India's Urban Landscape - Digital Solutions for Inclusive Growth and Future Resilience

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Climate Change & Urban Vulnerabilities: Global Outlook

~70% of global population expected to stay in cities by 2050

Over 70% of global consumption related carbon emissions from cities

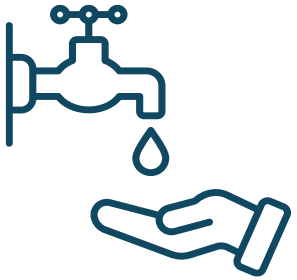
By 2050, nearly half of the global urban population, are projected to live in water-scarce regions

90% of urban areas are coastal and face the threat of rising sea level.

Impact access to basic urban services and quality of life in cities

India’s Urban Reality - What’s Really Holding Us Back

Fragmented Urban Growth



Deficits in water, sanitation, housing, mobility, energy, and solid waste management

Policy implementation gaps, institutional silos, and uneven capacity

Increased incidence of climate risks and vulnerabilities

Why Digital Infrastructure and Data Governance Matter

- **Digital systems** help cities move from **reactive firefighting to predictive**, preventive planning.
- **Digital Infrastructure** like Integrated Command & Control Centres (ICCCs), GIS-based utility mapping, IoT-enabled monitoring, and data dashboards are no longer optional for urban management.
- **Cross-integration Digital Networks**: water-energy nexus, electric mobility-grid linkages, land use-transport synchronisation, and disaster-response systems that speak to each other.

TERI's Perspective
Urban Systems Need Three Things

1. People-centered climate resilience

2. Utility integration and low-carbon transition

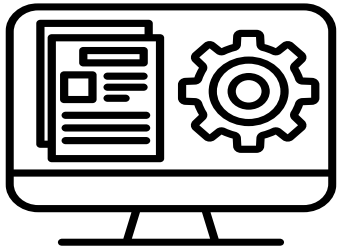
3. Science-driven, data-backed urban policy

TERI's Work That Demonstrates These Principles

Participatory Climate Action

- Visakhapatnam Urban Living Lab

Digital and Data-driven Decision Systems

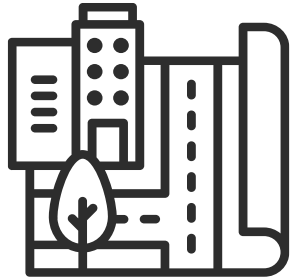


- MRV systems for Shimla, Coimbatore, Panaji
- CarbonLite Initiative - DMRC

Sustainable Mobility & Clean Transport

- Rail Green Points, GHG Carbon Calculator
- Socio-Economic & Env

Climate Integration in Urban Planning



- Climate resilience into master plans, DCRs, MBBL and URDPFI guidelines

What India Needs to Do Next

01

Build city-level digital commons: integrated urban data platforms accessible to utilities, researchers, and communities.

02

Mainstream climate risk into every urban policy, not as an add-on.

03

Institutional Strengthening Strengthen ULB capacity, staffing, and inter-departmental coordination.

04

Use participatory tools- Urban Living Labs, community mapping, digital feedback loops to make citizens co-authors of change.

05

Utility Integration: harmonised planning across water, mobility, housing, energy, and waste.

06

Encourage public-private innovation ecosystems where startups and utilities collaborate.

Thank You