Zero-Emission Transport

Prelims: *Current events of national and international importance | Environment*

Why in News?

Recently, A study by the International Council on Clean Transportation (ICCT) study finds India could prevent 1.7 million premature deaths by 2050 if it fully shifts to zero-emission transport.

Road Transport Pollution

- **2024 Data –** Linked to one premature death every 6 minutes and one new childhood asthma case every 34 minutes.
- **Global Share –** India accounts for 13% of global premature deaths attributable to road transport emissions.
- **Regional Impact –**
- NCR bears nearly 25% of India's childhood asthma cases from road transport, despite only 5% of population.
- **Delhi alone –** 2,800 premature deaths and 1,500 new paediatric asthma cases in 2024.
- NO_2 levels in NCR exceed WHO annual guideline (10 µg/m^3).

Heavy Vehicles – Major Contributors

- **Heavy-duty vehicles –** 79% of tailpipe Nitrogen Oxides emissions, contribute to smog and respiratory issues.
- **Heavy-duty vehicles –** 64% of tailpipe Particulate Matter 2.5 emissions, Microscopic airborne soot particles that can penetrate deep into the lungs.
- **Recommendation –** Fast transition to **electric trucks and buses**; phase-out of older, high-emitting vehicles.

Zero-Emission Transport

- **Electrification –** Only way to eliminate tailpipe emissions entirely, fast

transition to **electric trucks and buses**.

- **Policy Measures –** Accelerate adoption of low- and zero-emission vehicles.
- **Regulation –** Stronger oversight to retire high-polluting vehicles.
- **Public Health Priority –** High-exposure regions (e.g., NCR) should be prioritized for transition.

Reference

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