Future Cities Planning for Resilience and Inclusivity

This editorial is based on "Kumbh's transient city raises lessons in urban planning and resilience" **which was published in Business Standard** on **21/02/2025**. The article highlights that the Kumbh Mela exemplifies transient urbanism, demonstrating rapid infrastructure development for a temporary city while raising important questions about sustainability, safety, human behavior, and collective responsibility in urban planning.

For Prelims: NITI Aayog, 74th Constitutional Amendment, 15th Finance Commission, Union Budget 2025-26, Urban Challenge Fund, The Smart Cities Mission (2015), AMRUT (Atal Mission for Rejuvenation and Urban Transformation), Pradhan Mantri Awas Yojana (PMAY), Swachh Bharat Mission-Urban, Deen Dayal Antyodaya Yojana - NULM, skill development, financial inclusion, The Gati Shakti Master Plan (2021),MyGov, Swachh Survekshan

For Mains: Significance Urban Planning in Sustainable Urban Transformation.

The **Kumbh Mela's transient city** showcases rapid urbanization but also highlights challenges in **sustainability, resilience, and governance**. With India's urban population projected to reach **50% by 2050**, unplanned growth is straining **housing, transportation, and resources**. Inadequate planning, poor governance, and a shortage of urban planners worsen congestion and environmental issues. Strengthening urban planning, governance, and sustainable **infrastructure** is crucial for **future-ready cities**.

What is the Need for Reforming Urban Planning and Transformation?

- **Rapid Urbanization:** India's **urban population** is projected to reach **50% by 2050**, increasing pressure on infrastructure.
    - Between 2001 and 2011, Census towns increased from 1,362 to 3,892, highlighting **unplanned growth**.
    - Inadequate urban planning leads to **congestion, housing shortages, environmental degradation, and resource mismanagement**.
    - **The McKinsey Global Institute** estimates that India needs to invest **$1.2 trillion** in urban infrastructure by 2030.
- **Lack of Comprehensive Planning Mechanisms:** According to **NITI Aayog**, **52%** of the 4,041 statutory towns (as per the **2011 Census of India**) currently lack an approved or under-preparation **master plan**.
    - Unplanned **urban sprawl** results in inefficient **transportation systems, water scarcity, and sanitation issues**.
    - Retrofitting cities becomes costly and ineffective once **unregulated expansion** takes

place.

- **Shortage of Skilled Urban Planners:** As per a study by **TCPO and NIUA for NITI Aayog**, while India has only 17,000 urban planners, there is a shortage of **12,000 town planners**.
    - Without **skilled professionals**, **urban governance** remains **fragmented, inefficient, and unsustainable.**
- **Fragmented Urban Governance:** The **74th Constitutional Amendment** aimed to empower **Urban Local Bodies (ULBs)** but remains inadequately implemented.
    - Multiple agencies handling urban planning independently lead to inefficiencies and poor service delivery.
    - ULBs lack **financial autonomy**, making them dependent on state and central governments for funds.
        - For instance, the cities of **Bengaluru and Jaipur** are collecting a meager **5 to 20 %** of the potential income from property taxes.

What are the Challenges in Urban Planning and Transformation?

- **Outdated Regulatory Frameworks:** Most state-level **Town and Country Planning Acts** are outdated, failing to address modern urban challenges.
    - Regulations lack provisions for **climate resilience**, **smart infrastructure, and sustainable urbanization**.
    - Slow land acquisition processes hinder the timely implementation of **infrastructure projects**.
- **Inefficient Land Utilization and Slum Growth:** Poor land-use policies contribute to congestion, unplanned expansion, and increasing slum populations.
    - **Encroachments and unauthorized colonies** continue to grow due to weak enforcement of zoning laws.
    - As per 2011 census, **Maharashtra and Andhra Pradesh**, with a combined slum population of 2.20 crore, accounted for approximately **33.6%** of India's total slum population of **6.55 crore**.
    - The **Dharavi Redevelopment Project** aims to rehabilitate **more than 1 million** slum dwellers but faces delays due to land disputes.
- **Limited Public Participation and Awareness:** Despite higher literacy rates, public engagement in urban planning remains minimal.
    - **Lack of awareness** about urban governance leads to ineffective policy implementation.
    - **Participatory budgeting**, where residents contribute to **decision-making**, is largely absent in Indian cities.
- **Financial Constraints in Urban Local Bodies (ULBs):** ULBs struggle with revenue generation due to **low property tax** compliance and poor financial management.
    - As per **RBI report**, the tax revenues constitute only 30% of **Municipal Corporations' income**.
    - The dependence on central and state funding limits cities' ability to execute independent development plans.
- **Environmental Challenges and Climate Resilience:** India generates **42 million tons** of **municipal solid waste** annually, with **72%** from Tier-I cities.
    - Unregulated urbanization exacerbates **pollution, waste mismanagement, and resource depletion**.
    - Air quality in major cities like Delhi, Mumbai, and Bengaluru continues to deteriorate due to poor urban planning.
        - A **Lancet Planet Health study** found that no part of India meets WHO’s air quality standards, with PM2.5 pollution linked to 1.5 million deaths annually.

What Steps Have been Taken for Urban Planning and Transformation?

- **Legislative and Policy Reforms:**
    - The 1996 Urban Development Plan Formulation and Implementation (UDPFI) Guidelines streamlined the planning process.
    - The **2014 Urban and Regional Development Plan Formulation and Implementation**

(URDPFI) Guidelines introduced modern urban strategies.
    - The **15th Finance Commission** recommended municipal reforms and increased funding for **urban governance**.
    - **The Model Tenancy Act (2021)** aims to formalize rental markets and prevent housing shortages.
    - The **Government of India** promoted **municipal bonds** to enhance **urban infrastructure financing** under the **Smart Cities Mission and AMRUT**.
        - Cities like **Pune, Indore, and Ahmedabad** successfully issued bonds, ensuring financial sustainability and improved urban governance through market-driven investments.
- **Initiatives:**
    - In **Union Budget 2025-26**, the **Urban Challenge Fund** has allocated ₹1 lakh crore to support **Cities as Growth Hubs**, **Creative Redevelopment of Cities, and Water and Sanitation**, with ₹10,000 crore specifically earmarked for 2025-26.
    - **The Smart Cities Mission (2015)** promotes **technology-driven governance** and infrastructure improvements.
    - **AMRUT (Atal Mission for Rejuvenation and Urban Transformation)** focuses on basic urban infrastructure development.
    - **Pradhan Mantri Awas Yojana (PMAY)** aims to provide affordable housing to urban poor.
    - **Swachh Bharat Mission-Urban** is a nationwide initiative aimed at eliminating open defecation, improving waste management, and promoting cleanliness in urban areas.
    - **Deen Dayal Antyodaya Yojana - NULM** is a mission empowering urban poor through **skill development, self-employment, and financial inclusion** for sustainable livelihood opportunities.
    - **The Gati Shakti Master Plan (2021)** integrates transport, logistics, and urban infrastructure to streamline development.
- **Integration of Digital and GIS-Based Planning:**
    - **GIS-based master plans** are being implemented under AMRUT for Class-I cities.
    - **Digital platforms** for citizen engagement, like **MyGov**, enhance transparency in urban governance.
    - The adoption of **AI and big data** analytics aids in traffic management and service delivery.
        - For example, the **Pune Expressway** uses **Intelligent Traffic Management System (ITMS)** to monitor traffic violations, detect patterns, and improve **safety and efficiency** for a smoother travel experience.
    - **The Digital India Land Records Modernization Program (DILRMP)** has digitized 95% of land records, improving urban planning.

Best Practices and Examples of Urban Transformation in India

- **Kumbh Mela: A Model for Temporary Urbanization:** The 2025 Kumbh Mela in Prayagraj showcased rapid infrastructure development, **AI surveillance, and smart city solutions**.
    - 30 pontoon bridges and 92 renovated roads ensured smooth traffic movement.
    - AI-enabled surveillance with 2,700 CCTV cameras and drones enhanced safety and crowd management.
    - The event generated **$2.7 billion** in economic activity, highlighting urban planning's economic potential.
- **Indore's Waste Management Model:** Indore's decentralized waste management system achieved 100% waste segregation at source.
    - The city implemented strict monitoring, citizen engagement, and composting units to reduce landfill dependency.
    - **Indore** has consistently ranked as India's cleanest city in the **Swachh Survekshan** rankings since 2017.
- **Urban Traffic Management: Chandigarh's AI Traffic System** automates violation detection with 2,000+ CCTV cameras, ensuring seamless rule enforcement.
    - **Kolkata's Real-Time Traffic Management** adjusts signals using AI to reduce wait times and improve vehicle movement.
- **Bengaluru's Sustainable Mobility Initiatives:** Metro expansion projects and electric bus fleets

aim to reduce congestion and emissions.
    - Integration of last-mile connectivity with electric vehicles and bicycle-sharing programs enhances accessibility.
    - The **Namma Metro Phase-2** expansion will cover 72 km, reducing travel time by 40%.
- **Chennai's Water Management Reforms:** By implementing mandatory rainwater harvesting, Chennai has enhanced its water quality and significantly raised groundwater levels.
    - The city now fulfills 15% of its water demand through recycling, and 8% of treated wastewater is sold to industries.
- **Other Best Practices:**
    - **Visakhapatnam** built **India's first park designed for differently-abled children**, featuring sensory experiences, wheelchair accessibility, and safe play zones to promote inclusive urban spaces.
    - **Jabalpur's 311 App** enables citizens to access civic services, report grievances, and track public infrastructure issues. The app ensures **direct governance interaction and real-time resolution.**
    - **Surat's Integrated Command and Control Centre for Urban Management** integrates IT systems for city surveillance, traffic control, and emergency response. The system enhances **urban governance, citizen safety, and municipal efficiency.**
    - **Nashik** adopted **a multi-level flood preparedness plan**, integrating GIS mapping, real-time alerts, and coordinated rescue operations, significantly **reducing disaster impact on urban infrastructure.**
    - Chennai transformed **Pondy Bazaar into a pedestrian-friendly promenade**, enhancing **walkability, urban aesthetics, and local business engagement**, making cities more livable.

What Should be the Way Forward?

- **Enhancing Urban Governance and Autonomy:** Cities should be granted greater **financial autonomy** by leveraging **property taxes** and land value capture.
    - Germany's municipal finance system allocates nearly **15%** of total tax revenue to city governments.
    - **Also, Mumbai Municipal Corporation** boosted revenue through **property tax reforms and land monetization**, planning to assess **50,000 slum businesses** for ₹350 crore, serving as a model for other urban bodies.
- **Expanding PPP for Infrastructure Development: Bangalore's Kempegowda International Airport**, developed through **Public-Private Partnerships (PPPs)**, showcases effective private sector participation in urban infrastructure.
    - The **UK's Thames Tideway Tunnel project**, a successful PPP initiative, can serve as a model for cleaning rivers like **Yamuna and Musi** through efficient sewage management.
- **Sustainable Urban Development: Singapore's Green Plan 2030** focuses on **sustainable transport**, waste management, and **net-zero carbon developments**.
    - **Copenhagen** has developed a climate adaptation plan with **blue-green infrastructure** to combat urban flooding.
    - **Surat's Climate Resilience Strategy**, combining **flood management, urban greening, and sustainable water practices**, can serve as a model for other cities facing similar environmental challenges.
- **Strengthening Digital and Smart Urban Planning:** Barcelona's smart city initiatives use IoT technology to optimize waste management and urban mobility.
    - India's **Smart Cities Mission** has deployed integrated command centers in cities like **Bhopal and Pune** for real-time monitoring.
- **Promoting Inclusive and Participatory Urban Development:** The participatory budgeting model in Porto Alegre, Brazil, empowers residents in municipal decision-making.
    - **Pune's participatory budgeting model**, empowering local communities to **propose and implement urban projects**, can serve as a valuable example for other cities fostering community-driven development.

Conclusion

India's urban transformation must focus on **sustainable growth, efficient governance, and inclusive planning**. Strengthening **urban governance, digital integration, and skilled workforce** will create **resilient, people-centric cities**. A forward-looking approach will ensure **livable, environmentally sustainable, and economically vibrant urban spaces**, fostering long-term prosperity for future generations.

Drishti Mains Question:

How can Indian cities balance rapid urbanization with inclusive growth and equitable access to resources?

UPSC Civil Services Examination Previous Year Questions (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)