	37	22	31
Total		4,399	2,577	2,697

Table-16C: Involvement of pedestrians by type of vehicles – 2020

SL. No.	Type of Vehicle	RTA	Fatalities	Injuries
1	Motorised Two Wheeler	1318	679	907
2	Auto Rickshaw	62	30	59
3	Car/Jeep/Van/Taxi	985	504	760
4	Bus	200	88	158
5	Truck / Lorry	1038	657	615
6	Heavy Articulated Veh/Trolley	70	50	55
7	Tempo / Tractor	208	129	135

Table-16D: Top 10 stretches where pedestrians were involved in RTAs – 2020

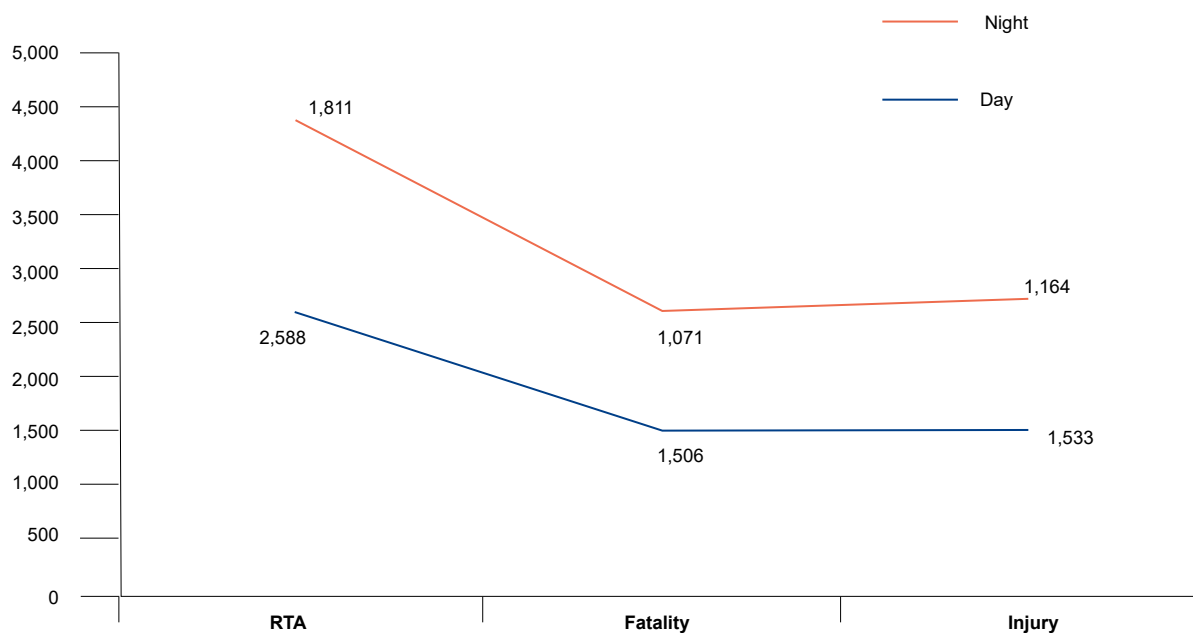
SI No.	District / PC	RTA	Stretches
1	Paschim Medinipur	372	Poradiha to NEAR SRIRAMPUR on NH-6, Sonakonia to Kharikasuli on NH-60 Khukurdaha to Tildanga on SH-4, Dhaneswarpur Bazaar to Gopali on SH-5, Amrakuchi Bus Stop to Deopur on SH-7.
2	Purba Bardhaman	310	Jougram Fly over to Simnori More on NH-2, Jhinguti More to Bagbati Morh on NH-2B, Uchalan dighirkone to Raikha Bazar on Badsahi road on SH-7.
3	Purba Medinipur	305	New Digha Bharat Patrol Pump to Rajib Park bus stand on SH-116B, Keshiary Bhuniabarb to CPT Market on SH-4
4	Malda	297	Town Ship More to Moyna Stand on NH-34, Beki Durgapur Bus Stand to Dharampur Stand on SH-10,
5	Murshidabad PD	230	Naka Check Post at Loknathpur to Culvert near Moholo on NH-34, Akash Brick field, Hukahara to Kumrai Bus stand on SH-11.
6	Birbhum	193	Barkuri Morh to Kalitha Dharmatala on NH-60, Futisanko Suri Road to COLLAGE MORH on SH-6.
7	Asansol-Durgapur PC	188	Tildanga More to Old Kalayneswari Temple on NH-2, Mankar SBI Bank to Basudha Patrol Pump on SH-14
8	Barrackpore PC	179	Belghoria Express Way near Kendriya Bihar cut out to Airport Gate Signal crossing on NH-34, Dakshineswar Bus Stand to Raja Road crossing under SH-1.
9	Krishnanagar PD	170	Plassey Mira Bazar to Dignagar Talikhola Bas stand, on NH-34, Naduria Khamar Simulia to Harekrishnapur Colony on SH-11.
10	Cooch Behar	144	Bahannaghar Bazar to Balarampur Chowpathy on NH-31, Kholta Check Post to Kamat Changrabandha on SH-12A.

Table-16E: Age group of pedestrians involved in RTAs – 2020

Victim Age Group	RTA	Fatality	Injury
Less than 18 years	580	306	486
18 - 25	402	277	318
25 - 35	852	523	731
35 - 45	722	404	596
45 - 60	968	604	570
60 and Above	403	269	181

Table-16F : Time-wise RTA data

Total			Day			Night		
RTA	Fatality	Injury	RTA	Fatality	Injury	RTA	Fatality	Injury
4,399	2,577	2,697	2,588	1,506	1,533	1,811	1,071	1,164

Chart of time-wise RTA data

indicate the need for stronger traffic engineering interventions and for launching more robust road safety awareness campaigns on Other Roads in rural areas. Out of 1,318 accidents in which pedestrians were hit by two-wheelers, 994 or 75.41% took

place on rural roads. Enforcement drives against errant two-wheeler drivers behaviour are required. Vulnerable stretches of pedestrian accidents are given in **Table-16D** (page 57). The age group of pedestrian fatalities is given in **Table-16E** (above).

Profiles of Road Accident Victims by Age and Gender

ROAD traffic injuries cause considerable economic losses to individuals, their families, and nations. These losses arise from the cost of treatment as well as lost productivity for those killed or disabled by their injuries, and for family members who need to take time off from work or school to care for the injured. Road traffic costs most countries 3% of their gross domestic product.

More than 90% of road traffic deaths occur in

low- and middle-income countries. Even within high-income countries, people from lower socioeconomic backgrounds are more likely to be involved in road traffic crashes.

From a young age, males are more likely to be involved in road traffic crashes than females. About three-quarters (73%) of all road traffic deaths occur among young males under the age of 25 years who are almost three times as likely to be killed in a road traffic crash as young females.

Table-17: Age profile of fatal road accident victims during 2019 and 2020

Age-group	Persons killed in 2019	Persons killed in 2020
1. Less than 18 years	335 (6.09)	287 (5.83)
2. 18 – 25	705 (12.81)	600 (12.18)
3. 25 – 35	1403 (25.50)	1257 (25.51)
4. 35 – 45	1178 (21.41)	995 (20.19)
5. 45 – 60	1344 (24.43)	1167 (23.69)
6. 60 and Above	395 (7.18)	436 (8.85)
7. Age not known	140 (2.54)	185 (3.75)
Total	5,500	4,927

Note: Figures in parentheses are percentage share in the total of respective columns

Age profiles of road accident victims

The age profile of fatal road accident victims of 2020 is lower than the previous year. Road accident victims largely constitute young people in the productive age groups underscoring the major implications on the economic cost of road accidents, apart from their emotional and psychological impact. Young adults in the age group of 25-35 years accounted for a high proportion of 25.51%. The working-age group of 18-60 years accounted for 81.57% of the total road accident fatalities. The chart below gives the age profiles of fatal victims of road accidents in 2019 and 2020.

Gender and the age profile of fatal road accident victims

The gender-wise comparison of road accident deaths in 2020 showed that the number of males and females killed was 4,203 and 724, respectively. In the last calendar year, the share of males and females in accident deaths was 86.34% and 13.65% respectively. This is given in **Table-18** (opposite page).

The chart depicts gender-wise distribution for the year 2020.

Age profile of road accident victims – 2020

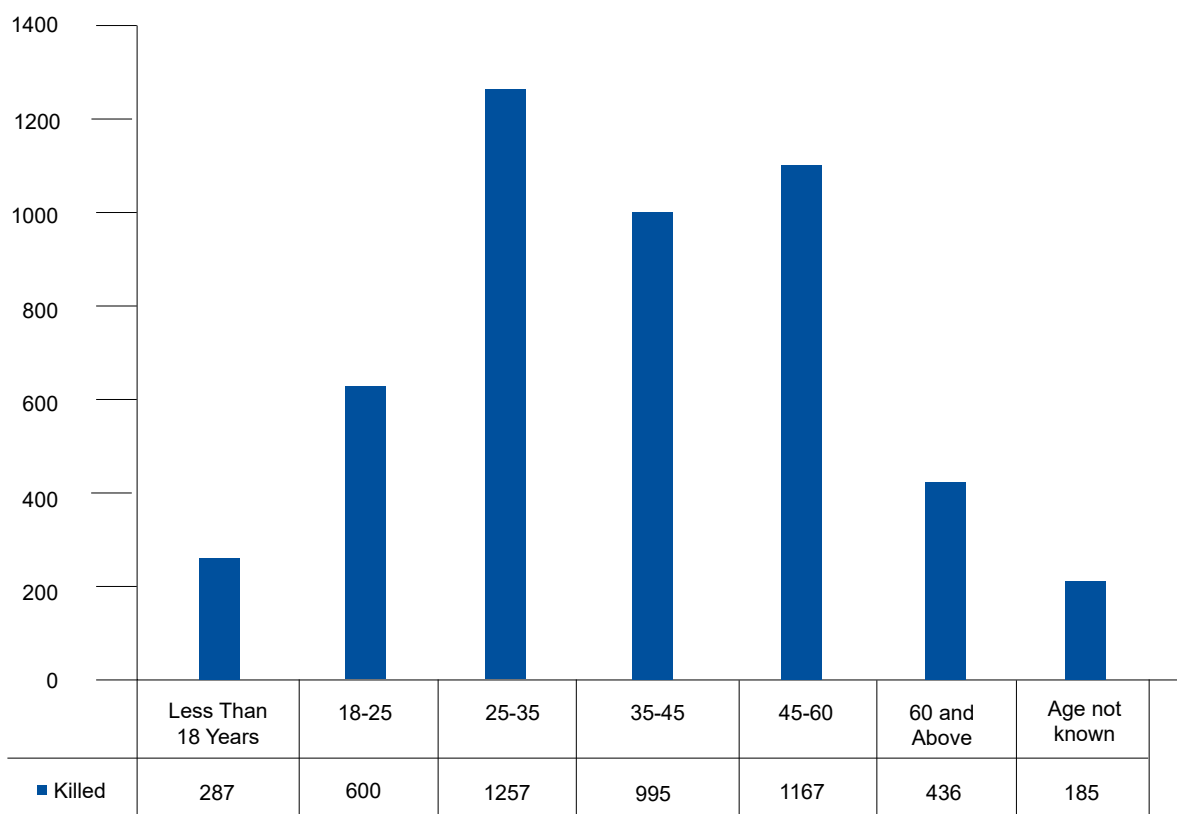
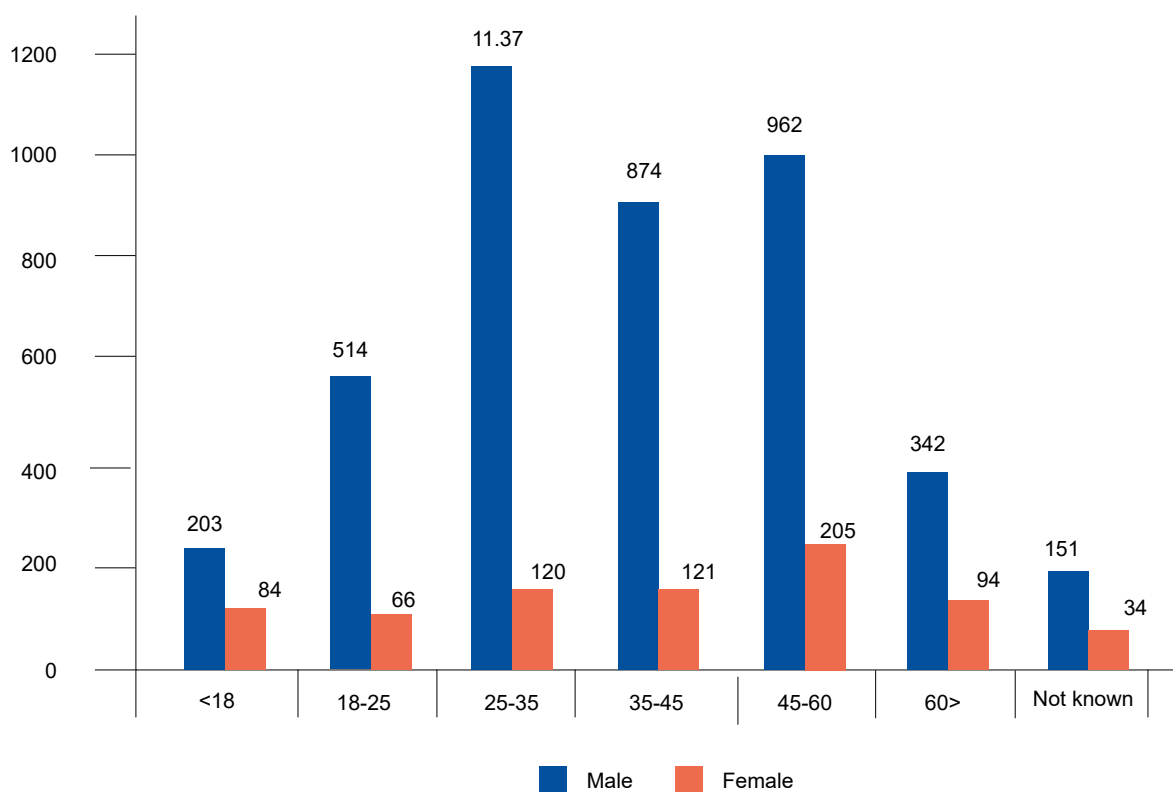


Table-18: Gender-wise age profile of fatal road accident victims in 2019 and 2020

Age-group	2019		Total Killed	2020		Total Killed
	Male	Female		Male	Female	
Less than 18 years	240	95	335	203	84	287
18 - 25	649	56	705	534	66	600
25 - 35	1,277	126	1,403	1,137	120	1,257
35 - 45	1,025	153	1,178	874	121	995
45 - 60	1,136	208	1,344	962	205	1,167
60 and Above	300	95	395	342	94	436
Age not known	122	18	140	151	34	185
Total	4,749	751	5,500	4,203	724	4,927

Age profile of accident victims 2020 – Percentage share of age groups



“

Our mission is to be recognized worldwide for our work in saving lives through smarter enforcement, changing driver behaviour for the better and ensuring that effective action is taken against those who break the law.





Causes of Road Accidents



R

OAD accidents, as the name itself suggests, are random events that are caused by the interplay of diverse factors relating to the road, its condition, road users, vehicles, and environmental conditions. Invariably, a combination of two or more of these

factors may lead to accidents. The major causes of accidents in India and especially in West Bengal are:

Bad Roads: Faulty geometric design components like sight distance, shoulders, super-elevation, transitions and inadequate traffic control devices cause

accidents, as do slippery road conditions that have inadequate friction leading to skidding and potholes and damaged conditions of the surface.

Users: The drivers of vehicles can cause accidents through rash driving and excessive speed, violation of traffic rules, traffic signs and signals and fatigue due to excessive continuous driving. In addition, bus passengers can cause accidents while getting into and alighting from moving vehicles, and distracting the driver's attention. Pedestrians using the carriageway and violating regulations can also cause accidents.

Vehicle conditions: Mechanical defects of vehicles like the failure of brakes, tyre bursts, and steering systems invariably lead to traffic accidents. Be it passengers or goods, overloaded vehicles are also a major cause of accidents in India. It becomes difficult to control an overloaded vehicle. Also, when a vehicle is carrying goods such as protruding steel rods, the result of an accident is even worse.

Drunken driving: Even though driving under the influence of alcohol is strictly prohibited, many flaunt

this rule, which at times results in road accidents.

Even if the person under the influence of alcohol walks away safe from the scene of the accident due to the safety features of the car, the pedestrians and smaller vehicles involved in the accidents are not so lucky.

Safer roads for vehicles, not people: While India has been upgrading its highways since 2000, with dividers, four-laning arterial roads, six-laning arterial roads and expressways, the design does not cater to the requirements of pedestrians, cyclists, two-wheelers, animal carts and other slow-moving traffic.

Weather and other conditions: Unfavourable weather conditions such as fog, heavy rainfall, dust and smoke render driving unsafe, leading to accidents. Stray animals, unmanned level crossings, advertisement boards and hoardings affecting visibility and distracting the driver's attention and a host of other such things may also cause road accidents.

Traffic-rule violations

Subject to the disclaimer made above, RTAs due to different traffic violations are given in **Table-19**.

Overspeeding and driving on the wrong side together

Table-19: Road accidents by type of traffic rule violations

Traffic rules violation	No. of Accidents	Killed	Injured
1. Over Speeding	3181 (34.65)	1618 (32.84)	3160 (38.01)
2. Jumping Red Light	14 (0.15)	1 (0.02)	17 (0.20)
3. Driving on Wrong side	95 (1.03)	49 (0.99)	119 (1.13)
4. Drunken Driving	24 (0.26)	15 (0.30)	15 (0.18)
5. Use of Mobile Phone	6 (0.07)	2 (0.04)	5 (0.06)
6. Others #	5860 (63.83)	3242 (65.80)	4998 (60.12)
Total	9,180	4,927	8,314

Note: Figures in parentheses are percentage share in the total of respective columns.

#Others refers to other than traffic violation i.e. lost control, slept, poor road visibility, engineering defect etc.

Table-19A: Distribution of over-speeding on divided and undivided road categories – 2020

NH		SH		Others Road		Total	
Divided	Undivided	Divided	Undivided	Divided	Undivided	Divided	Undivided
519		151	490	192	1,144	1,028	2,153
685	519	151	490	192	1,144	1,028	2,153

Table-19B: RTAs due to overspeeding at various junctions – 2020

T-Types		Y-Types		Four-Arms Junctions		Staggered Junctions		Roundabout Junctions		Median Cuts	
Control	Uncontrolled	Control	Uncontrolled	Control	Uncontrolled	Control	Uncontrolled	Control	Uncontrolled	Control	Uncontrolled
94	50	54	33	69	18	6	5	16	7	45	27

accounted for 35.68% of total accidents and 33.83% of total deaths. Violation of other rules, viz., drunken driving, red light jumping and use of mobile phones together accounted for just 0.48% of accidents and 0.36% deaths. Road accidents that do not involve traffic rules violations or violations not known (such as hit-and-run cases) constitute 63.83% and accounted for 65.80% of the fatalities.

The distribution of overspeeding cases across divided and undivided road categories is given in **Table-19A** (above). From this, it appears that given all conditions being the same, overspeeding related accidents occur more (2,153) on undivided than divided carriageways (1,028).

The distribution of over-speeding-related RTAs (**Table-19B** – above) across various junctions indicate that out of 3,181 RTAs in 2020, 424 took place at various junctions (13.32%) out of which 144 at T-junctions were the highest. Further, out of a total of 424 over speeding accidents at various junctions, 140 were at Uncontrolled junctions of which 50 at T-junctions was the highest. From this, it appears that junction designs and junction control imperfections have a huge role to play in cases reported as overspeeding .

Overspeeding results in various types of collisions of which Hit to Pedestrian (1,401) and Hit from Back is the second highest (808). Of these, 808 were hit

from back arising at undivided carriageways is 465. It reflects, therefore, poor driving skills in keeping to his side of the lane and also deficiencies in median lane marking, and maybe issuing of driving license to undeserving drivers by the authorities. This seems corroborated by the fact that 384 overspeeding collisions resulted in rear-end collisions.

However, the fact that only approximately 29,000 violations against overspeeding of over 90 lakh registered vehicles were launched points to the need for drastic improvement in vigil and enforcement against this offence.

Condition and age of vehicles

Vehicle maintenance issues are also relevant. In 2020, mechanical failures resulted in 600 (**Table-19D** – opposite page) accidents. Similarly, RTAs arising out of overloading of lorries and buses resulted in 26 RTAs.

Overloading – Load condition of vehicles involved in accidents

Overloaded vehicles and vehicles with loads protruding/hanging are road traffic hazards, risking accidents for themselves and also for other road users. A total of 62 road accidents during 2020 involved overloaded vehicles.

Not wearing helmets and seat belts

These omissions do not cause accidents but affect the

Table-19C: RTAs due to overspeeding by collision type-wise – 2020

With parked vehicle	Hit from Back	Hit from Side	Run-off Road	Fixed Object	Vehicle overturn	Head on Collision	Hit to Pedestrian
44	808	266	60	161	57	384	1401

Table-19D: RTAs due to various type of mechanical failures – 2020

Defective Brakes	Defective Steering/Axle	Punctured or Burst Tyres	Bald/Resoled/ Worn Out Tyres	Overloaded/ Overcrowded	Vehicle overturns	Head-on Collisions	Hit to Pedestrians
461	43	28	6	62	57	384	1401

Table-19E: Motorized/Two-Wheeler RTAs details on using Safety Devices – 2020

##	Total No. of Accidents	No. of Fatal Accidents	No. of Fatalities	No. of Injuries
Total Accident	2303	1098	1146	1776
Using Helmet	435	224	233	311
Without Using Helmet	182	87	96	154
Not Known	1686	787	817	1311

Table-19F: Four-Wheeler Motorized/Two-Wheeler RTA details on using Safety Devices – 2020

##	Total No. of Accident	No. of Fatal Accident	No. of Fatalities	No. of Injury
Total Accident	2173	902	994	2344
Using Seat Belt	236	88	96	265
Without Seat Belt	94	37	42	109
Not Known	1843	777	856	1970

nature of injuries and chances of fatalities. In 2020, out of 1,098 fatal two-wheeler accidents, in 435 cases out 2,303 cases of RTAs involving two-wheelers was the driver/pillion found wearing helmets (18.88%) which resulted in the death of 233 persons and injury to 311 drivers/pillion riders. Similarly, in 2,173 cases involving four-wheelers, in only 236 cases was the driver/passenger found to be wearing seat belts. Further, if we consider that out of the registered two-wheelers, prosecution against non-wearing of helmets was launched in only 5,84,250 cases; for four-wheelers, 1,85,096 prosecutions were launched against non-wearing of seat belt, it is clear that police authorities have to step up enforcement in a big way.

Traffic engineering

The large numbers of RTAs at different junctions of which a large number are uncontrolled make

engineering inadequacies a major contributory cause of accidents. In 2020, a total of 805 accidents occurred at road junction which comprises 8.76% of the total 9,180 accidents recorded in the State and resulted in 428 fatalities or 8.68% of fatalities (Table-8 – page 36). Out of 805 accidents at road junctions, 384 (47.70%) accidents took place at junctions that had traffic control measures such as traffic light signals, police control, stop sign and flashing signals/blinkers and the remaining 421 (52.29%) accidents took place at uncontrolled junctions (Table-9 – page 37). This highlights the importance and also the inadequacy of traffic control mechanisms at road junctions and a major traffic engineering shortcoming. RTAs on junction control on different road categories are given in Table-9A above. The high incidence of pedestrian accidents and deaths on other roads and residential areas in

rural roads indicates the need for stronger traffic engineering interventions and for launching more robust road safety awareness campaigns on the others roads in rural areas.

Driving skills and knowledge of road safety regulations

The skill deficit of drivers and their knowledge of road safety regulations relating to the right of way, lane driving, overtaking, the braking distance is not tested in any post-accident investigation as a result of which the causes arising out of these are not reflected. However, video footage of undisciplined driving and a large number of traffic violations relating to overspeeding and rear-end and head-on collisions compel an urgent need for a drastic increase in the thoroughness of the Basic driver's license test conducted by the RTOs.

Traffic engineering issues as per road safety audit

Main extracts from road safety audit reports conducted by IIT, Kharagpur on different NH and SH are given below:

1. Inadequate, often incorrect **signage and pavement markings**.
2. **Restricted right of way and vulnerable road users** – Very little separation of pedestrian channels from the motorized flow.
3. **Issues relating to road appurtenant:** Absent or discontinuous crash barriers (CB) and pedestrian guard rails (PGR).
4. **Intersections:** un-signalized; located at influence

area of curves; inadequate traffic calming measures; uneven levels of the main carriageway and merging lane.

5. **Encroachment:** - Poor sight distance from minor roads due to roadside encroachments by shops, parking lots and billboards/hoardings/flexes.

6. **At Horizontal curves:** restricted sight distance; lack of advance signages and chevron markings.

7. **Construction zones:** Improper demarcation and delineation, insufficient pre-warning signs, speed limits and 'no overtaking' signs at the construction zones.

8. **Unauthorized parking:** Illegally parked vehicles on the shoulder and along the carriageways. NO ENTRY restrictions result in long hours of highway parking.

9. **Built-up and market areas:** Negligible traffic calming measures, high interaction between pedestrians, non-motorized traffic and motorized traffic is observed on all such segments of the highway;

10. **For bus stops/bays:** Designated bus stops seldom used; often inaccessible; inadequate bus lane markings; improper siting.

11. **At narrow bridges:** insufficient warning of lane reduction and delineation of edges and approach for night driving; inadequate crash barriers at approach shoulders.

12. **Miscellaneous safety issues:** Edge Drop due to illegal parking of heavy vehicles; Reckless driving and overtaking of buses at long straight segments; No illumination at junctions and built-up areas. Crash barriers are absent in many stretches abutting water bodies.

Black Spots



LACK spots account for 90% of road accidents in the country and the short and long-term measures chalked out by the Union Ministry of Road Transport and

Highways (MoRTH) to curb accidents in such spots assume significance.

As per the Ministry's protocol for identification of black spots, an accident black spot is a road corridor of about 500 m long on which either five road accidents, involving fatalities and grievous injuries, have been reported during the last three calendar years or 10 fatalities during the last three years.

Table-20: Identified Black Spots, district-wise – 2020

SL No.	District / PC	NH	SH	OR	TOTAL BLACK SPOTS
1	Alipurduar	18	1	0	19
2	Asanasol-Durgapur PC	36	0	0	36
3	Bankura	12	11	2	25
4	Barasat PD	15	0	1	16
5	Baruipur PD	0	2	1	3
6	Basirhat PD	0	7	2	9
7	Bidhannagar PC	3	6	14	23
8	Birbhum	7	5	1	13
9	Barrackpore PC	3	29	4	36
10	Bongaon PD	1	3	0	4
11	Chandannagar PC	4	9	0	13
12	Cooch Behar	4	3	0	7
13	Dakshin Dinajpur	15	0	1	16
14	Darjeeling	3	0	0	3
15	DDH PD	18	0	1	19
16	Hooghly Rural	18	33	0	51
17	Howrah PC	27	4	4	35
18	Howrah Rural	24	0	1	25
19	Islampur PD	20	0	0	20
20	Jalpaiguri	26	0	1	27
21	Jangipur PD	7	0	1	8
22	Jhargram	6	0	0	6
23	Kalimpong	6	0	0	6
24	Krishnanagar PD	25	7	0	32
25	Malda	30	3	0	33
26	Murshidabad	17	14	3	34
27	Paschim Medinipur	43	18	8	69
28	Purba Burdwan	26	21	0	47
29	Purba MDP	56	14	10	80
30	Purulia	4	3	0	7
31	Raiganj PD	16	1	1	18
32	Ranaghat PD	10	1	0	11
33	Siliguri PC	20	3	9	32
34	Sundarban PD	11	0	0	11
TOTAL		531	198	65	794
Repeated Black Spots		296	80	12	388

Table-20A: Identified black spots district-wise on National Highways – 2020

District /PC	Total	2	2B	6	10	31	31A	31C	31D	32	34	35	41	55	60	60A	81	116B	117	517	131A	317	317A	327B	512
Alipurduar	18																					17	1		
Asansol-Durgapur PC	36	34													2										
Bankura	12														11	1									
Barasat PD	15										9	6													
Barrackpore PC	3										3														
Baruipur PD	0																								
Basirhat PD	0																								
Bidhannagar PC	3										3														
Birbhum	7														7										
Bongaon PD	1											1													
Chandannagar PC	4	4																							
Cooch Behar	4					4																			
Dakshin Dinajpur	15																								15
Darjeeling	3					2	1																		
Diamond Harbour PD	18																		18						
Hooghly Rural	18	18																							
Howrah PC	27	6		12															9						
Howrah Rural	24			24																					
Islampur PD	20					19					1														
Jalpaiguri	26							5	21																
Jangipur PD	7										7														
Jhargram	6			6																					
Kalimpong	6				5			1																	
Krishnanagar PD	25										25														
Malda	30										28														2
Murshidabad PD	17										17														
Paschim Medinipur	43			15											28										
Purba Bardhaman	26	26																							
Purba Medinipur	56			14									18					24							
Purulia	4									4															
Raiganj PD	16										16														
Ranaghat PD	10										10														
Siliguri PC	20					11		4	5																
Sundarban PD	11																		11						
Total	531	88	0	71	5	36	1	10	26	4	119	7	18	0	48	1	0	24	38	0	0	17	1	0	17

Table-20B: Identified black spots district-wise on State Highways – 2020

District /PC	Total	1	2	3	4	4A	5	6	7	8	9	10	10A	11	11A	12	12A	13	14	15	16	34
Alipurduar	1															1						
Asansol-Durgapur PC	0																					
Bankura	11		4							1	6											
Barasat PD	0																					
Barrackpore PC	29	29																				
Baruipur PD	2	2																				
Basirhat PD	7		3	4																		
Bidhannagar PC	6			5																		1
Birbhum	5								2					1					2			
Bongaon PD	3	2		1																		
Chandannagar PC	9																	9				
Cooch Behar	3																1				2	
Dakshin Dinajpur	0																					
Darjeeling	0																					
Diamond Harbour PD	0																					
Hooghly Rural	33		16					2	3									5		7		
Howrah PC	4							4														
Howrah Rural	0																					
Islampur PD	0																					
Jalpaiguri	0																					
Jangipur PD	0																					
Jhargram	0																					
Kalimpong	0																					
Krishnanagar PD	7									1				6								
Malda	3											3										
Murshidabad PD	14								6					7	1							
Paschim Medinipur	18				11		3		4													
Purba Bardhaman	21							5	8	4								2		2		
Purba Medinipur	14				9		5															
Purulia	3						3															
Raiganj PD	1												1									
Ranaghat PD	1	1																				
Siliguri PC	3											1					2					
Sundarban PD	0																					
Total	198	34	23	10	20	0	11	11	23	6	6	4	1	14	1	1	3	16	2	9	2	1

Table-20C: Identified black spots district-wise on Other Roads – 2020

SL No.	District / PC	OR
1	Alipurduar	0
2	Asanasol-Durgapur PC	0
3	Bankura	2
4	Barasat PD	1
5	Baruipur PD	1
6	Basirhat PD	2
7	Bidhannagar PC	14
8	Birbhum	1
9	Barrackpore PC	4
10	Bongaon PD	0
11	Chandannagar PC	0
12	Cooch Behar	0
13	Dakshin Dinajpur	1
14	Darjeeling	0
15	DDH PD	1
16	Hooghly Rural	0
17	Howrah PC	4
18	Howrah Rural	1
19	Islampur PD	0
20	Jalpaiguri	1
21	Jangipur PD	1
22	Jhargram	0
23	Kalimpong	0
24	Krishnanagar PD	0
25	Malda	0
26	Murshidabad	3
27	Paschim Medinipur	8
28	Purba Burdwan	0
29	Purba MDP	10
30	Purulia	0
31	Raiganj PD	1
32	Ranaghat PD	0
33	Siliguri PC	9
34	Sundarban PD	0
TOTAL		65
Repeated Black Spots		12

Road Safety Initiatives of the Government of West Bengal



Enforcement

Traffic enforcement is usually referred to the supervision of road users' compliance with traffic legislation, and punishment for non-compliance. The aim of enforcement is to prevent the occurrence of road traffic violations employing control and punitive sanctions.

In India, the responsibility of compliance rests on motorized vehicles only. In other words, there is no legislation that affixes the responsibility of desired road usage on non-motorized traffic like pedestrians, cycle

rickshaws, and animal- and man-pulled vehicles, etc. Furthermore, enforcement is carried out selectively both by the police and transport officers. Transport officers enforce vehicle standards, overloading, permits, and other administrative issues, leaving the enforcement of other violations to the traffic police.

- **Enforcement of Road Safety Laws:** Table-21 (page 66) gives the data on Enforcement of Road Safety Laws.
- **Suspension of Driving License:** 21,285 Driving Licenses suspended/revoked in 2020.

Table-21: M.V. prosecutions under various heads in 2019 and 2020 in West Bengal Police

Year	Drunken Driving	Non-wearing of helmet	Non wearing of seat belt	Use of Mobile Phone while driving	Overloading	Red light jumping	Over speeding
2019	16,451	9,72,270	3,62,517	44,563	31,556	2,49,771	94,552
2020	4,522	5,84,250	1,85,096	21,283	20,252	1,41,052	29,173

Statements of Prosecution, Imposed and Realised in 2019 and 2020 in West Bengal

Year	Prosecution	Fine imposed by issuing Compound slip	Spot Fine realised through bank/court
		(in Rs.)	(in Rs.)
2019	24,19,740	₹ 43,73,30,099	₹ 37,55,99,589
2020	13,69,714	₹ 24,14,48,027	₹ 19,05,82,792

Education

- Thirty-four units of West Bengal Police have conducted a massive community outreach under the **Safe Drive Save Life** campaign launched by the government on **8 July 2016**. In 2020, 9,964 activities – road safety lectures in schools, colleges, and villages, Sit and Draw competitions, Roadshows, tableaux, skits and drawing competitions, counselling sessions for drivers, and even medical camps for drivers – were conducted. These are round-the-year awareness programmes in addition to the accelerated programmes conducted during the **31st National Road Safety Week** observed from 11 to 17 January 2020.

- The Education Department has conducted road safety training programmes for teachers. An awareness programme on road safety is being conducted at schools. The 'Safe Drive, Save Life' slogan has been published in the school curriculum. The department has incorporated road safety awareness curriculums from Class-I to Class-VIII. Further development of the course curriculum for Madhyamik and higher secondary syllabus has been planned.

• Training of drivers

- » A state-of-the-art, sensor-based driving track is being built in Behala, Kolkata. After it starts, the State may evaluate the results and, based on the learning, may take it to other locations in the State.
- » **DL Testing under CCTV** surveillance has been introduced in four PVD offices as Pilot Projects – three are in Beltala and one in Howrah.
- » **Monitoring of Motor Training School:** The Transport Department with technical assistance from IIT Kharagpur has prepared and distributed a training manual to various motor driving training schools.
- » The highlights of the 'Good Samaritan' Law are being displayed prominently in public spaces to encourage citizens to save lives during the Golden Hours.

Road engineering

- **Road Safety Audits:** Done by a team of IIT Kharagpur on SH-11, SH-2, NH-60 and NH-117.
- **Visits and measures taken at Black Spots:** A total number of 388 Black Spots were identified across



the state. Necessary short-term and long-term measures were taken to prevent accidents.

Other initiatives

- The state has set up the **State Road Safety Council** (headed by the Chief Secretary) and District Road Safety Committees (headed by District Magistrates) as per the directions of the Supreme Court Committee on Road Safety. The State Road Safety Council meets twice every year while the District Road Safety Committees have been asked to meet once every quarter. A State Road Safety Plan was formulated in 2015.
- **Lead Agency:** The lead agency includes the Director (Transport) as the Chairman, IG (Traffic) as the Co-Chairman of the agency, PD of PIU-I/PWD,

Joint Director, Health and Family Welfare and Chief Engineer, WBTIDCL are included as a member of the lead agency. They have been entrusted with the monitoring of the implementation of the directions from SCCRS.

- To implement the measures outlined in the State Road Safety Policy, the Government of West Bengal has formulated a multi-pronged **Safe Drive Save Life** campaign based on 5 'E's viz. Education, Engineering (both of roads and vehicles), Enforcement, Evaluation and Emergency Care.
- The government has augmented the strength of traffic police personnel by posting 25,011 of various ranks, including 3,304 CVs. A very significant measure was to post 25 Deputy Superintendents of Police (Traffic).



- Change in IS standards for Agricultural Tractor, brakes, Turning Circle diameter and the location of exhaust pipes.
- **Anti-lock Brake System (ABS)** has been made mandatory for M1 and M2 category Vehicles
- Fitting of Speed Governors on M1 category;
- Additional safety provisions for M1 category – seatbelt reminders, airbags, manual overrides, and speed alert systems.

Traffic furniture

- Funds for traffic furniture which included traffic uniform items, traffic channelizers and enforcement

equipment like speed laser guns and breathalysers were received from various agencies like the Transport Department, West Bengal Police Directorate, Modernisation Police Fund (MPF), MPLAD, etc. Fixed watch towers (52), Mobile Watch Towers (40), Speed laser guns (196), Breathalysers (254), and Road Painting Machines (19) were some of the significant items that were procured.

Patho Bandhu

- Traffic HQ partnered with the Health and Family Welfare Department to launch the Patha Bandhu programme to train roadside civilians as first

responders in road traffic accidents in September 2019. The main objective of the scheme is to ensure that victims of Road Traffic Accident (RTA) receive medical attention within the shortest possible time.

E-Challan

- Earlier, only a few commissionerates and districts had the E-Challan system which was based on localised software/arrangements. Now, the entire State has been brought under the e-challan system on the NIC platform under the supervision of the Hon'ble High Court. The e-challans have also been linked to the e-court.

Training

- Virtual meetings were held with doctors where 69 units of Traffic, West Bengal participated and were trained to provide immediate medical help to accident victims in the golden hours. YouTube links were created too. Also, the force and traffic officers underwent a number of sensitization programmes.

IIT Kharagpur

- A Road Safety Audit of important roads is being done in coordination with Mr Bhargab Maitra, an IIT Professor, to identify and rectify engineering defects to prevent accidents.



VISION 2030



THIS IS THE vision of the Hon'ble Chief Minister Mamta Banerjee to reduce death and grievous injuries on the roads across the State of West Bengal. The Hon'ble Chief Minister has taken up this matter and initiated a campaign across the State named 'Safe Drive Save Life' to reduce road accidents and fatalities. Traffic HQ and field-level Traffic units are dedicated to implementing the vision of the Hon'ble Chief Minister to provide safer road situations to all citizens of the State of West Bengal. Our mission is to be recognized worldwide for our work in saving lives through smarter enforcement, changing driver behaviour for the better and ensuring that effective action is taken against those who break the law.

Targets to be achieved

- To reduce traffic accidents by 30% from the current level by 2030 and to maintain zero growth after 2030.
- To minimize loss of lives because of delays in evacuations and transfer of accident victims to first-aid/trauma care centres and ensure quality medical attention within the minimum response time (20 to 30 minutes).
- To take all short-term and long-term corrective measures with respect to all the Black Spots in the State.
- To impart training to all categories of drivers regarding the importance of defensive driving, courtesy and respect to fellow drivers and road users.
- To identify the actual causes of congestion in suburban towns as well as at various important stretches on roads entering Kolkata like Dankuni, Santragachi, etc., and to take necessary measures

to sort out the issue. Suitable parking places to be identified to deal with the parking of goods vehicles on highways to reduce congestion as well as accidents. Multi-pronged strategies to deal with congestion in cities like Siliguri, Asansol, and Chinsurah.

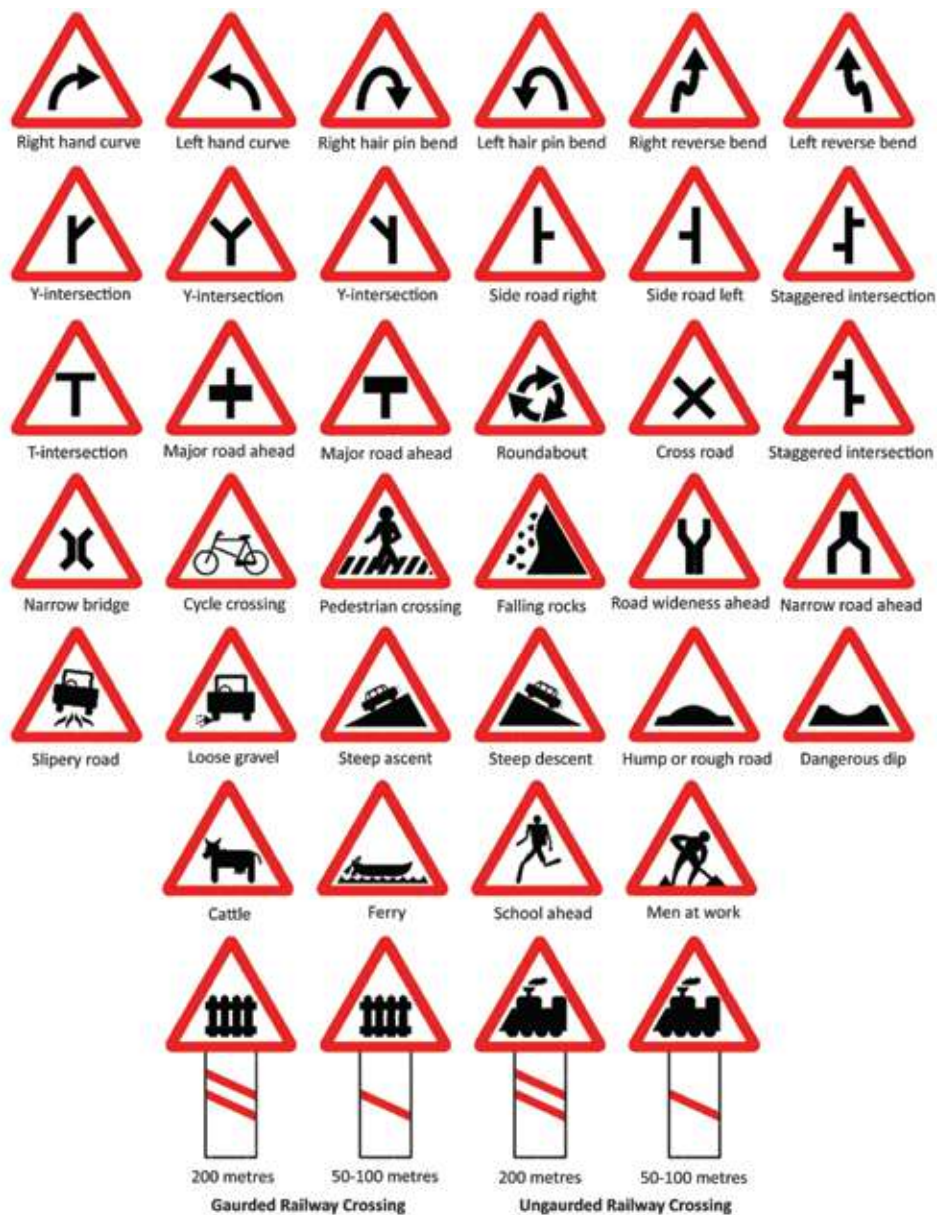
- To strengthen identified research institutions in the State for R&D support on a Road Safety Action Plan involving the Four Es, namely: Engineering, Education, Enforcement and Emergency Response System suitable to West Bengal's conditions.
- Setting up the necessary infrastructure to carry out routine accident investigations and conduct safety audits of highways, identify stretches that have defective road geometrics, lack of road-side appurtenances and safety devices,
- Strict enforcement against all traffic violations using an artificially intelligent system such as AI-based speed check devices, surveillance cameras and GPS/GIS/AIS140-enabled Accident Management Systems.
- Setting standards for the safe design of roads by providing speed reduction devices, traffic signboards, signals, pedestrian facilities and adequate parking spaces.
- Introduction of activity-based traffic education in school curriculum.
- Hard policing and strict enforcement on habitual traffic violators with the help of AI-based technologies such as surveillance cameras, interceptors and other advanced automated traffic control devices. Strategies to be evolved for sustained enforcement on overspeeding, rash driving, non-wearing of seatbelts and helmets, using mobile phones while driving, drunken driving and other traffic rule violations.



- Improve the quality of the accident database for R&D purposes and decision-making support systems.
- Strengthening of Traffic HQ with adequate technical manpower, capacity building and research

functions to provide an institutional framework for a coordinated approach to prevent road accidents. A Command Centre to be created at Traffic HQ for effective supervision for better road safety for all citizens of the State.

CAUTIONARY ROAD SIGNS



CAUTIONARY ROAD SIGNS



INFORMATORY ROAD SIGNS



Public Telephone



Petrol Pump



Hospital



First Aid Post



Eating Place



Light Refreshment



Resting Place



Thorough Road



Thorough Side road



Park Both Side



Park This Side



Parking Cycle



Parking Cycle Rickshaw



Parking Cars



Parking Motor Cycle



Parking Auto Rickshaw



West Bengal Police Directorate
Bhabani Bhawan
31/1A, Belvedere Rd, Alipore Police Line
Alipore, Kolkata
West Bengal 700027

Traffic HQ, West Bengal
Araksha Bhawan, 1st Floor,
Block-DJ, Sector- II, Salt Lake
Kolkata 700091

<http://wbpolice.gov.in>

