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The Urban World

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Regional Centre for Urban and Environmental Studies
All India Institute of Local Self-Government, Mumbai

Regional Centre for Urban & Environmental Studies (RCUES), Mumbai

(Supported by the Ministry of Housing and Urban Affairs, Government of India & Accredited under Capacity Building Commission's National Standards)

All India Institute of Local Self-Government (AIILSG) established in 1926, is a premier & autonomous research and training institution in India. It is a guide to Urban Local Bodies (ULBs) and contributed to the principles and practice of urban governance, education, research and capacity building.

The Regional Centre for Urban & Environmental Studies (RCUES) anchored by All India Institute of Local Self Government (AIILSG), Mumbai, was established in 1968 & supported by the Ministry of Housing and Urban Affairs (MoHUA), Government of India (GoI). The MoHUA, GoI has formed National Review and Monitoring Committee (NRMC) for RCUES, Mumbai in 2018 under the Chairmanship of the Secretary, MoHUA, GoI. The Principal Secretary, Urban Development Department (UDD), Government of Maharashtra (GoM) is the ex-officio Chairperson of the Advisory Committee (AC) of RCUES, Mumbai, which is established by MoHUA, GoI.

RCUES, Mumbai has received an Accreditation Certificate under the Capacity Building Commission's National Standards. RCUES, Mumbai is registered on Integrated Government Online Training (iGOT) platform of Karmayogi Bharat, GoI and associated with Amrit Gyan Kosh under Mission Karmayogi, GoI. RCUES, Mumbai is empaneled as Swachhata Knowledge Partner (SKP) for capacity building & technical support to ULBs under Swachh Bharat Mission (SBM) 2.0, MoHUA, GoI & also registered as a Partner with Swachhata Hi Seva (SHS) 2024 Portal.

RCUES, Mumbai as a National Training Institute (NTI), undertakes capacity building initiatives for elected representatives, municipal functionaries & mission functionaries from the States of Maharashtra, Goa, Gujarat, Rajasthan and UTs of Diu, Daman, Dadra Nagar Haveli & Lakshadweep from the western region and Assam & Tripura from northeast region. Over the years, RCUES, Mumbai has been working in close coordination with states and Urban Local Bodies (ULBs) to provide strategic, advisory, technical and capacity building support focusing on preparing action plans/strategies, technical assessment reports, urban plans such as DPRs, CSPs, CDPs as well as providing on-ground support by engaging with communities for assessment and improvement in infrastructure service delivery in cities.

RCUES, Mumbai has initiated Training Needs Assessments (TNA) and impact assessment to better understand the effectiveness of their training programs. This approach helps identify knowledge/skill gaps and measure the outcomes of training initiatives. The assessments aim to enhance capacity building efforts and improve training program delivery.

Maharashtra Urban WASH and Environmental Coalition (Maha UWES-C) is a joint initiative of the RCUES of AIILSG, Mumbai, and UNICEF Maharashtra. In 2022, MoU is signed with the Directorate of Swachh Maharashtra Mission, Urban Development Department, Government of Maharashtra for building capacities, facilitating partnerships, and supporting innovations under Swachh Maharashtra Abhiyan - Urban 2.0 under Maha UWES-C.

In 2017, AIILSG was empaneled among one of the 35 agencies in India for conducting Integrated Capacity Building Programmes (ICBP). AIILSG Mumbai is supporting the states of Maharashtra, Rajasthan and Goa for the same.

RCUES, Mumbai is advancing capacity building initiatives by extending its efforts beyond training and workshops, urging strong collaboration with states and ULBs. Driven by a small but passionate team, it remains dedicated to empowering municipal officials, with the goal of strengthening governance, thereby enabling better cities.

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Editorial

Environmental Sustainability: Cornerstone of Urban Transformation

As India advances its journey of urban transformation, the concept of smart cities must evolve beyond just technology and infrastructure to embrace inclusivity, sustainability, and resilience at its core. The integration of green principles into smart city development is not just an option, but a necessity in the face of escalating climate vulnerabilities and rapid urbanization. Infrastructure alone does not define a smart city, ultimately it is the harmony between urban systems, citizens' needs, and the environment which truly determines sustainability. Integrated planning across water, transport, energy, and solid waste management can enable cities to transition toward low-carbon, resource-efficient futures, provided existing systems are retrofitted and new technologies are scaled thoughtfully.

Environmental vulnerability remains a critical barrier to achieving true urban resilience. As cities expand rapidly, the degradation of natural ecosystems, poor land use planning, and inadequate infrastructure have heightened exposure to floods, heatwaves, and other climate induced risks. These vulnerabilities disproportionately affect the urban poor, who often reside in hazard prone areas with limited access to basic services. Resilience, therefore, must go beyond reactive measures and embrace a visionary approach that integrates environmental sustainability into every aspect of urban development. Strengthening urban ecosystems, investing in ecological solutions, and prioritizing inclusive planning are no longer optional, but they are essential steps toward building cities that can withstand and adapt to an uncertain climate future.

An often-overlooked pillar in this transformation is gender justice. Women and marginalized communities are disproportionately affected by climate impacts, yet their voices are frequently absent from decision-making stands. Achieving equitable urban resilience requires gender responsive planning and inclusive governance. From ensuring safe public spaces and accessible sanitation to meaningful participation in disaster risk planning, gender equity must be integrated into every facet of urban development. Sustainable development cannot succeed without recognizing and rectifying systemic exclusions, particularly those affecting women from marginalized communities. The convergence of smart growth, environmental stewardship, and social justice can pave the way for cities that are not only intelligent but also inclusive, green, and future-ready.

It is a vital prompt that environmental sustainability is not only about cities, it must also guide planning in corridors, hinterlands, and transit zones that support urban economies and national security.

Editorial

To achieve this vision by prioritizing environmental sustainability, inter-sectoral collaboration is vital. State agencies, Urban Local Bodies (ULBs), civil society organizations, and private stakeholders must work together to design and implement solutions that are locally relevant and scalable. Moreover, the financing of green and resilient infrastructure must be prioritized. Innovative financial instruments such as green bonds, climate funds, and public-private partnerships can unlock the resources needed for transformative change. Investing in sustainability is not merely an environmental imperative but it is an economic opportunity that adopts job creation, reduces future risks, and improves public health.

The path to sustainable urban transformation lies in embracing environmental responsibility, inclusivity, and resilience as guiding principles. By investing in green solutions and collective action, cities can emerge as models of equity and climate preparedness for sustainable future.

Strategic Buffer Zones: Reframing Environmental Vulnerability into Resilience at the Siliguri Corridor

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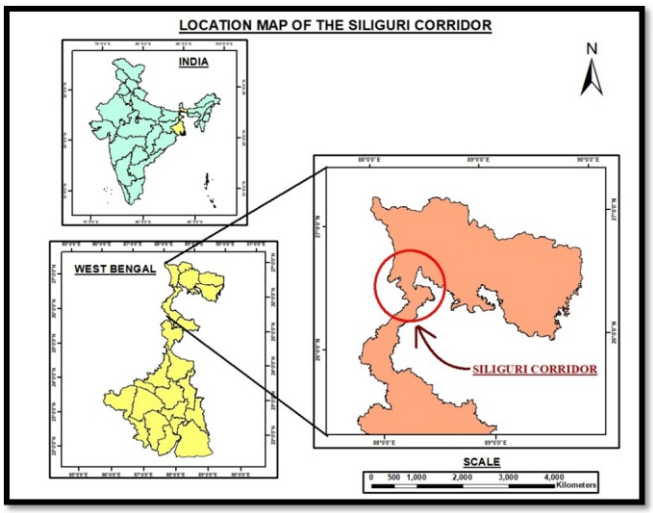
Introduction

In the rapidly evolving discourse of environmental sustainability and national security, few regions capture the convergence of ecological fragility and strategic importance as powerfully as the Siliguri Corridor in North Bengal. Known as India's "Chicken's Neck," this narrow tract of land, connecting the Indian mainland to the northeastern States, holds unparalleled significance. Beyond its military and logistical importance, the corridor functions as a vital artery for economic trade, civilian transit, and regional integration. However, while much attention has been given to its geopolitical vulnerability, the environmental fragility of this strategic landscape has remained marginal in policy frameworks and academic discussions.

Environmental sustainability is increasingly becoming synonymous with strategic sustainability, particularly for regions characterized by high ecological sensitivity and geopolitical exposure. The risks confronting the Siliguri Corridor are no longer theoretical; they are persistent, escalating realities. Monsoon-induced flooding, frequent landslides, tectonic activity, and infrastructural overstretch have emerged as chronic stressors. Further compounding this situation are demographic surges, cross-border pressures, and climatic variability (Sharma et al., 2023; IPCC, 2022). Together, these dynamics form a complex web of vulnerabilities demanding urgent and integrated solutions.



The Strategic Buffer Zone (SBZ) framework emerges as a holistic, systems-level response to these interlinked challenges. By embedding environmental sustainability within a layered security and development model, SBZ offers a transformative approach to regional planning. It positions ecological stewardship not as an afterthought but as a foundational principle of long-term regional resilience and national stability (Bisht, 2021).

Environmental Fragility of the Siliguri Corridor

The environmental vulnerability of the Siliguri Corridor stems from its precarious geographical setting. Flanked by the Eastern Himalayan foothills on one side and the alluvial plains of the Teesta and Brahmaputra rivers on the other, this corridor is located within one of India's most environmentally unstable regions (Chakrabarti, 2020). Annual monsoon rains routinely overwhelm the river systems, leading to recurrent flooding and sedimentation problems. The 2022 floods in North Bengal highlighted the devastating synergy of deforestation, unplanned urban sprawl, and degraded wetlands, which together accelerated inundation across both urban and rural landscapes (Sharma et al., 2023).

Wetlands, historically acting as natural sponges for excess rainfall, have been progressively encroached upon for urban expansion and agriculture. The destruction of riparian forests, essential for stabilizing riverbanks and filtering runoff, has further destabilized the hydrological balance (Das, 2023). The resulting flood risks are no longer limited to the rural periphery; urban centers such as Siliguri have become epicenters of environmental vulnerability.

Additionally, the corridor lies in Seismic Zones IV and V, making it highly susceptible to earthquakes and secondary disasters like landslides (NDMA, 2019). The 2015 Nepal earthquake served as a stark reminder of this tectonic instability, which poses continuous threats to both civilian settlements and critical infrastructure (Ghosh & Basu, 2017). Infrastructural fragility, exacerbated by unregulated construction practices and limited redundancy in transportation networks, compounds the risk of systemic collapse in the event of natural disasters.

Demographic pressures amplify these environmental risks. The corridor, being a transit hub, attracts significant migration flows, leading to informal settlements springing up along vulnerable floodplains and unstable slopes. These densely populated, poorly serviced areas not only suffer the worst during environmental shocks but also contribute to the very processes — such as deforestation and drainage blockage — that increase disaster vulnerability (Mehra, 2021).

Current Gaps in Policy and Planning

Despite the corridor's critical role, existing policy frameworks fall short of addressing its integrated vulnerabilities. Most development planning has prioritized road-building, trade facilitation, and border security, treating ecological issues as separate and secondary. Disaster management plans are reactive, focusing on post-event relief rather than anticipatory planning based on environmental indicators (Mahapatra, 2023).

Furthermore, planning authorities and institutional actors operate in silos. Urban development bodies rarely coordinate with ecological experts or disaster management agencies. Similarly, strategic planning by defense and border management organizations often overlooks ecological considerations, creating friction between civil and military uses of land and infrastructure (Chakrabarti, 2020).

One of the most glaring omissions is the lack of transboundary environmental cooperation. With upstream deforestation and river management decisions in Bhutan, Nepal, and even parts of Bangladesh affecting flood risks and sedimentation in the Siliguri Corridor, coordinated ecological governance remains essential but underdeveloped (Rahman & Roy, 2020).

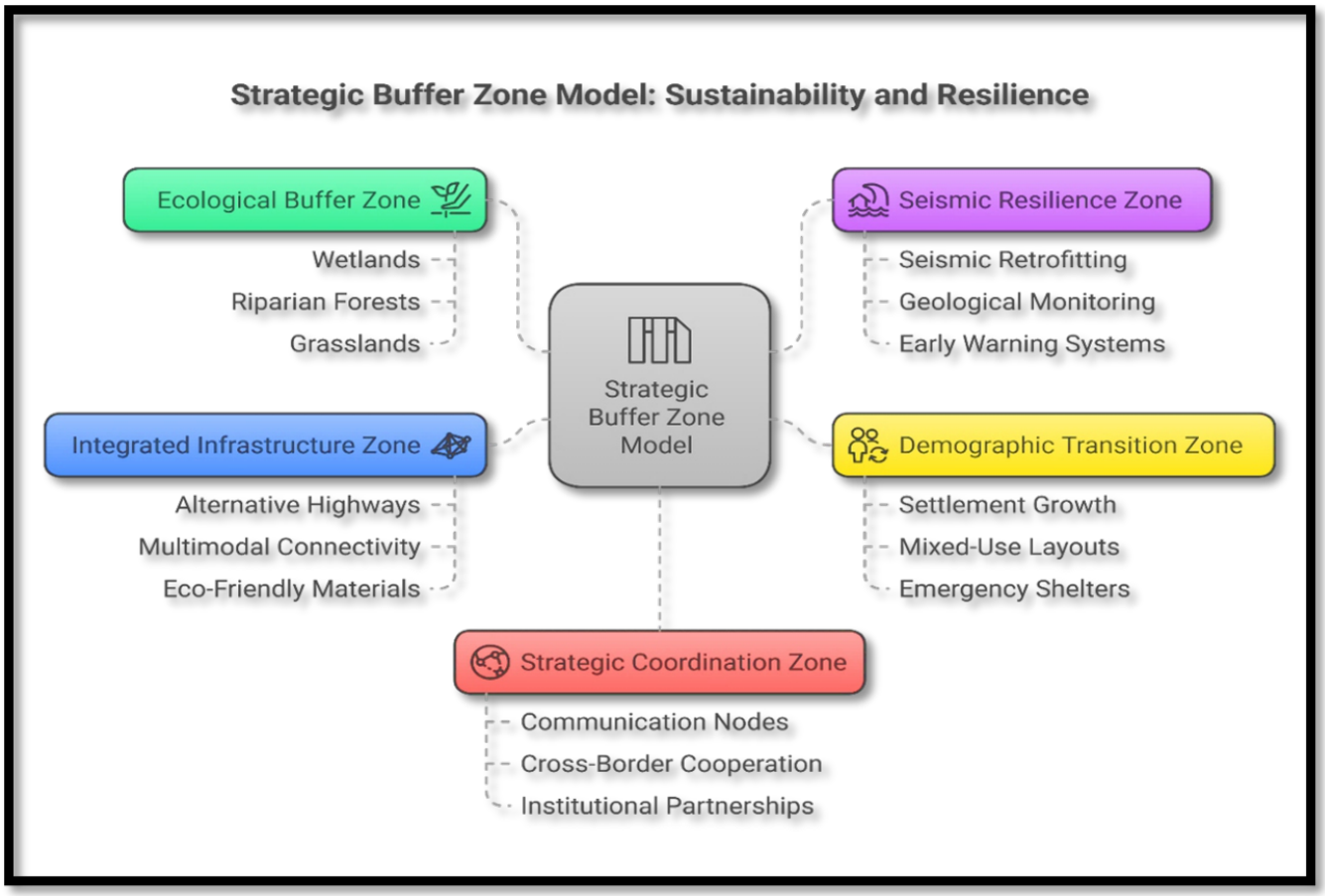
The Strategic Buffer Zone (SBZ) Model: A Sustainability-Driven Solution

The SBZ model addresses these planning gaps by introducing a layered, integrated approach rooted in environmental sustainability. It proposes the establishment of five concentric functional zones, each with a specific environmental and strategic purpose.

Ecological Buffer Zone (EBZ) - The outermost EBZ focuses on restoring and protecting ecological features such as wetlands, riparian forests, and grasslands. These natural features serve as primary defenses against floods and soil erosion. By integrating afforestation efforts, rewetting degraded wetlands, and implementing riparian vegetation buffers, this layer restores the ecosystem's natural capacity to absorb environmental shocks.

The EBZ is not just a conservation exercise but a proactive adaptation strategy aligned with global frameworks like Ecosystem-based Adaptation (EbA), endorsed by the IPCC and international climate resilience bodies (IPCC, 2022).

Seismic Resilience Zone (SRZ) - The SRZ addresses risks stemming from tectonic activity. It



mandates seismic retrofitting for critical infrastructures such as bridges, transport corridors, hospitals, and communication hubs. Urban expansion within this zone must comply with stringent earthquake-resilient building codes, minimizing structural failures during seismic events (NDMA, 2019).

Additionally, the SRZ integrates geological monitoring and landslide early warning systems, ensuring that communities in vulnerable slopes receive timely alerts and evacuation assistance (Ghosh & Basu, 2017). Sustainable construction techniques, such as terracing and retaining wall installations, become non-negotiable within these risk-prone belts.

Demographic Transition Zone (DTZ) - This zone mediates the demographic and environmental interface. By guiding settlement growth away from ecologically sensitive zones, the DTZ prevents the proliferation of informal housing in flood-prone or landslide-susceptible areas. Planning within this zone emphasizes mixed-use, low-density urban layouts with adequate provisions for sanitation, drainage, and emergency services.

Environmental sustainability within the DTZ includes green belts, stormwater harvesting systems, and designated open spaces that can function as emergency shelters during disasters (Mehra, 2021). Urban planning frameworks integrate participatory models, ensuring that communities are involved in shaping settlements that align with both their needs and ecological capacities.

Integrated Infrastructure Zone (IIZ) - The IIZ transforms the corridor's infrastructural backbone into a flexible, redundant network capable of adapting to disruptions. This involves building alternative highways, ring roads, and rail corridors to decongest primary arteries like NH10 and NH31. It also promotes multimodal connectivity between road, rail, and water transport to reduce dependency on any single mode (Pant, 2019).

Environmental considerations are embedded through eco-friendly construction materials, minimized ecological footprints of road alignments, and comprehensive environmental impact assessments for all infrastructure projects (Das, 2023).

Strategic Coordination Zone (SCZ) - At the core of the SBZ lies the SCZ, a governance-centric framework designed to facilitate coordinated responses to crises. Real-time communication nodes link civilian authorities, defense commands, and environmental monitoring centers, enabling integrated decision-making during emergencies.

Importantly, the SCZ champions cross-border cooperation on shared ecological risks. Institutionalizing partnerships with Bhutan and Bangladesh on river basin management, sediment control, and biodiversity preservation forms a key pillar of this layer (Mahapatra, 2023).

Environmental Sustainability as a Strategic Imperative

The hallmark of the SBZ model is its insistence that environmental sustainability is not peripheral but foundational to strategic resilience. By framing wetlands, forests, and ecological corridors as national assets for disaster mitigation, the model bridges the gap between ecological planning and security imperatives (Bisht, 2021).

Moreover, ecological restoration offers co-benefits that extend beyond disaster risk reduction. Sustainable agriculture practices, eco-tourism initiatives, and biodiversity conservation programs embedded within the SBZ structure create

economic incentives for local communities, aligning environmental preservation with livelihood security (Rahman & Roy, 2020).

Recommendations for the Implementation of SBZ Model

To operationalize the SBZ model, several key policy and institutional reforms are necessary:

- Policy Integration: National infrastructure and security planning must formally incorporate environmental sustainability goals, supported by mandatory Environmental Impact Assessments (EIAs) for all strategic projects in the corridor.
- Institutional Synergy: Establish joint task forces comprising representatives from ecological planning bodies, disaster management agencies, defense institutions, and local governance structures.
- Capacity Building: Training programs for urban planners, engineers, defense personnel, and community leaders should incorporate modules on ecosystem-based adaptation, climate risk management, and sustainable construction techniques (Jha et al., 2018).
- Environmental Diplomacy: India should take the lead in fostering trilateral environmental cooperation agreements with Bhutan and Bangladesh, focusing on joint watershed management, forest conservation, and climate adaptation strategies (Mahapatra, 2023).
- Funding Mechanisms: Dedicated green financing channels, supported by national and international sources, should be established to fund ecological restoration projects, seismic retrofitting programs, and sustainable infrastructure development (Sharma et al., 2023).

Conclusion

The Siliguri Corridor's environmental vulnerabilities encapsulate the broader existential risks faced by ecologically sensitive, strategically significant regions worldwide. By adopting the Strategic Buffer Zone model, India has the opportunity to lead in pioneering sustainable corridor development frameworks that harmonize ecological stewardship with strategic resilience.

The SBZ framework redefines what it means to protect and sustain critical national infrastructure. In a world increasingly shaped by the twin pressures of climate change and geopolitical competition, the future of security lies not in isolated fortifications, but in interconnected, environmentally sustainable, system-wide resilience strategies. Through SBZ, the Siliguri Corridor can serve as a living laboratory for such a future, one where environmental sustainability and national security are no longer seen as competing priorities but as mutually reinforcing imperatives.

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Smart Cities are Sustainable and Green

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Ecological balance and inclusiveness are among the important and urgent global needs of the present and future era. Human activity and development are rising to meet community needs. The urban centers, such as cities, are places with human concentrations and, in turn, multiple needs for various natural resources. Pinning down to the natural resources, as we are aware, are at large limited and non-replenishable. The challenge is to meet demands sustainably by using balanced, replenishable strategies that conserve and protect nature. We can summarise it as a well-known quote stating, 'Nature has enough to satisfy human needs, but not the greed'.

Smart Cities

A smart city is an urban area with a significant population, designed to meet both short-term and long-term needs for its residents. The definition of a smart city depends on factors such as population size, demographic characteristics, and economic status, reflecting distinctions among developed, developing, and underdeveloped regions globally.

Cities or urban centers are the direct reflection of the growth of any nation, pointing towards the educational, technological, economic, political, and cultural upgradation and sustenance of the nation.

Needs of a City

Any city needs all the infrastructural facilities with proper and adequate service providers to satisfy the short-term and long-term needs of residents, as and when required. Basic expectations from a city are their water supply, wastewater and solid waste management, energy needs, comfortable infrastructure for commuting to and from the places of travel to earn their livelihood, health requirements and education facilities from preschool to the centers of higher education, commercial centers and equally to the entertainment and health upkeep facilities, playgrounds and gardens etc.

While catering to all the above needs, the city activities make an exhaustive usage of various natural resources, producing and adding various kinds of pollution. Degrading the existing and refined quality of water, air, fossils, and minerals. This is also contributing to the depletion of natural resources.

Global trends are indicative of the population, which has grown multiple times in the last few

decades. Increase in the urban population has a major share in the population increase, for obvious reasons, as cities are the centers of overall development. Therefore, our cities remained at the focal point when we started searching for long-term solutions in a sustainable way.

Early nineties, the global thinktanks realized the quantum of the forthcoming problems with the severe and serious impacts. UNO and other scientific, social community experts have devised approaches to minimize and control the impacts of rampant growth for policymakers and governments.

Smart cities are one of the solutions to help in achieving the objective of creating and converting present cities to ensure persistent economic, social, and environmental sustainability.

Key Elements for Meeting Smart City Objectives

A smart city needs to have an adequate and sustainable infrastructure to support water supply for all, satisfy their energy needs, sanitation and housing, mobility for all, safety and security, health and education infrastructure, and all other ancillary needs of citizens. In modern times, digital connectivity is also among the basic needs of a city, urban, semi-urban, or rural areas, too. To achieve smart city objectives, the following key elements are principally required to be addressed to a measurable degree continuously –

- Participation of all stakeholders in a measurable manner.
- The implementation and extensive utilization of digital and modern technologies.
- Engaging and informing all governments and leaders.
- Participation across all city sectors/users.
- Financial infrastructure and investment for smart cities.

A master plan or a development plan, while transitioning to a smart city, needs to be in a planned and organized manner, addressing all the above key elements. Auditing activities within defined timeframes using quantifiable measures and established threshold limits is required before proceeding to the next level. Achieving a smart city vision should be divided into short- and long-term goals.

Challenges Faced by the City

It is imperative to state that the city planning and development of the past was owing to the relatively much less requirements of the city dwellers. Which may be in today's context termed as downtown or the old city. Barring that small city core area, the rest of the city has also grown up without much of our smart city objectives. Hence, our planners, policy makers, and technocrats must fit the objectives of a smart city over the existing city and retrofit it to a smart city.

This growth and development have gradually occurred over time. Adoption and upgradation of the existing status needs a significant level of retrofits.

How does a smart city need to be in today's context? All the stakeholders need to understand the expectations from a smart city. The stakeholders include the citizens, i.e. city dwellers, all types of

service providers, business providers, administrators of urban local bodies, and the state and or central administrations.

The challenges faced by the globe are increasing, such as population growth with their basic and increasing demands, as against the natural resources crunch. In the decades following the Industrial Revolution and especially after World War II, rapid global development has led to a significant increase in various pollutants that degrade the natural environment, including synthetic organic and inorganic chemicals.

So, all the stakeholders must make the smart cities environmentally sustainable. Water is essential for human survival, yet both the quality and quantity of surface and subsurface water sources are declining at an alarming rate. The water needs are to be planned, designed, executed, and operated judiciously. Air and soil (or land) pollution also present significant challenges that require immediate and focused attention.

The smart city is expected to have a long term solution on few other areas effectively, those are, an all-inclusive development plan with futuristic developments, housing for all sections of society, energy requirements, preservation of heritage of the city with development and preservation of crafts and culture, sustainable and environment friendly transport for the city dwellers, citizen friendly and cost effective city governance and disaster management, etc.

Smart city developments should include the various aspects previously discussed, ensure substantial coverage over time, and be designed to be self-sustaining.

Transition Towards Sustainable Cities

When developing and implementing smart city plans, the strategies address issues related to retrofitting and upgrading existing city infrastructure, as well as greenfield and brownfield projects. Greenfield projects involve entirely new developments, while other efforts focus on expanding current capacity, with or without technological enhancements.

Smart cities' infrastructures, such as transport, need inclusion of walkways with pedestrian-friendly roads, cycle tracks, comprehensive city mobility plans, mass transit, e-transport-friendly management, environmentally friendly parking policies, attractive public places for the city dwellers and their neighborhood.

Water and wastewater infrastructure, incorporating water conservation strategies such as the recycling of treated wastewater along with energy-efficient and resource-conserving measures, are essential components for the development of modern and future smart cities. Municipalities should prioritise the reclamation of the majority of wastewater generated by residential, commercial, and other establishments.

Municipal Solid Waste (MSW) is an integral and inevitable part of urban solid waste. The management of MSW includes the organic and inorganic components of MSW for maximum resource recovery and management in an environmentally sustainable manner. The

inorganic MSW includes construction and demolition waste, with a major recovery as coarse and fine aggregates, reusables such as steel, metals, and other materials form a significant contributor. Similarly, the organic MSW includes waste generated by hotels and restaurants, vegetable and fruit markets, meat and fish markets, gardens and arboriculture in the city. The energy, compost/humus facilities on a decentralized and centralized manner converting organic waste using biotechnologies, highlighting the circular economy can add to the smart city goals.

The energy needs of the city are important and ever-demanding. Rationalization of the present and future energy needs with the carbon neutrality and climate change goal. Replacing the energy needs partially with green and renewable energy must grow fast, to attain carbon neutrality targets of the region and globe, to control the climate change effects. A rapid and comprehensive transition away from fossil fuels and towards clean energy sources is crucial for achieving global carbon neutrality goals set for 2030, 2050, and 2070.

Management of the secondary outcomes resulting from all the above activities and processes, such as disposal of EV batteries, chemical sludge generated by water treatments, screenings, grit, and bio sludge from sewage treatment plants, and equipment used for energy generation is required. Reclaiming land from urban areas, including former solid waste disposal sites, represents an important resource that must be thoughtfully balanced with the expanding needs of a growing city, an essential component of smart city development.

Achieving the Goal of Becoming a Smart City

Numerous metropolitan areas worldwide are evolving into smart cities, prioritising sustainability and environmental goals in their development strategies. Adapting established urban environments to align with smart city standards presents considerable challenges and may necessitate substantial financial commitments, especially given the limited scope of prior initiatives in this domain. Consequently, these initiatives are currently regarded as standard practice.

The city would implement retrofitting, redevelopment, and both brownfield and greenfield expansions as approaches to achieve smart city objectives. Disadvantaged communities are to be considered for the city's development. Decentralised and regional approaches may be considered based on the specific requirements and context of the city.

Overall, fostering national growth and economic development requires ongoing improvements in citizens' quality of life, for which smart cities and urban centres play an essential role. A smart city, whether implemented locally, nationally, or internationally, serves as a model for the development of other cities.

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Sustaining Futures: Gender Justice as the Heart of Sustainable Development – A Karnataka Perspective

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Abstract

This paper explores the importance of gender equity in sustainable development and its impact on Karnataka, a state with regional diversity, rapid urbanization, and persistent socio-economic inequalities. It highlights how gender disparities in Karnataka hinder environmental sustainability, economic growth, and social inclusion. Women in rural Karnataka, particularly in districts like Koppal, Raichur, and Chamarajanagar, often bear the brunt of environmental degradation due to their roles in water collection, subsistence farming, and forest management. However, their voices are often excluded from environmental governance. Traditional patriarchal structures and caste-based hierarchies further marginalize Dalit and Adivasi women, rendering them invisible in climate action policies and rural development programs.

Government schemes like the Mahila Kisan Sashaktikaran Pariyojana (MKSP) and the Karnataka State Policy on Women (2016) reveal both progress and gaps in empowering women in agriculture and decision-making. Female farmers in North Karnataka often lack land titles, barring them from credit and subsidies. Self-help groups under Stree Shakti Yojana have shown promise in economic empowerment but frequently face institutional neglect and poor capacity-building support.

Urban spaces in Karnataka also reflect gendered exclusions, with informal women workers in garment factories and domestic labor facing exploitative conditions and lacking access to health care, housing, and legal protection. Sustainable urban development must address these inequalities by integrating gender-responsive planning, safe public transport, equitable access to green spaces, and affordable housing.

The paper advocates for a transformative, rights-based approach that centers gender justice in every dimension of sustainable development, including climate resilience, urban policy, education, and health. Policy recommendations include enhancing women's leadership in panchayats and urban local bodies, creating gender-disaggregated environmental data, funding feminist climate innovations, and reimagining gender budgeting beyond token allocations.

Introduction

The discourse on sustainable development has evolved from a focus on environmental conservation to a multidimensional paradigm that includes economic equity, social justice, and human rights. Gender justice is central to achieving sustainable futures, as it shapes access to resources, decision-making

power, and the impacts of environmental and economic change. In India, particularly Karnataka, historical inequalities, regional disparities, and the intersection of caste, class, and gender identities contribute to these dynamics.

Karnataka presents a compelling case study for investigating the intersection of gender justice and sustainable development. The state is home to the global innovation hub of Bengaluru, but also drought-prone districts like Koppal and Vijayapura, where rural women face climate vulnerability, agricultural uncertainty, and socio-cultural marginalization. Despite state-led and civil society efforts to address gender disparities, deep-rooted structural inequalities persist.

Women in Karnataka play critical roles in agriculture, informal labor, household care work, and natural resource management, yet they are systematically underrepresented in decision-making processes related to land, environment, and economic policy. The Sustainable Development Goals (SDGs) urge governments and institutions to integrate gender perspectives in all stages of development planning, but translating this commitment into grounded, intersectional practice remains a significant challenge.

This study explores the central thesis that gender justice must be positioned as a foundational pillar of sustainable development, particularly within the socio-economic and environmental landscape of Karnataka. It aims to offer an analytical framework that foregrounds gender equity as a catalyst for sustainability and explores whether existing models of development are inclusive or extractive.

Background of the Study

The concept of sustainable development, popularized by the Brundtland Commission in 1987, emphasizes meeting present needs without compromising future generations' ability to meet theirs. This concept has expanded beyond environmental sustainability to include social equity, economic justice, and human rights, with gender justice emerging as a critical dimension. The United Nations Sustainable Development Goals (SDGs), particularly SDG 5 (Achieve Gender Equality and Empower All Women and Girls), recognize that inclusive development cannot be achieved without addressing systemic gender disparities.

In India, sustainable development policies often focus on economic growth and infrastructure, overlooking the socio-cultural and gendered implications of development models. Karnataka, despite being one of India's more progressive states, still exhibits persistent gender gaps in key development indicators such as land ownership, political representation, access to education, and environmental decision-making. The gendered nature of poverty, environmental degradation, and climate vulnerability is particularly evident in Karnataka's rural and semi-urban areas.

Despite various policy interventions, the implementation of gender-equity frameworks often lack consistency, accountability, and cultural contextualization. The intersection of caste, class, religion, and regional identity further compounds the exclusion faced by women from marginalized communities.

Civil society organizations and women's movements in Karnataka have played a pivotal role in challenging patriarchal norms and advocating for women's rights within the development discourse. This study is grounded in the understanding that gender justice is not an auxiliary concern but a structural axis of sustainability, moving beyond numerical growth targets to

address the relational, emotional, and ecological labor carried by women.

State Literature Review on Gender Inequality in Karnataka

Gender and Agriculture

- Women farmers in Karnataka are often overlooked in land ownership and decision-making, affecting their access to credit, government schemes, and technical training.
- MKSP has seen varied success across districts, but implementation is hampered by inadequate grassroots support and gender-blind agricultural policy.

Water, Environment, and Climate Resilience

- Climate change affects women differently in the Western Ghats and dryland regions of Karnataka.
- Women spend disproportionate time managing water resources, often at the cost of education or income-generating work.

Urbanization and Informal Labor

- Bengaluru's urban development has led to an increase in informal, insecure work for women, especially in the garment and domestic sectors.
- High levels of workplace exploitation, wage theft, and the absence of grievance redressal mechanisms for female informal workers are reported.

Education, Health, and Gender Indicators

- Despite improvements in literacy, maternal health, and institutional births, dropout rates among adolescent girls remain high due to early marriage, lack of menstrual hygiene infrastructure, and poverty.

Caste, Religion, and Intersectionality

- Feminist scholars highlight how caste, religion, and regional identity intersect with gender in Karnataka's socio-political space.

Policy Review

- The Karnataka State Policy on Women (2016) is aimed at mainstreaming gender in all spheres of development.
- Evaluations by the Karnataka Evaluation Authority (KEA) point to inconsistencies in district-level execution, lack of monitoring, and insufficient integration with local governance structures.

Grassroots and Civil Society Contributions

- Women-led collectives like Grameena Mahila Okkuta, Sakhi Trust, and Stree Jagruti Samiti have produced valuable community-based knowledge on gender justice.

National Literature Review on Gender, Sustainable Development, and Equity in India

India's commitment to sustainable development, particularly through its endorsement of the United Nations Sustainable Development Goals (SDGs), has led to a significant body of national literature exploring the intersections of gender, environment, and equity. However, this literature reveals a consistent gap between policy intentions and ground realities, particularly concerning the structural and intersectional dimensions of gender justice.

The NITI Aayog's SDG India Index (2023) assesses states on progress across SDGs, including SDG 5 (Gender Equality). While the report emphasizes improvements in women's education, political

representation, and maternal health, scholars such as Mukhopadhyay & Bhan (2021) critique the framework for its quantitative bias and failure to capture qualitative, intersectional indicators, such as gender-based violence, unpaid care work, and ecological vulnerability. These gaps make it difficult to track how women from marginalized communities engage with and benefit from sustainability policies.

National research conducted by The Energy & Resources Institute (TERI) and the Ministry of Environment, Forest and Climate Change (MoEFCC) has established that women in rural India are disproportionately affected by environmental degradation and climate change. The lack of gender-disaggregated data in environmental policies results in the invisibilization of women in climate action strategies. Land, agriculture, and livelihoods studies have shown that less than 14% of landholdings are in women's names, affecting their access to subsidies, credit, and crop insurance.

Urbanization, labour, and informal economies report that more than 90% of women in India are employed in the informal sector, where wages are low and working conditions are precarious. Feminist scholars like Nandini Sundar, Bina Agarwal, and Nivedita Menon argue that mainstream development policies in India are often gender-neutral and fail to address deep-rooted inequalities. Intersectional approaches that factor in caste, religion, and regional disparity are increasingly seen as essential for meaningful progress.

Policy and governance gaps in India's development agenda include the National Policy for Women (Draft 2016) and Gender Budgeting guidelines by the Ministry of Finance. Studies by the Centre for Budget and Governance Accountability (CBGA) reveal that gender budgeting across central ministries remains fragmented and symbolic, with little impact on long-term structural inequality.

International Review

Gender justice is a crucial aspect of sustainable development, with the UN Sustainable Development Goals and feminist environmental movements across the Global South emphasizing that women are not only victims of environmental and economic crises but also agents of transformative change. The 2030 Agenda for Sustainable Development identifies SDG 5 (Gender Equality) as central to achieving the other 16 goals, such as poverty eradication, food security, clean energy, and climate action. However, reports from UNESCAP and Oxfam International argue that SDG implementation often reproduces tokenistic involvement of women in decision-making without addressing deeper structural inequalities.

Feminist Political Ecology (FPE) has contributed significantly to understanding how gender intersects with environment, power, and policy. FPE emphasizes that environmental knowledge is gendered, and women often possess place-based, generational knowledge essential for sustainable resource management. Feminist scholars argue that gender-responsive climate strategies must move beyond representation to transformation.

Land, livelihoods, and food sovereignty are also important aspects of gender justice. While only 13% of agricultural landholders are women globally, women produce 60-80% of food in many parts of Africa, Asia, and Latin America. International case studies demonstrate how women-led environmental stewardship contributes to sustainability and equity, promoting food sovereignty, local knowledge systems, and collective action.

Urbanization brings new challenges for gender justice, with feminist urbanists arguing that cities often reflect patriarchal designs, marginalizing women's safety, mobility, and access to services. The UN-Habitat Gender Equality Action Plan encourages cities to adopt gender-inclusive planning, but implementation remains inconsistent. International Labor Organization (ILO) reports show that migrant women, particularly in the Global South, face systemic exclusion from social protection, decent work, and housing, making them especially vulnerable in the context of climate-induced urban migration.

Intersectionality and Global South Feminisms are foundational in international gender and development discourse, calling for an analysis that includes not just gender but also caste, class, race, ethnicity, and geography. Global South feminist networks like Development Alternatives with Women for a New Era (DAWN) emphasize that development must not be about integrating women into existing systems but transforming systems to center care, justice, and sustainability, challenging neoliberal models of "empowerment" that reduce gender justice to individual economic gain.

Research Gap

The research gap in gender justice in sustainable development is significant, with a lack of context-specific studies in Karnataka that integrate intersectional perspectives. Existing policies often fail in implementation due to inadequate attention to women's experiences, particularly in rural and marginalized communities. Additionally, there is limited empirical research on embedding gender justice as a central pillar in local sustainable development initiatives.

Objectives

1. Examine gender disparities in access to resources and decision-making in Karnataka.
2. Evaluate Karnataka's policies on gender and sustainable development.
3. Study how caste, class, and geography intersect with gender issues.
4. Highlight women-led grassroots initiatives supporting sustainability.
5. Suggest strategies to strengthen gender justice in development planning.

Hypothesis

H1: Gender justice has a positive impact on sustainable development outcomes in Karnataka.

H2: Women from marginalized communities in Karnataka face greater barriers to accessing sustainable development resources.

H3: Karnataka's development policies lack adequate focus on intersectional gender justice.

Research Methodology

This study employs **a quantitative cross-sectional survey design** to explore the relationship between gender justice and sustainable development in Karnataka. The research focuses on assessing how intersectional factors such as caste, class, and geography influence women's access to resources, participation in decision-making, and the effectiveness of development policies.

Sampling and Data Collection

A **stratified random sampling technique** was adopted to ensure representation across urban and rural regions, as well as different caste and class groups within Karnataka. The sample consisted of **500 women respondents** aged 18 and above, selected from multiple districts to capture the diverse socio-economic and cultural contexts of the state.

Primary data were collected through **a structured questionnaire** designed to gather information on:

- Access to key resources such as land, water, and credit.
- Levels of participation in community and household decision-making.
- Awareness and perceived impact of gender-sensitive sustainable development policies.
- Demographic and socio-economic variables, including age, caste, education, and income.

Secondary data sources included government reports, policy documents, and previous studies related to gender justice and sustainable development in Karnataka.

Data Analysis

The collected data were organized and analyzed using **Microsoft Excel**, facilitating both descriptive and inferential statistical techniques. Descriptive statistics such as frequencies and percentages provided an overview of the demographic profile and key variables.

To test the relationships between categorical variables, the study employed the Chi-Square Test of Independence. This test examined associations between variables such as caste and access to resources, gender participation in decision-making and sustainable development outcomes, and awareness of policies versus program participation.

The Chi-Square statistic ($\chi 2 \backslash chi^2 \chi 2$) was calculated using the formula:

$\chi 2 = \sum (O - E) 2 E \backslash chi^2 = \backslash sum \backslash frac\{(O - E)^2\}\{E\} \chi 2 = \sum E(O - E)2$

where OOO represents observed frequencies and EEE represents expected frequencies under the null hypothesis of independence. Degrees of freedom were determined by (r−1)(c−1)® - 1) (c - 1)(r−1)(c−1), where rrr and ccc denote the number of rows and columns in the contingency table, respectively. Results were compared against critical values from the Chi-Square distribution table at a 5% significance level to assess statistical significance.

Ethical Considerations

The research adhered to ethical standards by obtaining informed consent from all participants and ensuring confidentiality and anonymity. Participation was voluntary, with respondents free to withdraw at any stage without any repercussions.

Data Analysis Results Table

Q No	Question Description	Variables Compared	Chi-Square Value (χ^2)	df	Critical Value (0.05)
Q1	Do you have access to land?	Caste (Q5) vs Access to Land (Q1)	39.93	2	5.991
Q2	Are you involved in household decision-making?	Caste (Q5) vs Decision Making (Q2)	18.40	2	5.991
Q3	Are you aware of Karnataka's sustainable development policies?	Policy Awareness (Q3) vs Participation (Q4)	4.20	1	3.841
Q4	Do you participate in community development programs?	Decision Making (Q2) vs Participation (Q4)	8.50	1	3.841
Q5	What is your caste category?	Caste distribution in sample	N/A	N/A	N/A
Q6	Do you have access to credit/loans?	Caste (Q5) vs Access to Credit (Q6)	25.60	2	5.991
Q7	Have you faced discrimination based on gender/caste?	Discrimination (Q7) vs Income Sufficiency (Q8)	10.75	1	3.841
Q8	Is your income sufficient for your family needs?	Income sufficiency distribution	N/A	N/A	N/A

Q No	Question Description	Variables Compared	Chi-Square Value (χ^2)	df	Critical Value (0.05)
Q9	Do you believe women's participation improves development outcomes?	Belief about women's role (Q9)	N/A	N/A	N/A
Q10	Have you attended any gender awareness workshops?	Workshop attendance (Q10) distribution	N/A	N/A	N/A

Report: Chi-Square Analysis of Gender Justice and Sustainable Development in Karnataka

Introduction

This study examines the association between social factors such as caste, gender discrimination, and awareness, with access to resources and participation in sustainable development initiatives among women in Karnataka. A survey of 500 respondents was conducted, and the Chi-Square test of independence was applied to analyze relationships between categorical variables.

Methodology

Chi-Square ($\chi2\chi2$) tests were performed on key variable pairs to test hypotheses related to gender justice and sustainable development. Observed and expected frequencies were calculated, followed by $\chi2\chi2$ statistics. The degrees of freedom and critical values at a 5% significance level were used to determine statistical significance.

Results and Interpretation

Variables Tested	Chi-Square (χ^2)	df	Critical Value (0.05)	Result	Interpretation
Caste vs Access to Land	39.93	2	5.991	Significant Association	Marginalized castes (SC/ST) have significantly less access to land compared to General and OBC

Variables Tested	Chi-Square (χ^2)	df	Critical Value (0.05)	Result	Interpretation
Caste vs Access to Credit	25.60	2	5.991	Significant Association	Credit access is significantly lower among SC/ST women
Policy Awareness vs Participation	4.20	1	3.841	Significant Association	Awareness of sustainable development policies increases participation in community programs
Decision Making vs Program Participation	8.50	1	3.841	Significant Association	Women involved in household decision - making are more likely to participate in development activities
Discrimination vs Income Sufficiency	10.75	1	3.841	Significant Association	Experiences of discrimination negatively affect women's economic well-being

Summary of Findings

The analysis strongly indicates that caste plays a critical role in determining women's access to key resources such as land and credit in Karnataka, affecting their ability to engage fully in sustainable development initiatives. Women from marginalized communities face significant barriers compared to their counterparts from the general and OBC castes. Furthermore, awareness and involvement in household decision-making positively influence women's participation in development programs.

Discrimination based on gender and caste negatively impacts women's income sufficiency, highlighting the economic consequences of social inequities. Despite these challenges, a majority of respondents recognize the importance of women's active participation in sustainable development.

Conclusion

The Chi-Square analysis confirms significant associations between social factors and access to

resources and participation in sustainable development in Karnataka. These findings underline the importance of integrating gender justice at the heart of sustainable development policies and programs to ensure equitable growth and empowerment of women across all social groups.

Summary of Key Findings

- **Access and Participation:** Caste is a significant factor in access to land, credit, and decision-making power (Q1, Q2, Q6).
- **Policy Awareness and Program Participation:** Awareness of policies positively influences participation in development programs (Q3, Q4).
- **Discrimination Impact:** Experiences of gender and caste discrimination reduce women's economic well-being (Q7, Q8).
- **Positive Attitudes:** The majority recognize the importance of women's participation in development (Q9), but workshop attendance is low (Q10).

Result Summary

- **Calculated Chi-Square value ($\chi 2$\chi^2$\chi 2$)** = 39.93
- **Degrees of freedom (df)** = 2
- **Critical Chi-Square value at 0.05 significance level** = 5.991

Interpretation

Since the calculated $\chi 2=39.93$\chi^2 = 39.93$\chi 2=39.93$ is **much greater** than the critical value **5.991**, we **reject the null hypothesis**.

Recommendations

- Strengthen policies ensuring equitable land and credit access for marginalized women.
- Increase awareness campaigns on sustainable development policies targeted at women from all castes.
- Promote women's participation in household decision-making and community programs.
- Address discrimination through targeted social and economic support to improve income sufficiency.

Conclusion

The study emphasizes the importance of gender justice in sustainable development in Karnataka. It reveals that factors such as caste, discrimination, awareness, decision-making power, and women's access to resources like land and credit are linked to their participation in development programs. Women from marginalized communities, particularly SC/ST groups, face systemic barriers that limit their opportunities and economic well-being. Increased awareness and involvement in decision-making positively correlate with women's active engagement in sustainable development initiatives. Discrimination remains a significant obstacle, negatively impacting income sufficiency and gender equity. Addressing these structural inequalities is crucial for securing sustainable futures for all women in the state.

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ROUND & ABOUT

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Government to Procure 100 Robots to Clean Manholes

One of the painful realities of our society has been that several deaths of sanitation workers who work in sewage gutter/manhole cleaning have been occurring with unfortunate regularity. Over the years, Parliament questions were asked on this, and the Hon'ble Minister of Social Justice has been replying to them by giving figures of such deaths. Such instances have been happening despite the safety protocols and protective gear. A Union government-commissioned social audit across many cities has exposed "critical failures" by authorities and contractors in protecting sanitation workers. The good news is that the Government of Maharashtra has decided to procure 100 robots for 27 municipal corporations to clean manholes. It is earnestly hoped that such a mechanized system for cleaning manholes and other hazardous work is implemented with all the strictness.

[Reference: The Times of India, Mumbai, 16th April 2025]

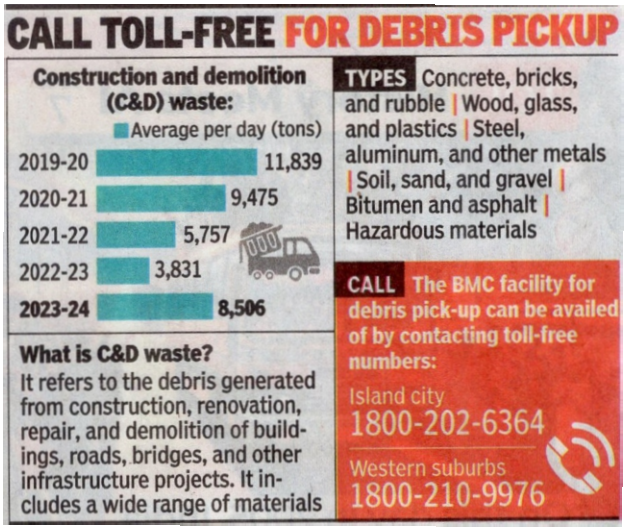
New Rules for Construction and Demolition (C&D) Waste Management Notified

The Ministry of Environment, Forests and Climate Change, Government of India, has notified (new) Environment (Construction and Demolition) Waste Management Rules, 2025, by replacing the rules of 2016. Government notifications provide valuable insight into the objective and purpose of making rules. The notification inter alia says that the 2016 rules were made "to provide for the environmentally sound management of construction and demolition waste in the country, including its segregation, collection, recycling, treatment and disposal, and to discourage unscientific disposal, promote scientific waste management, prevent loss of recyclable value, and address pollution related issues emanating from dumping of such waste…"

As for the new rules, it says "it has been considered expedient and necessary to make comprehensive revision and strengthening of the said rules by incorporating specific measures for waste management,

waste utilization and to deal with its non-compliance, and to align with circular economy and resource efficiency approaches by introducing extended producer responsibility, environmental compensation, and centralized interface based online monitoring and compliance assessment;.."

The notification runs into 17 pages with all the details of the operation of the rules.



Mumbai city, or for that matter, many cities, are generating huge quantities of construction and demolition waste on account of hectic construction and redevelopment activities. The Brihanmumbai Municipal Corporation has been tackling C&D waste for many years. In line with the new rules, the Corporation has made an app to ensure proper disposal of construction debris and monitor all the activities to be done online.

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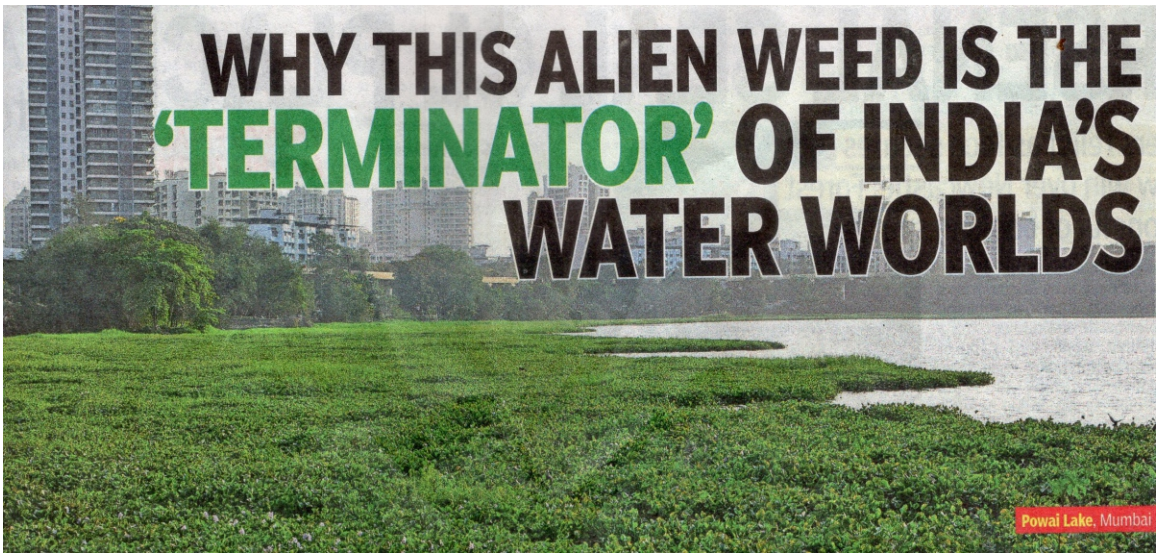
HYACINTH - A Water Weed Affecting Thousands of Water Bodies in India

Ingenuity of Assam Villagers to Make Commercial Use of it through the Livelihood Mission - Waste to Resource Approach

India is bearing the burden of two alien weeds - one is the Parthenium hysterophorus that has infested the land spaces across India, and the other is the hyacinth which has covered the uncared water bodies throughout the length and breadth of the country. Hyacinth was imported into India during the British rule as an ornamental plant without realizing its deep concerns. Both the weeds spread at enormous speed and have defined solutions to remove them. If removed, it keeps coming back, multiplying and suffocating the things beneath.



Powai Lake in Mumbai, once a pristine water body, gets covered with hyacinth. The Brihanmumbai Municipal Corporation (BMC) has decided on its mechanized removal along with other measures. Some villagers in remote Assam have found a way to make positive use of the weed, which has caught national attention. Here is a brief report of the same.

(Photo: Powai Lake, The Times of India, Mumbai, 19th May 2025)

From Weed to Wonder: Water Hyacinth a Swachh Green Resource

Women from flood-prone Borchila in Assam's Morigaon and two young entrepreneurs from Deepor Beel are turning the tide by transforming Water Hyacinth into eco-friendly products and job opportunities under the Swachh Bharat Mission - Urban.

A small group of women in flood-prone Borchila village, located in central Assam's Morigaon district, embarked on a mission to transform the abundant water hyacinth, a pervasive freshwater weed, into beautiful handicrafts, creating wealth out of waste. Their vision was clear. They aspired to create a life of dignity and purpose. Each of them now makes at least Rs. 10,000 per month. The initiative, which is part of Assam State Rural Livelihoods Mission (ASRLM), not only allowed them to become self-reliant but also put an end to their financial struggles.

In the heart of Assam lies Deepor Beel, the State's only Ramsar site, where sprawling mats of water hyacinth threaten the ecosystem. Two passionate youths from Guwahati, Mr. Rupankar Bhattacharjee and Mr. Aniket Dhar, saw an opportunity amidst the challenge. Recognized for their innovative approach, they developed Kumbhi Kagaz, a venture dedicated to crafting 100% biodegradable, blot-free, and chemical-free handmade paper from the invasive meteka plant. Their journey, marked by a commitment to learning and adaptation, culminated in winning the Zero Waste Cities Challenge, which seeks to empower entrepreneurs who can transform waste into eco-friendly solutions while fostering green employment. Nearly 40 women are employed in the Kumbhi Kagaz initiative.

The inspiring journey of the women in Borchila village and the innovators Mr. Rupankar and Mr. Aniket show how water hyacinth can be transformed from weed to wealth. By creating eco-friendly products and sustainable paper, they not only uplift their communities but also promote environmental sustainability.

[References: (1) The Times of India, Mumbai, 19th May 2025; (2) Ministry of Housing and Urban Affairs, Government of India, PIB, New Delhi, 24th October 2024; (3) https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2067772]

Electric Vehicle (EV) Policy of the Government of Maharashtra

The Government of Maharashtra announced its EV Policy through a Government Resolution of the Transport Department dated 23rd May 2025, with the objectives of mitigating climate change and

ameliorating pollution by offering various incentives for procuring EV vehicles, providing toll exemption, supporting charging facilities, etc. The policy will be effective from 1st April 2025 to 31st March 2030. The policy aims to make Maharashtra as a leading EV hub in India through infrastructure development, manufacturing support, and financial incentives.

Salient features of the policy are as indicated in the accompanying graphic.

[References: (1) Govt. Resolution dated 23rd May 2025; (2) The Times of India, Mumbai, 26th May 2025]

Sub-cities Approach in Urban Planning

Architecture and urban planning are fundamental disciplines impacting human settlements. It derives from many fields of human endeavor and creativity - planning, order, design, aesthetics, city science, etc., making the settlements organized, beautiful and comfortable, enhancing quality of life in the settlements.

In India, as cities and metropolitan regions are growing, the sub-city approach is discernible. Key aspects of the sub-city approach include decentralization, balanced development, large scope for housing quality and design, affordability, green spaces (though not paid attention to the extent desired), improved quality of life, systematic layout of infrastructure, maintaining regional identity, etc. Here is an excerpt from an expert:

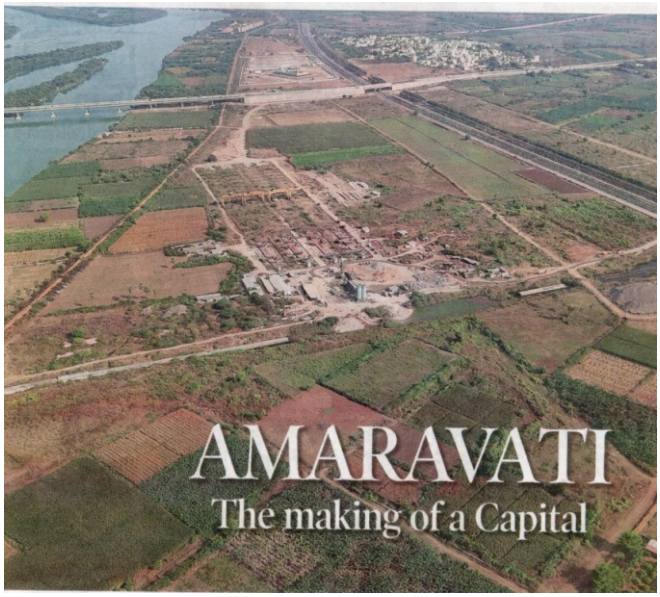
"Sub-cities offer affordable houses and often better living quality when compared to a mother city. One of the major causes of such a better living quality is a greater share of land earmarked as urban green spaces in the prevailing master plan. The mega-cities in India, like Delhi, Kolkata, Mumbai, and their sub-cities, accommodate a larger share of the total urban population compared to the other million population cities and fewer than a million cities. For example, under national capital region (NCR) planning, Delhi, several such sub-cities are planned around the city of Delhi, such as Gurgaon, Noida, Dwarka, Rohini & Greater Noida. On the other hand, the Perspective Plan of Kolkata, developed by the Kolkata Metropolitan Development Authority (KMDA) proposed several sub-cities, such as New Town (Rajarhat), Bidhan Nagar (Salt Lake City), Kalyani, West Howrah, etc.

[Reference: Roy, U., (2019) "Transformations of Urban Green Spaces (UGS) in Sub-Cities: A Case of New Town of Kolkata and Gurgaon of Delhi", Fábos Conference on Landscape and Greenway Planning 6(1). doi: https://doi.org/10.7275/5mss-5856]

CIDCO is developing NAINA city in the MMR with sub-city approaches as dedicated sectors like medical city, sports city, education city, research and development zone, eco-tourism, entertainment region, etc.

[Reference: All India Institute of Local Self-Government, Regional Centre for Urban & Environmental Studies, The Urban World, Vol.14, No.4, October-December 2021]

The Master Plan of Amaravati, the upcoming capital of Andhra Pradesh, shows that the grand capital will have nine sub-cities or theme cities. The justice city will have High Court and arbitration centres; finance city with buildings having banks, fintech and financial services firms; health city that will have hospitals, medical research centres and pharmaceutical industries; sports city with state of the art infrastructure and training facilities; electronics city with IT and electronic manufacturing; media city with film, entertainment and digital media; tourism city that will show-case Amaravati's hospitality and cultural heritage.



[Reference: The Indian Express, Mumbai, 3rd May 2025]

Call for Research Papers!

The Regional Centre for Urban & Environmental Studies is pleased to invite contributions for Urban World in the form of articles and research papers from researchers, authors, publishers, academicians, administrative and executive officers, readers on the following themes –

1) Municipal Finance
2) Solid Waste Management
3) Women Empowerment
4) Safe Cities for Women
5) Responsive Urban Governance
6) Citizens Participation and Local Governance.
7) Sustainable Urban Transportation

Articles could be between 2000 to 4000 words. They may contain compatible tables, charts, graphs, etc. We reserve the right to edit for sense, style and space. Contributions may be e-mailed in digital form as a Word file to the Director, RCUES, Mumbai.

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