Indian Cities as Growth Engines

This editorial is based on "[Urban development must shed masterplan system](#)" which was published in Hindustan Times on 21/04/2025. The article brings into picture the evolution of Indian urbanization—from isolated industrial centers post-independence to post-liberalization growth hubs driving regional development.

For Prelims: [Smart Cities Mission](#), [Atal Mission for Rejuvenation and Urban Transformation (AMRUT)](#), [National Transit-Oriented Development Policy 2017](#), [Urbanization](#), [City-as-growth-hub concept](#), [Hyderabad's Genome Valley](#), [Real Estate (Regulation and Development) Act, 2016](#), [Pradhan Mantri Awas Yojana](#) .

For Mains: Indian Cities Serve as Engines of Regional Growth, Key Issues Hindering the Sustainability and Effectiveness of Indian Cities.

Post-independence India initially **saw [urbanization](#) linked solely to [industrialization](#)**, creating isolated economic centers with weak regional connections. Recent liberalization has transformed major cities into **"Growth Hubs"** that spur development in surrounding areas, creating productive urban agglomerations wit**h thick labor markets and specialized supply chains**. The **2024 Union Budget formalized this [city-as-growth-hub concept](#)**, recognizing the potential of **India's 474 urban agglomerations to drive economic growth.** However, these hubs face significant challenges in mixed land use planning, incomplete transport networks, fragmented utilities, and revenue generation.

How Indian Cities Serve as Engines of Regional Growth?

- **Emergence of Regional Clusters and Satellite Cities:** The growth of satellite cities and urban agglomerations is enhancing the **regional economic footprint of metro cities.**
    - Regions such as the **Delhi NCR and Bengaluru's peripheral towns** have seen **economic spillover,** transforming surrounding areas into dynamic business hubs
    - For instance, In the **Delhi NCR, regions like Noida and Greater Noida have become industrial powerhouses**.
- **Knowledge and Innovation Ecosystems:** India's urban regions are fostering **innovation and knowledge-driven growth**, with universities, research hubs, and tech parks emerging as centers of development.
    - Cities such as **Pune, Hyderabad, and Chennai** are developing thriving ecosystems for R&D and startups.
    - For instance**, [Hyderabad's Genome Valley](#), home to 200+ biotech firms,** is positioned as a global hub for life sciences innovation, contributing significantly to **regional economic development.**
- **Service-led Economic Growth in Metro Cities:** India's metro cities, especially **Bengaluru, Delhi, and Hyderabad,** are driving service-led economic growth.
    - These cities **attract both skilled and unskilled workers** due to abundant

job **opportunities in IT, finance, and services.**

- A **thick labor market has enhanced productivit**y, reduced staffing delays, and increased income levels.
- For example, **Bengaluru is the hub for India's $150 billion tech sector,** which accounts for nearly **10% of the country's GDP.** This service growth is supported by **rapid urbanization and improved physical infrastructure.**

- **Infrastructure Development Driving Regional Connectivity:** The upgrading of urban infrastructure, such as **metro systems and smart road networks**, is transforming cities into engines of growth.
    - Cities like **Pune and Ahmedabad** have improved connectivity through metro projects, **facilitating faster movement of goods and people.**
    - For instance, recent data shows that **Chennai Metro's adoption reduced traffic by 15-20%.** Similarly, the **Delhi-Mumbai Expressway,** which promises to cut travel time between the cities by half, **is expected to enhance regional economic integration.**
- **Sustainability and Green Infrastructure for Future Growth:** Sustainability is becoming a cornerstone of urban growth in India, with an increasing focus on **green infrastructure, water conservation, and waste management.**
    - Cities like **Chennai and Mumbai have integrated rainwater harvesting, waste-to-energy projects, and green buildings**.
    - **Mumbai's initiative to reduce water leakage by 30% through smart meters** and pipeline upgrades showcases a growing trend.
        - **100 cities are now part of the Smart Cities Mission**, integrating green practices into urban planning.

- **Financialization and Investment in Urban Real Estate:** The real estate sector has been a key driver of economic growth in urban areas, with **rising property values and growing demand for residential and commercial spaces.**
    - Cities like **Mumbai and Delhi are seeing increasing foreign direct investment (FDI) in real estate,** pushing the regional economy forward.
    - For instance**, institutional investments in Indian real estate crossed $6.5 billion inflows in 2024.** Moreover, the **Real Estate (Regulation and Development) Act, 2016**, and tax reforms like GST have enhanced transparency and investment flow.
- **Policy Reforms Enhancing Regional Growth:** Recent policy reforms, including the **Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and the National Transit-Oriented Development Policy 2017**, have been pivotal in reorienting urban planning towards regional integration.
    - These reforms focus on improving transportation, water supply, sanitation, and creating sustainable, livable cities.
    - For example, **AMRUT's allocation** of ₹77,640 crore for city development has enabled

cities like **Bhopal and Varanasi** to improve infrastructure and urban services, enhancing their regional economic roles.

What are the Key Issues Hindering the Sustainability and Effectiveness of Indian Cities?

- **Urban Infrastructure Deficits and Poor Planning:** Many Indian cities struggle with outdated and fragmented infrastructure**, failing to support rapid urbanization.**
    - The **urban population is projected to reach 600 million by 2031,** according to the Union Ministry of Housing and Urban Affairs, **demanding urgent infrastructure upgrades**.
        - India needs an annual investment of **₹4.6 lakh crore for urban infrastructure,** yet the current funding is limited to ₹1.3 lakh crore.
- **Air Pollution and Environmental Degradation:** Air pollution is a pressing concern for Indian cities, with many consistently ranking among the most polluted in the world.
    - The **absence of stringent regulations on industries, vehicles, and construction** activities has led to alarming pollution levels.
    - **India ranked as the fifth most polluted country** worldwide in 2024, with **Byrnihat in Meghalaya** being the most polluted metropolitan area globally
        - In Delhi, the **air quality index (AQI) often reaches hazardous levels,** affecting millions of people.
- **Housing Shortage and Informal Settlements:** The housing shortage in urban areas is exacerbated by **rapid migration and rising land costs, resulting in the growth of informal settlements.**
    - The most recent comprehensive slum census in India, conducted in 2011, revealed that **65 million people resided in slums across urban areas**—a figure that has only grown since then.
    - Despite a high number of house sanctions under **Pradhan Mantri Awas Yojana (PMAY),** completion and occupancy rates fall short of targets.
        - For instance, the scheme aimed to build 1.12 crore houses by 2022, with 1.08 crore approved. Howeve**r, only 60.5 lakh houses were completed (60% of the target).**
- **Water Scarcity and Poor Resource Management:** Water scarcity is a growing crisis in Indian cities, worsened by **over-extraction, poor water management, and increasing demand.**
    - Many cities depend on **depleting groundwater reserves** while rivers like the Yamuna and Ganga face severe pollution.
        - **For instance, Bangaluru and Delhi faced acute water crises in 2024**.
    - By **2030**, the **country's water demand is projected to be twice the available supply**, implying severe water scarcity for hundreds of millions of people., underlining the urgency for sustainable water management.
- **Traffic Congestion and Inefficient Public Transport:** Traffic congestion is a severe issue in Indian cities, reducing productivity and quality of life.
    - **Poor public transport systems** and an increasing number of private vehicles contribute to this challenge.
    - For instance, **Mumbai's congestion level was 53% in 2021** followed by Bengaluru and New Delhi (48%) each and Pune (42%)
- **Inefficient Waste Management and Solid Waste Crisis:** India's cities generate massive amounts of solid waste, but waste management systems are largely ineffective.
    - **Poor segregation, inadequate recycling, and lack of awareness** are major issues.
    - For instance, the **Municipal Corporation of Delhi informed the Supreme Court of India earlier this year that over 10,000 tonnes of waste** are generated daily in the city, with most of it being dumped into the already overflowing landfill sites at **Ghazipur, Bhalswa, and Okhla.**
- **Ineffective Governance and Bureaucratic Hurdles:** Weak governance structures, fragmented decision-making, and bureaucratic delays hinder efficient urban management in Indian cities.
    - **Political and administrative fragmentation** often leads to delays in implementing urban development projects.
        - For example, in Mumbai, ongoing infrastructural projects like the **coastal road and**

metro expansion have faced delays due to regulatory hurdles.

- **Climate Change Vulnerability:** Indian cities are becoming increasingly vulnerable to the impacts of climate change, such as **extreme heat (urban heat island effect), flooding, and rising sea levels.**
    - A new study by IPE-Global and Esri-India has revealed that over **85% of Indian districts are vulnerable to extreme climate events.**
    - Recent urban flood events in India, like th**e 2020 and 2023 Mumbai floods, Chennai floods in 2015, and the July 2023 Delhi floods,** highlight the vulnerability of Indian cities to extreme weather events.

What Measures can be Adopted to Foster the Sustainable Development and Growth of Indian Cities?

- **Integrated Urban Planning with Smart Growth Principles:** Urban planning must be integrated, adaptive, and **forward-looking, focusing on a balanced mix of residential, commercial, and green spaces.**
    - **Adaptive land-use policies must replace rigid zoning laws** to accommodate dynamic urban needs, integrating modern technologies like GIS for efficient urban management.
        - India can learn from the **city of Portland, Oregon** that uses adaptive land-use policies with a strong emphasis on mixed-use zoning
- **Enhancing Public Transport Infrastructure and Mobility Solutions:** Investing in multimodal public transportation networks is crucial for decongesting cities and promoting sustainable mobility.
    - **Expanding metro rail systems, bus rapid transit (BRT),** and non-motorized transport infrastructure like **cycling lanes can reduce traffic congestion** and reliance on private vehicles.
    - Implementing **mobility-as-a-service (MaaS) platforms** can provide seamless, inter-connected transportation options for urban residents, promoting efficiency and reducing carbon footprints.
        - India can draw inspiration from **Bogotá, Colombia, which implemented a world-renowned Bus Rapid Transit (BRT) system**, reducing traffic congestion and promoting sustainable transport.
- **Water Resource Management and Conservation Initiatives:** Cities must implement robust water conservation techniques such as **rainwater harvesting, groundwater recharge, and wastewater recycling** to address growing water scarcity.
    - **Establishing city-wide water management frameworks** that integrate monitoring, data analytics, and predictive modeling can help in better water distribution and resource management.
    - Green infrastructure like **permeable pavements and urban wetlands** should be promoted to manage stormwater and replenish aquifers, reducing flood risks.
        - **India could adopt Singapore's water management strategies** in this regard.
- **Circular Economy Practices in Waste Management:** Transitioning to a circular economy approach in waste management can reduce pollution and resource wastage.
    - Cities should focus on **waste segregation at source, increase recycling rates, and invest in waste-to-energy plants** to minimize landfill dependency.
    - Promoting **extended producer responsibility (EPR)** for manufacturers, requiring them to take back their products post-consumption, can close the resource loop.
        - India can benefit from **Sweden's waste-to-energy model**, where waste is recycled and converted into energy
- **Affordable and Inclusive Housing Policies:** Sustainable urban growth demands a focus on affordable, resilient, and inclusive housing.
    - A **combination of land pooling, public-private partnerships, and increased investmen**t in affordable housing schemes can address the urban housing deficit.
    - Urban renewal projects should focus on upgrading slums and informal settlements with proper sanitation, infrastructure, and access to amenities, ensuring that all city residents benefit from economic growth.
- **Strengthening Climate Resilience and Disaster Preparedness:** To safeguard cities from climate-related risks, it's essential to integrate climate resilience into urban development plans.

- Building **climate-adaptive infrastructure such as flood barriers, heat-resistant buildings, and green roofs** can reduce vulnerability to extreme weather events.
    - Urban heat island mitigation strategies like urban forestry and green spaces can provide cooling effects and improve the quality of life in cities.
- **Technological Integration for Smart Cities:** The effective deployment of smart city technologies can improve urban management and service delivery.
    - Using IoT, AI, and data analytics for real-time monitoring and decision-making can optimize traffic flow, waste management, energy use, and public safety.
    - Smart grids, smart meters, and intelligent transportation systems can increase operational efficiency and reduce costs.
        - India can adopt **Barcelona, Spain's approach to smart cities,** where IoT sensors are used for real-time management of waste, traffic, and energy consumption.
- **Governance Reforms and Decentralization:** Effective governance is critical for sustainable urban growth. **Decentralizing powers to local governments will enable better management of resources**, promote accountability, and enhance citizen participation in urban decision-making.
    - **Strengthening urban local bodies and empowering urban planners** through training and capacity-building will improve policy implementation and responsiveness.
    - A **more transparent and participatory governance model (like Pune)** will help in addressing the unique challenges faced by different cities and ensure equitable distribution of urban benefits.

Conclusion:

While Indian cities have evolved into critical engines of regional growth, significant challenges remain in infrastructure, sustainability, and governance. To ensure long-term development, it is essential to integrate **smart urban planning, enhance public transportation, and implement sustainable resource management.** promoting **sustainable cities (SDG 11), climate action (SDG 13), and reducing inequalities (SDG 10), ensuring that urban growth benefits all citizens equitably.**

> *__Drishti Mains Question:__*
>
> Discuss the role of urban agglomerations in driving regional economic growth in India. What are the key challenges faced by Indian cities in sustaining this growth, and how can sustainable urban planning help in addressing these challenges?"

UPSC Civil Services Examination Previous Year's Question (PYQs)

Prelims

Q. As per the Solid Waste Management Rules, 2016 in India, which one of the following statements is correct? (2019)

(a) Waste generators have to segregate waste into five categories.

(b) The Rules are applicable to notified urban local bodies, notified towns and all industrial townships only

(c) The Rules provide for exact and elaborate criteria for the identification of sites for landfills and waste processing facilities.

(d) It is mandatory on the part of the waste generator that the waste generated in one district cannot be moved to another district.

Ans: (c)

Mains

Q. The frequency of urban floods due to high intensity rainfall is increasing over the years. Discussing the reasons for urban floods, highlight the mechanisms for preparedness to reduce the risk during such events. (2016)

Q. Do government schemes for up-lifting vulnerable and backward communities by protecting required social resources for them, lead to their exclusion in establishing businesses in urban economies? (2014)

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