



DAILY EDITORIAL ANALYSIS

TOPIC

**URBANISATION AND THE
CHALLENGE OF IDEAL TRANSIT
SOLUTIONS**

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URBANISATION AND THE CHALLENGE OF IDEAL TRANSIT SOLUTIONS

Context

- As India is undergoing a **rapid expansion of metro and tier-1 cities**, the demand for efficient and sustainable transit solutions has become a critical challenge.

Urbanization Trends & Its Impact on Mobility

- Global Urban Population:** More than 4 billion people — over half of the world's population—now live in urban areas.
- Projected Urban Growth:** By 2050, nearly 68% of the global population is expected to reside in cities (United Nations projections).
- Urbanization by Income Level:** In high-income countries, over 80% of the population lives in urban areas, while in upper-middle-income countries, the figure ranges between 50% to 80%.
- Megacity Expansion:** The number of megacities (cities with over 10 million inhabitants) is projected to increase significantly by 2035.
- Urbanization in India:** India's urban population is expected to **surpass 600 million** by **2030**, and is expected to **grow over 60%** of the population **by the 2060s**.

Challenges in Urban Transit Development

- Limited Public Transport Access:** Only about **37% of urban residents in India** have easy access to public transportation, compared to over 50% in countries like Brazil and China.
- Infrastructure Deficit:** India needs 200,000 urban buses, but only 35,000 are operational, including electric buses.
- Environmental Concerns:** Rising vehicle emissions contribute to urban pollution, making sustainable transit solutions a necessity.
 - The **transport sector contributes ~15%** of global CO₂ emissions.
 - Urban areas suffer from **toxic air pollution**, primarily from fossil-fuel vehicles.
- Funding and Cost Recovery:** Metro projects require substantial investment, and many struggle to recover costs due to lower-than-expected ridership.

India's Initiatives

- PM e-Bus Sewa and PM e-Drive:** These aim to induct 14,000 e-buses and over 1 lakh e-vehicles (e-rickshaws, e-ambulances, e-trucks).
 - However, India needs around **2,00,000** urban buses, but only **35,000** are currently operational, including e-buses — a major shortfall.
- Expansion of Metro Networks:** Increased funding for metro projects in major cities is expected to enhance urban connectivity.
- Sustainable Infrastructure Development:** The government is focusing on next-generation infrastructure powered by sustainability and long-term vision.

Case Studies

- Hong Kong – Mass Transit Railway (MTR):** It integrates high-density development around stations, creating vibrant, walkable neighborhoods.
 - It generates revenue through real estate, making the system less dependent on fares.
- Curitiba, Brazil – Bus Rapid Transit (BRT):** Dedicated bus lanes, pre-paid boarding, and bi-articulated buses allow for high-capacity, low-cost transit that rivals metro systems in efficiency.
- Tokyo, Japan – Shibuya Station Redevelopment:** It is a multi-modal integration, blending rail, subway, and bus systems with commercial and cultural spaces.

- ♦ It's a hub of connectivity and urban energy.

Solutions for Sustainable Urban Transit

- **Investing in Mass Rapid Transit (MRT) Systems:** Metro trains and bus rapid transit corridors can significantly reduce congestion while offering a reliable, fast mode of travel.
- **Promoting Non-Motorized Transport:** Expanding pedestrian pathways and cycling infrastructure encourages healthier mobility while reducing dependence on automobiles.
- **Smart Mobility & AI Integration:** Traffic management powered by artificial intelligence, ride-sharing platforms, and autonomous vehicles offer futuristic possibilities for urban commuting.
- **Policy and Planning:** Governments need to prioritize transit-oriented urban development, ensuring residential and commercial zones are well connected to efficient transport networks.
- **Exploring Road-Based Alternatives:** India needs to look beyond metro networks to bridge mobility gaps, especially in last-mile connectivity. Alternative technologies like **hydrogen, biofuel, and CNG** are gaining attention.

Conclusion

- Urbanisation in India presents both opportunities and challenges. While the government is making strides in improving transit infrastructure, there is still a long way to go in ensuring efficient, accessible, and environmentally friendly mobility solutions.
- A combination of policy reforms, technological advancements, and sustainable investments will be crucial in shaping the future of urban transit in India.

Source: TH



Mains Practice Question

[Q] How can cities prioritize efficiency and technological advancements in transit solutions focusing on inclusivity and environmental sustainability.

