Safe Roads

Mains Syllabus: GS III – Infrastructure , Road

Why in the News?

Recently Union Ministry of Road Transport and Highway announced the setting up of driving training centres and vehicle fitness centres in every district.

What is the need for improving road safety in India?

- **High Burden of Road Traffic Mortalities** - With one of the world's largest road networks, India also carries the burden of having among the highest number of road traffic fatalities globally.
- In 2022, India recorded 1.68 lakh road accident fatalities which translates to approximately 12.2 deaths per 1 lakh population.
- Japan and the U.K. have road traffic death rates of 2.57 and 2.61, respectively.
- **Economic Repercussions** - Road crashes cost India an estimated 3% of its GDP annually.
- **Urbanization** - By 2047, the urban population is expected to account for about 50% of the total population.
- This rapid urbanisation will be accompanied by a substantial rise in vehicle ownership.
- **Right to Life** - The right to safe road travel is an essential component of the right to life under Article 21 of the Constitution.
- Every citizen, whether a pedestrian, cyclist, or driver, has the right to move through public spaces without fear of injury or death.
- **Duty of the State** – It is the moral and legal duty of the state and society to treat road safety not as a privilege or technical matter, but as a human right and public good.

What are the causes of road accidents?

- **Drivers** - Over-speeding, rash driving, violation of rules, failure to understand signs, fatigue, alcohol.
- **Pedestrian** - Carelessness, illiteracy, crossing at wrong places moving on carriageway, Jaywalkers.
- **Passengers** - Projecting their body outside vehicle, by talking to drivers, alighting and boarding vehicle from wrong side travelling on footboards, catching a running bus etc.
- **Vehicles** - Failure of brakes or steering, tyre burst, insufficient headlights, overloading, projecting loads.
- **Road Conditions** - Potholes, damaged road, eroded road merging of rural roads with highways, diversions, illegal speed breakers.
- **Weather conditions** - Fog, snow, heavy rainfall, wind storms, hail storms.

What is the Safe System Approach?

- **Safe System Approach** - It is the heart of future-ready urban mobility lies and places human vulnerability and error at the centre of road design.
- **Philosophy** – It acknowledges that people will make mistakes, but those mistakes should not result in fatalities or serious injuries.
- **Safety** - Prioritising pedestrian safety is fundamental under this approach.



- **Resilience** - This system moves away from blaming individual road users and instead emphasises creating a forgiving and resilient road environment.



Key principles of the Safe System approach
• **Human Fallibility -** It acknowledges that people will make mistakes, and the system should be designed to accommodate these mistakes. • **Human Vulnerability -** It recognizes that humans are fragile and cannot withstand impacts above a certain speed (typically 30 km/h). • **Systemic Approach** - It considers the interaction between road infrastructure, vehicles, road users, and speeds to create a holistic and integrated safety system. • **Focus on Prevention and Mitigation** - It aims to prevent crashes in the first place and, if they do occur, to reduce the severity of injuries. • **Prioritizing Safety** - It makes safety the primary consideration when designing and managing roads.
Four Key Elements of a Safe System 1. **Safe Roads and Roadside -** Designing roads that are predictable, forgiving of errors, and encourage safe speeds. 2. **Safe Speeds** - Setting appropriate speed limits and ensuring compliance to avoid excessive speeds. 3. **Safe Vehicles -** Building vehicles that prevent crashes and protect occupants, pedestrians, and cyclists in the event of a crash. 4. **Safe Road Users -** Encouraging road users to be alert, compliant with rules, and to take responsibility for their own safety.

Government Measures on Road Safety
• **Rectification of Black Spots** – Recently Union Road Transport and Highways Ministry has identified over 13,795 black spots on India's National Highways (NHs) based on accident reports with fatality and major injury. • **Mandatory Road Safety Audits** - Road safety audit of all National Highways projects has been made mandatory at all stages of design, construction, operation & maintenance through third party auditors/experts. • **Stricter Safety Norms** - Central Motor Vehicles (Tenth Amendment) Rules, 2024 mandates IS certified safety belts and restraint system. • **Stringent Monitoring** - Electronic enforcement mechanisms such as speed cameras and CCTV surveillance have also been rolled out to improve compliance. • **Training Centers** - To ensure safer driving practices and reduce accidents caused by unskilled driving , It has been announced to set up driving training centres and vehicle fitness centres in every district.

What lies ahead?

- The growing urban and vehicular population necessitates people-centric interventions to ensure that streets remain safe, especially for vulnerable road users such as pedestrians, cyclists, the elderly, and public transport commuters.
- Urban streets can be redesigned based on safe system approach with wider footpaths, dedicated cycling tracks, well-marked crossings, pedestrian refuge islands, reduced speed limits, and calming measures such as raised intersections.
- To meet the massive financial requirements of road safety improvements, innovative funding models must be explored.
- Automobile manufacturers can be required to channel their entire Corporate Social Responsibility funds towards road safety initiatives for the next 20-25 years.
- This investment, executed in collaboration with the Indian government, could support black spot elimination, public awareness campaigns, emergency trauma care, driver training, and road safety research.

Reference

The Hindu | The road to safety

