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HARMONY IN THE CONCRETE JUNGLE

Creating Inclusive and Equitable Cities

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Editor

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Editor's Note

Globalisation has driven nations to promote cities using a singular development template. Cities are being visualised as spaces with high-end, gated residential townships and sparkling business districts, with a peppering of supposedly 'open and green' public spaces that end up catering only to the top tiers of the social and economic strata.[1] These urban agglomerations are energy-intensive and exploit natural resources with abandon, encouraging unsustainable consumption patterns and leading to vast socioeconomic disparities and increasing climate vulnerability.

This elitist trend has displaced the urban poor and widened socioeconomic gaps. The redevelopment of the mill lands in

Central Mumbai throughout the 1990s, for one,[2] bears testimony to how the poor and labour class can often be very easily relegated to the margins as political leaders and planners aim for their "world-class, slum-free city".[3] In Mumbai, this paradigm led to socioeconomic segregation, seen in the rise and spread of sprawling informal neighbourhoods. The poor and the marginalised were pushed further into the margins, mainly in the slums in unsafe, unhealthy, and often isolated surroundings, enduring poor quality of life.[4]

Globally, statistics would prove this uncomfortable truth: approximately 1.2 billion of the urban population live in slums or slum-like conditions; their number is likely to double by 2050.[5] This phenomenon is expected to be witnessed as the existing urban agglomerations expand further and new urban spaces are created in the emerging economies of the Global South. Nearly 50 percent of India's total urban population live in informal settlements. The situation is no better in most developing nations in Asia and Africa,[6] indicating a striking similarity across cultural and political systems.

This is not to say that cities in the developed world are socially just and inclusive. Indeed, some of these cities are experiencing increasing incidence of homelessness. Studies in these countries have found not just a shortage of housing but a myriad of social factors, including eroding societal values, collapsing family relationships, and increasing drug addiction and alcoholism as primary factors contributing to homelessness.[7,8] Compared to emerging economies, however, these Western cities do not have to serve the needs of massive population densities. They also have adequate financial resources to bring about remedial measures.

Inclusion goes beyond accounting for and delivering access and equity to the poor. Shaping their notions of an "urban life", cities have historically neglected the specific needs of women, gender minorities, children, people with disabilities, and the older adult populations. This phenomenon is witnessed in the low workforce participation rates of women, non-participatory city planning

and governance mechanisms, the lack of safe public spaces and transport, and poor access to healthcare, water and sanitation. Research suggests that the onset of the digital age has further widened many of these disparities.[9]

The UN-Habitat's *World Cities Report 2022*[10] aptly captures the above realities. Recognising the role of urbanisation in the long-term prosperity of the people and the planet, its New Urban Agenda[11] adopts an optimistic vision of 'cities for all' and provides guidelines for inclusive and equitable urban futures. It charts a people-first development roadmap to create gender-responsive cities, enhance social security, equity and justice, and participatory city planning and governance.

Given the existing scenario, achieving such an ambition will be complex and challenging. Unless backed by firm commitments and bold, transformative action from global, regional, national and local leaderships, this 'inclusive' vision could yet become an epitaph of urban evolution in the 21st century.

This anthology, **Harmony in the Concrete Jungle: Creating Inclusive and Equitable Cities,** thus comes at a critical time. It underscores the belief that the strength of cities is woven into the inclusive fabric. The contributors to this compendium are catalysts for change. In their essays, they offer a medley of insights, ideas, strategies and case studies that will inform future policy and action. They draw from diverse disciplines, bridging the realms of academics, policymaking, and grassroots interventions to present a holistic perspective on the imperative of nurturing inclusive cities. These essays not just reflect on the wrongs of the past but serve as beacons of hope for truly inclusive urban futures. They delve into the intricate tapestry of challenges and opportunities that define the quest for inclusive cities.

Each essay underlines the power of transformative thinking and collective action: how future urban development must consider ever-evolving cultural, socioeconomic, generational and gender diversities; how 'smart' cities must ensure that technology works

for all; 'empowered urbanism' frameworks and the role of open and green spaces in fostering inclusive and safe cities; the critical role of traditional knowledge systems and experiences; gender budgeting; the importance of civil society organisations in promoting inclusive urban spaces; advancing women in leadership roles and people-centric placemaking interventions; and deliberating pathways for the convergence of inclusive and climate-resilience strategies and multi-stakeholder engagement.

Inclusive cities are not just a moral imperative but a strategic investment in a brighter and more sustainable future. It is our hope that this effort aids and catalyses efforts in designing cities of the future that embrace diversity, promote equity, and foster a sense of belonging among all urban stakeholders.

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Unless backed by firm commitments and bold, transformative action from global, regional, national and local leaderships, the vision of 'inclusive' cities could yet become an epitaph of urban evolution in the 21st century.

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Urbanisation 2.0 and the Lessons of 20th-Century Cities

Srinath Sridharan and Dhaval Desai

From the ancient metropolises of Mesopotamia and the planned towns of the Indus Valley civilisation, to the sprawling modern urban landscapes of the present day, cities have shaped human civilisation throughout history. Over the last century, cities have grown exponentially, and today the world is predominantly urban with more than half of the population residing in cities.[1] This phenomenon—of people moving from rural to urban areas—is driven by many factors, among them the quest for better economic opportunities and quality of life. Rampant urbanisation, however, has perils that are multifaceted. At the same time, the growth of cities holds the potential

to propel billions of people to prosperity through sustainable and inclusive development, equity, social progress, digitisation, and innovation.

Empowered Urbanism

For cities of the developing world to be an enabler of sustainable development, they will have to learn from the mistakes of the unchecked and inequitable urban spaces of the 20th century. Asia and Africa, which are currently poised to lead the urbanisation wave,[2] will have to transcend the traditional ways of life of urbanism to build liveable, equitable, and sustainable cities to fulfil the UN Habitat's New Urban Agenda.[3] They must adopt 'empowered urbanism', recognising that wide income disparities, discrimination, and exclusion obstruct the path to truly equitable urban futures.

An empowered urbanism strategy, when merged with neighbourhood-level, community-led 'tactical urbanism',[4] can address urban economic disparities that extend to inequities in the rights and opportunities that hinder people from living a life that is safe and imbued with dignity. These inequities have worsened various forms of marginalisation, including those faced by women, gender minorities, children, the elderly, and people with disabilities, as well as other vulnerable urban population groups. These groups experience a multitude of challenges including those related to safety, and access to essentials like sanitation, mobility, education, new-age digital tools and finance; they are also underrepresented in public forums.

For example, despite gains[5] from the Millennium Development Goals, 57 percent of urban residents worldwide lack access to toilets, nearly 16 percent are not reached by essential sanitation services, and almost 100 million still practice open defecation.[6] Local governments are also struggling to fulfil the UN Sustainable Goals (SDGs), especially SDG 11, which aims to

"make cities and human settlements inclusive, safe, resilient and sustainable" by 2030.[7] Empowered urbanism seeks to confront these obstacles by redefining urban policies, infrastructure, and social norms to ensure inclusive and accessible cities for all.

Reliable Urban Data for Smart Interventions

A pillar of empowered urbanism is the use of datasets and tools from the Fourth Industrial Revolution to inform policy formulation, execution, and project tracking for sustainable cities.[8] City governments can create gender-disaggregated data by undertaking comprehensive surveys and assessments focusing on issues that affect women and gender-diverse communities. Collating gender-disaggregated data to make informed policies and urban planning decisions is a complex process riddled with challenges, including limited data availability, privacy concerns, and the lack of consistent data-collection methods.

City governments must collaborate with civil society organisations, researchers, and advocacy groups to establish data-collection frameworks. Designing gender-sensitive surveys, utilising digital technologies for data collection, and ensuring data privacy through anonymisation will help the collection of gender-disaggregated data, which is a prerequisite for any 'smart' solution to urban challenges.

Gender Mainstreaming in Urban Planning, Design, and Infrastructure

Pathways for establishing empowered urbanism will involve gender mainstreaming, which integrates gender perspectives into all stages of policy development and urban projects. Interconnections with local communities are essential to ensure gender equity in urban planning linked to improved quality of life for all residents as well as overall social progress. They can also address issues of underreporting by fostering trust and encouraging candid responses. For example, *mahila thanas* (all-women police stations) have contributed to a 22-percent increase

in reporting of gender-based crimes in India since they were set up in the early 2000s.[9] Further, collaboration with gender experts, activists, and community leaders can help identify issues that tend to be overlooked. Cities can employ gender-responsive budgeting, which allocates resources to programmes that address gender disparities.

Cities must create the necessary infrastructure to provide a level playing field for women in the labour market, including through the provision of safe and accessible public transportation, affordable childcare services, and opportunities for skills development and training. Promoting gender-based skilling programmes and scholarships, creating skill-gap databases, and announcing tax breaks for companies that catalyse such initiatives can ensure that skilled and job-ready women find space in the growing employment sectors.[10]

Small interventions can help kickstart such transformations. For example, most public toilets for women in India's cities are shut after 9:00 in the night,[11] reflecting the mindset that women are not expected to stay outdoors during late hours. When such basic infrastructure overlooks the specific needs of women, it undermines their entitlements to the city. While well-lit streets, a 24x7 transport system, and easily accessible and safe public toilets alone may not suffice, they are fundamental prerequisites for ensuring women's rights to public spaces and catalysing their participation in the urban workforce. Investments in safe and accessible urban public transport infrastructure have been shown to encourage more women to seek employment outside their homes.[12] In turn, encouraging women's participation in the labour market is necessary for India to achieve its aspirations of becoming a US$5-trillion economy by 2027.[13] Ensuring equal opportunities for women in the workforce will add US$770 billion to India's economy by 2025[14] and accelerate the country's growth by 1 percent.[15]

Cities can devise community-led strategies to change the norms, attitudes, behaviours, gender stereotypes, and biases perpetuating gender inequality through awareness campaigns, education, and engagement with local communities. Initiatives like the recent UN Women's #YouDontSeeMe[16] campaign in India can be used to tackle gender stereotyping in media and advertising. Collaboration with local leaders, schools, and cultural organisations is vital for addressing these issues and fostering broader societal transformation, eliminating gender biases for more equitable and progressive communities.

Conclusion

Reimagining urban concepts through the lens of empowered urbanism is critical. The SDGs encompass various dimensions of sustainable development, including gender equality, clean energy, affordable housing, and climate action, which also collectively contribute to the New Urban Agenda.

In 2021, the Government of India approved 32 greenfield city development projects along 11 industrial corridors planned across the country.[17] Six of these—including the Dholera Special Investment Region in Gujarat and one project each in Maharashtra, Uttar Pradesh, Madhya Pradesh, and Haryana—are under implementation, with a number already having received approval and others in the planning stage. Following the announcement of eight new greenfield cities as recommended by the 15th Finance Commission, 21 states have sent 26 proposals, which are under evaluation.[18] Additionally, Maharashtra has planned new cities and towns in 17 locations along the 701-kilometre Samruddhi Mahamarg that connects Mumbai to Aurangabad.[19] These initiatives offer India a unique opportunity to create sustainable, equitable, safe, and climate-resilient cities and set a template for other fast-urbanising economies of the Global South.

Empowered urbanism must go beyond mere rhetoric and embrace a moral obligation to ensure that all citizens, regardless of gender or ability, can thrive and contribute to the vibrant tapestry of urban life. By harnessing data and technology, reframing policies, creating accessible infrastructure, and fostering community-led change, India can navigate the path towards empowered urbanism, where cities truly become spaces for all.

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Promoting Inclusive Cities

Sulakshana Mahajan

I t is said that the mark of a great city is in how it treats its ordinary spaces, not the special ones.[1] In recent years, various city indexes have been created to evaluate the state of urban areas from diverse perspectives. A critical characteristic, however, is often overlooked—that of inclusiveness. The United Nations defines an inclusive city thus: "A place where all urban residents, regardless of their economic status, gender, race, ethnicity, or religion, have equal access to social, economic, and political opportunities. It is a place where city residents are empowered to participate in the city's growth and prosperity, ensuring that they are not marginalised in terms of basic urban services, social engagement, and political involvement."[2]

The imperative is to consider the nurturing of inclusive cities as a fundamental task for urban planners, policymakers, and the residents themselves. This would not only reflect the essence of a just and equitable society, but also have far-reaching implications for the future of urban spaces.

The Prosperity & Inclusion City Seal and Awards (PICSA) Index,[3] commissioned in 2019 by the Biscay Chartered Government and the City of Bilbao in Spain, sheds light on how 113 cities worldwide fare in terms of inclusivity. Relatively small cities in Europe—such as Zurich, Vienna, and Copenhagen—occupy the PICSA Index's top three positions. Three Indian cities were ranked in the last quadrant of the index: Bengaluru (83), Delhi (101), and Mumbai (107). Taipei (6) was the only Asian city in the top 20.

It is equally important, however, to acknowledge that the top spot is not necessarily claimed by well-known global metropolises such as New York and London. Further, that the world's most impoverished regions in Asia, Africa, and South America find themselves at the lower end of the inclusivity spectrum highlights the substantial global disparities.

The conversation surrounding inclusive cities has gained traction in recent years, especially amid Europe's ongoing migration crisis.[4] European cities experiencing an influx of migrants from West Asia and Africa are grappling with challenges related to integration. The idea of inclusion has thus become central to urban planning.

It is essential to explore the historical contexts of urbanisation to appreciate the significance of inclusivity in cities. Exclusionary practices have been a recurring subject[5] in cities across cultures throughout history. 'Othered' groups have varied across different periods, often leading to social exclusion and marginalisation. India, with its caste system, tribal populations, and multiple religious groups, has its own share of exclusionary practices. However, cities like Mumbai have stood out as exceptions.

The city, often referred to as *Urbs Prima* (or 'first city'), was celebrated during India's struggle for independence for its cosmopolitan and inclusive nature. Then called Bombay, it was a melting pot where diverse communities co-existed, celebrating their differences and thriving together. The city fostered an environment that respected labour, skills, intelligence, cultures, and entrepreneurship. Bombay was also at the forefront of social reforms and actively promoted social integration. Dr. B. R. Ambedkar, the chairman of the Constitution Assembly, embedded the ideals of inclusive growth in the Indian Constitution's preamble.

However, in the 1950s, after India gained independence and became a republic, exclusionary and parochial elements began to infiltrate the political arena.[6] In Bombay, this led to the Marathi language being weaponised to create divisions, marking the onset of exclusionary movements in the city. After successfully establishing Bombay as a Marathi-speaking city, exclusionary politics[7] were directed towards creating further divisions within the city.

Migrants from other Indian states, who had historically contributed to Bombay's growth, were now labelled as outsiders and blamed for the "decline" of the city.[8] Restrictive housing policies compounded the challenge and led to the mushrooming of informal settlements and slums.[9] Co-operative housing societies which were formerly mandated to include Dalit and other religious and language minority groups often failed to enforce these regulations, using considerations like caste, language, and food habits to exclude minority families.[10] Single women faced accommodation challenges, too.[11] The exclusionary mindset persisted and intensified after Bombay was renamed Mumbai in the 1990s. Migrants, and marginalised communities and religions, were targeted, sometimes violently. Today, inclusion seems to be a distant utopia in many parts of the city.

Accommodating both migrant workers and local residents and providing innovative solutions for affordable, modest, and temporary accommodations are essential to fostering inclusive cities. People from rural areas often seek short-term employment in cities, often in urban centres that require workers for temporary roles, such as for construction, maintenance, security, and transportation. This results in the constant presence of temporary migrants in cities throughout the year. To promote inclusivity, it is crucial to establish short-stay accommodations, dormitories, and hostels with essential amenities, childcare, and healthcare services.

Both public- and private-sector entities must contribute to creating facilities tailored to the needs of transient workers, especially during festivals, when there is a spike in temporary migration. The establishment of permanent facilities to support casual and temporary workers is particularly valuable in the Indian context. These measures ensure an inclusive urban environment and enhance the well-being and dignity of migrant workers who contribute to the growth of a city. By addressing the needs of these individuals, cities can better integrate their temporary workforce, create a more inclusive environment, and capitalise on the diverse skills and talents of the migrant population, which would benefit both the city and its temporary residents.

While an inclusive city may seem unattainable, it remains a crucial goal for urban planners and public intellectuals who envision a more peaceful and sustainable world. Inclusion is not a luxury but a necessity for the well-being and progress of cities and, by extension, the global society. By actively pursuing inclusivity and understanding the concept of diversity in ever-changing urban contexts, cities that embrace diversity can be built, social cohesion fostered, and opportunities created for all residents. Inclusive cities are a moral imperative as well as a pragmatic solution to addressing the complex urban challenges of our time.

In the context of Mumbai, for example, there is a need to ensure that the city's celebrated cosmopolitan character endures. Urban planners and political leadership of this megacity will need to reimagine the tenets of diversity from the perspectives of the ever-evolving cultural, linguistic, socioeconomic, generational, and gender diversity that the city represents. Such rethinking is a prerequisite for sustainable, safe, inclusive, and resilient cities.

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Pathways to Inclusion and Climate Resilience: Can They Converge?

Amita Bhide

The 21st century has irrevocably tilted in favour of an urban world. However, present as well as future cities face unprecedented challenges, primary of which is demonstrating economic vitality while absorbing continuing population growth and providing for people's needs for infrastructure, services, and amenities. Cities are struggling to attract investments and mobilise resources in a competitive environment even as they attempt to maintain a standard of decent work and social life as well as respect for heritage and history while being future-ready and attuned to technology.

Perhaps the biggest challenges are ensuring that urban growth does not occur at the cost

of human life, that no one is left behind, and that cities continue to thrive and prosper in a changing climate scenario. These seem to be highly incompatible goals. Is it possible to develop a growth-oriented heritage conservation policy? How can economic growth be socially inclusive? Can a pro-climate policy be pro-poor? These are imperatives that administrators, policymakers, politicians, investors, and citizens of cities need to address.

Walking the Tightrope

As cities in emerging economies face these simultaneous challenges, policy and action conflicts may appear inevitable. However, a careful review of some sectors reveals that conflicts in policy goals can be avoided. A city can balance and navigate conflict-ridden paths through data- and study-led intersectoral and nuanced approaches to issues and realign its governance mechanisms and planning resources.

The waste sector is an example. Conventional cities, which have emerged through fossil-fuel-based industrial economies, have relied on the unstated principle that production or manufacturing economies generate a near-corresponding quantity of waste that needs to be dumped in sites away from habitation to reduce risk to human lives.[1] However, more recently, developed economies have begun to recognise the importance of circularity and minimising waste to consider options such as recycling and upcycling, material recovery, and sanitary management of landfills.[2]

In India's cities, the need to earn a living with the support of minimal skills and resources has resulted in an innovative recycling mechanism that engages thousands of recyclers across all scales of urban settlements. These recyclers effectively segregate waste,

creating a dent in the massive volumes of garbage generated daily by cities. The recyclers have also successfully formed informal networks and industries that upcycle various products. However, the recyclers suffer from high levels of precarity and vulnerability, low levels of income that result in cycles of intergenerational poverty, and stigma which denies them key resources and opportunities.

Inappropriately managed waste exacerbates air, water, and land pollution, as witnessed in several Indian cities through effects such as foaming rivers,[3] changing contours of seas and oceans through debris dumping,[4] burning lakes,[5] and large-scale fish kills.[6] The destruction of natural resources—which may aid climate change coping strategies—needs to be prevented. Therefore, the management of waste that is pushing cities to crisis points is imperative.

There are various pathways to waste management. One set of options considers technology as key, with solutions such as waste-to-energy, extended producer responsibility (EPR), sanitary landfills, and incineration.[7] These solutions seek to bypass recyclers and replace them with large-scale operators. The other set of options considers waste recyclers, especially those at the bottom of the pyramid, to be an essential part of the solution.[8]

While the two options seem contradictory, a closer study of the sector reveals possible convergences.[9] For example, EPR operators can easily integrate recyclers into their collection and primary processing systems, which can extend the outreach of the EPR systems. Similarly, waste-to-energy plants necessitate a high calorific value for waste that requires prior segregation, which is a task that recyclers can significantly contribute to.

Yet, the question that remains is why difficulties persist in identifying and implementing these convergent possibilities.

Obstacles to Convergence

One of the primary reasons for non-convergence is the current policymaking and decision-making structures. Urban policymaking is increasingly informed by policy interlocutors such as consultants who, while informed by global events, have rarely studied grassroots conditions.[10] At the same time, there is a lack of systematic analysis of information and data gathered by relevant departments over time. Also pronounced is the trend of city-level decision-making being centralised at the state level, and thus removed from the dynamic and knowledge of the variability of local conditions. Motivations that prompt decision-making are becoming linked to short-range and individualised visions, pressures to produce immediate results, and related interests. The lack of departmental knowledge as well as ground-level data often results in new agendas that lack comprehensiveness and do not adequately balance competing and conflicting interests. This is exacerbated by the absence of an institutional system to evaluate policies or programmes at the city level to undertake course corrections.[11]

The non-pursuit of convergent possibilities can also be attributed to the structure of city governance systems which have shown an inclination for centralisation rather than the enhancement of citizen-centredness and participatory avenues.[12] The lower and mid-level bureaucracy is embedded in departmental hierarchies whose visions do not intersect and who lack the ability to communicate. This further widens the schism between citizens and the bureaucracy, resulting in trust deficits and the absence of micro-level citizen contribution and

monitoring. In turn, the possibility of creating linkages between waste recyclers, municipal waste workers and, EPR collectors is lost.

Finally, most city governance systems are designed towards the exploitation of natural resources and serving the interests of propertied citizens rather than the rights of those who contribute to the city through their labour.[13] As a result, even offices and departments that are concerned with natural resources tend to reflect such exploitation, with those concerned with the implementation of pro-poor schemes being marginalised in the system.

The Way Forward

Municipal and state urban development departments must be redesigned to protect and conserve environmental heritage and ensure responsible land and water use. Similarly, mandates for inclusion need to be institutionalised by redesigning the key areas of responsibility and everyday functional culture. There is also a need for creating strategic meeting points at various scales of governance (e.g., ward, zone, and city) where departments, political leaders, and citizens can meet, discuss, and review performance regarding larger goals of sustainability and modes of course correction.

It is only through the institution of systems that are function- and discourse-oriented that cities can create forums and mechanisms to develop comprehensive, nuanced, non-homogenous, and creative solutions for the complex issues that arise in the pursuit of inclusive climate action that leaves no one behind.

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Putting People Before Place to Ensure Inclusivity and Empowerment

Oormi Kapadia and Jasmine Saluja

'Placemaking'—or the conversion of public spaces into inclusive, accessible, functional and safe locations where people can spend time—could very well be the new fashionable jargon in the urbanism discourse of today. Urban local bodies in India, too, have been commissioning wall paintings and improved lighting in open public spaces under the banner of 'placemaking'.[1] Yet, calling routine maintenance activities or upkeep and beautification work as 'placemaking' short-sells a vital tool of city planning and urban design—one that ought to be an essentially democratic process that creates spaces of the people, for the people, and by the people.

This essay explains, with examples, how PLURAL, a group of multidisciplinary professionals in India engaged in collaborative improvement of urban spaces, have sought to demonstrate what placemaking should be and how it can be made effective.[a]

Dharavi Redevelopment: Process is Greater than the Product

The redevelopment of Dharavi, popularly known as one of Asia's largest slums, located in north-central Mumbai,[b] has been discussed since the 1990s but efforts to do so have repeatedly failed for various reasons.[2] A crucial mistake was not having involved residents in envisioning the area's future. After all, Dharavi is not a singularity. It includes multiple neighbourhoods of varied nature, including homes, commercial units and industries, the inhabitants of which have different expectations and all of whom PLURAL have strived to involve.[3]

Between 2014 and 2015, PLURAL worked extensively with the local communities—particularly those that are often neglected in top-down policymaking, such as the women, children and youth, and gender minorities—to map their aspirations for their neighbourhood. We did away with the conventional survey method and instead used a more innovative approach where each aspiration expressed during our discussions with the residents was mapped as a pixel to form a kaleidoscope on a 3D model of Dharavi, which was exhibited in various occasions as installation art.

This enabled us to locate local aspirations in geographical space. The outcome was remarkable as it did not adhere to popular media-generated aspirations. This enabled us to use focused and customised placemaking processes in different neighbourhoods of Dharavi, based on collective aspirations that reflected the community's real social and physical infrastructural needs.

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[a] The authors of this essay are co-founders of PLURAL.

[b] Dharavi measures approximately 2.04 sq km.

Source: PLURAL

Prioritising ownership, maintenance, and sustained usage of the space following placemaking, holds greater significance for residents than the design and implementation phases. The collaborative management of project ownership—from the initial design to its execution, involving both the community and the funding sources—fosters a genuine sense of ownership among stakeholders. This, in turn, motivates them to ensure that the place's utility exceeds initial expectations. By embracing this approach of community engagement from the outset, our placemaking process places people at the forefront, valuing their importance over the physical space.

Machhimar Nagar: Inclusivity and Empowerment through Urban Design

Pretty-looking plazas offer little for Mumbai's struggling fisherfolk, whose livelihoods have been declining due to environmental degradation and large infrastructure projects.[c,4] PLURAL embraced placemaking as a tool to collaborate with them, preserve their cultural heritage despite current economic pressures, and equip them with skills to navigate the uncertain future.

One of the original resident communities of the city, the Koli, live along its coastline in village clusters, often wrongly categorised as slums. Machchimar Nagar is one of the oldest such, lying cheek-by-jowl with Cuffe Parade in South Mumbai—one of the city's wealthiest neighbourhoods. Not only did the fisherfolk face livelihood challenges, the street dividing their area from their upscale neighbours became a focus of conflict owing to the contrasting urban landscapes.

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[c]   For example, reclamation work for a bridge between Cuffe Parade and Nariman Point has been ongoing since the 1990s and then stalled. Currently, the reclamation of a large area is going on at Marine Drive for a coastal road which is affecting the marine ecology of the entire coast. There are also many sewage pipes that are let out into the sea in this area as they are throughout the coast. All these projects affect marine life.

Addressing this conflict was a daunting task. PLURAL worked with the local government, and after a year of extensive discussions and planning with various community groups, the dividing street was transformed into a unifying space. Sidewalks on both sides received equal attention, and the selective removal of walls between private spaces created a welcoming public-private area to encourage chance interactions. The street was also narrowed to enhance pedestrian-friendliness, creating a more humane environment for all.

The introduction of a tourism circuit through the fishing village enabled the restoration of some of the fisherfolks' traditional homes into homestays. Street-side cafes serving traditional meals sprang up, which led to the development of infrastructure such as promenades and wider sidewalks. Introducing a 'Koli   Festival' gave a new meaning to the bazaar streets and temple courts. The process resonated with the community and empowered its members to face the rapid economic changes occurring in their environment.

Incremental Micro-Level Transformations

Mumbai has one of the lowest per capita open space ratios among the world's metropolitan cities.[5] Given the city's high population density and soaring real estate prices, increasing open space ratio seems nearly impossible. However, through research and mapping efforts, PLURAL identified derelict and underutilised areas within South Mumbai and collaborated with the municipal corporation to improve them. We carried out a pilot project in Ward A, the city's southernmost municipal ward, to showcase the possibility.

The area we chose was a neglected, triangular spot of public land wedged between the sea and a dead-end street in Ward A. It was being misused by miscreants and leading to safety hazards for the neighbourhood. Collaborating with local communities, the municipal ward office and corporate houses (to raise funding), PLURAL set up a public park.[6]

SB Somani Park, in Mumbai's A Ward: How placemaking can transform neglected public areas into mixed-use, safe and inclusive spaces for all. Source: PLURAL

The stakeholder network was further expanded to encompass local governance, metropolitan governance, the transit authorities, and the community. Typically, large-scale, top-down infrastructure projects exclude community inputs and, when poorly executed, can harm entire neighbourhoods. Collaborating with residents, local officials, and project managers from the metropolitan transit authority, PLURAL also re-imagined the interface of an upcoming Metro station terminal, which threatened the UNESCO-recognised Art Deco Precinct of South Mumbai. Citizens from diverse backgrounds united to define the preservation of history and aesthetics, transforming abstract ideas into a place for everyone.

Institutionalising Placemaking in Urban Planning

PLURAL has advocated integrating placemaking into Mumbai's formal urban development process at every neighbourhood level, with a tripartite governance model involving professionals, representatives of neighbourhood communities, and local government. This could help in the setting up of a placemaking cell in electoral wards. The cell should be allocated a yearly budget, thereby elevating its role from a mere advisory body and making it responsible for implementation.

PLURAL's participatory model for promoting ward-level Placemaking Cells

PROPOSED GOVERNANCE MODEL
(POST-COVID TERMS OF ENGAGEMENT TO FAST TRACK THE PROCESS)

Active + Passive open spaces = Healthy cities

EXISTING PUBLIC OPEN SPACES + **NEW PUBLIC OPEN SPACES**

DESIGNER-LED CONTRACTOR TEAM
APPOINTED WITHOUT L1 BIDDING

PRIVATE FUNDING: CSR & GRANTS

PUBLIC FUNDING MCGM BUDGET

PLACEMAKING CELL
EVERY ELECTORAL WARD LEVEL

PROFESSIONALS + **COMMUNITY** + **MCGM WARDS**
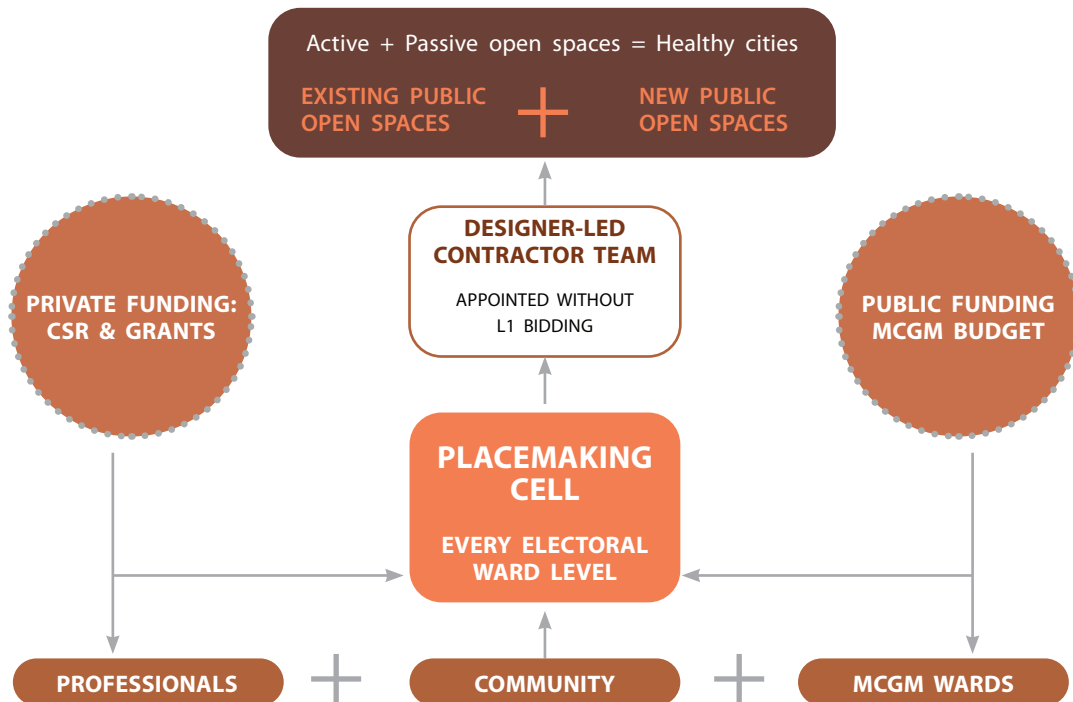
Source: PLURAL

Placemaking cells can be compared to *machizukuri*, a community-led planning process in Tokyo. *Machizukuri* differs from the popular idea of community planning as Japan allows for *Machizukuri* ordinances to be passed and upheld in a court of law, giving these bodies the status of a statutory local planning policy.[7] *Machizukuri* has enabled planning in Tokyo to focus on qualitative aspects of everyday life which were not a part of earlier discourse.

Placemaking can become an integral part of urbanism if it is formalised as a community-centric effort backed by local governance. It can empower marginalised communities at the neighbourhood level by customising the quality of space according to the community's needs. Implementation can be ensured and monitored, and people can finally be put before places.

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Founding partners of PLURAL. They co-authored the book, 6 Metros – Urban Planning and Implementation Compared *published in 2023.*

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Unlocking India's Urban Potential: The Role of Open and Green Spaces

Suryaprabha Sadasivan and Akhil NR

P rojections from the United Nations Habitat's *World Cities Report 2022* indicate that India's urban population will likely reach 675 million by 2035, second only to China's.[1] While there are positive aspects to urbanisation—including the economic opportunities that they unlock for a vast section of the population—there are formidable challenges to making these cities liveable, equitable, and sustainable.

India has around 8,000 cities and towns, according to its last census, and all of them are battling challenges of poverty, overcrowding, and pollution. While many cities are trying to overcome these problems under the Smart Cities Mission, they still have a long way to go.

Indian cities are most vulnerable to climate change, and a key thrust area to build their resilience against the negative impacts of urbanisation is to create open and green spaces. Such spaces promote healthy living and act as social equalisers, fostering inclusivity and reducing discrimination. They offer opportunities for socialisation and physical activity, improving health while aiding in climate change mitigation and pollution reduction. Despite their importance, open public spaces are often overlooked in discussions about India's urban development.

There are varying definitions of what constitute 'open spaces'. Indian urban local bodies follow the Urban and Regional Development Plans Formulation and Implementation (URDPFI) guidelines, which state that open spaces should include recreational spaces, organised green spaces, and other common areas such as vacant lands and flood plains.[2] They recommend a minimum of 10-12 sqm of open space per person in cities—a standard where many Indian cities fail. Chennai and Mumbai, for example, have only 0.81 sqm and 1.24 sqm of open space per person, respectively.[3] Delhi has a higher figure of 21.5 sqm per person, but the bulk of such spaces are concentrated in a small area of the city.[4]

A clear, structured framework is essential for urban areas to enhance their per capita open space and promote a more sustainable, green future. Notably, the Brihanmumbai Municipal Corporation (BMC) has released a new draft 'open spaces policy' for public consideration.[5] While it is encouraging to see urban bodies discussing focused policies for open spaces, how the policy shapes up after feedback from various stakeholders remains to be seen.

Creating and maintaining open and green spaces requires long-term commitment. Years of unplanned urban development have left little scope for changes. Globally, though, cities have used multiple strategies to create and maintain open and green spaces. The World Bank has highlighted specific strategies for unlocking the potential of public spaces, such as establishing

coalitions with local leaders across government, community, and the private sector; encouraging urban well-being by fostering active engagement with public spaces; conducting comprehensive assessments of public-space assets; formulating tools to measure spatial attributes and user activity patterns; and integrating public spaces with resilient city infrastructure.[6]

The cities of Colombo,[7] Dhaka,[8] Lima,[9] Nairobi,[10] Seoul,[11] and Singapore[12] are some of those that have implemented these strategies successfully. New York has appointed its first-ever public realm officer tasked with facilitating collaboration among diverse stakeholders to develop and maintain public spaces throughout the city.[13] Globally, well-lit, secure public spaces with high footfalls have had a positive outcome on the safety of women and increased their participation in the workforce.[14]

While creating more open and green spaces is a challenge, a related impediment that is given little attention is the lack of equitable access to these spaces for women and children. Current urban planning frameworks often cater predominantly to the needs of adult men. This is reflected in the perception that it is unsafe for women to enter some open areas after certain hours. To counter this, strategies such as improved lighting, accessibility, better public transportation, and small additions to open spaces—such as providing specialised equipment for women to exercise, ensuring adequate lighting, and installing CCTV cameras—should be employed.

Indeed, as part of the UN Women's Safe Cities and Safe Public Spaces for Women and Girls Global Initiative, various cities have made interventions such as carrying out scoping studies, enacting laws, and running awareness campaigns to enhance both safety in public spaces and their economic viability.[15]

Public spaces also hold immense potential for children's physical and mental development. Rapid urbanisation has made outdoor play for children in cities unsafe. Recognising this, cities like Bhubaneshwar in the state of Odisha are leading the way in adopting child-friendly urban design policies.[16] These initiatives integrate playful learning landscapes to enhance children's communication and cognitive skills, emphasising the importance of a holistic approach to urban planning.

The significance of open and green spaces extends beyond individual well-being to the social fabric of cities. As cities consume most of the world's energy and contribute significantly to greenhouse gas emissions, sustainable urban growth is imperative to addressing climate change. Citizens can also play a vital role in advocating for increased open space per capita and collaborating with governments on diverse initiatives. The City Investments to Innovate, Integrate and Sustain (CITIIS) Challenge[17] (which helps cities develop and implement sustainable urban infrastructure projects) and the Placemaking marathons[18] (reclaiming public spaces lying vacant or underused for public benefit), both initiated by the Ministry for Housing and Urban Affairs, have fostered collaboration between citizens and municipal authorities, enabling them to craft solutions and jointly reimagine the essence of public spaces.

The expansion and redesign of open and green spaces to make them more accessible to women and children can also be pursued through behavioural change campaigns and technology-enabled interventions. Technology platforms such as Safetipin[19] gather data via their applications and partner with different urban stakeholders, including governments, to improve safety and inclusivity of public spaces for women. Campaigns such as 'Why Loiter'[20] encourage women to reclaim public spaces, in the process upending ingrained societal norms.

Amid resource constraints and a burgeoning population, municipal bodies and governments often neglect urban green areas. Preserving and developing open spaces is one of the critical features of a smart city. Since its inception, the Smart Cities Mission has executed more than 200 community space transformation projects across 100 cities in the country.[21] The transformational journey of reimagining public spaces should continue through multi-stakeholder collaboration. Vibrant and inclusive public spaces that are accessible within walking distance of residential areas contribute positively to a city's quality of life and civic culture, and indirectly contribute to the country's socio-economic goals.

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Tackling Gender (Non) Inclusion in Urban Public Spaces

Vahida Nainar

Public places shape the social fabric of urban communities. Yet, the planning of infrastructure, transport, and public spaces of cities are far from being gender inclusive. Inclusive city planning involves an assessment of needs from the gender perspective and a broad understanding of the usage patterns of public spaces.

Urban women have responsibilities in both the home and the workplace and contribute to the prosperity of cities through paid and unpaid labour. Urban women typically use public spaces to access their work locations, homes, markets, schools, hospitals, health clinics, places of worship, parks, and playgrounds. They occupy these spaces for varying lengths of time

and make use of roads, pavements, and public transport. Thus, safe, clean, accessible, and affordable public places and infrastructures are preconditions for an inclusive city.

Twenty years after the adoption of gender budgets and gender audits as a state policy by the Government of India in 2005, state governments, other than that of Kerala, are yet to undertake the mandate.[1] On the contrary, city planners prefer to "unlock the economic potential of desirable land in inner city locations where low-income settlements are located, often in conditions of informality."[2] Such development, which is aligned with exploiting land value, often displaces the poor and pushes them to the margins of the city. This results in women who work locally as domestic helps or as vendors in local markets losing their jobs or being required to use public transport extensively in order to access their workplaces. The urban development template of megacities in particular has had the most impact on lower-income groups, shrinking their access to public spaces.

Congested Roads and Shrinking Mobility Options

In addition to causing severe congestion on the roads, the unregulated rise of vehicular traffic has led to pavements being encroached for use as parking spaces. Pavements are also often occupied by hawkers, which limits the walking space for pedestrians. Women often find such pavements unsafe. Such inaccessibility, which structurally excludes women from public spaces, is a serious issue.

In Mumbai, there have been several initiatives aimed at enhancing public transport, such as the construction of metro rail networks and flyovers. While these networks improve suburban connectivity, there is a lack of corresponding public transport facilities to bridge the much-needed last-mile connectivity.[3] Metro trains are often unaffordable for women from lower-income groups. A metro train ticket typically costs three to four times the bus fare for the same distance. Additionally, the number, frequency, and capacity of affordable buses operated by

the municipal corporation have reduced, and a number of routes are being phased out.[4] The buses are also crowded, and there are long wait times at bus stops.

Local suburban train services are the other affordable transport option. There have been several measures aimed at increasing the capacity of these trains, including a rise in the frequency of trains, women-only locals during peak hours, and an increase in the number of coaches, new lines, and stations. However, a recent announcement[5] focuses on increasing the number of high-fare air-conditioned trains that often run relatively vacant, even as crowds large enough to cause a stampede accumulate on platforms to board the next non-air-conditioned local trains that arrive at stations already packed. These conditions adversely influence women's decisions to move in public spaces.[6] Affordable and safe public transport is therefore vital to enable gender mobility and enhance gender-friendly urban spaces.

Lack of Public Sanitation Facilities

Among the primary considerations for the use of public spaces is the availability of clean and hygienic public toilets. A 2022 study reports that only 25 percent of public toilets in Mumbai are dedicated to women.[7] This situation highlights the inadequacy of access to public sanitation for women; nevertheless, it is an improvement since 2009, when only 8.6 percent of public toilets were meant for women.[8] Despite this increase in their number, toilets in public spaces are often in a state of neglect, lack running water, and are unsanitary. Most women's toilets also lack adequate lighting. For these reasons, women prefer not to use these public conveniences that expose them to potential health hazards. Women find themselves demanding facilities such as the free use of urinals, the provision of sanitary towels, and changing rooms in toilets, which were outlined in the Right to Pee campaign.[9] City planning needs to take these basic needs into consideration.

Inclusive public spaces provide avenues for recreational and leisure activities, sports, and social interaction opportunities and are instrumental in enhancing the health and happiness quotients of

cities. However, the scramble for land has resulted in the shrinking of public parks and playgrounds,[10] limiting access to recreational spaces for women and children. This lack of open, inclusive, and safe public places compromises the overall mental and physical health of communities.

Eroding Sense of Safety

Inadequate safety and security provisions impede women's access to and use of public spaces, especially with rising incidence of violence against women.[11] The lack of safety is also one of the crucial reasons for the sharp drop in the number of women in the labour force, from 30.7 percent in 2006 to 19.2 percent in 2021.[12] The multipurpose use of public spaces can ensure the presence of people in these places at all times, thus providing an enhanced sense of safety for women accessing these spaces.

Towards Inclusive and Safe Public Spaces

Understanding how men and women experience the city in their daily lives is the first step towards creating gender-inclusive cities. Local governments need to undertake urgent, comprehensive gender budgeting and audits of all public spaces and infrastructure to gather reliable data on the current gender focus and assess the gender considerations in public spaces.

City governments can enhance the safety and inclusivity of public places through several simple and cost-effective interventions, such as the following:

- Well-lit and CCTV-enabled pavements, parks, parking areas, and other public places
- Security in public transport from dusk to dawn, particularly in vulnerable areas
- Security rules for cab and public transport operators that ply women
- Removal and mitigation of security risk stimulants in public spaces at festivals and cultural, sports, and political events

Such measures can contribute to public spaces being safer and gender inclusive. However, a radical change in understanding the fundamental principles of inclusive development is also necessary. Gender inclusion can be achieved if it is an underlying principle in all aspects of urban planning and design. Additionally, there is a need for the active participation and representation of women in decision-making roles in urban planning bodies,[13] as well as enhanced political inclination for the implementation of gender inclusivity.

Ideal public places cater to all people, regardless of class, gender, and race. Inclusive public spaces are not in conflict with the idea of 'maximising economic potential' but can accelerate and augment the quest to achieve that goal more equitably towards creating a harmonious urban society.

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The Role of Gender Budgeting in Creating Gender-Inclusive Cities

Vibhuti Patel

U rbanisation often correlates with a rise in urban violence and crimes, including the street harassment of women and girls, stalking, sexual violence, blackmailing, extortion, and cybercrimes and trolling. According to the NCRB Crime in India 2021 report, Delhi recorded a 40-percent increase in crimes against women in 2022 compared to 2021,[1] whereas Mumbai and Bengaluru recorded a 12.8-percent and 7.2-percent increase, respectively, in crimes against women in the same period. Of the 19 metropolitan cities surveyed, 13 reported a rise in the incidence of crimes against women, and 15 saw an increasing trend of crimes against children during the period. Cyberbullying and blackmail, primarily in cities, also grew by 28

percent during the same period.[2] Additionally, over 1 million women and girls have reportedly gone missing across India between 2019 and 2021.[3]

Still a Long Way to Go

Gender crimes in cities can be attributed to gender gaps in five vital areas of human development—namely, education, health, employment and skillsets, safety, and decision-making. The discourse on gender-inclusive cities in India received traction after the 74th Constitutional Amendment of 1993 reserved 33 percent seats for elected women representatives in urban local bodies (ULBs), which has risen to 50 percent in 21 states in the past decade.[4] Women corporators have begun demanding funds, functions, and functionaries for gender-responsive programmes to promote education and reduce school dropout rates among girls as well as to address mortality, morbidity, malnutrition, illnesses, safety, and security among women, children, persons with disabilities, transgender persons, and the older adult population.

In 2005, the union government adopted gender budget audits as a state policy, directing all states and union territories to promote gender budgeting in all departments at the subnational levels.[5] State governments instructed ULBs to institutionalise gender budgeting. Elected women representatives also demanded that gender commitments be translated into financial commitments.

Town planners, policymakers, and budget experts have also acknowledged the need for gender-responsive budgeting, particularly for areas like women-friendly and safe civic infrastructure that includes sanitation, healthcare, transport, public toilets, helplines, skill development for crisis/disaster management, and safety at educational institutions and the workplace. National and state commissions for women collaborated with women's organisations to launch the Safe City campaign after a group of men brutally raped and killed a woman in 2012 in Delhi, grabbing global headlines.[6]

The Safe City campaign includes the provision of public education and counselling facilities; separate toilets for girls and boys in schools; legal literacy on the Protection of Children from Sexual Offense Act (2012) and the Prevention of Sexual Harassment Workplace Act (2013); and dedicated cells in police departments to take action against pornography, cybercrimes, and harassment of young girls and women in public places and public transport. Since 2015, some cities have also introduced 'panic buttons' and GPS devices in rickshaws and taxis and increased CCTV surveillance of public places under the Smart Cities Mission.[7]

Despite such efforts, cities in India remain unsafe and exclusionary.

Compromised Security, Access, and Convenience

Urban infrastructure planning has seldom taken into consideration the unique needs of women, resulting in public infrastructure, including transport, sanitation, community use, and recreation being non-responsive to women's needs, further reinforcing gender inequalities and compromising security, access, and convenience. The following examples reflect these interrelated issues:

- Pavements have become narrower due to poorly planned roads and road-widening projects.[8] Footpaths for pedestrians, vendors, and hawkers—whose presence often gives a semblance of a safe environment—are ignored, with the focus being given to the construction of roads for private vehicles, bridges, and flyovers.
- Roads and public places are often poorly lit, limiting women's and children's access to these spaces. A IWWAGE-ISI (2021) study has found that "cities designed with designated spaces for street vendors, especially women vendors, can be safer by creating an informal surveillance system."[9]

- Public toilets in most cities primarily cater only to men. Public conveniences for women, if they exist, are shut after 9 p.m. in many cities, indicating the social mindset that women must not venture out after dark.[10]

Prioritising Gender-Responsive Budgeting and Safety Audits

Creating gender-friendly cities must become a strategic objective of urban planners, policymakers, and practitioners. Centrally sponsored schemes such as the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), the Pradhan Mantri Awas Yojana (PMAY) – Housing for all (Urban), the Pradhan Mantri Swasthya Suraksha Yojana (PMSSY), and the National Urban Health Mission (NUHM) are required to allocate 30 percent of their funds for women's components. ULBs also need to institutionalise this provision in service taxes collected for water supply and sewage disposal, electricity, roads, health, and transport, among others. Citizens' forums, community-based organisations, and non-government organisations should publicly debate revenue generation and public expenditure issues through a gender lens. In this context, the Right to Information (RTI) has proved to be a vital tool in the hands of civil society, pushing for greater transparency in public expenditure.

Gender-sensitive budget demands a reprioritisation of financial allocations by municipal bodies towards achieving the following:

- Proper street lighting in the city's peripheral areas
- Working women's hostels, night shelters for homeless girls and women, crèche facilities, affordable food joints, and public toilets
- Women-friendly, efficient, and safe public transport
- Subsidised housing for single, abandoned, divorced, and widowed women and transgender people
- Improved *Garima Greh* shelter homes for transgender people[11]
- Stronger public distribution system (PDS) and midday meals for nutrition

- No user fees for health services for the below poverty line (BPL) population
- Establishment of one-stop crisis centres (OSCC) in public hospitals for women and girls who are survivors of violence and the linkage of OSCCs to shelter homes
- Financial provision for doctors, counsellors, emergency shelters, and legal aid to run OSCCs in public hospitals for women survivors of violence. Transparent guidelines for post-trauma care, counselling, rehabilitation, and compensation can ensure the judicious utilisation of funds.
- Skill training centres for women and tailor-made vocational courses with placement cells
- Safe drinking water and proper electrification in *bustees* or informal settlements
- Technological upgrades in waste management to improve occupational health and the safety of recyclers and sewage workers
- Multipurpose community centres, halfway homes for the elderly and women with mental health issues
- Affordable recreation centres, free-to-use community reading and studying facilities, and dedicated women- or girls-only hours in public parks and playgrounds.

Cities must also ensure budgetary allocations for enhanced CCTV coverage of public places, highways, and streets, especially in business hubs, which tend to be deserted after office hours. There is also need for increased budget allocation for the efficient running of police helplines with the help of professional counsellors who are conversant in multiple languages. Budgetary allocation for gender sensitisation workshops for police personnel is also vital to eliminate the often-prevalent "victim-blaming" mindset. Further, regular safety audits by civil society organisations are essential to identify unsafe areas. Other urgent requirements are safe, clean, and free toilets for women at railway stations, bus stops, markets, and other public places.

Conclusion

Safe cities ensure more freedoms and enhance women's mobility, in turn increasing their opportunities to participate in education and productive economic activities, and claim their rightful place in social spaces. Gender commitments concerning the safety of women and girls need to be translated into budgetary commitments. Constructive use of the right to information (RTI) can ensure transparency and accountability in public expenditures.

ULBs must prepare a bottom-up budget and lobby for its realisation in collaboration with elected representatives, women's rights organisations, corporate houses and businesses, and community-based and civil society organisations in order to reprioritise public spending. Gender economists need to work towards overturning the statistical invisibility of the unpaid care economy managed by women, and highlight its equality and efficiency dimensions to push gender-friendly macro-policies.

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Advancing Women to Leadership Roles: An Economic Imperative for the Private Sector

Naghma Mulla

In 1972, Katharine Graham became the first woman to become CEO of a Fortune 500 company, *The Washington Post*.[1] Some three decades later, Indira Nooyi would garner a similar distinction when she was named CEO of PepsiCo—the first in South Asia.[2] More women have since joined the ranks of Graham and Nooyi, although progress has been slow for countries like India where, by 2021, only 4.7 percent of CEOs were women.[3] Corporate cultures and structures remain typically neglectful of giving women opportunities to rise to positions of power.

In India, the corporate leadership landscape for women presents a stark contrast to their representation in the workforce. According to

LinkedIn's Economic Graph,[a] India has only 18 percent women's representation in leadership positions, which is disproportionately lower than their workforce participation. In the education sector, for instance, women form 39 percent of the workforce but hold just 29 percent of the leadership roles.[4] The same report finds that a crucial challenge in advancing India's women in leadership is the stark drop-off in female representation at the crucial transition from 'Senior contributor' to 'Manager'.[b] This phase marks the first notable leak in the leadership pipeline, with female representation plummeting from 30 percent to 19 percent.[5] The numbers are a telling indicator that women's ascent to the highest ranks in the corporate world continue to be barred by persistent challenges.

Barriers to the Advancement of Women to Leadership Roles in India

A combination of sociocultural expectations, ingrained institutional biases, and a lack of supportive policies frequently impedes women's advancement to leadership roles in India. The prevailing societal view often casts women primarily in the role of caregivers, which significantly challenges their ability to juggle professional responsibilities with family duties. This challenge is evident in findings from the LinkedIn Opportunity Index,[c] where a striking 71 percent of working women in India identified "family commitments" as a defining barrier to career growth.[6] The added burden of caregiving not only impacts their career

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[a]   The LinkedIn Economic Graph partners with governments and NGOs globally to analyse the evolving work landscape using detailed, dynamic data. It enables leaders to benchmark and compare labour markets, examine skills, jobs, and industries, and use real-time data for policy decisions.

[b]   The LinkedIn Economic Graph uses these generic labels for actual positions.

[c]   LinkedIn Opportunity Index, started in 2020, is a composite measure that seeks to understand how people perceive opportunity and, more importantly, the gaps or barriers they believe are keeping them from reaching these opportunities. The Index uses 100 as a baseline score for confidence. A higher score represents greater confidence from respondents living in a specific market.

advancement opportunities, including promotions and salary increments, but also contributes to broader issues of gender inequality in the workplace.

The so-called "broken rung" is another obstacle that women must contend with as they chart their paths to corporate leadership—a barrier at the first step up to managerial positions. *Popularised by the Women in the Workplace* study conducted by McKinsey & Company and LeanIn.Org, the 'broken rung' represents the point in the career ladder where the gender gap in promotions is most pronounced, typically at the transition from entry-level roles to management.[7] Women are less likely to be promoted to manager than men, resulting in fewer women at every subsequent level of leadership. This phenomenon contributes to the underrepresentation of women in higher positions and is a crucial factor in the gender disparity seen in corporate leadership.

Women Leaders Make for More Effective Workplaces

A smaller number of women in leadership positions can lead to a lower representation of women in the overall workforce and on boards. Deloitte Global's research indicates that having a female CEO impacts board diversity positively. Companies led by women have a higher percentage of women on their boards (33.5 percent) than those led by men (19.4 percent). A similar trend is observed with female board chairs, where companies have 30.8 percent of women on their boards, against 19.4 percent for male-led companies. Additionally, boards with greater gender diversity are more inclined to appoint women as CEOs and chairs.[8] This is a concerning scenario as gender diversity on the board is highly correlated with better performance.

Indeed, beyond tokenism, the presence of women in leadership roles is proven to be highly beneficial for business outcomes. For instance, globally, organisations with at least 30 percent of leadership positions assigned to women are 12 times more likely to be among the top 20 percent in financial performance.[9]

Moreover, research encompassing assessments of over 84,000 leaders and 1.5 million raters indicates that female leaders consistently outperform their male counterparts at every management and age level.[10]

Fixing the Broken Rungs

Promoting women's leadership in corporations, particularly in India, requires a multifaceted approach that addresses various systemic barriers. By integrating these diverse policies, India's private sector can enhance their organisational performance and create more equitable workplaces.

Policies such as setting minimum quotas for women on boards have been effective. For example, Norway, holding the distinction of having the highest representation of women on company boards, implemented a mandate as far back as 2003 requiring that 40 percent of board seats be occupied by women.[11] It is crucial, however, to frame these quotas not as ceilings but as initial steps towards greater equality. Therefore, although it may seem that India is aiming low with its mandate for corporations to have one woman member on the board, individual corporations can always set quotas or implement preferential hiring and promotion policies to ensure gender diversity in their leadership and on their boards.

At the same time, unconscious bias arising from gender stereotypes and patriarchal paradigms can be addressed through training programmes and workshops. Organisations can focus on fixing the broken rung by ensuring equitable promotion opportunities at entry-level managerial positions. This is a critical step not only for women to start their journey towards leadership roles but also for ensuring a perpetual pipeline for promotions within the workforce.

Measures like paid leaves, affordable childcare, and flexible working hours are essential but must be part of a more comprehensive strategy that facilitates women's ascent to

management and leadership roles. It is crucial that these policies do not reinforce the role of women as sole or primary caregivers. For instance, by promoting *parental* leaves instead of *maternity* leaves, the workforce can offer flexibility to women while ensuring that childcare responsibilities are equitably shared by both parents.

Mentorship and sponsorship also play pivotal roles in elevating women to leadership positions. Mentors provide invaluable guidance, helping women navigate professional challenges, build self-confidence, and emulate effective leadership behaviours. For example, Google's sponsorship programme is designed to foster the career growth of high-potential women directors by pairing them with vice-presidents. This initiative extends beyond the usual scope of personal development—advocating for, and safeguarding the professional advancement of women.[12] Similarly, sponsorship is instrumental in advancing women's careers by opening doors to significant assignments and advocating for their promotions. Effective organisational programmes often match sponsors and protégés based on career goals, interests, and strengths, creating a synergy that propels women's careers to new heights and positions them as future leaders.

Women leaders are more than role models; they drive societal change. Their distinct perspectives enhance innovation and inclusivity in decision-making, which is vital for sustainable progress. Women in leadership roles often actively champion gender equality, influencing policies that ensure equal opportunities and equitable pay. Their influence can trigger positive change beyond the aim of 'inclusive workspaces' into the much wider economic and social empowerment contexts. Empowering women in leadership is a stride towards a more equal, inclusive, and prosperous India.

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The Digital Pulse of Smart Cities

Sauradeep Bag

The development of 'smart' cities—where core public and private services are digitally enhanced to foster inclusivity—is becoming increasingly crucial as urban areas grapple with challenges such as ageing infrastructure, traffic congestion, strained public services, housing shortages, and financial exclusion. Nurturing smart cities, however, is a complex and gradual task.

In India, the Smart Cities Mission launched in 2015 aims to implement intelligent solutions to offer essential infrastructure, a clean and sustainable environment, and improved quality of life for residents.[1] The programme seeks to boost economic growth and enhance the overall well-being of urban dwellers by addressing

various social, economic, physical, and institutional aspects. Technology has consistently demonstrated its ability to support this progress and has therefore been recognised as one of the six tenets of the programme.[a,2]

An interoperable digital payments system is the cornerstone of a fully developed smart city. India's success in developing and deploying digital public infrastructure puts it in a good position to engage with this endeavour. However, the digital gender gap emphasises the need for more holistic solutions and frameworks that ensure equal benefits for all sections of society.

Innovative Tech, Seamless Payments

The rapid growth of urban populations has increased economic payment flows within cities. For a city to adopt the 'smart city' concept, its payment infrastructure needs to be intelligent and robust enough to efficiently manage large transaction volumes. Digital payments are a pivotal tool to streamline processes. For example, employing digital payments in traffic management can help alleviate congestion and enhance traffic flow. Other digital technologies, such as radio frequency identification (RFID) and digital recovery of traffic violation fines, also provide insights for optimising strategy and reducing accidents.[3,4]

Emerging as a pivotal player in the digital payments system is fintech. The National Payments Corporation of India (NPCI) introduced the National Electronic Toll Collection (NETC) programme to cater to the electronic tolling needs of the Indian market. FASTag, a device that employs RFID technology, facilitates toll payments while a vehicle is in motion. FASTag is

[a]   The six principles are community at the core; more from less; cooperative and competitive federalism; integrity, innovation & sustainability; technology as a means, not a goal; and convergence.

typically fixed on the vehicle's windshield and allows customers to make toll payments directly from their linked account. In April 2023, FASTag recorded 30.5 crore transactions, amounting to INR 5,149 crores, underscoring the technology's widespread adoption and effectiveness in optimising processes, easing congestion, and improving traffic flow.[5]

Fintech solutions connect various participants in the city's payments ecosystem, such as consumers, merchants, government entities, financial institutions, and non-government organisations. Fintech applications encompass various use cases, including tax collection; transit fare, entrance fee, and penalty payments; and the provision of healthcare and social services, subsidies, and benefit programmes. Digital payments are also used by consumers and merchants for business purposes.

In India, the cornerstone of these applications is the Unified Payments Interface (UPI).[6] The seamless and interoperable platform of the UPI has revolutionised digital payments in the country, allowing for quick and secure transactions and benefiting millions of users. Digital payments incorporate robust security measures, such as secure and encrypted one-time passwords (OTPs) and multi-level authorisation and authentication methods, including biometrics like voice, and fingerprint and facial recognition systems. According to the Finance Ministry Economic Survey 2023,[7] UPI accounted for over 52 percent of the 8,840 crore digital transactions in the financial year 2022–23.[8] The UPI achieved its highest ever transaction value in a month in December 2022, with 782 crore transactions amounting to INR 12.8 lakh crores.[9]

The Digital Tomorrow

Cities at the forefront of technological innovation, such as London[10] and Singapore,[11] have taken proactive measures to make regulatory changes to their payments infrastructures. Singapore's Monetary Authority has been steering the city state towards a smart future by emphasising innovation in electronic

payments with the aim of achieving a cashless society. Similarly, London has made strides in embracing contactless payments for public transport.

India is on a similar journey, reinforced by a surge in the penetration of the internet[12] and smartphones[13] and reduced reliance on cash.[14] As technological solutions continue to be employed to tackle urban challenges, it becomes crucial to examine the connections between digital payments and social mobility.

Incremental Progress, Lingering Gaps

There is a need to examine the intricate relationships between digital payments and social mobility. Despite the success of digital payments, negative patterns persist, such as the digital gender gap.

Fintech serves as a yardstick for assessing gender equality within evolving gender dynamics. Technological advancement has outpaced the progress of financial inclusion. Meaningful empowerment can only materialise through equitable access to a comprehensive suite of financial services—savings, credit, insurance, and payments—paired with the essential financial literacy.

The convergence of access and knowledge could help propel women towards genuine economic and social empowerment. This is true for India, where women's financial inclusion continues to be lagging.[15] A little more than half (53.9 percent) of women in the country own a mobile phone for personal use, with 71 percent of them capable of reading text messages. A far lower 22.5 percent of women with mobile phones use them for financial transactions.[16] Digital financial inclusion, mainly through digital payments, can empower women by providing them control over finances. It also facilitates access to banking services, opens business opportunities, enhances safety, saves time, supports education, and improves healthcare

access. Through offering tools and opportunities, digital financial inclusion can contribute to breaking gender barriers and promoting overall gender equality.

Fintech has improved the provision of various services, from tax collection to social services, and its potential to disrupt various other sectors of society is only set to grow further. However, despite the surge in digital payments fuelled by the UPI and digital public infrastructure, its success has yet to become all-encompassing, with large populations still unable to reap the benefits. As innovations continue to progress, it is crucial to ensure that technology benefits many and provides the key to genuine and inclusive growth. Therefore, addressing digital literacy and infrastructure gaps is the first step towards universalising the benefits of India's digital payments revolution.

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Inclusive, Sustainable Cities: Too Much Talk, Too Little Progress

Smruti Koppikar

For five years up to 2023, lakhs of people near the Santacruz Electronics Export Processing Zone (SEEPZ), a commercial and IT hub in suburban Mumbai, braved walking through a barely two-metre-wide pathway to get from one end of an arterial road to another, hemmed in by tall blue asbestos sheets on either side, exposed to the heat and rain and other elements. All that because the underground SEEPZ-Colaba metro line was being constructed,[1] and that narrow path was the only one that metro planners and the local government managed to provide for pedestrians.

While the metro line construction was indeed critical to the city, the safety of lakhs of pedestrians was equally important.[2] The question

was whether there was people's participation in the planning and execution of the project; was it even considered necessary? On paper, the answer might have been 'yes', but the situation on the ground was different, and the people's well-being was largely neglected.

Even as 'inclusivity' and 'sustainability' may today be fashionable jargon in the urban discourse, they are decades old.[3,4] India's cities are not inclusive in many ways and are tethering on the edge of ecological emergencies. The legacy gap between rhetoric and action is now glaring.

Across cities, including the premier megacities such as Mumbai and New Delhi, the yawning wealth gap becomes more apparent as one moves away from the economic, social, and political power centres.[5] How cities around the world, especially in India, are planned and built makes equal access for all or inclusivity a 'special' attribute when it should not be so.

Even discounting the early colonial planning of cities that were fortressed to keep the so-called 'natives' out, independent India has now had 75 years of making cities. The post-independence cities hardly score better for inclusivity or sustainability.[6] This became powerfully stark when the online journal on cities and ecology, *Question of Cities,*[7] did a series on independent India's first three planned cities—namely, Chandigarh in Punjab-Haryana,[8] Bhubaneswar (Odisha),[9] and Gandhinagar (Gujarat).[10] (The author of this essay is founder-editor of the journal.) It may be argued that those plans were drawn up in a different political, economic and ecological era. However, the idea of inclusive and sustainable cities, characterised by democratic participation, cuts across time.

There are guidelines of the United Nations, think tanks such as the World Urban Forum and institutions such as the Asian Development Bank to define and build inclusive cities. The National Institute for Urban Affairs (NIUA), an arm of the Government of India, defines an "inclusive city" thus: "(It) shall

provide a conducive environment ensuring equal opportunities and scope for dignified, independent and productive participation in various aspects of urban life for all citizens including the vulnerable groups. The urban spaces, services and systems will be equitable, accessible, safe, affordable, and culturally acceptable to all residents irrespective of their physical, sensory and cognitive abilities."[11]

The NIUA's guiding principles for inclusive cities are Equitable, Usable, Cultural, Economic, and Aesthetic.[12] It identifies the six sectors and 23 components within these sectors that should go into making an inclusive city.

Fig. 1 Components and Indicators of an Inclusive City (NIUA)

HOUSING PHYSICAL AND SOCIAL INFRASTRUCTURE
6 Components, 67 Indicators
Accessible Housing Accessible Water Supply Accessible Sewerage, Sanitation & SWM Accessible Health Accessible Education Accessible Community Facilities

OUTDOOR ENVIRONMENT
4 Components, 24 Indicators
Safety and Convenience of Pedestrian and SMV Accessible Amenities and Facilities Accessible Information and Easy way Finding Safety Security and Reliability

RECREATION & TOURISM
2 Components, 24 Indicators
Accessible, Safe and Affordable Tourism Accessible and safe Recreation for all

INCLUSIVE CITY

URBAN MOBILITY AND PUBLIC TRANSORT
5 Components, 40 Indicators
Accessible Urban Bus Service Accessible Railways/Metro Rail Accessible Paratransit (Auto, Totos/Uber) Accessible Hired Cars/Taxis / Special Services Personal Vehicles & parking

LIVELIHOOD
3 Components, 16 Indicators
Employment opportunities for Vulnerable Groups Accessible Working Environment and Policies Training and Capacity Building

IT CONNECTIVITY DIGITALIZATION, GOVERNANCE, PUBLIC PARTICIPATION
3 Components, 25 Indicators
Internet Connectivity and Digitalization Inclusive Governance Participation of Vulnerable Groups

As the decades rolled, however, the gap between the talk and the walk on making cities inclusive only widened. In the arc of India's urbanisation, cities became centres of deep inequality[13,14] and environmental degradation.[15,16] Even as certain parts of cities were made and built with care, most others languished; good air and water were deemed important in some areas and neglected in many others. To be sure, however, it is essential to recognise the difference between city-making pre- and post-1991 liberalisation: from planning cities,[17] the curve bent towards planning projects, and from public authorities being in-charge, private capital took the driver's seat.[18]

There are areas to fault in the urban planning frameworks that Le Corbusier followed for Chandigarh, Otto Konigsberger for Bhubaneswar, and HK Mewada and PM Apte—disciples of Le Corbusier—for Gandhinagar. The purpose, however, was to build cities; in the past two decades, this purpose has diminished, and today the focus is on promoting certain areas of cities with specific infrastructure projects. This inherently renders the rest of the areas in these cities unliveable. The post-liberalised India wholeheartedly embraced the idea of project planning, though the charade of city planning continued for the record.

Most urban planning has been limited to land-use plans and land zoning[19] rather than comprehensive plans that address critical inclusivity and sustainability factors such as housing, transport, health, open spaces, and green-blue infrastructure. Planning—a historically public exercise—has quietly moved into the private domain, with international consulting firms[20] being drawn into the process of making plans with or without—and usually without—the participation of the people for whom the plan is being made. How can plans, let alone cities, then be inclusive and sustainable when built?

The challenge to make cities inclusive and sustainable is far greater than it appears. Every stakeholder in planning and making cities acknowledges the need for inclusivity and sustainability. Yet, the frameworks that seem set in stone—the

'business as usual' about planning and building—are taking cities in the opposite direction. A case in point is the 'Vision Mumbai' document drawn up in the 1990s to turn the city into a mega financial hub in the Global South; the city's ecology and its vast millions of working-class population were left out of the 'vision'.[21] There is also the example of the Smart Cities Mission, launched almost ten years ago and focusing on handpicked areas in 100 cities for infrastructure upgrade and digitalisation. Hardly anything has changed towards inclusivity in between.

A recent representation of this blinkered approach to city-making is in Dharavi in Mumbai, where one private realty group, in a deal inked with the state government, agreed to redevelop a complex socio-geographical-commercial area of nearly 600 acres and turn public land into private. The arrangement gives no clarity on the future of the million people living and working in the slum over the past 50 years.[22] The approach is also visible in GIFT City in Gujarat[23] and in Neopolis on the outskirts of Hyderabad,[24] where the state governments have turned into what can only be called brokers of private capital, ignoring the natural ecology and people's needs.

When cities, or certain parts of cities, are increasingly being developed and constructed by private capital, they are designed to be more exclusive, not inclusive; to further the profit-motive that treats land as a commodity, not to respect the ecology and build with nature. To make cities more inclusive and sustainable, genuinely and purposefully, in the long term, the business-as-usual approach will no longer suffice. The very basis of urban planning and the tried-and-failed frameworks of city-making will have to change.

This calls for a fundamental shift, and not simply rectifying existing ways to make cities or drawing more private and non-representative bodies into the process. Two missions ought to be undertaken—however difficult and inconvenient they may be to administrators, planners, managers and others in charge of cities. One, open up the process of planning cities to the people in

ways they can constructively participate at every level, beginning from neighbourhoods to larger regions; two, to place natural ecology and people's well-being at the centre of the planning rather than create more land and investment-heavy projects around which people must adjust their lives.

The ongoing and impending weather events brought on by climate change—among them, higher summer temperatures, intensifying 'urban heat island' effect, changes in rainfall patterns, flash floods, persistent air pollution, sea-level rise—all demand that sustainability be built into the city-making at a fundamental level. Climate crisis makes it imperative to change how cities are planned and built. It is not feasible to make cities more inclusive and sustainable with the approach and tools used so far in urban planning and city-making. This shift is more radical than it appears to be or what the present political-economic establishment seems willing to acknowledge.

The imperative for nurturing inclusive and sustainable has become more urgent. While the literature on these subjects is vast, and not just in India, the challenge is translating even some of it into action on the ground. The first step is to make planning more democratic and participatory, then recognise the role of natural ecology and align city-making with it rather than treat it as an obstacle. Fundamentally, primacy should be given to the well-being of the largest number of people in the city. There has been enough talk; the time for real action is long overdue.

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Data-Driven, Community-Centric Approach for Inclusive Cities

Pratima Joshi and Geetanjali Deshmukh

India is expected to experience an increasingly rapid pace of urbanisation in the coming years, and by 2050, more than 50 percent of the country's population will be living in cities.[1] This increased pace of urbanisation is necessary to propel India to becoming the third-largest global economy by 2047.[2] Yet, at the same time, urban spaces are facing a multitude of challenges to their sustainability. At present, up to 40 percent[3] of India's urban population live in slums or slum-like conditions. These informal settlement dwellers contribute more than 7.5 percent to India's urban GDP but lack adequate access to essential services. As cities expand, India must ensure that

urban development becomes more equitable and inclusive—a universal goal outlined in the UN Sustainable Development Goals (SDGs).[4]

Over the last two decades, Indian cities have undergone a massive transformation, with various central and state missions being undertaken for the improvement of urban infrastructure and services. However, this development has yet to penetrate the slums, where mostly migrants from rural areas are forced to live as urban development processes have failed to prioritise affordable housing. City development plans focus on *slum redevelopment* rather than *slum improvement,* and the lack of accurate on-ground data results in unsustainable and ineffective ad-hoc projects. Slum dwellers struggle to access fundamental services like water, sanitation, and waste management.

While urban policies have attempted to alleviate living conditions in slums, civil society organisations (CSO) have been pivotal in improving the quality of life of these residents. Working at the grassroots, these CSOs adopt more nuanced approaches to local problem solving. Pune-based Shelter Associates is one such non-profit CSO.[a,5]

Shelter Associates has mapped 650 slums across seven cities in Maharashtra (Pune, Pimpri-Chinchwad, Thane, Navi Mumbai, Kolhapur, Sangli, and Panvel).[b] The CSO has also facilitated the provision of home toilets to 150,000 families and *pucca* (permanent) houses to 9,000 individuals, and created behavioural changes around sanitation among 500,000 urban poor by adopting a three-pronged model of slum development. The model incorporates technology for spatial data modelling and poverty mapping of slums, mobilises communities through
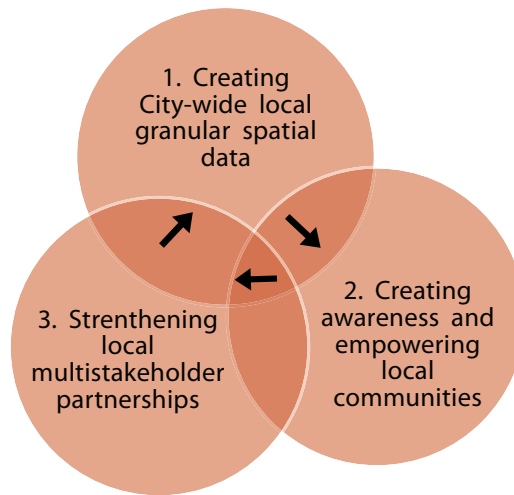
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[b]   Maharashtra is both, India's most urbanised state, and the "slum capital" of the country.

awareness campaigns, and facilitates the delivery of essential services to each slum household through sustainable, replicable, and scalable interventions.

Figure 1: Three-Pronged Approach to Creating Equitable, Inclusive, and Sustainable Cities

1. Creating City-wide local granular spatial data

2. Creating awareness and empowering local communities

3. Strenthening local multistakeholder partnerships

Source: Shelter Associates[6]

Local Data for Localised Interventions

Accurate on-ground datasets on slums and slum households can help better understand community issues. Data often provides the foundation for the development of inclusive policies. However, traditional datasets, which are often prepared with a focus on the needs of adult men, result in policies that overlook the unique requirements of women, other vulnerable genders, and children. In order to mitigate this, Shelter Associates has collated local datasets that capture women's needs and lived experiences. These datasets can also be disaggregated according to gender, allowing for the data to translate into policy and action. The group co-created the data with local communities, involving them in the data-collection process, thus nurturing a sense of confidence, comfort, clarity, and ownership.

GIS-based models, which leverage geo-visualisation to create granular spatial data maps of cities, aid in the preparation of intervention strategies for targeted neighbourhoods.

Technologies like Google's Plus Codes are then applied to assign unique, locational, digital, and navigable addresses to slum households and essential infrastructure. This data is validated by the respective Urban Local Body (ULB), which then assists intervening agencies in identifying gaps in services for the intended beneficiaries, allowing for equitable distribution of resources and the design of relevant interventions through effective and sustained monitoring. Interventions based on such robust and disaggregated digital data improve the accessibility of essential services for the slum population.

Figure 2: Granular Spatial Map of Balaji Nagar Slum in Pimpri Chinchwad Municipal Corporation Indicating the Penetration of Widow Pension Scheme
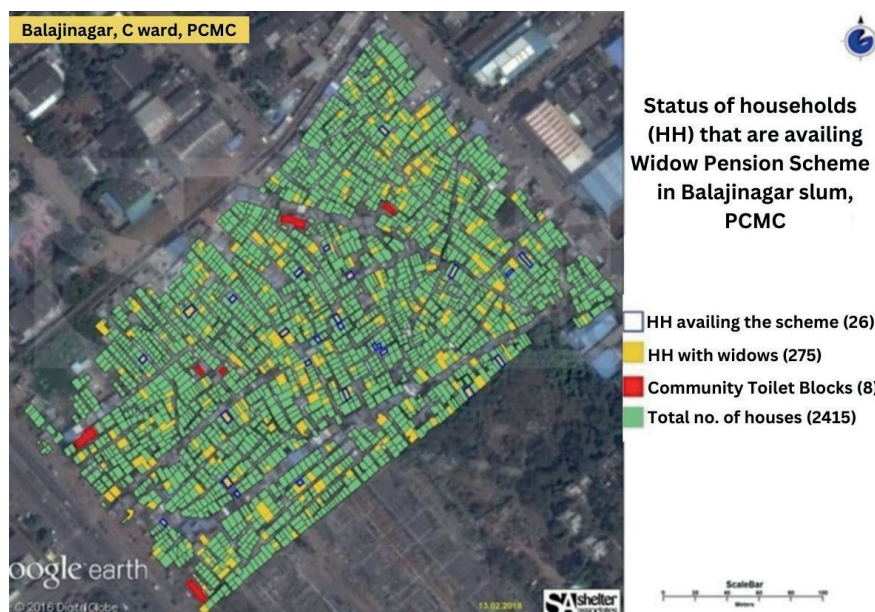
Note: Similar layers showing various target groups and penetration of services are available on Shelter Associates' website.
Source: Shelter Associates[7]

Such gender-disaggregated spatial data and digital addressing technology can help local administrations adopt a city-wide approach that is inclusive and offers the last-mile delivery of various services. Shelter Associates has linked Plus Codes to create spatial data of slums to accurately map 90,000 slum

households, which has helped local civic administrations deliver timely COVID-19 vaccines and gas cylinders, as well as track water meters.

Empowering Local Communities

In order for a city to be truly inclusive, there is a need to create awareness amongst beneficiaries on relevant issues, in addition to developing policies aimed at various target groups. To this end, Shelter Associates has developed interventions that incorporate deep engagement and relevant development communication tools that focus on community education and awareness of their data and civic rights.

For instance, Shelter Associates supports women and girls from various slum communities to adopt eco-friendly and non-toxic menstrual-hygiene products that benefit personal health and reduce non-biodegradable waste. The CSO also empowers women and adolescent girls to advocate for green menstrual hygiene products, improving solid waste management in slums.

Facilitators trained in Menstrual Hygiene Management conduct workshops in slum communities creating awareness on menstrual health and advocating the use of eco-friendly menstrual hygiene products.
*Source: Shelter Associates*[8]

Involving the communities results in sustainable outcomes. Therefore, the development process has to be made more democratic, with the active participation of marginalised communities in the decision-making process.

Strengthening Local Partnerships

In order to find sustainable solutions for local problems, all stakeholders, including ULBs, civil society, and the communities themselves, must come together on a common platform. There has to be sustained dialogue among the stakeholders, and non-profits can play a critical role in bringing grassroots communities and city administration to converge on various issues. The level playing field that is so established can shift the asymmetrical power dynamics between city administration and slum communities. It is time to stop viewing these communities as mere beneficiaries and involving them in the process of finding and implementing innovative solutions for their problems.

Shelter Associates' ongoing project in Kolhapur bears testimony to the importance of partnerships in successful projects that aim to enhance the quality of life of slum residents. Initiated under the Pradhan Mantri Awas Yojana (PMAY) for 77 of the most vulnerable families in the Bondre Nagar slum, the project embodies democratic principles, with the community being actively involved in all processes, from programme design to financial decision-making and construction, making this the only current beneficiary-led construction project. As part of the project, Shelter Associates has organised the community to work with various city departments, including roads, drainage, water, and PMAY, demonstrating the power of local partnerships.
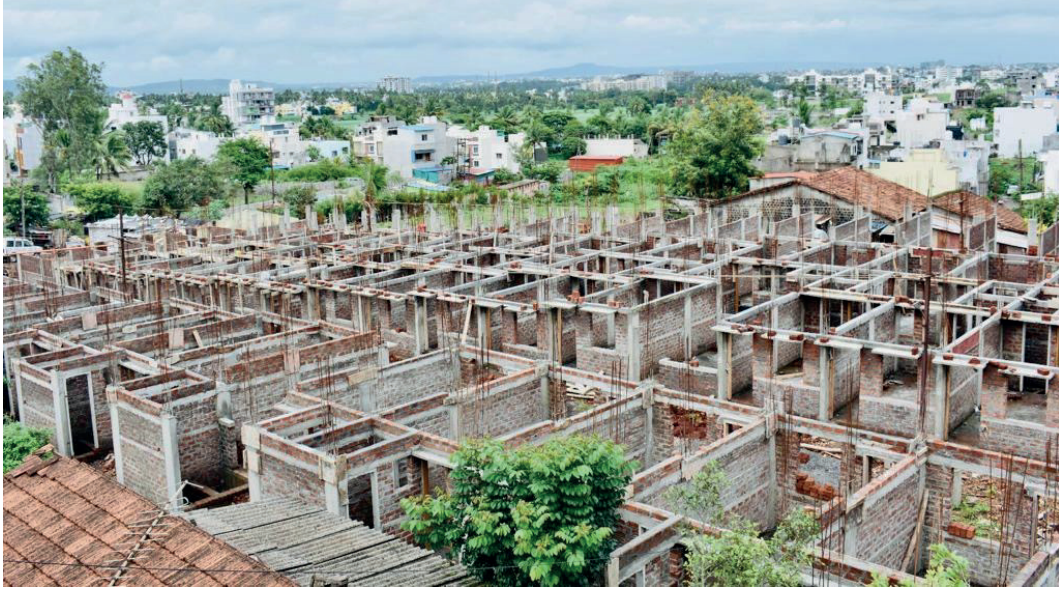
The Bondre Nagar redevelopment project currently under construction in Kolhapur city is partially funded under Pradhan Mantri Awas Yojana. Some 77 most vulnerable families from Kolhapur will move into the housing society next year.
Source: Shelter Associates

As Metro cities are approaching saturation, tier-2 and tier-3 cities in India will see a massive spurt in population growth by 2050. Civil society and community-led efforts based on Shelter Associates' three-pronged model can aid these cities in addressing structural inadequacies and prepare them for a planned expansion and improvement in service delivery to achieve equity and inclusivity. Making cities equitable, inclusive, and sustainable is a collective responsibility, especially with India aiming for development by reaping the demographic dividend.

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Incorporating Traditional Koli Knowledge into Mumbai's Urban Planning

Marika Vicziany and
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Kolis are one of the three Indigenous communities of Mumbai and the western coast of India, from Gujarat to Goa. This essay focuses on Kolis who live in Mumbai. Coastal Kolis are primarily fishing communities, but many other Kolis live in the hinterland and, in addition to inland fishing, they also farm. There are about 24 Koli subgroups: seven are officially recognised as Scheduled Tribes qualifying for the benefits of reservation, and the rest have been classified as Special Backward Classes.

The Greater Mumbai Urban Agglomeration consists of c. 27 million people, about half of whom live in the city of Mumbai. Of them, a marginal number of Kolis inhabit some 39 *koliwadas* (Koli villages).[1] Precise data on the total number of Kolis, or of Koliwadas, is not available. The authors of this essay have counted about 39 Koli villages, using various sources and testimonies from Koli informants. Official estimates are hard to find: the most reliable source is Gupte (2012) and the Mumbai Transformation Support Unit. Gupte mapped 37 Koliwadas in 2012 (Figure 1) while the latter noted that population estimates were only available for 24 Koliwadas with a total population of c. 42,000. Better data has not become available since 2012, but these authors have been told by many Koli informants that numerous Koliwadas have yet to be identified, especially in the Mulund-Thane area.

Figure 1: Map of 37 Koliwadas in Mumbai

Source: Mumbai Transformation Support Unit 2015[2] citing Gupte 2012: 54[3] using MMKS (Maharashtra Machhimar Kruti Samiti) data. [NOTE: Annexure 2 of Mumbai Transformation Support Unit report points out that MMKS data differs from the number of Koliwadas cited by the Brihanmumbai Municipal Corporation (24) and Central Marine Fisheries Research Institute (32).

Even for the documented Koliwadas, their boundaries, physical size, demographic numbers, and characteristics are unclear. Such lack of information betrays the absence of interest in Koli people—whether about their livelihoods or their overall welfare—among the city's government officials, policymakers, urban planners, and indeed the public. This neglect perhaps reflects a general mindset of what "development" is—that India's financial hub should glisten with the steely concrete of Shanghai.[4]

Nothing, however, can be farther from the reality of Mumbai—a city populated by millions of people who are struggling to find sustainable livelihoods, let alone to live lifestyles that remotely resemble typical notions of what is 'urban'. Some 42 percent of Mumbai's residents live in slums.[5] These do not include the city's Koliwadas, which are not classified as such. Despite this, Kolis similarly suffer from neglectful city planning and administration. Their livelihoods are declining, and they continue to experience various forms of social discrimination. Inequities during the COVID-19 pandemic exacerbated their marginalisation.[6] Food aid and other necessities rarely reached Mumbai's Koliwadas while police cordons hampered catching and selling fish. After the Worli Koliwada was declared to be the city's first 'containment zone', Kolis and other minorities were singled out as 'virus carriers'. As a result, the 'social distancing' public health measures increased discrimination against Kolis.

The question now is how Mumbai can nurture social cohesion amid its numerous challenges, including those related to the well-being of the Koli people and slum dwellers. How can Mumbai continue to grow in a manner that improves the lifestyles and security of all who currently live in the city and those who are yet to arrive?

Gaps and Policy Challenges

Research conducted by the authors of this essay over the past 15 years has given certain insights, discussed in the following points.

- Given their remaining activities as artisanal fishers, the most pressing problems for Kolis are caused by a development paradigm driven by two pillars: 'concrete' and 'industrialisation'—especially the industrialisation of the sea. Climate change is by itself a necessary but insufficient consideration.
- The 'concrete' referred to above, refers to the colonial and post-colonial development process that created a hardened, non-absorptive land mass from the original seven islands of what was then Bombay. As Mathur and Da Cunha (2009) have explained, Mumbai is an estuary whose contours were changed by urbanisation in a manner that hinders the runoff needed during monsoon rains; the result is devastating floods of increasing frequency.[7] Modern, scientific water management systems cannot address the scale of the problem. Yet, central, state and local governments continue to pour more concrete onto concrete when building coastal roads, trans-harbour highways, bridges, and Special Export Processing Zones. Located along the fragile coast of Mumbai, these infrastructure projects have increased interference with the natural movement of tides and the flow of inter-tidal waters. One SEZ, in particular, on the fragile wetlands of the Mulund-Kopri area, involved the building of bunds to keep out the tides. The SEZ project was challenged in the High Court of Bombay because of the destruction of wetlands that have historically served as a natural barrier against local floods.[8] The project was frozen when the High Court placed a 'Stay Order' on the plans.
- The 'industrialisation of the sea' refers to mega projects that adversely affect the marinescape of Mumbai.

Examples include the expanded 4th container terminal of Jawaharlal Nehru Port at Uran[9] and the new explorations of ONGC (Oil and Natural Gas Corporation of India) for off-shore hydrocarbons.[10] The seismic surveys by ONGC have caused damage to the city's marine life, perhaps more than the commercial trawlers that have contributed to the decline of fishing livelihoods for Kolis and marine resources for all. It would do well for city planners to learn lessons from Koli people who venerate *Dariyadev*, the sea god whose generosity used to deliver a bountiful annual harvest.[11] Today, that harvest is secured by Kolis using traditional gillnet fishing methods that are less destructive than trawlers and purse seines:[12] of the 275 boats belonging to the Cuffe Parade Koliwada, only 6 percent are trawlers or purse seines while 94 percent use gillnets.[13] This suggests that Koli religious values are intimately linked to the need to create a sustainable fishing industry and respect for the marine environment.

- Many aspects of Koli traditional knowledge—which have adapted to the needs of the present—are relevant to a more effective management of Mumbai's natural environment. In their fishing activities, they seek to bring together the goals of sustainability with the need to increase production, mindful as they are of the demands of earning a living while caring for the environment that sustains them.
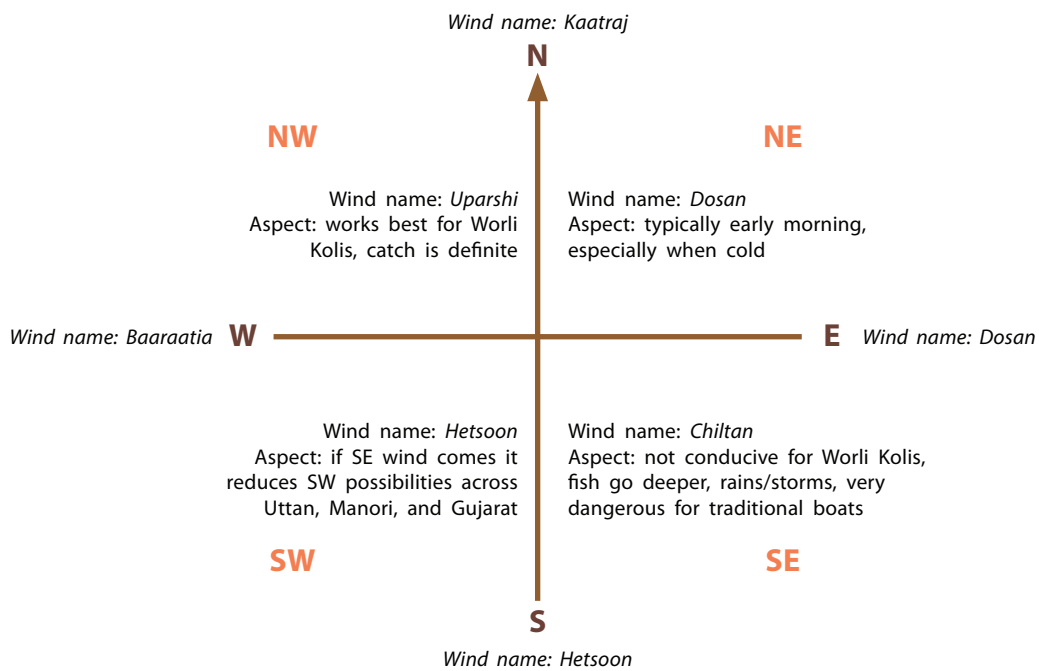
Making Traditional Knowledge Relevant to Urban Planning

1. Koli fishing along the coast, in the creeks, the rivers and inlets that define the Greater Mumbai conurbation has for centuries depended on observing the seasonal movements of marine life and the flow of water in the inter-tidal areas.[14] Kolis are, therefore, natural advocates for the importance of wetlands and mangroves. These are not only marine breeding areas but also bulwarks against tidal surges and monsoon floods.

2. Kolis' traditional knowledge includes an understanding of the seasonal weather and wind patterns which, combined with GPS technologies, can provide early warning of natural disasters (Figure 2) and other ecological problems.[15]

Figure 2. Kolis' Understanding of Wind Direction

Wind name: Kaatraj

N

NW

Wind name: *Uparshi*
Aspect: works best for Worli Kolis, catch is definite

NE

Wind name: *Dosan*
Aspect: typically early morning, especially when cold

Wind name: Baaraatia **W** ——————————————— **E** *Wind name: Dosan*

Wind name: *Hetsoon*
Aspect: if SE wind comes it reduces SW possibilities across Uttan, Manori, and Gujarat

Wind name: *Chiltan*
Aspect: not conducive for Worli Kolis, fish go deeper, rains/storms, very dangerous for traditional boats

SW

SE

S

Wind name: Hetsoon

Source: Authors' own[16]

3. Kolis' veneration of *Dariyadev*, the sea god, involves sacrificial offerings of coconuts and seafood during festivals. These biodegradable materials might inspire other festival organisers to use compostable materials for their images of deities and religious rituals.

From the Coconut Festival in 2017. The image of devotees can be seen against the Bandra-Worli Sealink, which has negatively affected Kolis' fisheries livelihood. Authors' own.[17]

4. Koli gillnets, traditionally used for fishing, have been applied in the Versova Koliwada for filtering water adulterated with plastic and other rubbish before the waters disgorge into the Arabian Sea.[18] Applying such filtration to the Thane Creek area, for example, could rid the Thane waters of the waste that is choking the creek.

Pollution in the upper part of Thane Creek. These plastic bags and bottles were visible during low tide, in an area close to the flamingo sanctuary. Authors' own.[19]

Kolis should be invited to participate in the development of plans for an expanded but more manageable Mumbai. Such inclusion could contribute to the creation of new jobs where Koli people's skills and expertise are relevant and competitive. One possible role model is the employment of Aboriginal people at the Kakadu National Park in Australia. About a third of the rangers are Aboriginal Australians, and the park is under shared management between the Australian Aboriginal communities and Parks Australia.[20]

Conclusion

There is growing appreciation in India of the benefits of traditional knowledge and how it can be combined with modern, scientific knowledge to promote sustainable agriculture.[21] Similarly, Koli people's traditional knowledge of the natural environment of the Mumbai estuary has much to contribute to the urban planning processes that should aim to reduce the risks from the natural disasters that frequently visit the city of Mumbai.

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