

UNIT 2 : Institutional setting of Road safety

National Road Safety Policy

Preamble

The Government of India has recognized that road accidents is a leading cause of death in the country. It has also recognized the importance of addressing road safety in order to reduce the number of accidents, deaths and injuries on the road. This must also be seen as a joint effort/responsibility of State and Central Government. The National Road Safety Policy is an effort for this movement by the government.

Policy Statements

The Government has taken the following steps to improve safety on the roads:

Raise awareness about issues related to road safety: The government would escalate its efforts to endorse awareness about road safety and all its aspects. This includes the implications of road accidents and the steps which have to be taken to reduce the number of incidents. The purpose of this is to enable and empower people on the road in order for them to take on a meaningful role in promoting road safety.

Launch a Road Safety Information Database: The government would help with increasing the quality of data collection, transmission, analysis and crash investigation by extending a hand to Union Territories, States and local bodies.

Safer Road Infrastructure: There will be measures taken by the Government to ensure better standards in terms of design and safety of urban and rural roads. Intelligent Transport Systems (ITS) is to be put in use to ensure efficient and safe transport system which will be on par with international best practices.

Safer Vehicles: The vehicles on the roads must be signed off as in line with international standards so that they pose least threat in terms of safety on the roads and harm to the environment. For this the safety features must be monitored from the stage of design, production, operation and maintenance of vehicles.

Safer Drivers: The government will take measures to ensure that only highly capable and competent drivers are behind the wheel by making the system of driver licensing stricter.

Safer conditions for Vulnerable Road Users: The needs of people on the road (including the physically challenged, the vulnerable and non-motorized transport) will be taken into account during the design and construction of all road facilities. Town planners, highway, engineers, traffic engineers and architects will have to keep 'best practices' while working on roads.

Road Traffic Safety Education and Training: Publicity campaigns, training and education will be used to create awareness and instil road safety knowledge among the population (both in the community and in educational institutions).

Safety Laws Enforcement: Various state and other governments will be aided by the Government of India to strengthen enforcements. This will make safety law implementation more uniform and effective. Highway Patrolling on National and State Highways will also be increased in number and frequency.

Emergency Medical Amenities for Accidents on the Road: There will be all efforts made from the government to ensure that everyone who is involved in accidents on the road will get quick, superior medical care. The main features of such medical care includes efficient rescue operations and conducting first aid at the accident site, as well as transporting the injured to the hospital for further care. Further, the government will ensure that all hospitals near National Highways/ State Highways are prepared to care for those who are injured in road accidents sufficiently.

HRD and Research for Road Safety: Programmes of road safety research will be encouraged by the government. This includes identifying priority areas, funding research, founding research and academic institutions etc. The results of such research will be disseminated by the government through workshops, training, publication, conferences and websites.

Fortifying Institutional, Legal and Financial Environment for Road Safety

Road safety education

Road safety education is the program of educational activities around road safety that is provided to children and young people in formal and community education settings – such as early childhood services, primary and secondary schools.

The Department of Transport and the Department of Education have emphasized the need for a long term road safety strategy that will include road safety education. The Ministry of Education announced at the start of 2006 that primary-school pupils will also study road safety in 2006 as part of the school curriculum. The Department of Transport confirmed that they have embarked on extensive educational programs, which have reached 90% of radio listeners and 80% of television viewers.

Children and young people have a high involvement in road crashes, so they must learn to use the road safely. Receiving road safety education as part of their normal school curriculum is recognized as being one of the most effective ways of providing youngsters with road safety knowledge. Road safety education develops knowledge, skills, attitudes and even more importantly - values that enable pedestrians, cyclists, motor cyclists, drivers and passengers to use the road safely. The Road Traffic Management Corporation has been tasked with providing road safety education.

In the past road safety education in schools was sporadic, non-continuous or even non-existent. There were many learners who went through schooling without ever being exposed to road safety education. Development of new resources using computers and other related equipment has now encouraged the use of new technology as part of the learning experience. The internet can play an important part in creating awareness of road safety and in making available educational materials.

Research have shown that learners show a limited awareness with regards to, amongst others

- the importance of protective gear and reflective clothing for cyclists
- the side of the road and for or against traffic and as to where (on the pavement or on the road) a cyclist should ride
- the laws related to carrying of passengers on motorbikes the importance of wearing seat belts
- why it is important to use a pedestrian footbridge if provided and not cross at any section of the road

Strengthen Road Crash Database System

The State Police, through its State Crime Record Bureau (SCRB), collects crash data on number of accidents occurred, extent of severity, types of vehicle involved, probable causes of accidents etc. However, the crash data collected presently can be further refined in understanding the general pattern and trends of crashes, thereby contributing to the holistic analysis of crashes and further development of effective road safety interventions. Since crash data is the key source of information for the planners, facilitators and researchers, Government of West Bengal is working towards development of a comprehensive database management system. Following will be the key activities to improve the database:

- 🕒 Create a database to fit the requirements of Home, Works, Transport, Health & Family Welfare, Housing & Urban Development Department and Research Institutions.

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- 🕒 All Trauma Care Centres, District Hospitals and Ambulance Services to be connected to the database.
- 🕒 Interfaces to be provided with the Centralized Motor Vehicle database of the State.
- 🕒 Capacity-building for in-depth accident analysis, investigation and reporting.
- 🕒 GIS & GPS enablement for real-time tracking of accidents.

Safe planning and design of roads

The Government will take following measures for proper planning and design of roads:

- ⌚ Periodically identify accident-prone areas/black spots on the basis of accident intensity and severity.
- ⌚ Take corrective actions in the identified accident-prone areas/ black spots through proper planning, design and construction techniques.
- ⌚ Carry out sustainable improvements in the road network of the entire State and take necessary actions such as road markings on all NHs, SHs and installation of relevant traffic furniture.
- ⌚ Construct wayside amenities/service centres on major road network etc. which will result in substantial reduction in road accidents/fatalities.
- ⌚ Introduce 'Traffic Calming' measures to physically reduce the speed in vulnerable stretches, near schools/ hospitals /markets / other busy community locations.
- ⌚ Conduct Road safety audit by hiring expert agencies and implement suggestions thereof.
- ⌚ Develop a handbook on 'Road Safety Design Guidelines' to be used by engineers at all levels in all road sector agencies covering urban and rural roads.

Safe Driving

Driving error causes majority of road accidents and to address this issue, the Government intends to:-

- ⌚ Undertake sustained road safety awareness campaigns for drivers through periodic workshops and training programmes.
- ⌚ Enforce fastening of seat belts and wearing of helmets as per statutory rules.
- ⌚ Issuance of driving licenses from Automated Driving training Centre.

⌚ Issuance of 'Certificate of Fitness' for vehicles from automated Inspection and Certification centres.

⌚ Enforcement to check violation of basic safety requirements, drunken driving etc. and implement deterrent penal provisions including cancellation of driving license for first offense for drunken driving and repetitive offense for other violations as per rule / law

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⌚ Implementation of proven innovative technologies to reduce accidents.

⌚ Implementation of third party audit of driving schools.

⌚ Implementation of auditing vehicle inspection centres

Awareness, Education and Training for Road Users

following are the activities to create safety awareness among road users.

⌚ Make road safety education programmes mandatory in schools.

⌚ Conduct Road safety awareness training programmes for teachers, parents and citizens.

⌚ Organize campaigns and orientation programmes for all categories of road users and make them aware of their respective responsibilities.

⌚ Special emphasis on safety of vulnerable groups like school children, the disabled and senior citizens.

⌚ Human resource development through development of training modules for staff, attendants, inspectors, auditors and mechanics

Trauma care ambulances.

⌚ Maintain the access roads to each emergency care hospital motorable, potholefree and free from roadside parking or encroachments/ obstructions.

⌚ Train all commercial vehicle drivers in First Aid trauma care.

⌚ Equip the district hospitals to provide Emergency Medical Services in road

accident cases.

Road Safety Rules And Regulations

Keep To Your Left – Always drive or ride on the left side of the road and let other vehicles overtake you from the right side.

Stay Left When You Turn Left – When turning towards left, start with approaching the curb from the left-most lane and ensure there's enough distance for oncoming vehicles to pass.

Turn Right – Come to the centre of the road before you start turning right but when going around the curb, try to stay towards the left-most part of your lane to avoid contact with oncoming traffic.

Always Overtake from the right side.

When being overtaken by another vehicle, never increase your speed to prevent the other driver from overtaking you.

Be extra careful on intersections. Also, when passing through them, ensure your vehicle doesn't cause inconvenience to other road users.

Right of Way- Always give a right of way to vehicles on intersections by letting them continue without stopping in that particular direction in which you are about to proceed.

Emergency Vehicles – It is your responsibility to give way to emergency services vehicles such as fire engines and ambulances.

Pedestrians have the right of way at pedestrian crossings or zebra crossings.

“U” Turns- U-turns can only be taken when there is no warning sign nearby you give a proper indication to other vehicle drivers that you are going to take a U turn

Indicators – Always use indicators to let other road users know about the planned change in the direction of travel. If your vehicle indicators get damaged without any warning, use hand signals

Parking – Make sure you don't park your vehicle in a way it causes any hurdle or disturbance to any other road users.

Registration – Your vehicle's registration plate should be visible at all times. In case it is broken or damaged, you need to get it replaced at the earliest. Driving a vehicle with its registration number not being visible is a serious offence.

One way Roads – Always drive only in the permissible direction on a one-way road. Also, never park your vehicle in reverse on a one way street.

Stop Lines – Always stop your vehicle behind the stop lines. On roads with no stop lines, make sure your vehicle comes to a halt before the Zebra-crossing.

Towing – No vehicles should be towed closer to other vehicles on the road. However, vehicles that are mechanically disabled and those confiscated by the police are exceptions to this rule.

Noise – Drivers should not horn needlessly or excessively or use them in no-honking zones like hospital zones and school zones, etc. Also, one should not drive with non-OEM-spec silencers

Traffic Lights and Signs should be always obeyed. One should respect instructions given by a traffic cop when there are no traffic lights available.

Following Distance – Always keep a safe distance from the vehicle in front of you as this will give you enough time to come to a stop in case the vehicle in front brakes suddenly.

Right of way on Steep Roads – When going up on an incline, you have the right of way as it might be difficult for you to stop and regain momentum. The vice versa holds true when you're driving downhill.

Obstruction of View – You should always have a clear view of the road ahead. Therefore, your car's windshield shouldn't have stickers that might obstruct your view.

Passing Pedestrians Do not drive at more than 25 km/hr, when you passing a procession, meeting, strike, or a march.

Tractor and Goods Carriages – It is prohibited to carry passengers on a tractor or a goods carrier

Loading – Overloading a vehicle is not only dangerous but even illegal. Therefore, one should not carry more than a permissible number of passengers or excessive luggage that the vehicle isn't designed to carry.

Dangerous Materials – One should not carry explosives, inflammable or harmful substances as they are a fire hazard.

Driving in Reverse – When driving in reverse, you should make sure you do not cause annoyance to any other people on the road.

Essential Documents – Always carry the following documents – Driving license, Registration certificate of the vehicle, Insurance certificate, fitness certificate (in case of commercial vehicle), tourist permit (in case of commercial vehicle) and PUC certificate.

Additional Regulations – In addition to the above, the drivers should be aware of all the road safety rules, such as those of speed limit, one-way streets, etc.

Road Safety Rules for Kids / Children

Know your Safety Signals

Your kid should know about basic traffic signals, such as vehicles have to stop at the 'red' light and 'green' means the vehicle should resume driving, etc. Doing so will help them understand that they

can cross a road once the vehicles come to a stop.

Safety Rules while crossing the road

Stop, Look, And Cross- At times, your child may have to walk on a public road alone, He should know that when crossing a street, he should first stop and look for any approaching vehicle and start crossing the street only if there's no vehicle in sight. Of course, at traffic signals, he should cross the road only when the light goes red.

Always Pay Attention – Listen to Warnings

Pay Attention – Ask your kids to pay attention to horns and even to sounds of the vehicle so that they can judge if there is some car or motorcycle driving towards them from a bend or from behind.

Never Run On Busy Roads and Crossing Time

Don't Run On Roads – Children should never run on roads as that might not only cause them to lose balance and fall on a busy street but also because it might confuse other road-users, who might end up colliding with the kid.

Always Use Sidewalk

Kids should use a footpath (Sidewalk) when walking on the road. Set an example for them by using the walking paths yourself.

Crossroads and Pedestrian Crossing – Kids tend to start running or walking across a street, anywhere they wish to. This is dangerous and kids should be told to cross a road only on a pedestrian crossing and when the vehicular movement is suspended during a red light.

Never Stick Hands Outside The Vehicle

Kids often put their hands out of the school bus or at times, even put their heads out but this is very dangerous and kids should be told to not do this at any cost.

Avoiding Blind Spots

Never Cross Road At Bends – There are blind spots for many motorists on a bend and they might not be able to see your child crossing a road on the bend. Hence, kids should avoid crossing the road at bends.

Staying Safe On A Bicycle – In case your child uses a bicycle, he should avoid riding it fast and always wear a helmet. Also, he should ensure the bicycle is in good condition and always ride it in a bicycle lane. In case the bicycle lane isn't present, he should ride it in the left-most lane.

Staying Safe Inside A Moving Vehicle – In a moving vehicle, a kid should be always belted up, nevstand or disturb the driver.

Crossing the Road Only at Zebra Crossings

Children should remember that pedestrians have the right of way at pedestrian crossings or zebra crossings and should use them to cross a road when vehicles have stopped at a red light. Never play or run at bus stops or on the road

What Is a Pavement?

Pavement is one type of hard surface made from durable surface material laid down on an area that is intended to carry vehicular or foot traffic.

its main function is to distribute the applied vehicle loads to the sub-grade through different layers. The road Pavement should provide sufficient skid resistance, proper riding quality, favorable light reflecting characteristics, and low noise pollution.

Its goal is to reduce the vehicle transmitted load so that it will not exceed the bearing capacity of the sub-grade.

The Road Pavements are playing a crucial role in the development of any construction. There are mainly two types of road pavement used namely flexible and rigid pavements road.

A good pavement should possess the following requirement,

it should have required thickness to distribute the wheel load stresses to a safe value on the sub-grade soil,

It should be structurally strong to resist all types of stresses imposed upon it.

To prevent the skidding of vehicles, it should have a sufficient coefficient of friction.

It should have a smooth level surface that offers comfort to road users even at high speed.

Ensure less noise when the vehicle moving on it.

It should be dustproof so that there is no danger of traffic safety.

It must provide an impervious surface, so that sub-grade soil is well protected, and

It should offer low maintenance with long life.

Types of Pavement

The following are two major pavement types used in road construction,

- Flexible pavement
- Rigid Pavement.

Interest group :Iso called special interest group, advocacy group, or pressure group, any association

of individuals or organizations, usually formally organized, that, on the basis of one or more shared concerns, attempts to influence public policy in its favour. All interest groups share a desire to affect government policy to benefit themselves or their causes. Their goal could be a policy that exclusively benefits group members or one segment of society (e.g., government subsidies for farmers) or a policy that advances a broader public purpose (e.g., improving air quality). They attempt to achieve their goals by lobbying—that is, by attempting to bring pressure to bear on policy makers to gain policy outcomes in their favour.

Interest groups are a natural outgrowth of the communities of interest that exist in all societies, from narrow groups such as the Japan Eraser Manufacturers Association to broad groups such as the American Federation of Labor–Congress of Industrial Organizations (AFL–CIO) and to even broader organizations such as the military. Politics and interests are inseparable. Interests are a prevalent, permanent, and essential aspect of all political systems—democratic, authoritarian, and totalitarian regimes alike. Furthermore, interest groups exist at all levels of government—national, state, provincial, and local—and increasingly they have occupied an important role in international affairs.

The common goals and sources of interest groups obscure, however, the fact that they vary widely in their form and lobbying strategies both within and across political systems. This article provides a broad overview that explains these differences and the role that interest groups play in society.

Road safety procedures

Safe work procedures are road safety cornerstones. They explain how the organization expects its employees to drive. Effective procedures are easy to understand and apply. Employers need to train and instruct employees in their procedures and ensure they are being followed.

Here's an example of a very basic safe driving procedure:

- “When driving for work, employees will:
- Pay full attention to driving at all times
- Identify hazards and respond proactively
- Avoid high-risk driving behaviours, such as speeding, tailgating, failing to yield, improper passing or lane changes, etc.”

SAFETY OF VULNERABLE ROAD USERS

Mobility is part of daily life. Anyone using the roads is at risk of injury or death in the event of a

road accident. Some people are more at risk than others and are commonly referred to as Vulnerable Road Users (VRU). The term has been defined in different ways:

Transport policy makers and road authorities who are responsible for road safety strategies and policies at national and local level need to provide safe road infrastructure that integrates protection for vulnerable road users. ITS technologies can help through:

- design engineering of the road infrastructure to reduce accident risk, manage the conflicting requirements of different road users at critical locations and to reduce the impacts of any incidents
- developing applications that raise awareness of the existence and needs of vulnerable road users, encourage safe road user behaviour by all road users and promote the use of dedicated road safety facilities where provided
- Vehicle manufacturers are also exploring vehicle protection systems for Vulnerable Road Users (VRUs). These are often based on forward looking cameras mounted on the vehicle, used in conjunction with other in-vehicle safety applications such as forward looking radars and Collision Warning.

What are the major causes of Road Accidents?

Over speeding and undisciplined driving: Approx 50000 accidents in India are on account of over speeding.

Motorization and Urbanisation: Are also the main causes of road crash fatalities.

Faulty road designs: Lack of caution signs, big potholes, illegal speed breakers.

Weak Vehicle safety standards in India:

Ineffective and inefficient road regulations: Due to lack of caution signs, big potholes, illegal speed breakers.

Encroachment of road: Unruly road congestion caused by hawkers disrupts normal movements of vehicles.

Laxity in driving license regulations: Lax procedure in obtaining a driving license

Inefficient public transport: The paucity of end to end public transport and its inefficiencies in India leads to the public opting for private vehicles.

Tree types of traffic signs

1) Regulatory

Constructed with a white background, as per the Manual on Uniform Traffic Control Devices (MUTCD), regulatory signs are used to regulate the flow of traffic in a given area. They provide motorists and pedestrians with instructions on how to move -- or not move -- through the area. Examples of regulatory signs include stop, yield, do not enter, no turn on left, no turn on right, no parking, weight limit, speed limit, one way and HOV lane ahead. Because they are used to regulate the flow of traffic, regulatory signs are arguably the most important type of traffic signs.

2) Warning

Warning signs differ from regulatory signs in the sense that they inform rather than instruct. Warning signs are used to warn motorists and pedestrians about a given area. Examples of warning signs include left turn ahead, led reverse turn ahead, right curve ahead, winding road left ahead, hairpin curve ahead, side road at angle, sharp to the right, sharp curve to the left, intersection and hill with grade.

3) Guide

Finally, guide signs live up to their namesake by guiding motorists (not pedestrians) through a given area. They contain essential information about an area, such as location markers. Examples of guide signs include interstate route markers, country route markers, U.S. route markers, state route markers, interchange exit sign, hurricane evacuation route, exit only and roadway junction.

Road Safety Foundation is a United Kingdom charity which carries out and procures research into safe road design and road safety. The Foundation is responsible for the European Road Assessment Program (EuroRAP) in the UK and Ireland.

Traffic Rules While Riding:

While riding on public roads, you are not the only one riding. There are other road users such as car drivers, pedestrians, and other bike riders whom you need to be aware of. Below are some basic traffic rules while riding a bike:

- Always wear a helmet and ensure the pillion rider too wears a helmet.
- Do not ride without mandatory documents such as DL, RC, Insurance Policy, PUCC and Medical or Fitness Certificate if required.
- Always keep to the left on a two-way road.
- Slow down at intersections, junctions, road corners, pedestrian crossings, etc.
- Maintain lane discipline.
- Use hand signals when required.

- Use turn indicators to let others know you are taking a left or a right turn.
- Ensure the registration number is clearly visible.
- Do not use the horn unnecessarily.
- Do not overtake an overtaking vehicle.
- Use high-beam only on dimly lit roads or highways.
- Always give way to pedestrians.
- Do not carry more than one pillion rider.
- Do not park near a road junction or on a flyover or a bridge or on the footpath.
- Do not ride on footpaths.
- Follow traffic and road signs diligently.