

MISSION ON SUSTAINABLE TRANSPORT: ENVIRONMENT

NEWS: New mission can boost climate action but emission cuts in transportation pose a daunting challenge.

WHAT'S IN THE NEWS?

India will add a *Mission on Sustainable Transport* to the National Action Plan on Climate Change (NAPCC) to tackle rising transport sector emissions by promoting green mobility across road, rail, shipping, and aviation. The mission will drive adoption of electric vehicles, alternative fuels, efficient logistics, and sustainable urban planning.

In News

- A **Mission on Sustainable Transport** will be added to the **National Action Plan on Climate Change (NAPCC)** — the first new mission since its launch in 2008.
- The mission aims to tackle **vehicular emissions** and promote **green policies** across the entire transport sector.

About National Action Plan on Climate Change (NAPCC)

- **Launched:** 2008
- **Objective:** Outlines a national **mitigation and adaptation strategy** to address climate change impacts and promote ecological sustainability.
- **Current Structure:** Comprises 8 national missions across sectors such as energy, habitat, water, agriculture, and knowledge.
- **National Missions:**
 - **National Solar Mission** → Accelerate solar technology adoption. Target: 100GW solar capacity by 2022.
 - **National Mission for Enhanced Energy Efficiency** → Strengthen the market for energy efficiency. Initiatives include PAT, MTEE, EEFP, FEEED.
 - **National Mission on Sustainable Habitat** → Develop sustainable urban development standards.
 - **National Water Mission** → Promote integrated water management and equitable distribution.
 - **National Mission for Sustaining the Himalayan Ecosystem** → Protect Himalayan biodiversity and glaciers.
 - **National Mission for a Green India** → Enhance ecosystem services and promote afforestation.
 - **National Mission for Sustainable Agriculture** → Make agriculture productive, sustainable, and climate-resilient.

- **National Mission on Strategic Knowledge for Climate Change** → Build a robust climate knowledge system.

About the Mission on Sustainable Transport

- **Objective**
 - Address **vehicular emissions** and promote sustainable practices in the transport sector.
 - Contribute to India's **net-zero emissions targets**.
- **Sectoral Focus**
 - Focuses on **road transport, railways, ports, shipping, and civil aviation**.
- **Nodal Ministry**
 - **Ministry of Road Transport and Highways (MoRTH)**, in collaboration with Indian Railways, Ministry of Civil Aviation (MoCA), and Ministry of Shipping.
- **Key Factors**
 - Logistics optimization
 - Vehicle and road design
 - Regulatory standards and consumer behaviour
 - Urban planning
 - Promotion of **alternative fuels** and **electric vehicles (EVs)**
- **Sectoral Measures**
 - **Road Transport**
 - Focus on **BS-VII standards** and a shift to **EVs** and **alternative fuels**.
 - Target: **30% EV penetration** in new private vehicle registrations by 2030.
 - **Railways**
 - Target to become a **net-zero carbon emitter by 2030**.
 - Strategies: Electrification of operations and use of renewable energy.
 - **Civil Aviation**
 - Align with **ICAO standards** to achieve net-zero by 2050.
 - Implement the **Carbon Offsetting and Mitigation Scheme for International Aviation (CORSIA)**.

- **Shipping**
 - Align with the **IMO net-zero framework by 2050**.
 - Adoption of a **global carbon levy** on vessels.

About Sustainable Transport

- Refers to **safe and low-impact transportation** using **renewable energy sources** instead of fossil fuels.
- **Examples**
 - **Alternative fuels** → Biofuels, hydrogen fuel cells, natural gas.
 - **Electric Vehicles** → Promoting EV adoption and building charging infrastructure.
 - **Public Transport** → BRTS, metro systems, zero-emission buses, e-rickshaws, trams.

Contribution of the Transport Sector to Emissions

- **Global Context** → Transport is the fastest-growing source of **energy-related carbon emissions**.
- **India's Context** →
 - Transport contributes **~10%** of India's total GHG emissions (~375 million tonnes CO₂).
 - **Road transport** accounts for **90% of transport emissions** and about **12% of national CO₂ emissions**.

Need for Sustainable Transport

- **Reduced Energy Dependence**
 - Promotes **energy-efficient options** such as EVs and clean public transport.
 - Helps reduce dependence on **coal and fossil fuels**.
- **Increased Accessibility and Mobility**
 - Enhances access to **essential services** and supports **economic growth**.
 - Example: India plans to deploy **50,000 electric buses by 2030**.
- **Reduced Emissions**
 - Shift to **electric and hybrid vehicles**, use of **alternative fuels**, and improved public transport.

- Example: Public transport can reduce **GHG emissions by two-thirds per passenger per km** compared to private vehicles.
- **Improved Air Quality**
 - Lowered pollution leads to **immediate health benefits** and reduced healthcare costs.
- **Reduced Congestion**
 - **Public transport** moves more people with less space, easing urban traffic.
 - Example: Delhi Metro reduced **congestion** and marginally improved **air quality**.

Challenges to Sustainable Transport Implementation

- **Road Transport Challenge**
 - No **globally agreed net-zero plan** for road transport unlike shipping and aviation.
- **EV Challenge**
 - **Infrastructure gaps**, high costs, and slow **market penetration** delay transition.
- **High Infrastructure Costs**
 - **Massive investments** needed for green infrastructure.
 - India requires **USD 2.2 trillion** investment for infrastructure by 2030.
- **Electronic Waste**
 - EVs and smart transport systems generate **increased electronic waste**.
- **Consumer Behaviour**
 - Poor public transport pushes people towards **private vehicle use**.
- **Urban Encroachments**
 - Rapid urbanization leads to **congested and encroached roads**.
- **Freight Optimization**
 - Integrated multimodal transport for freight requires **high operational efficiency**.

Case Studies: Global Best Practices

- **Netherlands**
 - 100% renewable-powered electric trains.
 - Goal for **emission-free buses by 2030**.

- Extensive cycling infrastructure.
- **Sweden**
 - Public transport powered by **100% renewable energy**.
 - ElectriCity project for sustainable mobility.
- **Luxembourg**
 - **Free public transport** since 2020.
- **France**
 - High-speed rail reduces car travel demand.
 - Fuel tax and EV incentives promote green transport.

Way Forward

- **Efficient Logistic Models**
 - Shift to **rail and water transport** for freight.
- **Smart Mobility Solutions**
 - Modernize public transport with **smart technologies**.
- **EV Adoption and Infrastructure**
 - Incentivize EVs and expand **charging networks**.
- **Urban Planning**
 - Design cities around **sustainable and non-motorized transport**.
- **Alternative Fuels**
 - Scale up use of **biofuels, LNG, hydrogen**, and blended fuels.
- **Regulations**
 - Set **emission standards**, promote public transport, and support clean mobility.

Indian Government Initiatives for Sustainable Transport

- **FAME India Scheme** → Subsidies for EV adoption.
- **NEBP** → Deploy **50,000 electric buses** by 2030.
- **Transit-Oriented Development** → Promote **walkable communities** around public transport.

- **Metro Rail Expansion** → Clean and efficient mass transit.
- **PM GatiShakti NMP** → Enhance green multimodal logistics.
- **National Rail Plan** → Increase freight share of rail to **45% by 2030**, with **net-zero target by 2030**.

Conclusion

- The inclusion of a **Mission on Sustainable Transport** under NAPCC is a crucial step towards reducing transport emissions and promoting **safe, efficient, climate-friendly mobility** options for India's growing population.

Source: <https://www.deccanherald.com/opinion/editorial/sustainable-transport-start-with-the-roads-3565143>