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TODAY'S IMPORTANT CURRENT AFFAIRS

UPSC

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In News: Carbon-di-oxide emissions from India's Transport Sector

Exam Point of View: GS III - Environment

What is Carbon emission?

Carbon dioxide emissions from India's transport sector could be reduced up to 71 percent by 2050 if high - ambition strategies are adopted on few parameters, said a new study by World Resources Institute (WRI) India.

Background:

The study noted that following a high emission reduction target in the transport sector would also be pivotal in achieving India's net zero target by 2070.

Important Points:

1. Emission reduction potential: India's transport sector CO2 emissions could be reduced by up to 71% by 2050 with high ambition strategies on:

1. Electrification of vehicles.
2. Improved fuel economy standards.
3. Shifting to cleaner modes of transports.

2. Current emissions: India's transport sector accounted for 14% of total energy related CO2 emissions in 2020. 90% of these emissions came from road transport, with major contributors being: Two-wheelers:16%, Cars: 25%, Buses: 9%,etc.,

The study, using the energy policy simulator, found that simultaneously implementing fuel economy, electrification, and modal shift strategies at their highest level can lead to a 71% reduction in CO2 emissions by 2050 compared to the business-as-usual scenario.

3. Adding a carbon free electricity standard: (75% renewable energy) could result in a 75% reduction by 2050.

Decarbonising India's transport sector can be achieved by implementing klast-cost policies.

The simulation suggests that shifting to low carbon transport for both freight and passenger segments is the most cost effective policy in the long term, with estimated savings of Rs.12,118 per tCO2 (tonnes of carbon dioxide equivalent) abated.

The mandate of expanding electric vehicle sales is most effective in terms of CO2 emissions reduction, with an annual abatement potential of 121 MtCO2e (Metric tonnes of carbon dioxide equivalent.)

The study added that the decarbonisation of electricity generation could complement the electrification targets in transport sector.

4. Non- renewable resource:

Without any changes, the consumption of fossil fuels is expected to quadruple over the next 3 decades. Such consumption will be driven by passenger travel demand, which is estimated to triple between 2020 and 2050, and freight travel demand, which is likely to increase seven times during the same period.