



Towards Sustainable Urbanization in India

The editorial, titled "[Small cities' outsized role in the urban future](#)," was published in Hindustan Times on 22/08/2025. It highlights the growing importance of small towns in India's urbanization but emphasizes ongoing challenges like fragmented planning, governance gaps, and environmental issues. Despite initiatives, a robust framework is needed to ensure sustainable growth in these areas.

For Prelims: [74th Constitutional Amendment Act](#), [Urban local bodies](#), [Sponge Cities](#), [Digital public infrastructure](#), [Smart Cities Mission](#), [AMRUT](#), [PMAY-U](#)

For Mains: India's Urban Landscape: Related Challenges & Way Forward

[India's urban landscape](#) is rapidly evolving, with small towns and peri-urban areas playing a key role in this transition. As these regions shift from agriculture to non-farm economic activities, they **face challenges such as fragmented urban planning, outdated infrastructure, and weak governance**. These areas risk replicating the problems of larger cities, like unchecked sprawl and environmental degradation, without a robust planning framework. **To ensure sustainable growth, India needs to adopt integrated, people-centric urban planning**, focusing on spatial planning, ecological preservation, and regional coordination.

What are the Key Drivers Shaping the Course of Urbanization in India?

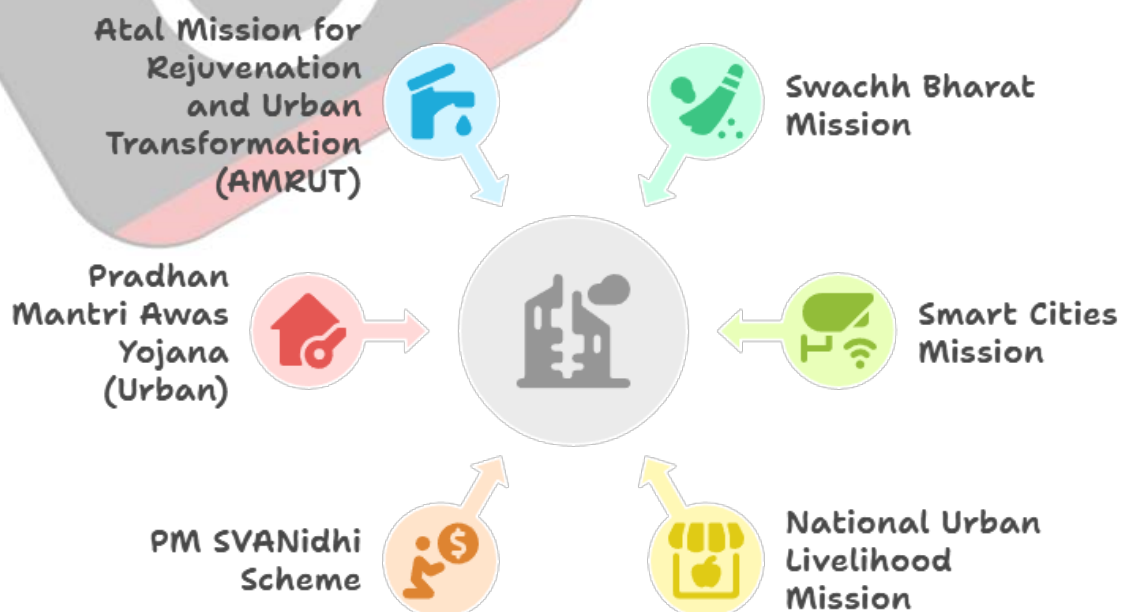
- **Demographic Transition and Rural-Urban Migration:** India's rapid urbanization is driven by continuous [rural-to-urban migration](#), driven by improved livelihood opportunities and better urban amenities.
 - This influx places increasing pressure on cities to **deliver jobs, housing, and infrastructure**, fueling urban growth while also straining governance.
 - As of 2020-21, **approximately 34.6% of urban residents in India were migrants**, compared to 26.8% in rural areas.
 - By 2036, India's towns and **cities will be home to 600 million people**, or 40% of the population, up from 31% in 2011, with urban areas contributing almost 70% to [GDP](#). ([World Bank](#))
- **Structural Economic Transformation and Sectoral Shifts:** The shift from agriculture to industry and services is centralizing economic activities in urban areas, transforming cities into engines of growth and innovation.
 - As of 2022, **urban areas contribute approximately 63% to India's GDP** ([NITI Aayog](#)), with this share expected to surpass **75% by 2030 and reach 80% by 2050** ([MoHUA, 2023](#)).
 - This growth is primarily fueled by the **rapid expansion of the IT**,

manufacturing, and services sectors.

- Moreover, initiatives such as [Skill India](#) and [PMKVY](#) are helping create a skilled workforce, aligning with the growing demand in urban areas.
- Through this, urbanisation offers pathways for [poverty reduction](#), **increased education, and healthcare access**, linking economic development with improved human development outcomes.

- **Government Urban Policy Frameworks and Initiatives:** Ambitious schemes such as the [Smart Cities Mission \(SCM\)](#), [AMRUT](#), and [PMAY-U](#) exemplify targeted policy interventions to modernize urban infrastructure, housing, and governance.
 - As of May 2025, **more than 8,000 projects** have been completed under the SCM, and over **14,000 projects** have been sanctioned under the AMRUT and [AMRUT 2.0](#).
 - These initiatives aim to **reshape urban areas into vibrant centers of economic growth and social inclusion**, marking a transition from mere infrastructure development to improving the overall quality of life.
 - Moreover, initiatives like [Startup India](#) and [‘Vocal for Local’](#) are transforming cities into entrepreneurial hubs, fostering self-reliance, sustainability, and balancing growth with climate commitments.
 - The [National Infrastructure Pipeline \(NIP\)](#) is another critical aspect, with investments aimed at developing sustainable urban infrastructure.
- **Technological Integration and Smart Urban Solutions:** Emerging technologies such as [AI](#), [IoT](#), and [big data analytics](#) are revolutionizing **urban management**, enhancing efficiency, transparency, and sustainability.
 - All 100 cities under the SCM **established Integrated Command and Control Centres (ICCCs)** utilizing technologies like AI and the Internet of Things for enhanced urban management.
 - Digital infrastructure, intelligent traffic systems, and smart water and waste management are **pivotal in addressing the complexities of rapid urban growth**.
- **Rural Distress and Agrarian Crisis:** The push factors contributing to migration from rural areas are primarily rooted in agricultural distress.
 - Climate change, erratic monsoon patterns, and shrinking per-capita land holdings have intensified the vulnerability of rural populations.
 - The average landholding for farming among farmers in the country was 1.08 hectares in 2016-17, but it **decreased to just 0.74 hectares in 2021-22**.
 - **As agricultural productivity becomes increasingly unpredictable, urban migration emerges as a critical survival strategy for many, offering better economic prospects and a more stable livelihood.**

India's Urban Development Initiatives



What are the Challenges Associated with Urban Development in India?

- **Fiscal Constraints and Underutilization of Private Capital:** [Urban local bodies](#) face financial constraints due to **limited revenue autonomy, inefficient tax collection, and heavy reliance on state and central transfers**. This hampers their ability to fund essential services and infrastructure.
 - Although **governments finance 72% of urban infrastructure**, private sector participation remains minimal, highlighting structural challenges in attracting commercial financing.
 - The World Bank estimates that **India will require an investment of USD 840 billion in urban infrastructure** and municipal services over the next 15 years, averaging approximately USD 55 billion annually.
 - This underscores the **substantial financing needs to support the country's rapid urbanization** and infrastructure development.
- **Infrastructure Deficit and Lack of Service Delivery:** India's urban infrastructure is **severely lagging behind demographic growth**, resulting in critical shortages of housing, potable water, sanitation, and energy services.
 - India faces a **shortage of 10 million affordable homes**, a number expected to triple by 2030. This growing shortage not only leads to overcrowded slums but also **creates urban ghettos**.
 - Moreover, as per the World Bank, investment in urban infrastructure **averaged only 0.6% of GDP** between 2011-18, half the required 1.2%, reflecting a persistent funding gap.
 - Despite various initiatives, **no Indian city ranks in the top 100 of the [Global Liveability Index](#)**, and even Bangalore, India's top city, scored only 66.7 on the [Ease of Living Index](#).
- **Congestion and Traffic Management Issues:** Urban residents (for example, in Bengaluru & Pune) spend an average of **1.5 to 2 hours daily in traffic**. This congestion not only contributes to higher pollution levels but also wastes valuable time and reduces productivity.
 - Moreover, most Indian cities **lack comprehensive, efficient, and integrated public transport systems**, leading to a heavy reliance on private vehicles, which in turn exacerbates traffic congestion.
 - For instance, **Patna requires over 1,000 buses**, but as of 2024, only 260 buses were registered in 2024-25, highlighting the lack of a comprehensive public transport system.
 - According to the [Asian Development Bank](#), India loses up to **USD 22 billion annually** due to urban transport inefficiencies, logistics delays, and poor infrastructure.
- **Environmental Degradation and Poor Urban Resilience:** Rapid urbanization has resulted in a significant loss of **green cover, the destruction of wetlands, and the pollution of water bodies**.
 - Construction-driven development often overlooks ecological considerations, leading to **flash floods**, drainage failures, and deteriorating **air quality**.
 - As a result, cities are increasingly vulnerable to environmental shocks, yet building regulations continue to **prioritize high-energy designs**.
 - The **2023 Delhi floods** and the **2024 Bengaluru floods** are stark examples of how inadequate urban infrastructure fails to cope with extreme weather events.
 - Additionally, **13 Indian cities**, including Delhi and Gurugram, **were ranked among the world's top 20 most polluted cities**.
- **Economic Disparities and Urban Poverty:** Urban areas in India are grappling with growing economic inequality, driven by rising living costs and insufficient job creation for low-income groups.
 - A large proportion of the workforce, **approximately 90%, is employed in the informal sector**, where workers often lack access to social security and stable wages.
 - Inflation, especially in food prices, has severely impacted urban households, reducing disposable income and weakening spending power.
 - Additionally, **urban unemployment reached 8.1% in April 2024**, according to CMIE, further exacerbating the economic strain on city dwellers.
- **Urban Waste Management Crisis:** [Urban waste management](#) systems struggle to cope with

rising solid waste generation, with improper disposal practices creating environmental hazards.

- According to a report by **The Energy and Resources Institute (TERI)**, Indian cities generate approximately **62 million tonnes of municipal solid waste annually**.
 - **However, only about 43 million tonnes are collected**, and merely 12 million tonnes are treated before disposal. The remaining 31 million tonnes are often discarded untreated, leading to environmental hazards.

- Mega-landfills like **Delhi's Ghazipur and Ahmedabad's Pirana landfill** continue to expand, emitting toxic gases and polluting water bodies.

- **Urban Safety and Security Issues:** Rising urban crime rates, including theft, cybercrime, and gender-based violence, are increasingly jeopardizing the safety of city residents.

- Contributing to this trend are **insufficient policing, inadequate urban planning, and weak legal enforcement**, all of which hinder effective crime prevention and the protection of citizens.

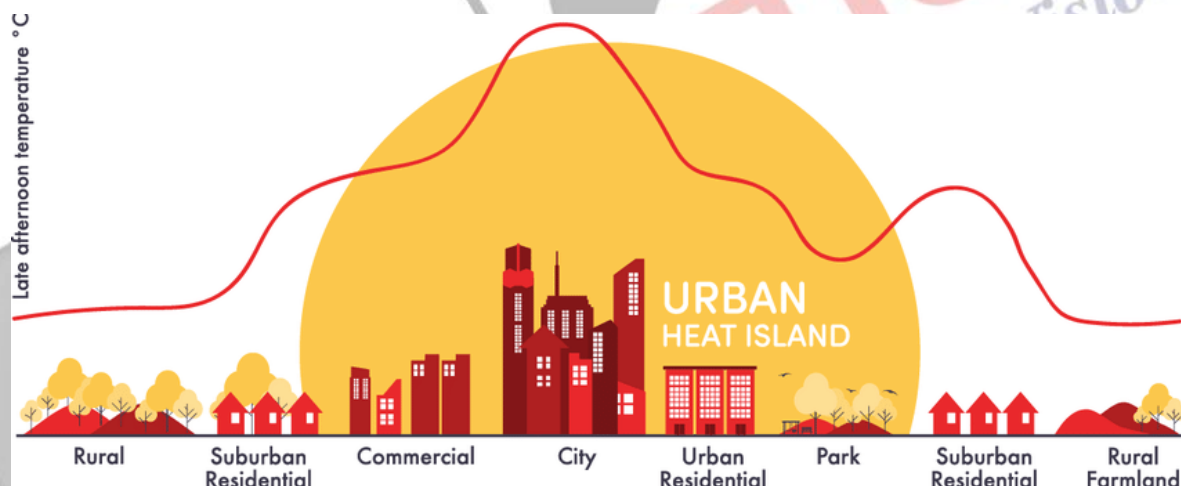
- As per the data of **NCRB (2023)**, Delhi recorded over 14,000 cases of crime against women in 2022.

- **Urban Heat Island Effect:** Indian cities have witnessed a rising Urban Heat Island (UHI) effect, with temperatures in densely built areas significantly higher than in surrounding rural regions.

- Elevated temperatures in urban areas result in greater reliance on air conditioning, which spikes electricity demand, particularly during the summer months. This places additional strain on power grids and contributes to higher [carbon emissions](#).

- **Urban Heat Islands** also pose significant health risks, especially for vulnerable populations, while leading to a reduction in green spaces and biodiversity.

- They **exacerbate water shortages, heighten the risk of flooding**, and accelerate the deterioration of infrastructure, ultimately impacting the overall livability of cities.



What Measures can be Implemented to Ensure Sustainable and Inclusive Urban Growth in India?

- **Fiscal Decentralization and Sustainable Infrastructure Financing:** Empower **Urban Local Bodies (ULBs)** through comprehensive fiscal decentralization by broadening municipal revenue sources, **reforming property taxes, introducing land value capture mechanisms**, and implementing dynamic user fees, all within the framework of budgetary responsibility.

- Foster the **development of municipal bond markets (Indore Municipal Corporation)**, incorporating **ESG-linked instruments**, while establishing outcome-based performance grants to incentivize fiscal prudence, transparency, and effective public-private partnerships.

- This **approach will unlock capital for resilient infrastructure investments**, ensuring sustainable urban growth.

- **Integrated Urban Development Strategy:** Revise fragmented governance structures by establishing metropolitan development authorities with comprehensive responsibilities encompassing land use, transport, housing, and environmental management.

- Promote subsidiarity and cooperative federalism in line with the [74th Amendment](#) to ensure empowered, accountable leadership that fosters **coordination at both vertical and horizontal levels**, dismantling bureaucratic barriers and streamlining policy implementation.
- **Enhancing accountability and fostering multi-stakeholder collaboration** to ensure responsive and transparent urban governance.
 - Moreover, **Odisha's Rural-Urban Transition Policy** is a positive step towards ensuring a smooth and **sustainable shift from rural to urban areas** by providing urban-grade infrastructure and planning support, fostering balanced regional development.
- **Inclusive Urban Regeneration:** Operationalize integrated urban regeneration by aligning the affordable housing goals of [PMAY-Urban](#) with the digital governance and service delivery platforms of the Smart Cities Mission.
 - Facilitate **holistic slum upgrading** that combines improved physical infrastructure, sanitation, livelihood support, and digital inclusion
 - This approach will **promote social equity and empower marginalized urban communities** through participatory planning and real-time monitoring systems, ensuring sustainable development and inclusive growth.
 - India can draw valuable lessons from the **Baan Mankong project in Thailand (2003)**, which effectively upgraded slums by providing secure land tenure, improved housing, and infrastructure through community-led efforts.
- **Enabling Data-Driven, Interoperable Urban Platforms:** India must prioritize investment in urban [digital public infrastructure \(DPI\)](#) to enable **real-time monitoring, improve service delivery, and support effective urban planning**.
 - Platforms such as Integrated Command and Control Centres (ICCCs), under the Smart Cities Mission, **should be scaled and made interoperable across cities** to create a unified urban management system.
 - Connecting property records, **utility billing systems, mobility data, and GIS layers** will significantly enhance urban efficiencies, facilitating seamless data exchange and decision-making.
 - This approach ensures that **digitalization not only improves transparency but also strengthens governance** and operational effectiveness across urban areas.
 - **Estonia's data-driven governance** has enhanced transparency, reduced bureaucratic inefficiencies, and fostered high levels of citizen trust, providing valuable lessons for India's urban digital ecosystem.
- **Advancing Solid and E-Waste Management:** Decentralized waste segregation systems at the ward level should be implemented to enhance recycling rates and minimize dependency on landfills.
 - Advanced technologies, including **waste-to-energy plants (e.g., Narela-Bawana plant in Delhi)** and material recovery facilities, are crucial for managing the increasing volume of waste.
 - **Enforcing [Extended Producer Responsibility \(EPR\)](#) laws** is essential to tackling **e-waste** generation by holding companies accountable for the recycling of discarded electronics.
 - **Bengaluru's success in decentralized composting** offers a scalable and replicable model for other cities to follow.
- **Mainstreaming Urban Blue-Green Infrastructure for Climate Resilience:** Indian cities must prioritize the restoration and integration of urban water bodies, wetlands, and green corridors into their core planning to **build resilience against floods and [heatwaves](#)**.
 - Urban planning should allocate land for urban forests, bioswales, and rain gardens as part of a **comprehensive Green Master Plan**.
 - Cities like **Ahmedabad and Pune serve as exemplary models**, where the revival of city lakes and parks has effectively reduced temperatures and enhanced groundwater recharge.
 - Furthermore, urban greening and **watershed restoration efforts should be aligned with programs such as AMRUT 2.0 and [SBM-U 2.0](#)** to ensure holistic and sustainable urban development.
 - India can also draw inspiration from **China's Sponge Cities model**, which offers valuable lessons for creating climate-resilient urban environments.

- **Strengthening Urban Safety:** To address the rising urban crime rates and safety concerns, cities must enhance policing efficiency, improve urban planning, and strengthen legal enforcement mechanisms.
 - This can be achieved by **implementing a smart surveillance system** and improving community policing to foster trust between law enforcement and residents.
 - For example, **Mumbai has implemented proactive policing initiatives**, which leverage real-time data, surveillance, and analytics to enhance crime prevention.
 - Furthermore, **engaging citizens through community-led safety programs** can empower local communities to contribute to crime prevention.
- **Institutionalizing Community Participation and Participatory Planning:** Building sustainable cities requires the active involvement of the communities they serve.
 - Institutionalizing platforms like **ward committees, mohalla sabhas**, and citizen report cards can help bridge the gap between urban planning and the lived experiences of residents.
 - **Municipal budgeting must be made participatory**, enabling citizens to have a say in local infrastructure priorities and resource allocation.
 - Tools such as **digital grievance redressal systems, social audits**, and area sabhas should be mandated in state municipal laws to ensure transparency and accountability.
 - India can adopt similar frameworks like **Brazil's Participatory Budgeting model**, where citizens directly influence budget allocation for local projects.
- **Sustainable Urban Planning:** Sustainable urban planning in India requires a holistic approach that integrates environmental, social, and economic factors to promote long-term development.
 - **NITI Aayog's 2021 report** on Reforms in Urban Planning Capacity recommended the **establishment of the National Council of Town and Country Planners as a statutory body** to strengthen urban planning and improve capacity-building at various levels of governance.
 - This would ensure a **more coordinated and systematic approach to urban growth**.
 - Additionally, initiatives like the **Master Plan Delhi 2041** represent a positive step towards creating models for achieving sustainable urbanization.
 - **Also, developing more satellite towns** can help alleviate the pressures of India's highly concentrated urbanization.

Conclusion

India's urbanization, while offering significant growth potential, also demands a **forward-thinking approach** to ensure that cities evolve into sustainable, inclusive, and resilient hubs. The key to addressing urban challenges lies in integrating the principles of **SDG 11 (Sustainable Cities and Communities)** to foster cities that are not only economically vibrant but also socially equitable and environmentally responsible.

Drishti Mains Question

Discuss the key measures required to address the multifaceted challenges of urban development in India, focusing on governance, infrastructure, and sustainability.

UPSC Civil Services Examination Previous Year Question (PYQ)

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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