Safer Roads for Greener Environment

What is the issue?

1. In 2021, India reported 4,03,116 crashes, each of which adversely impacted the environment in various ways and in different degrees.
2. In addition to ensuring an easier, comfortable, and more secure commute, safer roads also have a positive impact on the environment.

What is the major problem?

- Most vehicles contain **toxic metals** such as lead, mercury, cadmium or hexavalent chromium, which are detrimental to the environment.
- **Fuel and fluid leaks** are seen at crash sites.
- Severe road crashes lead to automobile wreckage, which becomes a part of unusable end-of-life vehicles. This gives rise to **scrappage**.

India is estimated to have about 22.5 million end-of-life vehicles by 2025.

- Despite being one of the largest car and light commercial vehicle markets in the world, India's National Automobile Scrappage Policy 2021, is still in its nascent stages.
- With the absence of widespread, systematic facilities dedicated to their proper recycling, vehicles after road crashes as well as old end-of-life automobiles are left to rot by the wayside.
- Some end up at landfills or at informal recycling facilities where rudimentary hand tools are utilised to unscientifically dismantle them.
- This leads to the **leakage of hazardous constituents** such as oils, coolants and glass wool.
- Vehicle landfills turn into automobile graveyards leading to wasteful and sub-optimal land usage and water and soil pollution for decades.

What is the impact of speeding?

Being cognisant of the environmental sustainability while working on the road safety is the need of the hour.

- One of the biggest factors for road crashes is speeding.
- In 2020 alone, speeding was responsible for 91,239 road crash fatalities, comprising 69.3% of all road crash deaths registered.
- Speeding has consistently been responsible for over 60% of all road crash fatalities in India in the last 5 years.
- Simulation exercises in Europe have demonstrated that cutting motorway speed limits

even by 10 km/h can deliver
    a. 12% to 18% fuel savings for current technology passenger cars, and
    b. Significantly reduce pollutant emissions, particularly Nitrogen Oxides and particulate matter (PM) output, from diesel vehicles.
- Consequently, several governments globally have reduced speed limits to prevent crashes and lower air pollution.

What is the Zero-Fatality Corridor solution?

- All road safety initiatives undertaken and recommended by the SaveLIFE Foundation (SLF) are designed to be environment-friendly.
- The Zero-Fatality Corridor (ZFC) solution for road safety by the SLF takes environmental sustainability seriously.
- The ZFC solution focuses on reducing speeding through advanced engineering and enforcement technologies.

What are some other initiatives?

- The ZFC programme, which was deployed on Mumbai-Pune Expressway in 2016, helped bring down road crash fatalities by 52%, as of 2020.
- Similar interventions introduced in 2018 on the Old Mumbai-Pune Highway helped reduce the road crash fatalities on this stretch by 61%, as of 2021.
- Initiatives included guarding natural hard structures such as trees using crash barriers to prevent direct collisions, and installing retro reflective signage on the trees to make them more visible to commuters.
- The Government of India too is now building green corridors to go over forests and animal paths as opposed to going through them.

What is the issue with the signages?

- Missing/ inadequate signages are another leading cause of road crashes.
- Their absence results in road users being unaware of a stretch's unique features in a timely manner, which could lead to crashes.
- It is a standard practice to use asbestos for creating these signages.
- As asbestos has an adverse impact on the environment, the ZFC opts only for long-lasting, high-quality, non-hazardous material for signage.
- Despite being more expensive than asbestos, Aluminium Composite Panels are employed for signages.
- Aluminium Composite Panels are free of toxic gas or liquids during the production process, and also recyclable separately as aluminium and plastic, without much value or quality loss.
- This also makes it apt for subsequent multi-purpose usage.

What is next?

- Since roads and the environment are inseparable spaces, they are not just our shared resources but also our joint responsibility.
- So, safer roads and a sustainable environment can be ensured only through the joint

efforts of road-owning agencies, enforcement officials and the public.

Reference

1. The Hindu | Safer roads for a greener, more sustainable environment