বিশ্ব নগর পরিকল্পনা দিবস ২০২৬

World Town Planning Day 2026

স্মরণিকা

SOUVENIR

Great Communities are Built on **Planning**



বাংলাদেশ ইনস্টিটিউট অব প্ল্যানার্স (বিআইপি)
BANGLADESH INSTITUTE OF PLANNERS (BIP)

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আয়োজক কমিটি এবং বিভিন্ন প্রতিযোগিতা সংক্রান্ত সাব-কমিটি

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বিভিন্ন প্রতিযোগিতা সংক্রান্ত সাব-কমিটি

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বাংলাদেশ ইনস্টিটিউট অব প্ল্যানার্স (বিআইপি)

০৮ নভেম্বর, ২০২৬

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Preface

World Town Planning Day (WTPD), observed annually on 8 November, highlights the importance of planning in creating sustainable, inclusive, and livable communities. Since its establishment in 1949, this global observance has provided a platform for planners, policymakers, researchers, and citizens to exchange knowledge and reflect on how thoughtful planning can improve people's lives. It reminds us that planning is not merely about physical development and infrastructure; it is about creating opportunities, connecting people, managing resources responsibly, and shaping a better future for all.

In Bangladesh, rapid urbanization, population growth, climate vulnerability, and increasing pressure on land and infrastructure make effective urban and regional planning more important than ever. Cities and towns face challenges related to housing, mobility, environmental degradation, public services, and unequal access to urban opportunities. Addressing these challenges requires coordinated, forward-looking, and people-centered planning that balances economic development, social inclusion, and environmental sustainability.

The Bangladesh Institute of Planners (BIP) plays an important role in promoting the planning profession and advancing sustainable urban development in the country. Through professional engagement, research, publications, seminars, workshops, and collaboration with government institutions, academic communities, and development partners, BIP contributes to strengthening planning knowledge and practice. Its celebration of WTPD brings together planners, students, policymakers, and other stakeholders to exchange ideas, raise awareness, and encourage collective action towards better towns and cities.

The theme of this year's World Town Planning Day, **"Great Communities Are Built on Planning,"** emphasizes that strong communities do not emerge by chance. They are shaped through informed decisions, inclusive participation, and a shared vision for the future. Great communities provide access to adequate housing, essential services, safe mobility, livelihood opportunities, quality public spaces, and a healthy environment. Achieving these outcomes requires planning that responds to people's needs while considering the long-term social, economic, and environmental impacts of development.

Public spaces, neighborhood facilities, and accessible streets are important elements of this vision. They create opportunities for social interaction, recreation, and community engagement while strengthening people's sense of belonging. Equally, participatory planning ensures that the voices of residents, particularly vulnerable and underrepresented groups, are reflected in decisions that affect their lives. Integrating climate resilience, environmental protection, and disaster risk reduction into planning is also essential to ensure that communities can adapt to future challenges.

Building great communities is a shared responsibility. It requires collaboration among planners, government institutions, local authorities, development partners, the private sector, and citizens. Effective policies, strong institutions, adequate resources, and meaningful public

participation are essential to translating plans into tangible improvements in people's everyday lives.

Through this WTPD souvenir, we hope to encourage professional dialogue, share knowledge, and inspire renewed commitment to sustainable and inclusive development in Bangladesh. I sincerely appreciate all the contributors and supporters whose efforts have made this publication possible.

As Convenor of the WTPD Souvenir Committee, I hope this publication reinforces our collective commitment to planning as a means of building communities that are inclusive, connected, resilient, and livable for present and future generations.

Planner Hosneara
Convenor
WTPD Souvenir Committee
Bangladesh Institute of Planners (BIP)

Message from the President

Bangladesh Institute of Planners (BIP)

World Town Planning Day (WTPD), observed annually on 8 November, provides an important opportunity to recognize the role of planning in shaping sustainable, inclusive, and livable communities. It reminds us that planning extends beyond the physical development of towns and cities; it is fundamentally about improving people's quality of life, creating equitable opportunities, and ensuring a better future for all.

This year's theme, “Great Communities Are Built on Planning,” highlights the importance of thoughtful, participatory, and forward-looking approaches to community development. Such communities are shaped through coordinated development, accessible public spaces, efficient mobility, adequate housing, environmental protection, and meaningful public participation.

In Bangladesh, rapid urbanization, climate vulnerability, and increasing pressure on urban infrastructure make effective planning more important than ever. Addressing these challenges requires integrated approaches that balance economic growth with social inclusion and environmental sustainability. Well-planned public spaces, neighborhood facilities, and accessible streets can also strengthen social connections and foster a sense of belonging among residents.

The Bangladesh Institute of Planners (BIP) remains committed to advancing the planning profession, promoting professional excellence, and contributing to sustainable urban and regional development. Through research, knowledge-sharing, professional engagement, and collaboration with government institutions, academia, development partners, and communities, BIP seeks to strengthen the contribution of planning to national development.

On this occasion, I encourage planners, policymakers, researchers, students, and all stakeholders to work collectively towards building inclusive, resilient, and people-centered communities. Let us reaffirm our shared responsibility to use planning as a powerful instrument for positive change.

I extend my sincere appreciation to the WTPD Souvenir Committee and all contributors for their efforts in making this publication possible.

Dr. Muhammad Ariful Islam

President

Bangladesh Institute of Planners (BIP)

Invisible Infrastructure of Cities: The Role of Public Spaces in Building Inclusive, Connected and Livable Communities

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Abstract

What can be counted, which is what cities are judged on: kilometers of road, megawatts of power, floors of built space. Yet the wellbeing of urban life depends on an asset class that seldom makes it onto an investment balance sheet. The parks, playgrounds, streets and neighborhood open spaces make up the invisible infrastructure of a city - where strangers become neighbors. This article argues that public space should be designed, preserved and funded as primary infrastructure rather than as leftover land. It investigates the production of public space in terms of it leading to inclusion, companionship and livability; pinpoints the design characteristics that differentiate between a transit-oriented space and a desiring place for staying; measures the existing pressures on this very necessary urban infrastructure in terms endemic to Bangladeshi urbanizing contexts, where geospatial proofs demonstrate dramatic shrinkages of open land within Dhaka. It concludes with a platform based on safeguards, network design, climate-responsive architecture, participatory placemaking and measurable transparency.

Keywords: *public space; urban design; inclusive planning; livability; placemaking; urbanization in Bangladesh*

Introduction: Cities are More Than Buildings

We tend to tell the story of urban development in terms of construction: a new flyover opens, a skyline-altering corridor of towers rises, an expressway shaves minutes off the daily grind. Those are real accomplishments, and no city aspiring to be great can afford to live without them. However, these only recount the physical aspects of contemporary civilization. They cannot explain the discrepancy between two neighborhoods with identical road widths, densities and service coverage yet feel so different to live in.

What is the difference is this ground between buildings? To Jacobs (1961) the security of a street was not to be found in policing but rather in users paying close, informal attention on an ongoing basis. Lynch (1960) demonstrated the way in which residents shape mental images of their cities from paths, edges, nodes and landmarks - from public rather than private interiors. This essay then considers public space infrastructure as a system, which performs vital tasks and is visible in times of abandonment while carrying with them the protection of drainage or electricity.

Public Spaces as Invisible Infrastructure

Form must follow function in the case of infrastructure. A system qualifies as such when it is shared, when it enables action impossible without and when its absence imposes costs on a population. Public space satisfies each test. When it is lacking, the costs emerge in the form of heat stress, inactivity, isolation, and the silent withdrawal of women, children and older people from public space.

The word invisible is deliberate. You can see a park; You cannot see the work it does. A drainage line saves a photographable flood, where as your neighborhood ground listens to my scream of woe preventing the flooding outcome that never happen. This is grossly undercounted in appraisal so open space becomes the first to go when land is scarce.

Carr et al. Inspired by Wright and his public space frame of comfort, relaxation, engagement, discovery (1992). Use depends on reproducible conditions- seating, sun, water, proximity to pedestrian flow- as shown by time-lapse observation (Whyte 1980) Gehl (2010) differentiated between necessary activities that happen no matter the quality of your environment and optional and social activities, which only add up where the environment invites people to stay a while longer. This means that, therefore, social life in most neighborhoods is not a kind of cultural accident as much as it is a design opportunity.

Policy has followed. UN-Habitat (2015) discusses public space not as an amenity but as a driver of urban prosperity, and Target 11.7 of the 2030 Agenda commits states to ensuring access for all to safe and inclusive public spaces, through Indicator 11.7.1 (UN-Habitat, 2019), turning public space from a discretionary offering into an accountability metric.

Public Space and Inclusive Communities

Inclusion is easy to declare and hard to design. A space legally open to everyone may in practice serve only those who are young, male, able-bodied, and unafraid, so a city can meet its open-space targets on paper while much of its population remains excluded. Inclusive space is judged by who is actually present, and for how long.

Requirements differ sharply by age. Children need space within safe walking distance of home, free of vehicular conflict. Adolescents need somewhere to gather without being treated as a nuisance- the group the public realm most consistently designs against. Older adults need short distances, shaded seating, and level surfaces. One undifferentiated lawn serves none of them well.

Use is governed by perceived safety far more than by distance, particularly for women. Sightlines, lighting, active frontages, and sanitation determine whether a park serves half the population or a quarter of it. Where these are absent, the under-use that follows is misread as absence of demand and used to justify further disinvestment- a cycle design must interrupt.

Accessibility begins before the boundary wall: a park with ramps is not accessible if the footpath to it is broken or occupied. For low-income residents, whose homes offer little private space or thermal relief, public space substitutes for what the housing does not provide, so the neighborhoods with the least private space hold the strongest claim yet are served last.

Carmona (2019) argues that management quality is as decisive as design quality, because value is realized over decades of use rather than at inauguration.

Urban Design Principles for Successful Public Spaces

Successful public spaces are not accidents of taste. Across widely differing climates, intensively used spaces share a recognizable set of qualities (Table 1), and these reinforce one another: a space that is accessible but unshaded stands empty through much of a Bangladeshi day.

Table 1. Core design qualities of successful public spaces.

Quality	What it requires in practice
Accessibility	Reachable on foot in 5–10 minutes; continuous, step-free approach routes.
Safety	Clear sightlines, lighting, active overlooking edges, visible maintenance.
Comfort	Shade, varied seating, drinking water, sanitation, separation from traffic.
Stewardship	A named custodian, a maintenance budget, and a resident role in daily care.

Note. Compiled from Whyte (1980), Gehl (2010), and Carmona (2019).

Two principles deserve local emphasis. First, comfort is climatic. In a hot, humid setting shade is not an aesthetic preference but the precondition for use; an unshaded plaza is unusable for most of the day and, functionally, is not public space at all. Canopy and shaded circulation belong to the primary structure of the design, not to landscaping applied at the end.

Second, streets are the largest public space a city owns. Their aggregate area far exceeds that of parks, and the street is the only public space reaching every doorstep. Treating footpaths purely as vehicle channels forfeits the city's most equitably distributed public asset.

Challenges of Public Space Planning in Bangladesh

Bangladesh is urbanizing at a pace that leaves little margin for retrofitting. Satellite analysis of Greater Dhaka has documented sustained contraction of green and open land as built-up area expanded, with surviving patches becoming smaller and less connected (Byomkesh et al., 2012). Geospatial work in Dhaka South City Corporation records a reduction of roughly 36.5 percent in vegetation cover over the three decades to 2021, leaving about 9.5 percent under green cover- far below the twenty-five percent commonly cited as a benchmark (Misty et al., 2024). Several pressures drive this.

- Land economics. Where land values rise faster than public budgets, every unbuilt parcel carries an escalating opportunity cost, and open space is the least defended land use in any negotiation.
- Density without amenity. Vertical growth answers land scarcity rationally, but where floor area expands without matching open space, the per-capita share of public realm falls.
- Encroachment. Playgrounds, water bodies, and footpaths are incrementally occupied by structures, parking, and storage. Each incursion is small, so cumulative loss goes unchallenged until irreversible.

- Fragmented custodianship. Responsibility is split among development authorities and city corporations, so protection becomes everyone's mandate and no one's accountability. Open-space standards exist in plans; enforcement does not match them.

The framework is not indifferent to this. The Detailed Area Plan for the Dhaka metropolitan region sets out a block-based approach intended to consolidate development while preserving open space for community use (RAJUK, 2022). The difficulty is the distance between provision and practice- between land designated as open space on a plan and land still open, accessible, and used a decade later.

Future Directions: Connected and Livable Communities

Closing that distance requires a change in how public space is classified, financed, and evaluated. Protect before creating. The cheapest public space a city will ever obtain is the space it already holds. Openly published mapping of existing open spaces, water bodies, and playgrounds, backed by statutory protection, prevents losses no acquisition budget could reverse- and protection must extend to approach routes, since an unreachable park is a park in name only.

Plan networks, not sites. Isolated parks serve their catchment; connected networks serve a city. Linking open spaces through shaded routes, safe crossings, and green corridors along canals and embankments multiplies the value of each site. A defensible standard: every household within a ten-minute walk of usable public space.

Design for climate and for care. Heat and flooding are now the binding constraints on outdoor life in Bangladeshi cities, so public space must perform ecologically as well as socially. Every space also needs a named custodian and a maintenance budget fixed at the design stage, since deferred maintenance is the commonest route to a disused park.

Make placemaking participatory. Communities hold information no land-use survey captures: which corner is avoided after dark, which route children take to school, which tree people gather beneath. Structured participation- including women, children, older residents, and persons with disabilities- improves decisions and builds the ownership stewardship depends on. Measure what matters. Indicator 11.7.1 offers a shared basis for tracking the share of built-up area in open public use, but area alone is insufficient (UN-Habitat, 2019). Monitoring should also capture canopy cover, walking-distance access, and observed presence by gender, age, and ability.

Conclusion

Great communities are not produced by construction alone. They emerge where planning and design create the conditions for people to meet, participate, and belong- conditions that sit almost entirely in the space between buildings.

For rapidly urbanizing cities such as Dhaka, the choice is not between growth and open space. It is between growth that leaves room for public life and growth that quietly forecloses it, parcel by parcel, until the ground held in common has been spent. Treating public space as infrastructure- mapped, protected, funded, maintained, and measured with the seriousness

given to any other urban system- is how planners ensure the cities of the coming decades are not only larger, but worth living in.

References

Byomkesh, T., Nakagoshi, N., & Dewan, A. M. (2012). Urbanization and green space dynamics in Greater Dhaka, Bangladesh. *Landscape and Ecological Engineering, 8*(1), 45–58. https://doi.org/10.1007/s11355-010-0147-7

Carmona, M. (2019). Principles for public space design, planning to do better. *URBAN DESIGN International, 24*(1), 47–59. https://doi.org/10.1057/s41289-018-0070-3

Carr, S., Francis, M., Rivlin, L. G., & Stone, A. M. (1992). *Public space*. Cambridge University Press.

Gehl, J. (2010). *Cities for people*. Island Press.

Jacobs, J. (1961). *The death and life of great American cities*. Random House.

Lynch, K. (1960). *The image of the city*. MIT Press.

Misty, M. S., Hoque, M. A.-A., & Mukul, S. A. (2024). Assessment of urban green space dynamics in Dhaka South City Corporation of Bangladesh using geospatial techniques. *Land, 13*(9), Article 1426. https://doi.org/10.3390/land13091426

Rajdhani Unnayan Kartripakkha. (2022). *Detailed Area Plan (DAP) for Dhaka Metropolitan Development Plan, 2022–2035*. Ministry of Housing and Public Works, Government of the People's Republic of Bangladesh.

Neuro-Urbanism: Designing Sidewalks and Public Spaces to Help Dhaka Breathe

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Introduction

When you ask a Dhaka commuter what the city feels like and the answer is rarely about buildings. It is more likely to be about the experience of moving through them: the hesitation before crossing a road, the constant search for a clear piece of footpath, the sudden motorcycle appearing from behind, the noise of horns, the heat radiating from concrete or the exhaustion that begins before the working day has properly started. These experiences are easy to dismiss as ordinary features of city life. But they raise a deeper planning question:

What happens when an urban environment repeatedly asks the human brain to remain alert?

What is Neuro-Urbanism?

Emerging at the intersection of urban planning, environmental psychology, neuroscience and public health, neuro-urbanism considers the city not only as a physical system but also as an environment experienced by the human brain and body. The idea is not that every uncomfortable street causes a mental disorder. Nor is the purpose of urban planning to replace mental-health treatment. Rather, the question is simpler:

Can everyday urban design reduce unnecessary cognitive and sensory stress?

In a neuroimaging experiment, Lederbogen et al. (2011) found that current city living was associated with greater amygdala activity during a social-stress task among healthy participants. The study does not prove that urban environments cause anxiety, but it provides evidence that urban living and the brain's response to social stress can be connected. At the same time, research on natural environments suggests that contact with greenery can support psychological restoration. Ulrich's classic hospital study found that patients whose windows looked toward trees had shorter postoperative stays and required fewer strong analgesics than matched patients whose windows faced a brick wall (Ulrich, 1984).

This matters for Dhaka because the city already has a mental-health challenge. A nationwide 2019 survey of 7,270 adults found that 18.7% met criteria for a psychiatric disorder, including 18.9% in urban areas and 18.7% in rural areas. Depression and anxiety disorders accounted for 6.7% and 4.7%, respectively (Hossain et al., 2024).

The city as a Cognitive Environment

Traditional planning often evaluates streets through measurable physical characteristics: width, capacity, speed, land use, accessibility or traffic volume. But people experience streets differently. A pedestrian does not experience a footpath as simply "2.5 metres wide." They experience whether it is possible to walk without interruption. A crossing is not simply an intersection. It is a decision-making environment. A park is not simply open space. It can be a place where attention temporarily shifts away from traffic, deadlines and crowds. This distinction is important because human attention is limited. Repeated hundreds of times during daily travel, however, they can turn an ordinary journey into a continuous process of environmental monitoring. This is where the concept of cognitive load becomes useful for planners. A predictable street reduces unnecessary decisions. A chaotic street creates them.

Dhaka's Footpaths: A Landscape of Constant Negotiation

Walking is not a marginal activity in Dhaka. Research cited in discussions of Dhaka's transport system indicates that approximately 19% of primary trips within the City Corporation area are made on foot, while the figure rises to 37.2% in the wider Dhaka Metropolitan Area (Morshed, 2019). Walking can account for up to 65% of trips in Dhaka metropolitan areas, depending on the definition and study area (Haque et al., 2017). The numbers vary because the studies use different geographical boundaries and definitions of trips. The important point is not which percentage is "the correct one." It is that walking represents a substantial component of everyday urban mobility in Dhaka.

Yet the pedestrian environment frequently requires people to negotiate between formal and informal uses of space. Footpaths can be: interrupted by utility poles, occupied by parked motorcycles, narrowed by construction materials, used for vending, broken by repeated utility works. The result is not merely an accessibility problem. It is a predictability problem. A pedestrian who cannot trust the next 20 metres of footpath has to continually monitor the environment.

Three Things That Make a Street Mentally Exhausting

1. Unpredictability

The first problem is unpredictability. A continuous footpath creates a simple mental expectation: walk → continue → cross → continue.

An interrupted footpath creates:

walk → obstacle → road → vehicle → search → negotiate → return to footpath.

This constant re-planning may appear trivial from an engineering perspective. From the pedestrian's perspective, it changes the psychological character of the journey. This is why legibility matters. A good street communicates what people should do without requiring them to constantly figure it out.

2. Sensory overload

Dhaka is also a city of intense sensory exposure. Traffic noise, horns, engine vibration, dust, heat, glare, crowds, advertisements and movement compete for attention simultaneously. Noise is particularly important because people cannot simply "look away" from sound. The study estimated that approximately 12 million residents were exposed to outdoor sound above WHO-Europe traffic guidelines, while approximately 0.9 million people were exposed to levels above 70 dBA, a threshold associated with hearing-loss risk (Lee et al., 2026). The relationship between noise and anxiety is more complicated than simply saying "noise causes anxiety. For planners, the practical lesson is nevertheless clear: reducing unnecessary environmental noise is likely to improve the quality of the urban experience even beyond its potential mental-health benefits.

3. The Missing Ingredient: Recovery

A city does not have to be silent or empty to be psychologically supportive. In fact, Dhaka can never and should not become a completely quiet city. The planning objective is different: People need moments of recovery within the intensity of everyday urban life. This is where nature becomes important. Kaplan and Kaplan's Attention Restoration Theory proposes that natural environments can help restore directed attention through characteristics such as fascination, being away, extent and compatibility (Kaplan & Kaplan, 1989).

Dhaka's Green Deficit Makes Small Interventions

Dhaka's problem is not simply that large parks are insufficient. It is that opportunities for everyday contact with nature are increasingly fragmented. Research on Greater Dhaka found that green spaces declined from 44.8% of the study area in 1975 to 24.1% in 2005, while built-up land increased from 13.4% to 49.4% during the same period (Dewan & Yamaguchi, 2009).

Table 1: Selected indicators of Dhaka's changing green environment

Indicator	**1975**	**2005**	**Implication**
Green space	44.8%	24.1%	Large long-term decline
Built-up area	13.4% (1975)	49.4% (2005)	Major expansion of built-up land
Green-space area	18,626 ha (1975)	10,010 ha (2005)	Approximately 46% reduction
Current Dhaka tree cover	-	<11%	Limited urban canopy
Urban trees	-	~1.3 million	Approximately 1 tree per 7 people

Note. The first four rows refer to different spatial definitions and methodologies; therefore, they should not be interpreted as a single continuous measurement series.

Five Neuro-Urban Design Principles for Dhaka:

1. Predictability: Make the Walking Line Obvious

The first neuro-urban principle should be extremely simple: People should know where to walk. A good footpath should be continuous, reasonably level, unobstructed, visually legible, connected to crossings, and protected from unnecessary vehicle intrusion. Where space is limited, a clearly marked pedestrian priority zone can still create predictability. The objective is not aesthetic perfection. It is to reduce unnecessary decision-making.

2. Refuge: Give People Somewhere to Pause

People do not only move through cities. They wait for buses, friends, rides, crossings and appointments. Yet many Dhaka streets provide almost nowhere comfortable to pause. A refuge space can be very small: a shaded bench, a widened footpath, a seating alcove, a bus-stop shelter, a small pocket plaza, or a protected edge beside a tree. In a hot and crowded city, a shaded seat is not decorative infrastructure. It is everyday comfort infrastructure.

3. Sensory Relief: Reduce Unnecessary Noise and Heat

Not every source of stimulation can or should be eliminated. But unnecessary exposure can be reduced. Street design can use: tree-lined pedestrian corridors, planted buffers, shaded walkways, traffic calming, better road-surface maintenance. The goal is not to make Dhaka silent. It is to create short intervals of relative calm.

4. Nature Contact: Small Doses, Frequently

A large central park is valuable. But a person who spends two hours commuting every day may not visit it regularly. This creates an important planning principle: The most useful greenery may sometimes be the greenery people encounter without planning to visit it. Street trees, pocket gardens, planted setbacks, green school edges, canal-side paths and shaded pedestrian spaces can make nature part of the everyday route. The emerging evidence on urban green and mental health supports this direction, while also showing why local evaluation is needed.

5. Social Safety: Design for Seeing and Being Seen

Psychological comfort is not produced by greenery alone. A street can be green and still feel unsafe. Active frontages, adequate lighting, clear sightlines, visible entrances and legitimate activity can make public space more socially comfortable. This is particularly important for people who experience streets differently because of age, gender, disability or occupation.

From ‘Mega Projects’ to ‘Micro-Calm Zones’

Dhaka does not need to wait for another giant urban project to begin experimenting with healthier streets. A more realistic strategy would be to identify micro-calm zones around places where pedestrian stress is concentrated. Possible locations include: school gates, hospitals, major bus stops, railway stations, metro stations, market entrances, university areas. Instead of redesigning an entire neighbourhood, planners could begin with a 100–200 metre pedestrian environment around a selected hotspot.

The intervention package might include: Continuous walking line + shade + seating + greenery + safer crossing + lighting + noise management + organized vending.

Tactical Planning: Test Before You Build

One of the most useful lessons from contemporary urban planning is that not every intervention needs to begin as permanent infrastructure. Dhaka could test low-cost interventions such as temporary bollards, painted pedestrian priority lanes, movable benches, temporary shade structures. Instead of spending millions first and evaluating later, planners can test, measure, modify and then invest.

What Should We Measure?

If mental wellbeing is going to become a legitimate planning objective, it needs to become measurable. A pilot neuro-urban project could use a surprisingly simple monitoring framework.

Table 2: A possible neuro-urban monitoring framework for Dhaka

Dimension	**Possible indicator**	**Measurement method**
Walkability	Pedestrian volume	Manual/automated pedestrian count
Continuity	Number of footpath interruptions	Walking audit
Safety	People forced onto carriageway	Behavioural observation
Accessibility	Average walking speed	Video/GPS observation
Noise	daytime and night-time dBA	Sound-level meter
Thermal comfort	Air temperature / surface temperature	Portable sensor / thermal imagery
Nature exposure	Tree/green coverage	GIS / field inventory
Psychological stress	Self-reported stress/anxiety	Validated short-scale survey
Social comfort	Perceived safety and comfort	Intercept survey
Physiological response	Heart-rate variability	Optional wearable-sensor study

Source: Author,2026

This would transform neuro-urbanism from an interesting concept into a measurable planning practice.

The Bigger Planning Lesson

The most important insight of neuro-urbanism is perhaps not about neuroscience at all. It is about how we define a successful city. A road may move traffic efficiently while making

pedestrians miserable. A plaza may look beautiful in photographs while providing no shade. A footpath may meet a technical width requirement while being unusable because of motorcycles and vendors. A park may exist on a land-use map while being too distant or inaccessible for everyday residents.

A great community is not simply one with roads, buildings and public facilities. It is one where people can move without constant fear, pause without feeling displaced, meet others without feeling exposed, and experience small moments of calm within the intensity of urban life.

Conclusion

Planning is often judged by what it produces: roads, bridges, buildings, transport systems and economic growth. Dhaka cannot become a quiet suburban town, nor should it. Its density, commerce, movement and social intensity are part of its identity. But intensity does not have to mean exhaustion. The future of Dhaka's urban planning may not depend only on building bigger projects. It may also depend on designing better moments the ten seconds of shade at a bus stop, the uninterrupted hundred metres of footpath, the quiet corner beside a tree, the safe crossing at the end of a long journey. A great community is built when planning recognizes that people are not merely moving bodies, economic units or traffic counts. They are human beings with limited attention, sensitive nervous systems and a need to recover.

References

Barua, U., Tay, R., Hoque, M. M., & Mamun, M. S. A. (2007). Analysis of pedestrian accidents and assessment of pedestrian safety deficiencies on five major arterial road links in capital city, Dhaka, Bangladesh. *Transportation Research Forum*.

Dzhambov, A. M., & Dimitrova, D. D. (2020). Residential road-traffic noise and general mental health: A systematic review and meta-analysis of epidemiological studies. *International Journal of Environmental Research and Public Health, 17*(24), 9295. https://doi.org/10.3390/ijerph17249295

Hossain, M. D., et al. (2024). Community prevalence of psychiatric disorders: Findings from a nationwide survey in Bangladesh. *Asian Journal of Psychiatry, 92*, 103897. https://doi.org/10.1016/j.ajp.2023.103897

Kaplan, R., & Kaplan, S. (1989). *The experience of nature: A psychological perspective*. Cambridge University Press.

Lee, M., Bayazid, A. R., Arku, R., Barratt, B., Khan, R. H., Quayyum, Z., & Baumgartner, J. (2026). Citywide modeling and mapping of environmental sound exposure in Dhaka, Bangladesh. *Science of the Total Environment, 1048*, 182104. https://doi.org/10.1016/j.scitotenv.2026.182104

Lederbogen, F., Kirsch, P., Haddad, L., Streit, F., Tost, H., Schuch, P., Wüst, S., Pruessner, J. C., Rietschel, M., Deuschle, M., & Meyer-Lindenberg, A. (2011). City living and urban upbringing affect neural social stress processing in humans. *Nature, 474*, 498–501. https://doi.org/10.1038/nature10190

Morshed, A. Z. (2019, September 29). Why not a national footpath policy? *The Daily Star*.

Ulrich, R. S. (1984). View through a window may influence recovery from surgery. *Science, 224*(4647), 420–421. https://doi.org/10.1126/science.6143402 (PubMed)

The Missing Caw: Why Crows Are Leaving Dhaka's Sky

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A few years ago, mornings in Dhaka started with crows. Rooftops, wires, the neem tree outside the window, all of it full of noise before the traffic even began. Lately that noise is gone. Ask around and people notice the same thing. Fewer crows, quieter mornings, and no one is quite sure when it happened.

According to data from Jahangirnagar University's Department of Zoology, Bangladesh's crow population in major urban areas has fallen by more than 60 percent since 2010. That is not a small dip. That is most of a population gone in about fifteen years. This piece looks at why, and at how the same satellite tools already used to audit roads and drains can explain a change most of us only felt, without ever measuring it.

A study using satellite images from 1990 to 2020 tracked plant cover across Dhaka using NDVI, a standard remote sensing measure of vegetation health, alongside land surface temperature and moisture readings from the same imagery. Vegetation fell sharply across the city over those three decades. Today, greenspace covers only about 2.24 percent of Dhaka's residential area. Only 2 out of 110 wards have greenspace above 20 percent. One ward measured close to zero.

Crows are adaptable. They do not need forests. But they do need trees to nest in and open ground to forage on. Courtyards, orchards, and wetlands that once sat inside and around Dhaka have mostly disappeared. Citywide, wetland cover has dropped to about 4.38 percent, down from roughly 14.25 percent two decades ago. That is a loss of close to seven tenths of the wetland area the city once had. Crows that once roosted by the thousand in these spaces now nest on ledges and half-built structures instead, because the trees are simply not there anymore.

The same NDVI study found a strong link between falling vegetation and rising land surface temperature, measured through thermal satellite bands. As green cover dropped, heat went up, block by block, in the same wards. Heat matters for crows in a very direct way. Rising temperatures disrupt breeding cycles and lower chick survival. A city that is losing shade is also becoming harder to raise a family in, for birds and for people.

There is an odd twist here. In the early 2000s, crow numbers in Dhaka actually rose, because unplanned waste dumping gave them an easy, constant food source. For years, crows scavenged food scraps well enough that residents leaned on them as free waste collectors. One long-time waste worker in Dhaka North recalled that bins used to be picked nearly clean by crows before collection crews even arrived. Now the same bins sit rotting well into the afternoon.

What changed was not the waste itself, but what it carries. Pesticide residue, formalin used to preserve food, and industrial runoff now move through the same scraps crows once fed on safely. The food source that used to sustain them is now quietly poisoning them, and rising air

pollution adds its own strain on their lungs. The same waste stream flipped from an advantage into a hazard within about a decade.

Table 1. The Disappearance, in Numbers

Indicator	Baseline	Now	Source
Crow population, urban Bangladesh	2010 level	Down over 60%	Jahangirnagar University, Dept. of Zoology
Wetland cover, Dhaka	~14.25% (city area)	4.38%	BIP survey, via Prothom Alo
Greenspace cover, Dhaka	-	2.24% of residential area	NDVI/LST satellite study, 2023
Wards above 20% greenspace	-	2 out of 110	Same NDVI/LST study

Two quick calculations, using the same figures.

Wetland loss: 4.38 ÷ 14.25 = 0.31, so about 31% of Dhaka's wetlands from twenty years ago remain.

Crow population: a drop of over 60% since 2010 leaves less than 40% of the earlier population, if the trend held roughly steady.

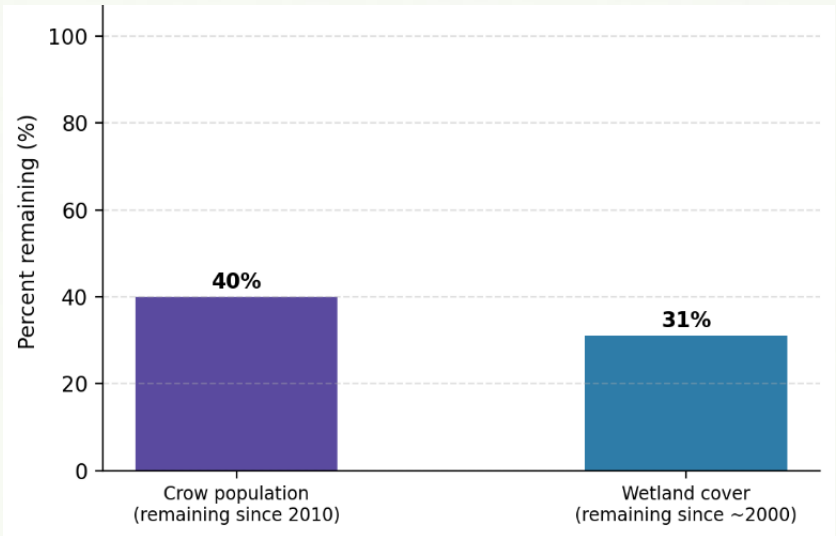


Figure 1: Two declines, same direction

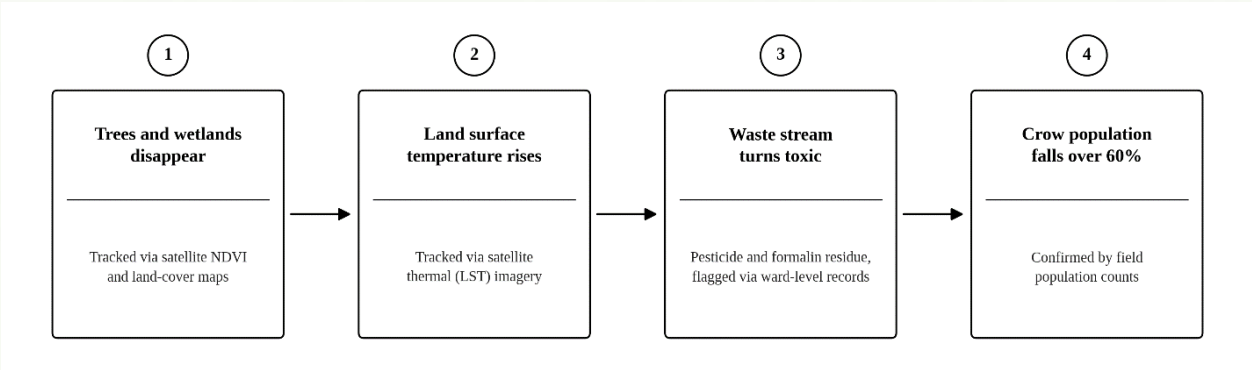


Figure 2: How satellite data traces the chain, step by step

Each step in that chain leaves a trace that remote sensing can already pick up. Vegetation loss shows up in NDVI. Heat shows up in thermal imagery. Land cover change shows up in satellite classification. None of this requires new technology. It requires someone to look at the layers together instead of one at a time.

Crows are not just background noise. For decades they worked as unpaid sanitation staff, clearing food scraps off streets and open bins before waste trucks even showed up. That job matters more in Dhaka than in most cities. The four city corporations now generate about 11,500 tonnes of solid waste every day, and only 70 to 80 percent of it gets collected. That leaves somewhere between 2,300 and 3,450 tonnes sitting uncollected in the city each day, rotting in the sun until someone eventually clears it, or it washes into a drain.

A healthy crow population used to eat directly into that leftover pile. A shrinking one does not. The waste does not disappear just because the birds that used to pick through it are gone. It sits longer, smells worse, and draws in rats and flies instead.

Bangladesh would not be the first country to lose a scavenger species and treat it as a footnote. India lost its vultures the same way, only faster and at a much larger scale. A common anti-inflammatory drug given to sick cattle, diclofenac, turned out to be lethal to vultures that fed on the carcasses. Three vulture species collapsed by 91 to 98 percent within about a decade.

Economists Eyal Frank and Anant Sudarshan later measured what that collapse actually cost. In districts that once had large vulture populations, human death rates rose by more than 4 percent after the birds disappeared. Feral dogs multiplied, rabies spread, and carcass runoff fouled local water supplies. Their published estimate, in a 2024 study, put the toll at around 100,000 extra human deaths a year and 69 billion dollars in economic damage a year, for the years 2000 to 2005.

Crows are not vultures, and Dhaka is not rural India. But the mechanism is the same. One species quietly does a sanitation job for free, until it is gone, and the job simply stops getting done. No one in Dhaka has measured what a 60 percent crow decline actually costs the city yet, in extra waste, disease, or health spending. That is exactly the kind of question GIS layers and public health records together could answer. Right now, nobody has run the numbers.

Table 2. Two Scavenger Collapses, Side by Side

Indicator	**India's Vultures (2000-2005)**	**Dhaka's Crows (2010-present)**
Population decline	91-98% (three species)	Over 60%, urban areas
Main driver	Diclofenac poisoning via livestock carcasses	Habitat loss, heat, toxic waste, air pollution
Measured cost	~100,000 extra deaths/year; $69 billion/year	Not yet studied
Status	Documented (Frank and Sudarshan, 2024)	Open question

Urban planning usually tracks roads, drains, and housing. It rarely tracks whether a city can still support a crow. That is a mistake, because crows are not fragile. They are generalists, built to survive almost anywhere. If a city becomes too hot, too paved over, and too poisoned for

even a crow, that is an early signal, not a footnote. Ecologists sometimes call this kind of species a bioindicator, an ordinary creature whose decline flags a bigger problem before it reaches people directly.

GIS and remote sensing already sit inside most planning offices, usually pointed at infrastructure. The same NDVI, land surface temperature, and land cover layers that flag a failing drain or a shrinking park can just as easily flag a collapsing urban ecosystem, if planners choose to look. A green cover target in a master plan is not only about shade for people. It is nesting space, foraging ground, and a cooler block for every species that shares the city with us. One practical step would not cost much. Layer NDVI, land surface temperature, and land cover data with basic citizen bird counts and waste complaint records, ward by ward, and track the combination over time, the way infrastructure audits already do. Call it a scavenger health index if it needs a name. It would not need new satellites or new sensors. It would just need someone to connect data that already exists, before the gap between the map and the ground turns into a bill nobody planned for.

This year's theme says great communities are built on planning. A community that plans well should still sound like a community when the sun comes up, crows included. Dhaka does not need to bring back every wetland it lost. It needs planners willing to read the same satellite data already sitting in their offices, and to notice, before the last crow does, that something in the city has quietly stopped working.

Planning for a River That Moves: Building Great Communities on Kurigram's Chars

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If one asks a planner for the criteria of an ideal community, chances are that he will get a response based on stability, which includes things like solid road networks and stable facilities, along with clearly marked plots of land for ownership on any map. The case of Kurigram is an exception to this trend almost every day. The Brahmaputra, Teesta, Dharla, and Dudhkumar rivers braid through the district, and the sandbars they leave behind, known locally as chars, are home to more than half a million people [1]. A char can hold a village, a school, a market, for years. Then, in the space of one bad monsoon, it can be gone. It would be easy to read that as a failure of planning, or proof that planning simply cannot reach places this unstable. I want to make the opposite case. Kurigram's riverine communities are already planning, in every sense that matters, just not in a form most planning departments recognise. It is not a matter of bringing order into chaos, but of recognizing existing order and creating a policy that is strong enough to live with it.

The Land That Will Not Stay Put

The scale of the erosion is worth sitting with for a moment. The Brahmaputra alone eats away roughly 50 metres of riverbank a year along a 70-kilometre stretch that has been retreating since the 1950s [5]. The Teesta contributes another 45 kilometres of erosion-prone bank inside Kurigram, with known trouble spots at Ramhari, Nazimkhan, Chaprarpar, Saduar Damarhat, and Bajra[4]. During one recent stretch of reporting, erosion was active at 33 separate points along four rivers at once, swallowing 4.3 kilometres of bank and hundreds of houses across Kurigram Sadar, Nageshwari, Roumari, Ulipur, and Rajarhat[3]. Behind those figures are ordinary, repeated disruptions to ordinary lives. Something like 2,000 to 2,500 families lose their homes to erosion here in a typical year, and close to 30,000 have been displaced over the last decade alone [1]. In one recent flood season, over 37,000 families across nine upazilas felt some impact, 458 of them left without a home entirely, and 7,350 hectares of cropland went under [2]. Nuru Mia, who farms and fishes out of Begumganj union, has moved his house at least fifteen times [1]. Not fifteen disasters, spaced out over a lifetime. Fifteen moves, because that is simply how long a char lasts him before the river wants it back.

Kurigram's Riverine Reality

Why planning for impermanence matters

~450 chars in Kurigram, home to 500,000+ people	**50 m** of Brahmaputra riverbank lost every year	**2,000-2,500** families displaced by erosion each year	**30,000+** families displaced over the last decade

Figure 1: Key indicators of erosion and displacement in Kurigram district. *Sources: [1] [2] [3] [4] [5] - see References.*

All of this is at odds with the methods typically employed by planners. The cadastral map, the master plan, the zoning ordinance-all presuppose stability of the earth below them. In Kurigram, a settlement that exists on paper this year may be two metres underwater by the next, or resurfaced somewhere else entirely. Planning built for permanent ground was never going to translate cleanly onto ground that isn't.

Community as the First Planner

What's striking, if you look closely, is how much planning is already happening on the chars without anyone calling it that. Homesteads go up on raised earthen plinths, well clear of the flood line, before the rains arrive. When the river gets close, families take their houses apart piece by piece, timber and tin, and carry the same structure to the next char rather than lose it. Fishing and cropping schedules follow the river's own calendar. And when someone's char goes under, it is neighbours and relatives, not any government office, who absorb that family until they can rebuild.

Call it what it is: risk anticipated, resources shared across a community, a settlement pattern that repeats itself because it works. What's missing isn't the knowledge to do this well. It's recognition, and the infrastructure that ought to follow from it, land titles that survive a move, clinics and schools built to travel rather than to be abandoned, some legal basis for compensating a family that loses land to a river the way other families are compensated for land lost to a road project. Shafiqul Islam Bebu, who heads the Kurigram District Char Development and Implementation Council, has pointed out that countries with more developed erosion policy offer structured rehabilitation and housing support to affected families. Bangladesh, despite managing this scale of displacement year after year, still has no real legal framework of that kind [4].

Where Formal Planning Falls Short

Three gaps keep showing up. Chars sit in a kind of administrative limbo, often part of unions whose institutional reach doesn't extend very far, so piped water, electricity, a paved road, a school built to last, none of it tends to follow the population to a char that may well be inhabited for the next ten years. Land administration compounds this: it's built around fixed parcels and permanent records, and a char that resurfaces fifty metres from where the old one eroded is, on paper, almost a new place, which makes ownership claims, credit, and government assistance harder to sort out than they should be. And embankment or dredging work, necessary as it is, usually gets funded and engineered as a one-off project rather than folded into an ongoing process that tries to anticipate where the river is headed next. A Tk 850 crore erosion-control project for the district has been sitting with approval pending for some time now [5], which tells you something about the mismatch in speed between infrastructure planning and a river that can erode a measurable stretch of bank in a single season.

The result is a planning vacuum in exactly the place that needs planning most. It isn't that char residents can't plan for their own survival, they clearly can, and do. It's that no state or

professional planning system has really shown up to plan alongside them, on terms that make sense for land that moves.

Toward a Planning Framework for Impermanent Settlements

If great communities really are built on planning, then planning has to change shape for a place like this. Four shifts would go a long way toward meeting char communities where their own adaptive practice already is.

- Flexible land tenure would help most. Recognising seasonal, conditional, or relocatable land rights, rather than insisting on a single permanent title, would let char households get credit, compensation, and services without waiting on a land system that was never designed for ground this restless.
- Anticipatory resettlement zones are the next piece. BWDB and other agencies already have erosion information available. Utilizing such erosion information in advance in order to identify safe land before the river pushes people away will change the situation from an unplanned effort to a planned one.
- The infrastructure has to be mobile and modular. The schools, clinics, tube wells, and latrines should be constructed in such a way that they can be disassembled and then reconstructed again in another place, thus preventing the waste of public resources that get washed away every year by the river.
- And erosion data should be participatory, not just satellite-derived. Residents like Nuru Mia often sense a char's collapse coming well before any instrument does. Pairing that knowledge with satellite tracking would make relocation decisions both more accurate and more trusted.

A Planning Framework for Impermanent Settlements

Four shifts to make planning fit char communities, not the other way around

1. Flexible Land Tenure Recognise seasonal and relocatable rights on chars instead of fixed titles alone.	2. Anticipatory Resettlement Zones Identify alternative sites before displacement due to erosion.
Community At the Centre	
3. Mobile & Modular Infrastructure Create schools, health clinics, and water supply points that can be dismantled and rebuilt.	**4. Participatory Erosion Data** Combine satellite monitoring with local information to determine when to move.

Figure 2: A proposed planning framework placing char communities at the centre of decision-making.

None of this asks communities to give up what they're already doing well. It asks planning to catch up to it, formalise it, fund it, extend it. That distinction is not a small one. A plan that ignores what a community has already worked out for itself tends to compete with it, waste money, and lose trust in the process. A plan built on top of it tends to multiply whatever was already working.

Conclusion: Planning Worthy of the Community

There is a version of this year's theme that Kurigram's char dwellers have already lived out, building and rebuilding community, over and over, under pressure most planners will never face, without waiting for anyone's permission or budget. What's unfinished is the other half of the bargain: a planning profession whose frameworks have not yet caught up to the resilience they are supposed to be supporting. A great community isn't only one that plans well for itself. It's one that the wider system around it, government, engineers, planners, chooses to plan well for too, on its own terms. For Kurigram, that means treating impermanence not as an excuse to look away, but as the actual design problem in front of us.

Bangladesh built its planning profession on the idea that careful, forward-looking decisions about land and infrastructure make people's lives better. Half a million people on Kurigram's chars are still waiting for that idea to reach them.

References

[1] Bonik Barta Correspondent, Kurigram. (2025, November 3). Sediment from upstream raises riverbeds, intensifying riverbank erosion in Kurigram. Bonik Barta. https://en.bonikbarta.com/environment/EZzs5zsIljGXUOMr

[2] Dhaka Tribune / UNB. (2024, July 14). Floods, erosion hit poorest district hard in Bangladesh. Dhaka Tribune. https://www.dhakatribune.com/bangladesh/352022/floods-erosion-hit-poorest-district-hard-in

[3] The Business Standard / BSS. (2025, September 17). River erosion at 33 points in Kurigram, hundreds of houses devoured. The Business Standard. https://www.tbsnews.net/bangladesh/river-erosion-33-points-kurigram-hundreds-houses-devoured-1238686

[4] The Business Standard / UNB. (2026, May 2). Kurigram residents face fresh displacement as Teesta devours land. The Business Standard. https://www.tbsnews.net/bangladesh/kurigram-residents-face-fresh-displacement-teesta-devours-land-1427131

[5] United News of Bangladesh (Bebu, S. I.). (2026, March 27). Kurigram battles climate-driven river erosion; Tk 850cr project awaits nod. UNB. https://unb.com.bd/category/Special/kurigram-battles-climate-driven-river-erosion-tk-850cr-project-awaits-nod/182290

Planned vs. Organic: What Uttara and Jatrabari's Street Networks Reveal About Building Great Communities

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Introduction

"Great communities are built on planning" is more than a slogan for World Town Planning Day 2026 - it is a claim that can be tested against the physical fabric of our cities. One of the most basic, and most revealing, elements of that fabric is the street network: the pattern of roads and intersections that determines how people move, how emergency services respond, and how neighborhoods function on a daily basis. This article presents a comparative street network analysis of two contrasting areas of Dhaka - Uttara, a formally planned neighborhood, and Jatrabari, an organically developed, largely unplanned area - using open geospatial data and Python-based network analysis. The goal is simple: to move beyond intuition and show, with data, how deliberate planning shapes the connectivity, resilience, and livability of a community.

Why Street Networks Matter for Community Building

A street network is the skeleton of a neighborhood. It determines how easily residents can walk to a market, how quickly an ambulance can reach a home, and how traffic disperses during peak hours or disasters. Two broad patterns dominate urban growth. A grid-iron pattern, typical of planned developments, distributes intersections evenly and offers multiple alternative routes between any two points. An organic pattern, which emerges when settlements grow without a master plan, tends to produce longer, winding streets, more dead ends, and a heavy reliance on a small number of arterial corridors. These are not just aesthetic differences - they translate directly into measurable differences in connectivity, redundancy, and accessibility, which this study quantifies for Uttara and Jatrabari.

Study Area

The two study areas lie within Dhaka, the capital of Bangladesh, and represent contrasting patterns of urban growth. Uttara, in the north of the city, is a formally planned residential area laid out with a regular grid of primary, secondary, and local roads; it borders Uttara Lake to the west and Hazrat Shahjalal International Airport to the east, and is flanked by Pallabi and Badda. Jatrabari, in the south-east, is a densely built, organically developed area along the Buriganga River, bordered by Shahbag, Kamrangirchar, Sutrapur, and Demra. Figure 1 situates both neighborhoods within Dhaka and provides a schematic overview of their location, boundaries, and surrounding context.

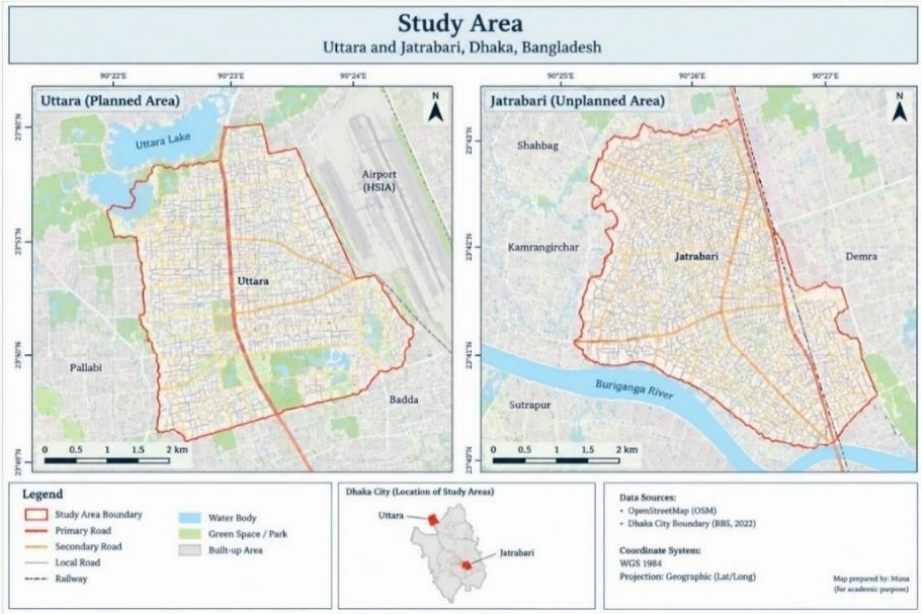


Figure 1: location GeoPandas map of the study areas, Uttara (planned) and Jatrabari (unplanned), Dhaka.

Data and Methodology

This study used OpenStreetMap (OSM), a widely used and continuously updated open-source geospatial dataset, as the source of road network data for both study areas. Data extraction and analysis were carried out entirely in Python using the following tools: OSMnx for downloading and constructing routable street network graphs directly from OSM; NetworkX for graph-based network analysis; for spatial data handling; and Matplotlib for visualization and map production.

To ensure a fair and unbiased comparison, both Uttara and Jatrabari were analyzed using an identical 800-meter network radius from a comparable central point in each area, keeping the study area sizes broadly similar (2.21 km² for Uttara and 2.43 km² for Jatrabari). The analysis examined five key dimensions of network structure: street network connectivity, node and edge distribution, intersection characteristics (including intersection type, such as 3-way, 4-way, or dead-end), street network density, and betweenness centrality - a graph-theory measure that identifies which streets carry a disproportionately large share of the shortest paths across the network, and therefore act as critical connectors.

It is worth noting, as a methodological limitation, that OSM is a crowd-sourced dataset and its completeness can vary by location. However, Dhaka is a heavily mapped city with an active contributor base, and the resulting network for both study areas was found to be detailed and structurally consistent with satellite imagery, making it a reliable basis for this comparative analysis.

Key Findings

The extracted road networks for both areas are shown in Figure 2. Even visually, the contrast is immediately apparent: Uttara displays a clear grid-iron structure with regularly spaced,

interconnected blocks, while Jatrabari shows a more irregular, tree-like pattern with long, winding roads and a cluster of converging streets near its center.

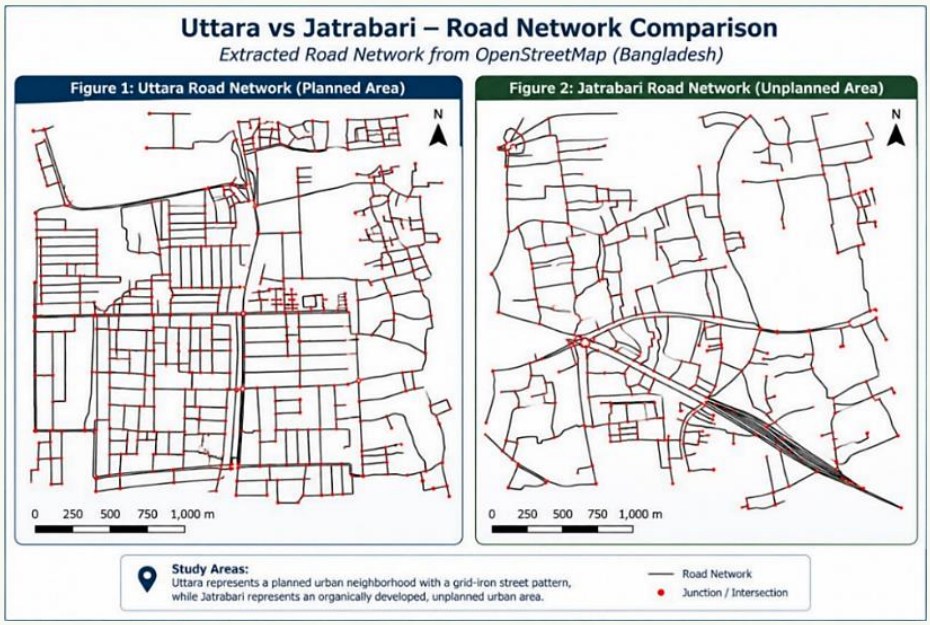


Figure 2: Road networks of Uttara (planned) and Jatrabari (unplanned), extracted from OpenStreetMap using OSMnx within an identical 800 m radius. (Source: Author's analysis, OpenStreetMap data)

These visual impressions are strongly supported by the quantitative network statistics summarized in Figure 3. Uttara contains 444 nodes and 1,186 edges, compared to 404 nodes and 1,030 edges in Jatrabari, indicating a denser and more interconnected street network. Uttara also records a higher average node degree (5.34 versus 5.10) and a greater intersection count (367 versus 320), reflecting more frequent points of connectivity. Although the total street length in both areas is comparable (44,572 m in Uttara versus 43,486 m in Jatrabari), the average street segment in Jatrabari is noticeably longer (84.44 m versus 75.16 m in Uttara) - a sign of fewer, more spread-out connections. In terms of density, Uttara records a higher node density (200.54 nodes/km²) and intersection density (165.76 intersections/km²) compared to Jatrabari's 166.52 nodes/km² and 131.89 intersections/km², confirming a finer and more walkable street grid in the planned area.

The intersection type comparison adds further detail: both areas are dominated by 3-way intersections, but Uttara has more than double the number of 4-way intersections (67 versus 31 in Jatrabari), a hallmark of grid-based planning that provides multiple direct route choices at a single junction. Jatrabari, in contrast, has a higher share of dead-end (1-way) intersections, indicating more streets that terminate without onward connection - a common feature of unplanned, incrementally built settlements.

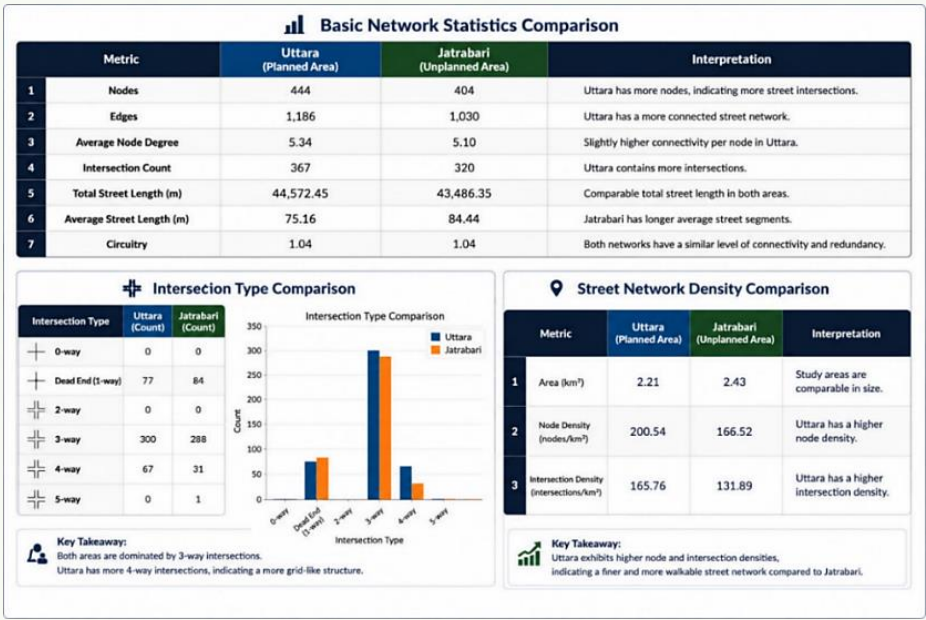


Figure 3: Basic network statistics, intersection type distribution, and street density comparison between Uttara and Jatrabari. (Source: Author's analysis, OpenStreetMap data)

Perhaps the most revealing metric is betweenness centrality, shown in Figure 4. In Uttara, high-centrality nodes (shown in yellow and light green) are distributed across several locations throughout the grid, meaning that movement between different parts of the neighborhood does not depend on any single street. In Jatrabari, by contrast, the highest-centrality nodes are tightly clustered around one central corridor where multiple roads converge. This concentration means a much larger share of trips across the neighborhood is funneled through a small number of critical streets.

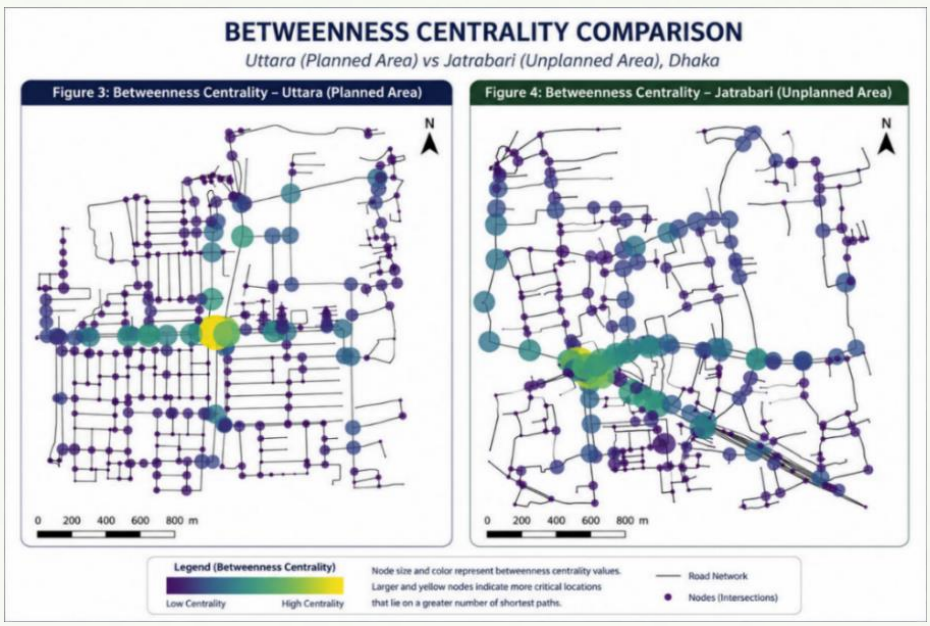


Figure 4: Betweenness centrality comparison between Uttara and Jatrabari. Larger, brighter nodes indicate street junctions that lie on a greater number of shortest paths across the network. (Source: Author's analysis, OpenStreetMap data)

Planning Implications: Connectivity Is Not an Accident

These findings translate directly into real consequences for the people who live in each area, and they speak to the heart of this year's theme. In Uttara, the grid-iron layout means that if one street is blocked- by construction, flooding, an accident, or congestion- residents and emergency vehicles have several alternative routes to reach the same destination. This redundancy is not incidental; it is a direct product of deliberate, forward-looking planning that anticipated growth and allocated space for a regular network of roads before development occurred.

In Jatrabari, the concentration of betweenness centrality along a few corridors reveals a structural vulnerability. If one of these key streets becomes obstructed, a disproportionately large part of the neighborhood loses efficient access to the rest of the city. This is not merely an inconvenience; in an emergency- a fire, a medical crisis, or a flash flood, which are increasingly relevant risks for Dhaka - it can mean the difference between timely response and dangerous delay. The longer average street segments and higher share of dead-end streets in Jatrabari further compound this issue, increasing walking distances and reducing the fine-grained accessibility that supports everyday community life, from children walking to school to residents accessing local shops and services.

This comparison illustrates a broader lesson for rapidly urbanizing cities like Dhaka: the absence of planning does not simply mean a different aesthetic- it produces a functionally weaker, less resilient urban fabric. As Bangladesh continues to urbanize at a fast pace, areas that grow organically without guided planning risk repeating the same structural weaknesses seen in Jatrabari: congestion concentrated on a few arteries, poor emergency accessibility, and inefficient movement patterns that persist for decades once the built environment is in place, since retrofitting street networks in dense, already-built areas is far more difficult and costly than planning them correctly from the outset.

This is also where data-driven tools become valuable for planners and policymakers. Open data sources like OpenStreetMap, combined with accessible Python libraries such as OSMnx and NetworkX, allow planners to quantitatively diagnose network weaknesses in existing unplanned settlements - identifying critical corridors, connectivity gaps, and areas most in need of new connector roads - rather than relying on visual impression alone. Such analysis can directly inform targeted interventions: opening new through-connections in dense pockets, protecting right-of-way for future roads in expanding city fringes, and prioritizing infrastructure investment based on measurable accessibility deficits rather than guesswork.

Conclusion

The comparison between Uttara and Jatrabari offers concrete evidence for a simple but important truth: connectivity is not an accident of geography; it is the outcome of a decision. Where planning shaped the ground before development occurred, as in Uttara, the result is a denser, better-connected, and more resilient street network that distributes movement evenly and offers redundancy when disruptions occur. Where development preceded planning, as in Jatrabari, the network that emerged is functional but fragile, dependent on a handful of

corridors that carry an outsized share of the city's daily life. As Bangladesh's cities continue to grow, this analysis reinforces why proactive, data-informed planning must guide new development - and why retrofitting connectivity into already-built unplanned areas should be treated as an urgent priority. Great communities, in the most literal, structural sense, are indeed built on planning.

শহর বড় হচ্ছে, কমিউনিটি কি গড়ে উঠছে?

বাংলাদেশের বর্তমান নগর বাস্তবতায় পরিকল্পনার নতুন প্রশ্ন

পরিকল্পনাবিদ কাজী সালমান হোসেন
যুগ্ম সম্পাদক, বিআইপি

"Great Communities are Built on Planning: Together We Deliver, Together We Thrive, Together We Sustain."

এ বছরের World Town Planning Day-এর প্রতিপাদ্যটি বাংলাদেশের বর্তমান নগর বাস্তবতায় একটি সরল কিন্তু জরুরি প্রশ্ন সামনে আনে-আমরা কি শুধু শহর বড় করছি, নাকি ভালো কমিউনিটি গড়ে তুলছি?

ঢাকার বাইরে তাকালেও নগরায়ণের পরিবর্তন এখন স্পষ্ট। গাজীপুর, সাভার, নারায়ণগঞ্জ কিংবা নরসিংদীর মতো এলাকাকে রাজধানী থেকে বিচ্ছিন্নভাবে দেখা কঠিন হয়ে পড়ছে। আবাসন, শিল্প, কর্মসংস্থান ও প্রতিদিনের মানুষের চলাচল প্রশাসনিক সীমানা অতিক্রম করছে। অন্যদিকে জেলা শহর ও পৌর এলাকাগুলোও দ্রুত বদলাচ্ছে। বাংলাদেশের নগর জনসংখ্যা আগামী কয়েক দশকেও বাড়তে থাকবে এবং secondary city-গুলোর ওপর নতুন জনসংখ্যা, কর্মসংস্থান ও সেবার চাপ আসবে।

এই পরিবর্তন সুযোগ তৈরি করছে, আবার সতর্কও করছে। ঢাকার যে সমস্যাগুলো আমরা কয়েক দশক ধরে তৈরি হতে দেখেছি- অপরিকল্পিত ভূমি ব্যবহার, যানজট, জলাবদ্ধতা, খোলা জায়গার সংকট, দূষণ এবং অবকাঠামোর ওপর অতিরিক্ত চাপ-সেগুলো যেন নতুন নগর এলাকার ভবিষ্যৎ না হয়।

এখানেই planning-এর প্রয়োজন সবচেয়ে বেশি।

উন্নয়ন হচ্ছে, কিন্তু সব উন্নয়ন কি পরিকল্পিত?

বাংলাদেশে নগর উন্নয়নের দৃশ্যমান অংশ খুব সহজে চোখে পড়ে। নতুন সড়ক হচ্ছে, আবাসিক ও বাণিজ্যিক ভবন বাড়ছে, শিল্প এলাকা সম্প্রসারিত হচ্ছে, বড় পরিবহন অবকাঠামো তৈরি হচ্ছে। কিন্তু মানুষের দৈনন্দিন অভিজ্ঞতা দিয়ে একই উন্নয়নকে দেখলে ছবিটি সবসময় এত সরল নয়।

একটি এলাকায় বহুতল ভবনের সংখ্যা দ্রুত বাড়ে, কিন্তু আশপাশের সড়ক একই থাকে। নতুন আবাসন হয়, অথচ স্কুল, পার্ক বা খেলার মাঠের জায়গা নিশ্চিত হয় না। কোনো সড়ক প্রশস্ত হয়, কিন্তু পথচারীদের চলাচল এর জন্য continuous footpath থাকে না। কোথাও নিচু জমি বা জলাধারের ওপর development হওয়ার কয়েক বছর পর একই এলাকায় drainage capacity বাড়ানোর জন্য আবার বড় বিনিয়োগ প্রয়োজন হয়।

এই কারণেই development এবং planned development এক বিষয় নয়। পরিকল্পনা তখনই অর্থবহ, যখন land use, mobility, drainage, environment, housing, employment এবং social infrastructure-কে আলাদা প্রকল্প হিসেবে না দেখে একই নগর ব্যবস্থার অংশ হিসেবে বিবেচনা করা হয়।

আমাদের সামনে তাই শুধু নতুন plan তৈরির প্রশ্ন নয়। বড় প্রশ্ন হচ্ছে, বিদ্যমান পরিকল্পনার নীতি প্রতিদিনের development decision-এ কতটা প্রতিফলিত হচ্ছে।

বড় পরিকল্পনার পাশাপাশি পাড়ার পরিকল্পনাও দরকার

একজন মানুষ পুরো metropolitan region-এ বাস করেন না। তিনি একটি পাড়া বা neighbourhood-এ বাস করেন। তার কাছে শহরের মান নির্ধারিত হয় আরও সাধারণ কিছু প্রশ্নে। বাসা থেকে main road পর্যন্ত নিরাপদে হাঁটা যায় কি না, শিশুটি স্কুলে যেতে পারে কি না, প্রবীণ মানুষের বসার জায়গা আছে কি না, কাছাকাছি বাজার আছে কি না, বৃষ্টির পর কোথায় পানি জমে, রাতে রাস্তায় পর্যাপ্ত আলো আছে কি না।

Master plan-এর বড় মানচিত্রে এসব micro-level বাস্তবতা সবসময় ধরা পড়ে না। এই কারণে city-wide planning-এর পাশাপাশি neighbourhood-level planning আরও গুরুত্ব পাওয়ার দাবি রাখে।

একটি ওয়ার্ড বা পাড়ার জন্য school, health facility, open space, waterbody, drainage, pedestrian route, public transport, waste collection এবং disaster risk-এর একটি basic spatial profile থাকলে উন্নয়ন অগ্রাধিকার নির্ধারণ অনেক সহজ হয়। কোনো এলাকায় হয়তো নতুন বড় প্রকল্প প্রয়োজন নেই। ৪০০ মিটার ব্যবহারযোগ্য ফুটপাত, একটি নিরাপদ school crossing, কয়েকটি shade tree এবং street light সেই এলাকার মানুষের জীবন অনেক বেশি বদলে দিতে পারে। অন্য এলাকায় নতুন drain করার চেয়ে বিদ্যমান খালটির প্রবাহ ফিরিয়ে আনা বেশি প্রয়োজনীয় হতে পারে। পরিকল্পনার সাফল্য সবসময় project size দিয়ে মাপা যায় না। অনেক সময় সবচেয়ে গুরুত্বপূর্ণ বিষয় হলো সঠিক সমস্যাটি আগে চিনতে পারা।

গাড়ির চলাচল থেকে মানুষের চলাচল

বাংলাদেশের নগরে mobility নিয়ে আলোচনা প্রায়ই যানজট দিয়ে শুরু হয়। ফলে সমাধানও সহজে road capacity বা motorised traffic-এর দিকে চলে যায়। কিন্তু একজন মানুষের যাত্রা গাড়িতে ওঠার পর শুরু হয় না; যাত্রা শুরু হয় তার বাসার দরজা থেকে। ফুটপাত না থাকলে, রাস্তা পার হওয়া ঝুঁকিপূর্ণ হলে কিংবা bus stop বা metro station পর্যন্ত নিরাপদে পৌঁছানো না গেলে বড় transport investment-এর সুবিধাও সীমিত হয়ে যায়।

ঢাকায় mass transit network-এর সম্প্রসারণ একটি বড় সুযোগ। কিন্তু station-এর চারপাশের land use, pedestrian access, feeder transport এবং public space একই সঙ্গে পরিকল্পিত হওয়া প্রয়োজন। একটি metro station নির্মাণ transportation project হতে পারে। কিন্তু মানুষ কীভাবে সেখানে পৌঁছাবে, station ঘিরে কী ধরনের development হবে এবং সেই development আশপাশের neighbourhood-এর ওপর কী প্রভাব ফেলবে- সেটি town planning-এর প্রশ্ন।

আমাদের mobility planning-এ তাই vehicle movement থেকে people movement-এর দিকে দৃষ্টি আরও স্পষ্ট হওয়া দরকার।

শহরের তাপও এখন planning issue

বাংলাদেশে climate change-এর আলোচনা দীর্ঘদিন মূলত বন্যা, ঘূর্ণিঝড় ও উপকূলীয় ঝুঁকিকে কেন্দ্র করে হয়েছে। এখন শহরে আরেকটি বাস্তবতা দ্রুত দৃশ্যমান হচ্ছে-অতিরিক্ত তাপ।

ঘন নির্মাণ, paved surface, গাছের ঘাটতি এবং open space কমে যাওয়া urban heat-কে আরও তীব্র করতে পারে। এ কারণে গাছ, পার্ক ও জলাশয় শুধু beautification-এর বিষয় নয়। এগুলো এখন public health এবং climate infrastructure-এরও অংশ।

এখানে রাজশাহী একটি বাস্তব শিক্ষা দিতে পারে। শহরটির পরিবেশ ব্যবস্থাপনায় সড়ক, median, park ও খোলা জায়গায় বৃক্ষরোপণের পাশাপাশি নির্বাচিত পুকুর ও জলাধার সংরক্ষণ এবং উন্নয়নকে গুরুত্ব দেওয়া হয়েছে। সাম্প্রতিক গবেষণায় রাজশাহীর যেসব residential area-তে vegetation বেশি, সেখানে তুলনামূলক কম surface temperature পাওয়া গেছে; গবেষণাটি নগর তাপ কমাতে green space এবং waterbody সংরক্ষণের গুরুত্বও দেখিয়েছে। এর অর্থ এই নয় যে রাজশাহীর সব নগর সমস্যা সমাধান হয়ে গেছে। বরং শিক্ষা হলো-growing city-তে green এবং blue space আগে থেকেই planning-এর অংশ করলে ভবিষ্যতের সমস্যা কমানো সম্ভব।

জলকে জায়গা না দিলে জল নিজের জায়গা নেয়

বাংলাদেশের ভূপ্রকৃতিতে খাল, পুকুর, নিম্নভূমি ও floodplain শহরের বাড়তি বা অব্যবহৃত জমি নয়। এগুলো প্রাকৃতিক drainage system-এর অংশ। কিন্তু land value বাড়লে এসব জায়গার ওপর development pressure-ও বাড়ে। এর ফল আমরা বর্ষাকালে দেখি।

ঢাকা ও আশপাশের নদী ও খালের পানি দূষণ এবং drainage-এর সমস্যার সঙ্গে দ্রুত নগরায়ণ, অপর্যাপ্ত sanitation ও solid-waste management-এর সম্পর্ক এখন বড় নগর কর্মসূচিতেও গুরুত্ব পাচ্ছে। তাই blue-green infrastructure-কে optional amenity হিসেবে দেখার সুযোগ কমছে।

একটি খাল drainage corridor-এর পাশাপাশি ecological resource এবং public landscape হতে পারে। একটি পুকুর stormwater ধরে রাখতে পারে, neighbourhood-এর microclimate-এ ভূমিকা রাখতে পারে এবং open space-এর অংশ হতে পারে। আজ একটি জলাধার ভরাট না করার লাভ সরাসরি দৃশ্যমান নাও হতে পারে। কিন্তু সেটি হারানোর মূল্য পরে waterlogging, pumping, drainage investment ও environmental degradation-এর মাধ্যমে দিতে হয়।

ঢাকার বাইরে এখনই বড় সুযোগ

বাংলাদেশের planning discussion-এ ঢাকা স্বাভাবিকভাবেই বেশি জায়গা নেয়। কিন্তু আগামী দিনের বড় সিদ্ধান্তগুলোর অনেকটাই নেওয়া হবে secondary city ও growing municipality-গুলোতে। বর্তমানে দেশের বিভিন্ন city cluster-এ climate-resilient roads, footpaths, public space, transport facility এবং urban management উন্নয়নের জন্য বড় বিনিয়োগের উদ্যোগ নেওয়া হয়েছে। এগুলোর একটি উদ্দেশ্য secondary city-গুলোকে কার্যকর growth centre হিসেবে গড়ে তোলা এবং ঢাকার ওপর অতিরিক্ত চাপ কমানো।

এই জায়গায় রাজশাহীর বর্তমান planning direction-ও প্রাসঙ্গিক। ২০২৫ সালে চূড়ান্ত করা ২০২২–২০৪১ মেয়াদের master plan-এ শহরের পাশাপাশি আশপাশের পৌরসভা ও ইউনিয়ন এলাকাকে বিবেচনায় নেওয়া হয়েছে এবং ভবিষ্যৎ residential-commercial development-এর সঙ্গে road, footpath, playground ও water reservoir রাখার কথা বলা হয়েছে।

অর্থাৎ শহরের বর্তমান administrative boundary-এর বাইরে growth কোথায় যাবে, সেটিও আগে থেকে ভাবার চেষ্টা রয়েছে। এটাই secondary city-গুলোর জন্য সবচেয়ে বড় সুযোগ।

ঢাকায় যে সমস্যার সমাধান করতে এখন বিপুল অর্থ, জমি অধিগ্রহণ ও সামাজিক ব্যয় প্রয়োজন, একটি growing city-তে সেটি আগেই এড়ানো সম্ভব।

- Future road reserve আগে রাখা যায়।
- পুকুর ও খাল সংরক্ষণ করা যায়।
- Neighbourhood গড়ে ওঠার আগেই school ও playground-এর জমি রাখা যায়।
- ভবিষ্যৎ public transport corridor-এর right-of-way নিশ্চিত করা যায়।

একবার ঘনবসতি ও fragmented land ownership তৈরি হয়ে গেলে এগুলো অনেক কঠিন হয়ে যায়। তাই আমাদের planning principle খুব সাধারণ হতে পারে:

আগে ভবিষ্যতের প্রয়োজনীয় জায়গা নিশ্চিত করি, তারপর শহরকে বাড়তে দিই।

Together We Deliver: একই শহরের জন্য একসঙ্গে পরিকল্পনা

বাংলাদেশের নগর ব্যবস্থাপনার একটি বাস্তব সমস্যা institutional fragmentation। একই এলাকার road, drainage, water supply, utility, traffic management এবং land-use control বিভিন্ন প্রতিষ্ঠানের দায়িত্বে

থাকতে পারে। ফলে নতুন road তৈরির পর আবার utility কাজের জন্য সেটি কাটা হয়। Drain তৈরি হলেও downstream connection যথেষ্ট থাকে না। নতুন development অনুমোদনের পর traffic pressure সামলাতে আলাদা project নিতে হয়। কোনো প্রতিষ্ঠান তার নিজস্ব প্রকল্প সফলভাবে শেষ করলেও neighbourhood-এর সামগ্রিক ফল ভালো নাও হতে পারে।

"Together We Deliver"-এর অর্থ তাই শুধু একসঙ্গে কাজ করা নয়। একই spatial vision ধরে কাজ করা। বড় শহরগুলোতে সংশ্লিষ্ট সংস্থার তিন থেকে পাঁচ বছরের planned investment একটি shared spatial platform-এ আনা গেলে road, drainage, utility, transport এবং land development-এর conflict construction-এর আগে planning stage-এই দেখা সম্ভব।

Together We Thrive: মানুষ beneficiary নয়, partner

কোনো পাড়ার বাসিন্দারা এমন অনেক তথ্য জানেন যা কোনো map বা database-এ থাকে না। কোন গলিতে অল্প বৃষ্টিতেই পানি জমে, কোথায় প্রায় দুর্ঘটনা ঘটে, কোন খালি জায়গাটি শিশুরা ব্যবহার করে কিংবা কোন জায়গায় রাতে নারীরা যেতে স্বস্তি বোধ করেন না-এই local knowledge পরিকল্পনার জন্য গুরুত্বপূর্ণ।

Participation তাই শুধু stakeholder meeting বা public hearing-এ সীমাবদ্ধ থাকা উচিত নয়। Ward বা neighbourhood পর্যায়ে নিয়মিত Community Planning Forum করা যেতে পারে। সেখানে মানুষ তাদের এলাকার সমস্যা map করবে, priority নির্ধারণে অংশ নেবে এবং আগের সিদ্ধান্তের অগ্রগতি জানতে পারবে। তখন community আর development-এর শেষ পর্যায়ের beneficiary থাকবে না; planning process-এর অংশ হবে।

Together We Sustain: নির্মাণের পরও পরিকল্পনা থাকে

আমাদের development culture-এ নতুন project দৃশ্যমান, maintenance তুলনামূলক কম দৃশ্যমান। কিন্তু পাঁচ বছর পর footpath ব্যবহারযোগ্য আছে কি না, drain নিয়মিত পরিষ্কার হচ্ছে কি না, park-এর আলো জ্বলছে কি না, নতুন লাগানো গাছ বেঁচে আছে কি না-এসব দিয়েই development-এর স্থায়িত্ব বোঝা যায়।

তাই urban project-এর design stage-এই operation and maintenance-এর দায়িত্ব, অর্থায়ন এবং monitoring-এর ব্যবস্থা নির্ধারণ করা প্রয়োজন। কারণ sustainable community শুধু কিছু নির্মাণের মাধ্যমে তৈরি হয় না। যা তৈরি হয়েছে, সেটিকে দীর্ঘদিন কার্যকর রাখাও planning-এর অংশ।

বাংলাদেশের শহর বড় হবেই। প্রশ্ন হলো সেই growth আমরা পরে গিয়ে সংশোধনের চেষ্টা করব, নাকি আজই তাকে সঠিক পথে পরিচালিত করব। সব পরিবর্তনের জন্য mega project প্রয়োজন হয় না। একটি usable footpath, একটি সংরক্ষিত পুকুর, একটি কার্যকর drain, একটি shaded public space, একটি নিরাপদ school crossing কিংবা কয়েকটি প্রতিষ্ঠানের সময়মতো coordination একটি neighbourhood-এর জীবন বদলে দিতে পারে।

বাংলাদেশের নগরায়ণ থামবে না। তাই আমাদের লক্ষ্য শহরের বৃদ্ধি থামানো নয়; সেই বৃদ্ধিকে বাসযোগ্য, অন্তর্ভুক্তিমূলক এবং দীর্ঘমেয়াদে টেকসই কমিউনিটি গঠনের দিকে পরিচালিত করা। কারণ শহর বিনিয়োগে বড় হতে পারে। কিন্তু ভালো কমিউনিটি পরিকল্পনা করেই গড়ে তুলতে হয়।

Planning for Resilient and Inclusive Communities in Coastal Bangladesh

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Introduction

A great community does not happen by chance. It is built through thoughtful planning, cooperation, and a clear understanding of the needs of the people who live there. The theme of World Town Planning Day 2026, "GREAT COMMUNITIES ARE BUILT ON PLANNING," reminds us that planning is not only about roads, buildings, and land use. It is also about creating places where people can live safely, access opportunities, protect the environment, and feel that they belong.

This is especially important in coastal Bangladesh, where communities face rapid urban growth, climate-related risks, environmental pressure, and limited resources. Cox's Bazar and other coastal areas show both the opportunities and challenges of development. A well-planned approach can help these communities become safer, more inclusive, and more resilient while protecting their natural environment.

Planning Beyond Buildings

When people hear the word "planning," they often think about physical infrastructure. Roads, drainage systems, housing, schools, hospitals, markets, and public spaces are certainly important, but good planning goes beyond physical structures. It connects different needs and considers how decisions made today will affect people in the future. For example, a new road can improve mobility, but if drainage is ignored, the same area may face waterlogging. A new residential area can provide housing, but if schools, healthcare, public transport, and open spaces are not considered, the community may still struggle. Therefore, planning should look at the whole community rather than individual projects.

Good planning should also consider different groups of people. Children, young people, women, older persons, persons with disabilities, low-income families, and other vulnerable groups may experience the same city differently. Their needs should be part of the planning process from the beginning.

The Coastal Challenge

Coastal communities in Bangladesh are closely connected to the environment. At the same time, they are exposed to hazards such as cyclones, flooding, salinity, erosion, and waterlogging. Rapid population growth and unplanned development can increase these pressures.

Cox's Bazar is a useful example of why integrated planning matters. The area has important tourism, economic, environmental, and social value. It also contains sensitive ecosystems and communities whose livelihoods depend on natural resources. Development that ignores these relationships may create short-term benefits while producing long-term problems.

Resilient planning should therefore identify risk areas, protect natural systems, improve infrastructure, and make essential services accessible. Development should not simply mean building more. It should mean building better, in appropriate locations and in ways that reduce future risks.

People-Centered Planning

One of the most important elements of a great community is meaningful participation. Local people understand their neighborhoods in ways that planners and institutions may not always see from maps or statistics. They know where water collects during heavy rain, which roads become difficult to use, which public spaces feel unsafe, and which services are missing.

For this reason, community consultation should not be treated as a formality. Young people can also play an important role in this process. They can contribute ideas, collect local information, raise awareness, use digital tools, and communicate community concerns. As a young person involved in volunteer activities, I have seen how community participation can turn small ideas into practical action. Volunteering has also taught me that people are more likely to support initiatives when they understand the purpose and feel that their voices matter. Town planning can benefit from the same principle: planning with communities rather than planning only for communities.

Green and Climate-Resilient Communities

Environmental protection should be a core part of urban and regional planning. Coastal communities need green spaces, healthy water systems, proper waste management, tree cover, and protection of natural areas. These are not simply aesthetic features. They can contribute to healthier and more resilient communities.

Planning should encourage efficient public transport, safe walking and cycling opportunities, appropriate land use, renewable energy, and climate-resilient infrastructure. Natural features such as wetlands, vegetation, and coastal ecosystems should be considered valuable parts of the planning system.

At the same time, climate resilience should be connected with everyday life. A resilient community is not only one that can respond to a cyclone. It is also one where people have access to safe housing, clean water, healthcare, education, transportation, and reliable communication. Resilience is therefore both an environmental and a social goal.

The Role of Young People

Young people are not only future citizens; they are present stakeholders in the communities they live in. Their ideas and energy can contribute to better planning. Schools and colleges can

introduce students to basic concepts of sustainable development, disaster preparedness, environmental responsibility, and community participation.

Youth-led mapping, awareness campaigns, clean-up activities, local surveys, and digital storytelling can help identify community issues and communicate them to decision-makers. Partnerships among educational institutions, local government, planners, civil society, and youth organisations can create practical opportunities for participation.

Young people can also help bring technology into community planning. Digital maps, open data, mobile-based surveys, and social media can make information easier to collect and share. However, technology should support human participation rather than replace it. Local knowledge and direct engagement remain essential.

From Plans to Action

A good plan has value only when it can be implemented. This requires coordination among planners, local authorities, communities, professionals, educational institutions, and development organisations. Plans should have realistic priorities, clear responsibilities, appropriate budgets, and mechanisms for monitoring progress.

Small-scale actions can also support larger planning goals. Improving a local drainage system, creating a safe public space, protecting a green area, improving waste collection, or making a road safer for pedestrians may directly improve daily life. These actions can build public trust and demonstrate the practical value of planning.

Planning should also be flexible. Communities change over time because of migration, economic development, climate impacts, technology, and changing social needs. Regular review and community feedback can help ensure that plans remain relevant.

Conclusion

The idea that “GREAT COMMUNITIES ARE BUILT ON PLANNING” is ultimately about people. Roads, buildings, parks, and infrastructure are important, but a successful community is one where people can live safely, participate in decisions, access opportunities, and enjoy a healthy environment.

For coastal Bangladesh, planning must connect development with resilience, inclusion, environmental protection, and community participation. Cox’s Bazar and other coastal communities have the opportunity to demonstrate how thoughtful planning can support both people and nature.

As a young citizen, I believe that better communities can be created when planners listen to local people and when communities take an active role in shaping their future. Planning should not be seen as a barrier to development. It should be understood as a tool for making development safer, fairer, more sustainable, and more meaningful.

Great communities are built when good planning becomes a shared responsibility.

Great Communities are Built on Planning: Lessons from Bangladesh Cities, Slums and Deltas

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Introduction

Great communities are not built by chance. They are built when planning turns ordinary decisions into lasting public good. A safe route to school, a drain carrying monsoon rain from a home, or a market road that lets a farmer sell vegetables before they spoil, each begins with a choice made before need becomes crisis. Planning decides where roads go, how water moves, where families build, which services arrive first, and whose voice shapes a neighborhood. When that process is early, inclusive, and enforced, communities grow stronger and fairer. When delayed, growth becomes inequality, flooding, congestion, and insecurity.

Bangladesh makes this truth visible. It is one of the fastest-urbanizing and most densely populated countries, home to more than 165 million people [1], with roughly 41 percent living in urban areas [2] and Dhaka projected to become the world's largest city by 2050 [3]. In this compact and climate-exposed country, planning is not a technical exercise kept inside government offices. It is the difference between a settlement that floods and one that adapts, between a slum that remains invisible and a community that gains services, savings, and security. This paper argues that great communities, in Bangladesh and beyond, are built on planning: physical planning that anticipates growth, social planning that gives residents a real voice, and long-term planning that protects the future as carefully as it solves today's problems.

What Planning Really Means for a Community

For great communities, planning is not paperwork. It is public leadership in practical form. It turns space, services, and time into shared security. It begins with physical choices: where homes safely stand, how roads connect people to work and school, where drains carry water, and which public spaces hold a neighborhood together. It then becomes social choice: who takes part, whose needs are heard, and whether local institutions turn priorities into services. Finally, it becomes long-term choice: whether today's decisions protect the next generation or leave them exposed to flood, displacement, and costly repair. In Bangladesh, this matters deeply. With high population density, rapid urban growth, and climate risk, one weak decision can affect thousands. There is little spare land, infrastructure, or margin for error. Communities become great when planning is early, inclusive, enforced, and built to last.

When Planning Is Missing, The Dhaka Story

Dhaka shows what happens when the promise of planning is overtaken by growth. Bangladesh's urban population rose from about 5 percent of the national total in 1960 to more than 40 percent by 2023 [4], and roughly half of city dwellers now live-in informal settlements

with limited access to basic services [4]. These figures show the cost of communities expanding faster than services, land use, drainage, housing, and transport can be organised. Dhaka's challenge has never been a lack of plans. Since Patrick Geddes first proposed a development scheme for the city in 1917, the capital has been guided, on paper, by the Dhaka Metropolitan Development Plan of 1995–2015, the Detailed Area Plan of 2010, and the Dhaka Structure Plan of 2016–2035 [5]. The lesson is clear: great communities are not built by plans that sit on shelves. They are built when plans shape decisions, control land, protect public space, and reach people before crisis defines their lives.

The Detailed Area Plan of 2010 illustrates this gap between vision and delivery. It failed largely because enforcement came late, government agencies worked in silos, and unauthorised construction continued on land and wetlands set aside for conservation [6]. The failure was institutional as much as technical. Analysts note that RAJUK, Dhaka's main planning authority, has often acted more as a real-estate regulator issuing permits than as a public planning body able to defend a coherent city vision [7]. Successive plans also failed to apply lessons from earlier plans [8]. Each reset weakened continuity, and every delay allowed unplanned growth to harden into daily reality. The results are visible across the city: canals and wetlands that once absorbed monsoon water have been filled, producing chronic waterlogging; congestion consumes time, income, and productivity; and weak zoning has pushed low-income families into flood-prone, poorly serviced settlements because no planned, affordable alternative arrived in time.

The Dhaka story strengthens the central argument of this paper. Planning is not the act of producing a document. It is the public discipline of making decisions early, enforcing them fairly, and staying the course long enough to change how people live. A city can have many plans and still fail its communities if those plans lack authority, continuity, and political backing. In that sense, Dhaka is not evidence against planning. It is proof that great communities are built only when planning moves from paper into power, and from intention into everyday life.

When Planning Works, Community-Driven Success

Bangladesh also shows the other side of the argument: great communities can be built when planning begins with the people who know the place best. The strongest example is not a top-down master plan, but a neighbourhood-led model that made poor residents' active planners of their future. Between 2008 and 2015, the Government of Bangladesh, UNDP, and the UK's Department for International Development implemented the Urban Partnerships for Poverty Reduction programme across thirty towns and cities, reaching about three million urban poor people [9]. Its strength was not only in what it built, but in how it planned. The programme organised residents of poor settlements into Community Development Committees, which identified local priorities, negotiated with municipal authorities, and directly managed funds for roads, drains, water points, and latrines. It built on community action planning, but went further by turning residents from beneficiaries into decision-makers [9].

The results show what planning can achieve when it is owned by the community. More than fifty-five thousand slum residents saved about BDT 12 crore through these committees. In Gopalganj municipality, 346 families evicted from their earlier settlement worked with local government and the programme to identify vacant public land, secure a ninety-nine-year lease, and design and build a low-cost housing settlement through a genuinely consultative process [10]. In Korail, one of Dhaka's largest informal settlements, the same planning logic combined water, sanitation, roads, and drainage with social and economic support. An independent assessment found the intervention successful largely because communities were deeply involved in design and delivery. The remaining weakness, insecure land tenure, also reinforces the central lesson of this paper: community planning can transform daily life, but it needs institutional backing to protect those gains over time [11].

These examples prove that planning is strongest when shared. Instead of distant authorities designing settlements for residents, residents became co-authors of the plans that shaped their communities. Government and development partners added technical advice, finance, and legal support, but direction came from the people who lived with the consequences. That is why the improvements were more than physical upgrades. They created ownership, trust, and a practical base for maintenance. Bangladesh's community-driven experience gives the title its clearest human meaning: great communities are built on planning when the people most affected help decide what is built, where it is built, and how it will last.

Planning for the Long Term, The Bangladesh Delta Plan 2100

Great communities are built not only for today's needs, but for tomorrow's shocks. This is where long-term planning becomes decisive. As a low-lying delta nation exposed to cyclones, riverbank erosion, flooding, and rising seas, Bangladesh cannot afford to plan one project, one budget cycle, or one disaster at a time. It needs a horizon as long as the risks its people face. The Bangladesh Delta Plan (BDP) 2100, adopted in 2018, responds with a hundred-year integrated strategy for water, land, and climate resilience, the first plan of its kind developed for an entire delta anywhere in the world [12]. Its vision is clear: a safe, climate-resilient, and prosperous delta by the end of the century. Just as importantly, it commits to protecting the livelihoods of vulnerable communities under the principle of leaving no one behind [13], backed by a government pledge to direct roughly 2.5 percent of gross domestic product towards delta-related investment [13].

This long view has deep roots in Bangladesh's own practice of resilience. Long before BDP 2100, the government began constructing raised earthen refuges, known locally as Mujib Killa, in coastal areas from 1972 onward, giving vulnerable communities and their livestock a safer place during cyclones and storm surges [13]. The Delta Plan turns that instinct into a national planning principle. A community exposed to recurring shocks cannot simply rebuild after each cyclone, flood, or erosion event. It must prepare before danger arrives, with land decisions, infrastructure, finance, and local systems that reduce loss and protect dignity. This is the title's central message at its longest scale: great communities are built when planning looks beyond the next crisis and organises the future before risk becomes disaster. The ambition of BDP

2100 will matter most if Bangladesh avoids the implementation gap that weakened Dhaka's earlier plans. A hundred-year vision is powerful only when institutions carry it forward year by year, budget by budget, and community by community [13].

Principles for Building Great Communities Through Planning

Together, Dhaka's planning failures, Bangladesh's community-led successes, and the long horizon of the Delta Plan 2100 point to one lesson: great communities are built when planning is participatory, enforceable, and sustained. The principles below turn that lesson into a framework for any city, town, or settlement that wants growth to produce security, dignity, and lasting public value.

1. **Plan before growth becomes pressure.** Great communities are shaped ahead of demand. Dhaka's weakest plans were forced to chase development after land had already been filled, settlements had already expanded, and infrastructure was already under strain.
2. **Give planning institutions authority, not just responsibility.** A plan protects a community only when the institutions behind it can enforce land use, defend public space, and stop unauthorised construction before damage becomes permanent.
3. **Make residents co-authors of their community's future.** The Community Development Committees under UPPR worked because planning became a shared civic process. Residents set priorities with government, instead of waiting for solutions designed elsewhere.
4. **Turn physical upgrading into lasting security.** Roads, drains, water points, and housing improve daily life, but they last only when communities also have legal protection. Korail shows the risk of fragile tenure; Gopalganj shows the strength of planned security.
5. **Match the planning horizon to the scale of risk.** Climate risk, flooding, erosion, and sea-level rise cannot be managed through short budget cycles alone. A hundred-year delta requires decisions that protect people, land, and livelihoods across generations.
6. **Treat knowledge continuity as public infrastructure.** Great communities are not rebuilt from scratch with every new plan. They improve when institutions learn from what came before, preserve evidence, and carry proven lessons into the next cycle of decisions.

Conclusion

Bangladesh brings the title of this paper to life. In a crowded ward of old Dhaka, a resettled neighbourhood in Gopalganj, a settlement such as Korail, or a low-lying char facing the next cyclone, the difference between survival and progress is rarely luck. It is planning: early enough to guide growth, inclusive enough to earn trust, strong enough to be enforced, and sustained enough to outlast a project or political cycle. Dhaka shows the cost when plans remain weak or disconnected from implementation. Gopalganj and Korail show how communities gain dignity when residents shape decisions that affect their lives. The Bangladesh Delta Plan 2100 shows why communities must be planned across generations, not only after each crisis. Together, these lessons make the argument unmistakable: great

communities are not delivered by documents alone. They are planned with people, protected by institutions, and built to last.

References

[1] Bangladesh Bureau of Statistics. (2022). Population and Housing Census 2022: Preliminary Report. Ministry of Planning, Government of Bangladesh.

[2] World Bank. (2024). Urban population (% of total population) - Bangladesh. World Development Indicators.

[3] United Nations Department of Economic and Social Affairs, Population Division. (2025). World Urbanization Prospects 2025. United Nations.

[4] Hamza, A. T. (2025). Urbanization in Bangladesh: A comprehensive analysis of trends, determinants, and challenges. University of Dhaka.

[5] Mowla, Q. A. (2016). Review of Dhaka Structure Plan 2016–2035; Rajdhani Unnayan Kartripakkha. Detailed Area Plan official records.

[6] The Daily Star. (2022, 6 September). Can the new Detailed Area Plan cure Dhaka of its ills? Editorial.

[7] Hossain, S. (2018). Detailed Area Plan and its impact for Dhaka City. BIISS Journal, 39(4), 359–374.

[8] Mowla, Q. A. (2016). Review of Dhaka Structure Plan 2016–2035. Discussion of continuity across successive Dhaka structure plans.

[9] UN-Habitat Regional Office for Asia and the Pacific. (n.d.). Urban Partnerships for Poverty Reduction, Bangladesh; City2City Network. (n.d.). Urban Partnerships for Poverty Reduction Project in Bangladesh.

[10] United Nations Development Programme. (2019). Housing solutions for the urban poor in Bangladesh. UNDP Bangladesh.

[11] Degert, I., Parikh, P., and Kabir, R. (2016). Sustainability assessment of a slum upgrading intervention in Bangladesh. Cities, 56, 63–73.

[12] General Economics Division, Bangladesh Planning Commission. (2018). Bangladesh Delta Plan 2100, Abridged Version. Government of Bangladesh.

[13] Ministry of Foreign Affairs, Government of Bangladesh. (n.d.). Bangladesh Delta Plan 2100.

Land Zoning as a Tool for Guiding Sustainable Urban Growth: A Study of Chattogram Metropolitan Area

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Introduction

As per a United Nations report, published in 2018, 55% of the world's population lives in urban regions, and it is estimated that it would be 68% by the year 2050. Likewise, a census report of Bangladesh conducted in 2022 states that around 53.7 million people out of total population live in urban areas of the country, which is about 32% of its population (The Daily Star, 2026). This steady growth puts much pressure on land at the urban fringe, and in the absence of proper planning, it is usually the hills, wetlands, and agricultural lands that get converted first, raising the question of where different activities should actually take place. Land zoning is the planning tool that answers it. Zoning controls land use by dividing land into zones and regulating what kinds of buildings may be built and how many people may live in each zone (Britannica, n.d.). It also serves as a buffer between different conflicting land uses and helps protect the sensitive areas (Al Mamun et al., 2024). It is applied in Bangladesh through structure plans, master plans, and Detailed Area Plans (DAP), among other types of plans done by institutions such as the CDA in Chattogram. Its significance becomes apparent in its application in relation to sustainable development, which is described as the ability to satisfy the demands of the current generation without denying future generations the capacity to meet their demands (WCED, 1987). SDG target 11.3 promotes this concept in urbanization (United Nations, 2015). This requires sustainable development in which wetlands, canals, and hills are safeguarded to ensure safety of the city, while at the same time, benefits of development are shared in an equitable manner, and zoning is one of the important policies in ensuring this is achieved (Al Mamun et al., 2024).

Urban Growth & Sustainability Challenges in Bangladesh and Evolution of Land Zoning in Chattogram Metropolitan Area

Bangladesh's urbanization process ranks among one of the fastest in the world but is much slower than the urbanization process in most developed nations (The Daily Star, 2026). Urban population in the period between 2011 and 2022 increased by 11.5 million because of migration of 6 million people from rural to urban areas; however, owing to the lack of organization, urbanization has led to the problem of non-inclusive growth (World Bank, 2025). The rapid process of unorganized urbanization has resulted in inequality, sprawl, pollution, and environmental degradation (ASEF, 2021). The lack of proper governance has also led to these issues; urban policy was adopted in Bangladesh only in 2025 (The Daily Star, 2026). It

has also been noted that according to an experienced planner from CUET, the development in Bangladesh was politically motivated rather than technologically planned (Hasan, in The Daily Star, 2026).

The Chattogram Metropolitan Area (CMA) shows how zoning has evolved under these pressures. The area has had three master plans, in 1961, 1995 and 2008 (The Business Standard, 2026).

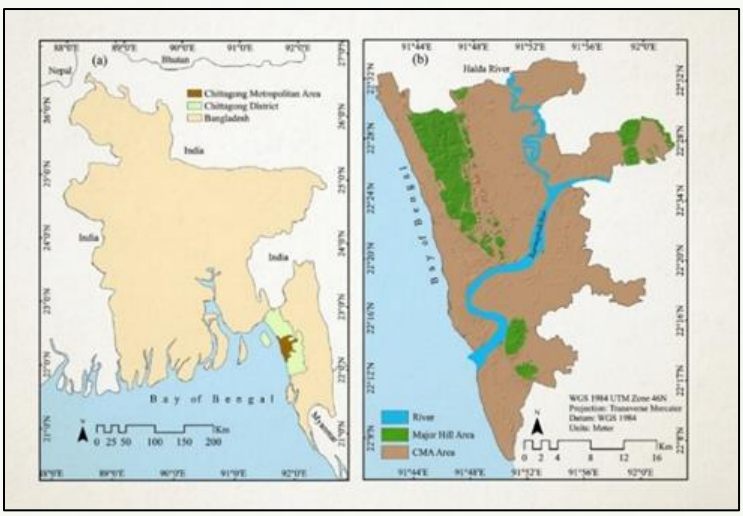


Figure 1: Map of Chattogram Metropolitan Area (CMA) within Bangladesh. (Source: Al Mamun et al., 2024)

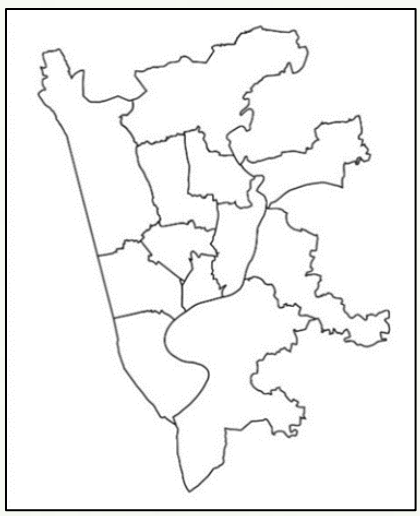


Figure 2: detailed planning zones of the chattogram metropolitan area. (Source: cda, 2008).



Figure 3: Structure Plan and Land-use Framework of Chattogram Metropolitan Area, 1995–2015. (Source: CDA, 2008).

Under the DAP, the metropolitan planning area is divided into 12 Detailed Planning Zones, six within Chattogram City Corporation (CCC) and six in the surrounding periphery (CDA, 2008). Yet intentions have often not turned into action. In Detailed Planning Zone 7 (Sitakunda, on the metropolitan periphery), the 1995 master plan designated the coastal strip as a No Development Zone, but the DAP recommended reducing vegetation coverage from 46.2% to 32.6% and allocated around 25% of the coast for development, despite its vulnerability to disasters. The DAP also prohibited industrial activity within 300 m of the foothills, but industries have been set up next to the hills without the necessary legal approval and environmental impact assessment (Al Mamun et al., 2024). The zoning framework is now being revised again. The CDA's proposed Metropolitan Master Plan 2025–2050 envisions a "One City, Two Towns" approach with six zones, detailed plans for Anwara, Bakalia and Agrabad, and protection of almost 40,000 ponds and other water sources (The Business Standard, 2026).

Environmental Consequences of Zoning Gaps

The consequences of these deficiencies have been quite apparent in the environment as well. Vegetation cover in Detailed Planning Zone 7 declined from over 67% in 1997 to 52% in 2017, while the built-up area rose to 26% from 13%.

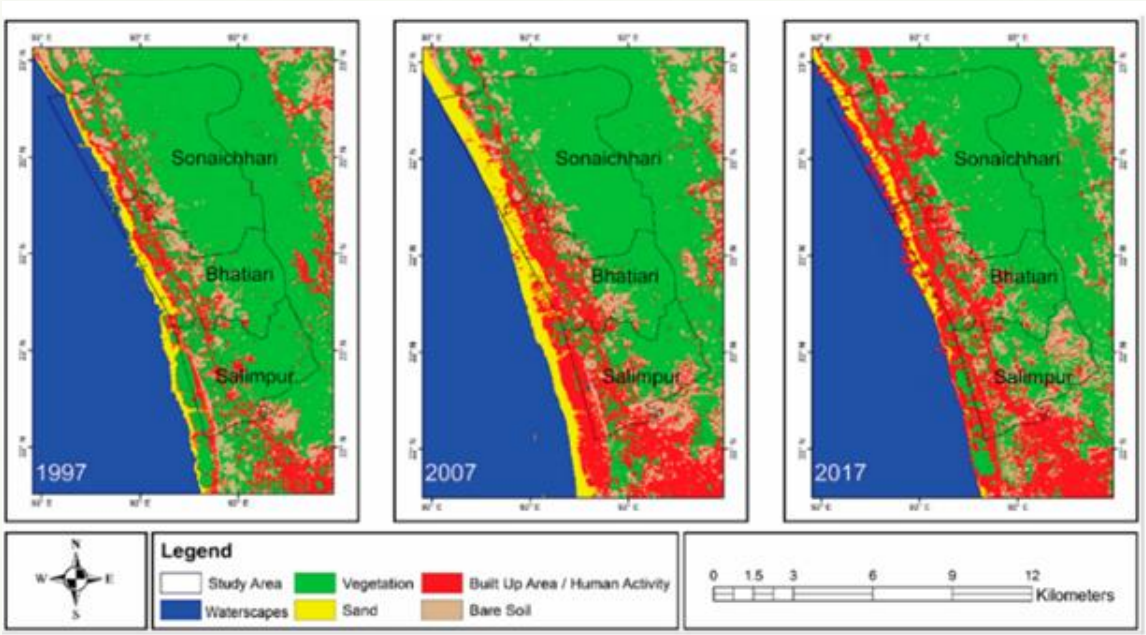


Figure 3: Land Use/Land Cover Changes in DPZ-07, 1997–2007–2017 (Source: Al Mamun et al., 2024)

According to the DAP, 48 km of canals would be rehabilitated and 286 ponds conserved in this zone. However, satellite images revealed that water body area declined, while afforestation achieved only 6.5% of the target (Al Mamun et al., 2024). A similar trend of negligence is apparent throughout the whole metropolitan area: retention areas, farmland and wetlands next to urban zones have been filled despite their ecological significance, and hill cutting resulted in sand entering the drainage system and canals. Record rainfall occurred in Chattogram in

July 2026 after 42 years (Hasan, in The Daily Star, 2026). The issue is that of plan-implementation gap. Risks were adequately outlined in the master plans; however, implementation was never considered a priority, and four new canals proposed in the 1995 drainage plan were never pursued. Fragmented institutions, encroached canals, and the absence of proper waste collection - 3,000 tons produced vs. 2,000 tons collected per day - exacerbated the situation (Hasan, in The Daily Star, 2026).

Future Risks if Current Trends Continue

Following the current trends and evidence provided above, the pressure on the land use will continue. By 2050, it is estimated that around 56% of the total population will reside in urban areas in Bangladesh (ASEF, 2021). Based on the DAP, it is projected that there will be 1,313 hectares of growth in built-up land and more than 14% decline in vegetation land in Detailed Planning Zone 7 (Al Mamun et al., 2024). This trend is also observed in other parts of the metropolitan city: the uncontrolled expansion of land use may continue to the hills and coasts, and the study of Chattogram through satellite imagery during 2003 to 2023 has revealed expanding uncontrolled built-up land and reduction in cropland area (Heliyon, 2023). Unexpected rainfall will only add to the problem of waterlogging in the area since the drainage system of the area is already very weak. The dry-season salinity in the Karnaphuli region had already compelled WASA to import water from 70 km distant Kaptai. Even the Tk 12,000 crore drainage project may not work if the city corporation does not have enough workforce and budget for its maintenance (Hasan, in The Daily Star, 2026).

Way Forward: Making Zoning Work for Sustainable Growth

Solving these issues begins with making the master plan binding for all agencies, ensuring that the city corporation, CDA, WASA and others work within one common framework (Hasan, in The Daily Star, 2026). Hills and wetlands must be firmly protected through a ban on hill cutting, replanting, and strict enforcement of the Natural Water Reservoir Conservation Act, so that ponds and wetlands can serve as retention areas (Hasan, in The Daily Star, 2026); CDA's digital database of water bodies is a good beginning in this direction (The Business Standard, 2026). Zoning should also incorporate green infrastructure, where canal banks are used as public green space, rainwater detention is required for construction permits, and water bodies and parks are created in every ward (Hasan, in The Daily Star, 2026). The author also proposes that any rezoning should require a public environmental impact assessment, given the lack of such assessment in development adjacent to the hills, as noted by Al Mamun et al. (2024). Citizen involvement is equally essential: residents have the opportunity to object to and amend the draft 2025–2050 plan until 30 September (The Business Standard, 2026), while continuous satellite and GIS surveillance can help identify violations (Al Mamun et al., 2024). Ultimately, zoning can support sustainable growth only if it is science-based, socially responsible, and enforceable. Chattogram's experience shows that the problem is not the absence of planning but the failure to implement it, and how well the 2025–2050 master plan

protects hills, wetlands and retention areas, and how far all agencies follow a shared vision, will decide zoning's role in the city's future.

References

Al Mamun, M. M., Nijhuis, S., & Newton, C. (2024). Sustainable urban planning challenges in the peri-urban landscape: Evaluating LULC dynamics and the policy effectiveness of the Chattogram Metropolitan Region, Bangladesh. Land, 13(8), 1157. https://doi.org/10.3390/land13081157

ASEF. (2021). Urbanisation in Bangladesh: Challenges and way forward (ASEFSU23 background paper). https://asef.org/wp-content/uploads/2021/11/ASEFSU23-Background-Paper_Sustainable-Urbanisation-in-Bangladesh-Dhaka.pdf

Britannica. (n.d.). Zoning. https://www.britannica.com/money/zoning-land-use

Chattogram Development Authority. (2008). Detailed Area Plan for the Chittagong Metropolitan Master Plan: Executive summary. https://cda.gov.bd/detailed-area-plan/

Heliyon. (2023). Mapping and monitoring land use land cover dynamics employing Google Earth Engine and machine learning algorithms on Chattogram, Bangladesh. https://www.cell.com/heliyon/fulltext/S2405-8440(23)08453-0

Rahman, M. S., Ahmed, B., & Di, L. (2017). Landslide initiation and runout susceptibility modeling in the context of hill cutting and rapid urbanization: A combined approach of weights of evidence and spatial multi-criteria. Journal of Mountain Science, 14(10), 1919–1937. https://doi.org/10.1007/s11629-016-4220-z

The Business Standard. (2026, August 2). Ctg draft master plan seeks to protect ponds, canals, hills. https://www.tbsnews.net/bangladesh/ctg-draft-master-plan-seeks-protect-ponds-canals-hills-1504121

The Daily Star. (2026). An urban breaking point we can no longer ignore. https://www.thedailystar.net/slow-reads/big-picture/news/urban-breaking-point-we-can-no-longer-ignore-4089681

The Daily Star. (2026, July 16). How Chattogram can end its recurring waterlogging crisis [Interview with M. R. Hasan]. https://www.thedailystar.net/slow-reads/big-picture/news/how-chattogram-can-end-its-recurring-waterlogging-crisis-4225336

United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development (Goal 11). https://sdgs.un.org/goals/goal11

United Nations. (2018). 68% of the world population projected to live in urban areas by 2050, says UN. United Nations Department of Economic and Social Affairs.

World Bank. (2025, December 18). How can cities in Bangladesh become engines of inclusive growth? https://blogs.worldbank.org/en/endpovertyinsouthasia/how-can-cities-in-bangladesh-become-engines-of-inclusive-growth-

World Commission on Environment and Development. (1987). Our common future. Oxford University Press.

Bridging The Policy- Practice Gap in Dhaka's Low-Income Housing

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Housing is more than the provision of a physical structure; it is a foundation for security, dignity, livelihoods, and participation in urban life. It is also closely connected to how cities are planned: where homes are located, how they connect to jobs and public transport, and whether residents can access essential services. Yet for many low-income households in Bangladesh, access to housing remains closely tied to the ability to pay, the availability of land, and proximity to employment. As Dhaka continues to attract people in search of economic opportunities, the pressure on its limited and increasingly expensive housing stock has intensified. The result is a persistent mismatch between the city's growing housing needs and the capacity of existing institutions, planning systems, and markets to provide affordable and adequate homes.

The Scale of The Crisis

Nearly 40 percent of Dhaka's population lives in slums characterized by overcrowding, insecure tenure, and minimal access to safe water, sanitation, and electricity. The formal housing market supplies only about 40 percent of the city's housing stock, and the public sector's own contribution has historically hovered around 10 percent, with most of that output priced for middle- and upper-income buyers. The consequence is a starkly dual housing market: those who can pay, build and buy formally; those who cannot are pushed into informal settlements, insecure rentals, and structures built from bamboo and straw. Studies cited in recent research show that over 89 percent of low-income families in Dhaka live in single-room dwellings, and low-income households often spend close to 45 percent of their income on housing, an extraordinary burden for what remains substandard shelter. One widely cited estimate suggests that 97 percent of the city's urban poor own no land at all. Nationally, Bangladesh's housing deficit is estimated at around 6 million units today and is projected to rise toward 10.5 million by 2030, with the bulk of that unmet demand concentrated in the affordable segment. These are not abstract figures. They describe millions of people who migrated to Dhaka pushed by rural poverty, landlessness, river erosion, and disaster, and pulled by the promise of work in garments, construction, and the informal economy, only to find that the city's housing system was never built with them in mind.

A Policy Framework That Promises More Than It Delivers

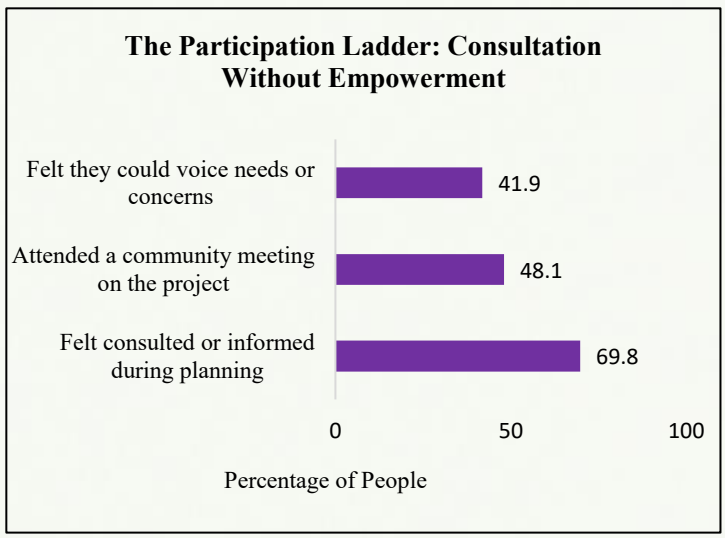
On paper, Bangladesh has not been silent on this problem. The National Housing Policy, first adopted in 1993 and revised in 2008, 2013, and 2016, recognizes housing as a basic right and commits the state to ensuring "accessibility of people from all strata of society to suitable housing." It calls for high-density, high-rise development on public land, the creation of urban

land banks from unused khas land, priority quotas for poor households, low-interest housing loans, and subsidies. Where slum communities must be relocated, the policy explicitly requires that resettlement preserve access to jobs, services, and transport, and that planning be participatory.

Since the mid-1990s, successive strategic plans, including the Dhaka Metropolitan Development Plan and later Detailed Area Plans, have shifted the government's role from direct provider to "enabler," inviting NGOs and private developers to share the burden of housing delivery. This is a reasonable and internationally common approach. The trouble in Dhaka has never really been the vision; it has been what happens after the policy is signed. Multiple government agencies, including the National Housing Authority (NHA), RAJUK, and the city corporations, share overlapping responsibility for housing the urban poor without clear coordination, and evaluations of flagship schemes such as RAJUK's Uttara Model Town have found that only a small fraction of its smallest, ostensibly affordable plots actually reached low-income families. Progressive policy language has repeatedly failed to translate into operational guidelines for the issues that matter most on the ground: upgrading informal settlements, building a functioning rental market, and securing tenure.

A Closer Look: What Happens When a Project Meets the Policy

A detailed evaluation of a completed National Housing Authority rental project for a relocated slum community in Mirpur, examined as part of ongoing research into Dhaka's low-income housing provision, illustrates this gap with unusual clarity. The project rehoused families from the Bauniabadh slum into newly built flats on formerly informal land, with rents fixed below market rate. Judged only by bricks and mortar, it succeeded: every household surveyed reported a structurally sound unit with running water, electricity, and sanitation, a decisive improvement over slum conditions, and satisfaction with housing quality was high.



But adequate housing is more than four walls, and the same evaluation, built around five criteria: affordability, accessibility, livability, sustainability, and community participation found that the project fell short on nearly every dimension beyond the physical structure. These criteria also highlight why housing projects must be considered as part of wider urban planning, rather than as isolated construction schemes. Beyond who got a flat, the survey asked how residents experienced the process of getting there. The results trace what the evaluation calls a "consultation without empowerment" pattern: engagement that looked reasonable at first

glance but thinned out sharply as it moved from information-sharing toward any real decision-making power. Nearly 70 percent of residents felt they had been consulted or informed during planning, but under half had actually attended a community meeting, and only 42 percent felt they could genuinely voice need or concerns. None of this means the project failed outright rather it delivered durable housing where none existed before. But it demonstrates precisely how a well-intentioned national policy can be only partially realized on the ground: institutional responsibilities were left unclear between agencies; no concessional financing or cross-subsidy mechanism accompanied construction, despite the policy explicitly calling for one; and the monitoring systems, land-bank inventories, and beneficiary tracking that the National Housing Policy requires were largely absent, so the project proceeded without the checks meant to hold it accountable to its own targets.



Mirpur Section-11: rental flats built for families relocated from the Bauniabadh slum

What Housing Planning Actually Requires

This case is a useful lens precisely because it is not an outlier. It reflects a pattern visible across Dhaka's government-led and NGO-driven housing initiatives alike: genuine gains in physical shelter, undermined by weak coordination, thin financing, limited transparency, and an almost total absence of the community's own voice in decisions that reshape their lives. Adequate housing, in the fullest sense used by planners and by UN-Habitat itself, is not simply a roof. A project can succeed on the physical measure below and still fail the family it was built for.

Table 1: The five pillars used to evaluate low-income housing projects in this research.

Affordability	Rent, fees, and utilities a low-income household can sustain without cutting into food or health spending
Accessibility	Short, affordable commutes to work, schools, and health services from the new location
Livability	Safe, adequately spaced housing with reliable water, sanitation, and electricity
Sustainability	Housing and household finances that hold up for years, not just at handover
Community Participation	Real influence for residents over design and allocation, plus a lasting voice after move-in

Bridging The Gap: A Practical Agenda

Closing this distance between policy ambition and lived reality does not require reinventing Bangladesh's housing policy. It requires implementing the policy that already exists, more rigorously and more transparently. Some strategies can be followed:

1. Establish a clear lead body or standing coordination mechanism with defined procedures linking the National Housing Authority, RAJUK, and city corporations to reduce overlapping responsibilities and ensure timely implementation of housing targets.
2. Legally guarantee and regularly audit land and housing quotas for low-income households, while maintaining systematic urban land inventories to ensure a reliable pipeline of suitable land for future housing projects.
3. Expand housing finance beyond fixed rental arrangements by introducing low-interest housing loans, rent-to-own schemes, and targeted utility support to reduce the recurring financial burden on low-income households.
4. Make beneficiary selection transparent through public application processes, clearly defined eligibility criteria, transparent or lottery-based selection where demand exceeds supply, and independent monitoring with community or NGO representation.
5. Integrate livelihoods into relocation planning by considering residents' workplaces, commuting patterns, and access to affordable transport when selecting and developing new housing sites.
6. Ensure meaningful community participation throughout the housing process, from site selection and project planning to post-occupancy management, supported by resident feedback mechanisms and tenant associations.
7. Strengthen monitoring and evaluation through digital tracking of land, beneficiaries, and project outcomes, with regular assessment against the National Housing Policy's targets to identify and address implementation gaps.

Bangladesh does not lack ambition on housing; its National Housing Policy already articulates most of what a fair and inclusive city requires. What it lacks, repeatedly, is the machinery to carry that ambition from the page to the plot. As Dhaka continues to absorb hundreds of thousands of new residents each year, the test for planning is not what the next policy document says, but whether the next housing project reaches the families it is meant for, at a cost they can bear, without severing them from the livelihoods that brought them to the city in the first place. Navigating change to shape better futures will remain unfinished business until implementation is treated as seriously as intention, and until the people who are meant to be housed are genuinely part of deciding how. Good planning is what turns a promise of shelter into a place to belong.

পরিকল্পনাহীন প্রবৃদ্ধি: বাড়ছে শহর, বাড়ছে সংকট

ফাহিম আহম্মেদ মন্ডল
সহকারী পরিচালক (নগর পরিকল্পনা), রিজিওনাল মিউনিসিপ্যাল সাপোর্ট ইউনিট, এলজিইডি, ময়মনসিংহ অঞ্চল
যোগাযোগঃ ০১৬১৫-২৭১৪৯২

একবিংশ শতাব্দীর তৃতীয় দশকে এসে বিশ্বজুড়ে নগরায়নের গতি-প্রকৃতি এক জটিল মোড় নিয়েছে। বাংলাদেশের মতো উন্নয়নশীল রাষ্ট্রের শহরগুলো এখন কেবল রঙিন স্বপ্নের কেন্দ্র নয়, বরং অপরিকল্পিত বিকাশের চরম বাস্তবতা। দ্রুত নগরায়নের সমান্তরালে তৈরি হয়েছে গভীর সংকট, 'বাসযোগ্যতার চরম বিচ্যুতি'।

কল্পনা করা যাক, একটি শহর; সরু রাস্তা; দুই পাশে গা ঘেঁষাঘেঁষি করে দাঁড়িয়ে থাকা আকাশচুম্বী বহুতল ভবন। হঠাৎ আগুন লাগলে ফায়ার সার্ভিসের গাড়িটার ঘটনাস্থলে প্রবেশের কোনো উপায় থাকে না। আবার একটু ভারী বৃষ্টি হলেই নতুন আবাসিক এলাকায় হাঁটুসমান পানি জমে যায়, কারণ যে খাল একসময় বৃষ্টির পানি বহন করত, তা এখন কংক্রিটের নিচে পুরোপুরি চাপা পড়েছে। কিংবা, তীব্র যানজটে রোগী নিয়ে অ্যাম্বুলেন্স আটকে আছে ঘণ্টার পর ঘণ্টা, কারণ রাস্তার দুই পাশে এমনভাবে ভবন ও স্থাপনা উঠে গেছে যে, প্রয়োজনে রাস্তা প্রশস্ত করার সুযোগও আর অবশিষ্ট নেই; এর সঙ্গে যোগ হয়েছে বিস্তৃত এলাকাজুড়ে থাকা অবৈধ যানবাহনের ছড়াছড়ি। এগুলো কোনো বিচ্ছিন্ন কল্পনা নয়; আমাদের বর্তমান নগরায়ণেরই নির্মম ও স্পষ্ট প্রতিচ্ছবি। প্রশ্ন হলো, আমরা কি সত্যিই শহর নির্মাণ করছি, নাকি কেবল কংক্রিটের স্তূপ বা ফাঁদ বাড়াচ্ছি?

বাংলাদেশের অর্থনৈতিক অগ্রগতি, শিল্পায়ন এবং সেবাভিত্তিক অর্থনীতির সম্প্রসারণের সঙ্গে নগরায়ণের গতি বাড়বে, এটি স্বাভাবিক। স্বাধীনতার পর থেকে সেই প্রক্রিয়া ক্রমাগত ত্বরান্বিত হয়েছে। অর্থাৎ বাংলাদেশের সামগ্রিক উন্নয়নের ভবিষ্যৎ অনেকাংশেই নির্ভর করে শহরগুলোর ভবিষ্যতের ওপর। কিন্তু শহরের পরিধি বাড়লেই একটি শহর উন্নত হয়ে যায় না। প্রকৃত নগরায়ন তখনই ঘটে, যখন জনসংখ্যা বৃদ্ধি, ভূমি ব্যবহার, অবকাঠামো, পরিবহন, পরিবেশ ও জনসেবার মধ্যে একটি ভারসাম্য বজায় থাকে।

এই ভারসাম্য রক্ষা করতে না পারলে শহর ধীরে ধীরে বাসযোগ্যতা হারাতে শুরু করে। একটি নির্দিষ্ট সংখ্যক মানুষের জন্য পরিকল্পিত এলাকায় যদি কয়েক বছরের ব্যবধানে বহুগুণ বেশি জনসংখ্যা ও আবাসিক ঘনত্ব তৈরি হয়, তাহলে শুধু ভবনের সংখ্যা বাড়ে না; বাড়ে রাস্তার ওপর চাপ, পানি সরবরাহের চাহিদা, ড্রেনেজ ব্যবস্থার ওপর নির্ভরতা, বিদ্যুৎ ব্যবহার, বর্জ্য উৎপাদন এবং জরুরি সেবার প্রয়োজনীয়তা। পরিষেবা অবকাঠামো যদি সেই অনুপাতে সক্ষমতা না বাড়ায়, তাহলে সংকট অনিবার্য। তখন জলাবদ্ধতা, যানজট কিংবা অগ্নিনিরাপত্তার সংকটকে বিচ্ছিন্ন ঘটনা হিসেবে ব্যাখ্যা করা যায় না; এগুলো হয়ে ওঠে পরিকল্পনার সীমাবদ্ধতার দৃশ্যমান প্রকাশ।

বাংলাদেশে নগর উন্নয়নের আলোচনায় দীর্ঘদিন ধরে ঢাকাকেই কেন্দ্র করে চিন্তা করা হয়েছে। অথচ বাস্তবতা হলো, ঢাকার বাইরে দ্বিতীয় সারির শহরগুলো এখন দেশের নগরায়ণের নতুন কেন্দ্র হয়ে উঠছে। বিভাগীয় শহর, জেলা সদর এবং আঞ্চলিক বাণিজ্যকেন্দ্রগুলোতে বিনিয়োগ, শিক্ষা, স্বাস্থ্যসেবা ও কর্মসংস্থানের সুযোগ বাড়ার সঙ্গে সঙ্গে মানুষের বসতি ও অর্থনৈতিক কর্মকাণ্ডও বাড়ছে। কিন্তু সেই অনুপাতে সব জায়গায় উন্নয়ন পরিকল্পনা, সড়ক নেটওয়ার্ক, গণপরিবহন, ড্রেনেজ, উন্মুক্ত স্থান কিংবা নাগরিক সেবার অবকাঠামো গড়ে উঠছে না। ফলে রাজধানীর বহু পুরোনো সমস্যাগুলো ধীরে ধীরে দেশের অন্যান্য শহরেও নতুন রূপে দেখা দিচ্ছে।

এখানেই বাংলাদেশের সেকেন্ডারি সিটিগুলোর গুরুত্ব। এগুলোকে শুধু 'ছোট শহর' হিসেবে দেখলে ভুল হবে। এসব শহরই আগামী দিনের নগরায়ণের বড় অংশ ধারণ করবে। মানুষের বসতি, কর্মসংস্থান, শিক্ষা, স্বাস্থ্য, ব্যবসা-বাণিজ্য এবং আঞ্চলিক অর্থনীতির নতুন কেন্দ্র হিসেবে এগুলোর ভূমিকা আরও বাড়বে। ফলে এখন যে সিদ্ধান্তগুলো এসব শহরকে ঘিরে নেওয়া হচ্ছে, সেগুলো শুধু বর্তমানের জন্য নয়; আগামী কয়েক দশকের নগর কাঠামোর ভিত্তিও তৈরি করছে।

কিন্তু আমাদের সবচেয়ে বড় সমস্যা হলো, আমরা অনেক সময় শহরের পরিবর্তনকে দেখি ঘটনার পর। কোথাও যানজট বেড়ে গেলে রাস্তা প্রশস্ত করার কথা বলি, জলাবদ্ধতা হলে ড্রেন পরিষ্কার বা নতুন ড্রেন নির্মাণের কথা ভাবি, জনসংখ্যা বেড়ে গেলে নতুন আবাসিক এলাকা তৈরি করি, আবার কোথাও ভবনের চাপ বেড়ে গেলে নতুন করে নিয়ন্ত্রণের কথা বলি। অর্থাৎ সমস্যার সৃষ্টি

হওয়ার পর সমাধানের চেষ্টা করি। অথচ পরিকল্পনার সবচেয়ে গুরুত্বপূর্ণ কাজই হলো ভবিষ্যতের চাপকে আগে থেকে অনুমান করা এবং সেই অনুযায়ী শহরের কাঠামো প্রস্তুত করা।

একটি শহরে কোথায় মানুষ বসবাস করবে, কোথায় কর্মসংস্থান তৈরি হবে, কোন এলাকায় বাণিজ্যিক কার্যক্রম বাড়বে, কোন পথে মানুষের চলাচল হবে, কোথায় স্কুল, হাসপাতাল, বাজার ও উন্মুক্ত স্থান প্রয়োজন হবে, কোথায় পানি জমবে, কোন খাল বা জলাধার ভবিষ্যতের পানি নিষ্কাশনে গুরুত্বপূর্ণ ভূমিকা রাখবে, এসব প্রশ্নের উত্তর আগে থেকে খুঁজে বের করাই পরিকল্পনার কাজ। পরিকল্পনা মানে শুধু একটি মাস্টার প্ল্যান তৈরি করে কোনো দপ্তরের আলমারিতে রেখে দেওয়া নয়; বরং, ভবিষ্যৎ শহরের সম্ভাবনা ও ঝুঁকি সম্পর্কে আগে থেকেই সিদ্ধান্ত নেওয়ার একটি প্রক্রিয়া।

এই জায়গাতেই 'উন্নয়ন' আর 'নির্মাণ'-এর পার্থক্যটি গুরুত্বপূর্ণ। একটি নতুন ভবন নির্মাণ দৃশ্যমান উন্নয়নের চিহ্ন হতে পারে, কিন্তু সেটি নিজে থেকে একটি শহরকে উন্নত করে না। একটি ভবনের অনুমোদন মানে শুধু একটি প্লটে নির্মাণের অনুমতি দেওয়া নয়; এর অর্থ সেই এলাকার সড়ক, পানি সরবরাহ, ড্রেনেজ, বিদ্যুৎ, বর্জ্য ব্যবস্থাপনা, অগ্নিনিরাপত্তা এবং অন্যান্য নগরসেবার ওপর অতিরিক্ত চাপ সৃষ্টি হওয়া। তাই কোনো এলাকায় নতুন উন্নয়ন অনুমোদনের আগে শুধু জমির ব্যবহার বা ভবনের নকশা নয়, সেই এলাকার বিদ্যমান অবকাঠামো অতিরিক্ত চাপ বহনের সক্ষমতা রাখে কি না, সেটিও বিবেচনা করা জরুরি।

কিন্তু পরিকল্পনার পরিধি এখানেই শেষ নয়। একটি শহরের রাস্তা, ড্রেন, ভবন কিংবা পার্ক আলাদা কোনো ব্যবস্থা নয়। এগুলো পরস্পরের সঙ্গে সম্পর্কিত। নতুন আবাসিক এলাকা তৈরি হলে সেখানে মানুষের চলাচল বাড়বে; চলাচল বাড়লে পরিবহন অবকাঠামোর প্রয়োজন হবে; মানুষের সংখ্যা বাড়লে পানি, বর্জ্য ও ড্রেনেজ ব্যবস্থার ওপর চাপ বাড়বে; একই সঙ্গে প্রয়োজন হবে স্কুল, স্বাস্থ্যসেবা, বাজার, উন্মুক্ত স্থান ও সামাজিক অবকাঠামো। অর্থাৎ শহরের একটি অংশে নেওয়া সিদ্ধান্তের প্রভাব অন্য অংশেও পড়ে।

সেকেন্ডারি সিটিগুলোর জন্য তাই সবচেয়ে বেশি প্রয়োজন সমন্বিত পরিকল্পনার। ভূমি ব্যবহার পরিকল্পনা একদিকে, পরিবহন পরিকল্পনা অন্যদিকে, ড্রেনেজ আরেকদিকে, পরিবেশ সংরক্ষণ ভিন্নদিকে, এভাবে খণ্ডখণ্ডভাবে শহরকে পরিচালনা করলে একটি পর্যায়ে গিয়ে ব্যবস্থাগুলো একে অপরের সঙ্গে সংঘর্ষে জড়িয়ে পড়ে। একটি সড়ক প্রশস্ত করা হলো, কিন্তু তার সঙ্গে আশপাশের ভূমি ব্যবহারের পরিবর্তন বিবেচনা করা হলো না; নতুন আবাসিক এলাকা তৈরি হলো, কিন্তু পানি নিষ্কাশনের পথ রাখা হলো না; বাণিজ্যিক কেন্দ্র তৈরি হলো, কিন্তু গণপরিবহন ও পার্কিংয়ের ব্যবস্থা করা হলো না; একটি খালকে অব্যবহৃত জমি মনে করে ভরাট করা হলো, অথচ কয়েক বছর পর সেই শহরই জলাবদ্ধতার সমস্যায় পড়ল!

প্রাকৃতিক ব্যবস্থার ক্ষেত্রেও আমাদের দৃষ্টিভঙ্গির পরিবর্তন প্রয়োজন। খাল, জলাধার, নিম্নাঞ্চল, নদী ও সবুজ এলাকা শুধু সৌন্দর্যের উপাদান নয়; শহরের প্রাকৃতিক অবকাঠামো। এগুলো পানি ধারণ ও নিষ্কাশনে সহায়তা করে, শহরের তাপমাত্রা নিয়ন্ত্রণ করে, জীববৈচিত্র্য রক্ষা করে এবং জলবায়ু পরিবর্তনের ঝুঁকি মোকাবিলায় গুরুত্বপূর্ণ ভূমিকা রাখে। একটি শহর যখন এসব প্রাকৃতিক ব্যবস্থাকে ধ্বংস করে তার জায়গায় কেবল কংক্রিট বসায়, তখন সে শুধু পরিবেশের ক্ষতি করে না; নিজের ভবিষ্যৎ নগর নিরাপত্তাকেও দুর্বল করে।

একইভাবে চলাচলের প্রশ্নেও আমাদের চিন্তার পরিবর্তন দরকার। শহরের যানজট দেখলেই শুধু রাস্তা প্রশস্ত করার চিন্তা করলে হবে না। মানুষ কোথা থেকে কোথায় যাচ্ছে, কেন যাচ্ছে, কোন ধরনের যাতায়াত ব্যবস্থা তাদের জন্য কার্যকর, হাঁটার জন্য নিরাপদ ফুটপাত আছে কি না, সাইকেল বা গণপরিবহনের সুযোগ আছে কি না, এসবও বিবেচনায় আনতে হবে। একটি ভালো শহর সেই শহর নয় যেখানে কেবল গাড়ি দ্রুত চলতে পারে; বরং সেই শহর যেখানে একজন শিশু, একজন বৃদ্ধ, একজন নারী কিংবা একজন প্রতিবন্ধী মানুষও নিরাপদে ও স্বাচ্ছন্দ্যে চলাচল করতে পারেন।

এখানেই পরিকল্পনার সঙ্গে 'কমিউনিটি'র সম্পর্ক তৈরি হয়। একটি ভালো কমিউনিটি শুধু অনেক মানুষ ও অনেক ভবনের সমষ্টি নয়। সেখানে মানুষের দেখা হওয়ার জায়গা থাকে, শিশুদের খেলার জায়গা থাকে, বয়স্কদের হাঁটার সুযোগ থাকে, স্থানীয় বাজার থাকে, শিক্ষা ও স্বাস্থ্যসেবার সুযোগ থাকে, মানুষ নিরাপদে চলাচল করতে পারে এবং তার চারপাশের পরিবেশের সঙ্গে একটি সম্পর্ক তৈরি হয়। তাই "Great Communities Are Built on Planning", এই বক্তব্যটি শুধু একটি সুন্দর স্লোগান নয়; এর মধ্যে নগর পরিকল্পনার একটি মৌলিক সত্য রয়েছে। একটি ভালো কমিউনিটি স্বতঃস্ফূর্তভাবে তৈরি হতে পারে, কিন্তু একটি নিরাপদ, অন্তর্ভুক্তিমূলক, সংযুক্ত ও দীর্ঘমেয়াদে বাসযোগ্য কমিউনিটি গড়ে তুলতে পরিকল্পনার প্রয়োজন হয়।

সেকেন্ডারি সিটিগুলো, বিশেষ করে টারশিয়ারি শহরগুলোর সবচেয়ে বড় সুযোগ এখানেই। বড় শহরগুলোর অনেক ভুল ইতোমধ্যে সেখানে স্থায়ী হয়ে গেছে। কোথাও রাস্তার জায়গা আর বাড়ানোর সুযোগ নেই, কোথাও জলাধার হারিয়ে গেছে, কোথাও

অপরিকল্পিত ঘনত্ব এতটাই বেড়েছে যে পরিবর্তনের খরচ অত্যন্ত বেশি। কিন্তু দেশের অনেক দ্রুত বর্ধনশীল দ্বিতীয় ও তৃতীয় সারির শহরে এখনও ভবিষ্যৎ কাঠামো নির্ধারণের সুযোগ রয়েছে। এখনই যদি কোথায় শহর বাড়বে, কোথায় বাড়বে না, কোন এলাকায় কী ধরনের উন্নয়ন হবে, কোথায় পরিবহন করিডোর থাকবে, কোথায় সবুজ ও জলাভূমি সংরক্ষণ করা হবে, এসব সিদ্ধান্ত নেওয়া যায়, তাহলে ভবিষ্যতের অনেক সংকট আগেই এড়ানো সম্ভব।

তবে এজন্য একটি বিষয় খুব পরিষ্কারভাবে বুঝতে হবে, সব শহরের জন্য একই পরিকল্পনা কার্যকর নয়। বাংলাদেশের একটি নদীকেন্দ্রিক শহর, একটি সীমান্তবর্তী বাণিজ্যকেন্দ্র, একটি শিল্পনির্ভর শহর কিংবা একটি কৃষি-অর্থনীতিনির্ভর জেলা শহরের সমস্যা ও সম্ভাবনা এক নয়। তাই, সেকেন্ডারি সিটিগুলোর উন্নয়ন পরিকল্পনাও হতে হবে তাদের নিজস্ব ভৌগোলিক, অর্থনৈতিক, সামাজিক ও পরিবেশগত বাস্তবতার ভিত্তিতে। এক শহরের পরিকল্পনা আরেক শহরে হুবহু বসিয়ে দিলেই পরিকল্পিত নগর তৈরি হবে না। প্রয়োজন হবে স্থানীয় বাস্তবতা বোঝা এবং সেই অনুযায়ী পরিকল্পনা করা। স্থানিক পরিকল্পনা অধ্যাদেশের বাস্তবায়ন এক্ষেত্রে গুরুত্বপূর্ণ ভূমিকা রাখতে পারে। এখানে স্থানীয় সরকার, উন্নয়ন কর্তৃপক্ষ, পরিকল্পনাবিদ, স্থপতি, প্রকৌশলী, পরিবেশ বিশেষজ্ঞ, প্রশাসন, ব্যবসায়ী, ভূমিমালিক এবং সাধারণ নাগরিক, সবার ভূমিকা রয়েছে। পরিকল্পনা কেবল পরিকল্পনাবিদের কাজ নয়, যেমন শহর নির্মাণও কেবল প্রকৌশলী বা স্থপতির কাজ নয়। একটি শহর একটি সমন্বিত ব্যবস্থা; তাই এর সিদ্ধান্ত গ্রহণও সমন্বিত হতে হবে। বিশেষ করে পরিকল্পনা বাস্তবায়নের জায়গায় আমাদের আরও শক্তিশালী হতে হবে। কাগজে একটি পরিকল্পনা থাকা আর বাস্তবে সেটি কার্যকর হওয়া এক বিষয় নয়। অনুমোদিত পরিকল্পনা ও বাস্তব ভূমি ব্যবহারের মধ্যে ব্যবধান থাকলে, আইন থাকলেও তার কার্যকারিতা কমে যায়। তাই পরিকল্পনার সঙ্গে তথ্য, নিয়মিত পর্যবেক্ষণ, প্রযুক্তিনির্ভর মনিটরিং, স্বচ্ছ অনুমোদন ব্যবস্থা এবং জবাবদিহি নিশ্চিত করা জরুরি। কোথায় কী পরিবর্তন হচ্ছে, কোন এলাকায় কী ধরনের উন্নয়ন হচ্ছে, কোথায় অবকাঠামোর ওপর অতিরিক্ত চাপ তৈরি হচ্ছে, এসব তথ্য নিয়মিতভাবে বিশ্লেষণ করতে হবে। আমাদের পরিকল্পনা ব্যবস্থায় আরেকটি গুরুত্বপূর্ণ পরিবর্তন দরকার, প্রতিক্রিয়াশীল পরিকল্পনা থেকে পূর্বানুমানভিত্তিক পরিকল্পনায় যাওয়া। কোনো এলাকায় জলাবদ্ধতা হওয়ার পর ড্রেন বানানোর পরিবর্তে আগে থেকেই পানি প্রবাহের পথ নির্ধারণ করা; যানজট চরমে পৌঁছানোর পর রাস্তা প্রশস্ত করার পরিবর্তে আগে থেকেই বিকল্প সড়ক ও গণপরিবহন ব্যবস্থা পরিকল্পনা করা; আবাসিক ঘনত্ব তৈরি হওয়ার পর স্কুল বা হাসপাতাল খোঁজার পরিবর্তে বসতি বিস্তারের সঙ্গে সঙ্গে সামাজিক অবকাঠামোর জায়গা নির্ধারণ করা; এটাই হতে পারে ভবিষ্যৎমুখী নগর পরিকল্পনার ভিত্তি। এই পরিবর্তন শুধু প্রশাসনিক সিদ্ধান্তে আসবে না; নাগরিক মানসিকতারও পরিবর্তন প্রয়োজন। আমরা যখন নিজেরাই ড্রেনের ওপর স্থাপনা তৈরি করি, জলাধার ভরাটকে মেনে নিই, ফুটপাত দখল করি, নির্ধারিত জায়গার বাইরে নির্মাণ করি কিংবা ব্যক্তিগত সুবিধার জন্য জনপরিসর সংকুচিত করি, তখন আমরাও শহরের ভবিষ্যৎকে প্রভাবিত করি। পরিকল্পিত শহর গড়তে হলে আইন মানাকে কেবল শাস্তির ভয় হিসেবে নয়, নাগরিক দায়িত্ব হিসেবে প্রতিষ্ঠা করতে হবে।

সবশেষে, আমাদের বুঝতে হবে যে একটি শহর একদিনে গড়ে ওঠে না, আবার একদিনে ধ্বংসও হয় না। প্রতিদিনের ছোট ছোট সিদ্ধান্ত, প্রতিটি নতুন সড়ক, প্রতিটি নতুন আবাসিক এলাকা, প্রতিটি ভবনের অনুমোদন, প্রতিটি খাল রক্ষা বা ভরাট, প্রতিটি উন্মুক্ত স্থান সংরক্ষণ কিংবা দখল, এসবের সমষ্টিই ভবিষ্যতের শহর তৈরি করে। আজ আমরা যে সিদ্ধান্ত নিচ্ছি, তার অনেকগুলো আগামী পঞ্চাশ বছর পরও শহরের ভৌত কাঠামোর অংশ হয়ে থাকবে। আজ যে রাস্তা সংকুচিত করছি, সেখানে আগামী প্রজন্মের মানুষ চলবে। আজ যে জলাধার হারিয়ে ফেলছি, তার মূল্য ভবিষ্যৎ প্রজন্মকেই দিতে হবে।

মনে রাখতে হবে, প্রতিটি নগর-নাগরিক সিদ্ধান্ত আসলে ভবিষ্যৎ প্রজন্মের সঙ্গে করা একটি চুক্তি। সেই চুক্তি যদি শুধু তাৎক্ষণিক লাভ বা স্বল্পমেয়াদি প্রয়োজনের ভিত্তিতে হয়, তাহলে ক্ষতি হবে পুরো শহরের। আর যদি পরিকল্পনা, জনস্বার্থ, পরিবেশ এবং দীর্ঘমেয়াদি নগর সক্ষমতার ভিত্তিতে হয়, তাহলে তার সুফল ভোগ করবে প্রজন্মের পর প্রজন্ম।

সর্বোপরি, বাংলাদেশের শহরগুলো এখন একটি গুরুত্বপূর্ণ সন্ধিক্ষণে দাঁড়িয়ে আছে। স্বভাবতই এগুলো বাড়বেই, এটি থামানো যাবে না, এবং থামানোও উচিত নয়। কারণ এই শহরগুলোর বিকাশ দেশের অর্থনীতি, কর্মসংস্থান এবং আঞ্চলিক ভারসাম্যের জন্য গুরুত্বপূর্ণ। প্রশ্ন হলো, তারা কীভাবে বাড়বে, এটা নিয়ে আলোচনা করতে হবে। চিরায়ত পরিকল্পনাহীনভাবে, যেখানে সমস্যা তৈরি হওয়ার পর একে একে তার সমাধান খোঁজা হবে? নাকি এমনভাবে, যেখানে ভবিষ্যতের জনসংখ্যা, অর্থনীতি, পরিবহন, পরিবেশ ও নাগরিক জীবনের প্রয়োজনগুলোকে আগে থেকেই বিবেচনায় নেওয়া হবে? সিদ্ধান্তটি আসলে আজই নিতে হবে; আমাদেরই নিতে হবে। কারণ একটি শহরের প্রকৃত পরিচয় সেখানে কতগুলো ভবন আছে, কতটি সড়ক আছে কিংবা কত দ্রুত তার ভৌত পরিধি বাড়ছে, সেটিতে নয়; বরং, সেখানে মানুষ কতটা নিরাপদে, স্বস্তিতে, সংযুক্তভাবে এবং মর্যাদার সঙ্গে বসবাস করতে পারে তার উপর। পরিকল্পনা থাকলে শহর শুধু বড় হয় না; শহর আরও ভালো হয়।

The Planned Neglect: How Uttara's Grid Failed to Build a community

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At 8 PM, walk down Sonargaon Janapath in Uttara- it will be a large well-lit street, with orderly boundary walls, and very few people outside. Go walking down a lane at the same time in Old Dhaka's Shakharibazar, and you will struggle for pavement space with the tea stalls, children and vendors. One of these locations is "planned. Technically, the other is not the other. However, when asked which of them acts like a community, the answer is not pretty for planners: Uttara, the most strictly planned neighbourhood in Dhaka, has been developing infrastructure for 40 years but has developed no community. It is not a coincidence that some people have been unable to do that. The plan contains it as a plan.

The project started as North Satellite Town in 1967 under the survey of Dhaka Improvement Trust and would not come into existence as RAJUK until 1987. In 1980, DIT renamed the project Uttara Residential Model Town and it was subdivided into nine sectors of which land was allotted to the police and the Civil Aviation Authority. Then a third phase came from 1999 when civic amenities (15-18 sector) occupied three-fourths of the project, schools, hospitals, business centres, playgrounds, community centres and plots for mosques and temples, and a park was promised in each block, according to the Daily Star at the time with RAJUK's very own project director Golam Mostafa. On paper, Uttara is a textbook new town: road hierarchy, land use zoning, open space designation, phasing. If planning was only cartography and good intentions, it would be the pride of the planning in Bangladesh.

A plan is not, however, a community. It is at best a set of conditions for the possible development of a community. So, Uttara's grid has been self-sabotaging for 40 years.

The Wall Where a Threshold Used to Be

In the old Dhaka, houses were not required to have walls for security until about 30 years ago. They had an elevated plinth, or raised bench, known as a mer, which was open and had a pitcher for water and a bench facing the lane, an invitation to sit, drink and chat. It made the street more of a part of the house than a barrier. In Uttara, the threshold has been replaced by a wall, often barbed wired and with a warning sign, since the house here is known primarily as property to be defended rather than a node in the street life of the community.

Defence even has trouble going on the right track. An old story about the neighbourhood says that one of the neighbours who was up next door's wall found no evidence of the guard hired for the house. More than fifty years ago, Jane Jacobs challenged the idea of security as the height of a boundary wall, contending that real security lies in the eyes on the street, those of neighbours who can see and recognize what's going on outside their door. 10 years later, Oscar

Newman developed the concept of defensible space: if you can see it and claim it as your space, it is yours for the taking; if it is hidden behind a wall and you can't see the space between house and street, it is not yours. Uttara's planners delineated plots. They weren't designing for the "eyes on street" and shared thresholds that create a street culture of self-policing. Thus, house after house was accumulated in the various sectors which were then walled and defensible, and were left to their solitude.

Let's take a fairly normal Uttara story. In the early 2000s, a family who were selling a joint household in Old Dhaka, desired to get the order and security that Uttara's reputation yielded, and then purchased a plot in the middle sectors. The boundary wall comes standard, not a choice. The children have a private car, a home tutor, and friends, not really encountered on the street outside, on which there's nothing to linger for. Two decades on, the parents have an asset that has gained a lot of value, and they can say the names of two of the families who live nearby beyond a nod. This is what they received in terms of safety and order as per the plan. They are not getting the community as a result of this year's theme of planning to build, but rather as a result of planning to build them.

A Neighbourhood Unit Without a Neighbourhood Centre

The division of Uttara into numbered sectors, separated by broad arterial roads, is based on the skeletal structure of a planning concept that was proposed for American suburbs more than 100 years ago: Clarence Perry's neighbourhood unit. The unit was supposed to be walkable, with a school and small commercial spine, designed to reduce the need for residents to cross a busy road for everyday activities. Uttara adopted that logic of boundaries from that model, from that sector, from that arterial ring, from that grid, but not the social logic. The commercial land was zoned, not woven in as a walkable spine; the plan is a consideration of how much time it will take to read, not for casual encounters.

The best proof is in the people's associations in Uttara. The formal plan has never been able to provide a proper public fresh market, hence the informal one, katcha bazaar, which is operated by a private businessman, is described in the profiles of the neighbourhood. The same accounts record a local welfare society (not the planning authority) negotiating for space for a community graveyard and resisting encroachment on Uttara Lake, which the planning authority has had to engage in more than once since. These are not the characteristics of a civic-minded populace that has flourished under good planning. These are indications of a population improvising the infrastructure the Mostafa that he promised the press, but never really delivered on a street-by-street basis.

The numbers also don't match the scale. Even by the 2011 census, the built-up area of Uttara supported almost five thousand persons per km² and Perry's model had never been planned for one school and one informal market. A neighbourhood unit is no use unless its civic heart is big enough. Reduce the core as the population continues to grow and people will either do without or find an alternative, which is what has happened.

When the Market Fixes What the Plan Wouldn't

Zoning maps do not prevent urban life from finding its mix when left to its own devices. Many areas of Uttara have been built up with coaching centres, clinics, boutiques and one of the country's most renowned schools, largely without the knowledge of the local authorities. Jane Jacobs would approve of the urge. In her 1961 opposition to single use zoning, she argued that safe, viable streets must have a variety of primary uses which means that people will be on the street at various times of day for different purposes. But Uttaras people wanted just that kind of life, and they were it themselves plot by plot, permit or no permit.

However, the plan had no provision for it; roads designed for the quiet of residential streets are now clogged, drains are filling with discarded polythene and manholes are left uncovered as no one has paid for the maintenance a busier street would require. Where Jacob's virtue, zoning, the organic, the human scaled was to be, it has become a liability, for the plan assumed its zoning categories were permanent not a hypothesis to revisit as each sector matured.

Uttara Is Not Fated, But It Is Warned

This experiment has been conducted in Dhaka earlier. It was planned in the same spirit of wide roads, lakes and platted lots and, for a generation, it served as a true residential neighbourhood. Next commercial buildings took the place of the lakeside houses, the quiet avenues were swallowed by traffic and now Gulshan is primarily used as a business address, and not as a place where children grow up and know their neighbours. Under pressure that its original infrastructure was never designed to handle, Uttara is already building new multi-storey buildings, including six and sixteen-storey apartment complexes, on the same road where Uttara is walking. In fact, RAJUK's own plans tell the same story, as their 1995 metro plan identified the stretch between Diyabari and the Turag River (now Sectors 14, 17 and 18) as a protected floodplain for the monsoon rains, but they have since all been filled in to house, schools, and metro infrastructure. It isn't just the city that's catching up with a planning authority that's redrawing its own flood-protection map, revision by revision. It is voting plan by plan for the density it has and the lack of drainage it requires.

Planning for People, Not Just for Plots

None of this gives an excuse for Uttara to be ignored, or for Old Dhaka's organic streets to be copied en masse, since a city of 20 million cannot operate on a basis of informality. It claims planning does not just involve plotting plots and drawing arterial roads. A sector plan which provides space for a market needs to be accompanied by funding and protection of that market. The road hierarchy needs to be considered both ways, through traffic away from residential streets, and the residential street friendly for people to want to be on, providing shade and spaces free from parked cars and building edges facing the street, not walling it off.

There are 2 changes that will cost RAJUK minimal, and have a significant impact. The community facility audit should be included with the road and drainage designs for every sector plan, and be reviewed after the plan has been approved, 5 and 10 years after it goes into operation. The welfare societies which are already organizing informally around the markets,

graveyards and lakes of Uttara should also be formally included in that process, since their work as planners is essentially already being done for them for free.

Uttara isn't a failure of implementation. It's a testament to the difference between planning for plots and property lines, and planning for traffic. It’s an example of how much difference it makes to plan for traffic vs. planning for the social life to happen after infrastructure. It doesn't often happen by itself. So, 40 years later, Uttara is the clearest example in Bangladesh that one has been able to find of planned neglect- where the map has been drawn correctly and yet one has to make a pilgrimage to some private trader to get vegetables, and to a welfare society to get a burial plot. Planning must create for a community, and not simply take it for granted that the grid will expand on its own, if the next Uttara, wherever RAJUK gets it from, is to be called the poster's slogan this year.

What Happens Next?

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The butterfly effect, as we all know, describes the idea that the seemingly insignificant flapping of a butterfly's wings on one side of the world can, through a complex chain of events, contribute to a tornado on the other side of the world. A simple action that appears to be inconsequential on its own, can have consequences far beyond what we imagine. This idea of chaos theory feels strangely relevant to Dhaka.

Here, what appears to be a small problem can bring an entire city to a standstill. A few hours of heavy rain can turn roads into rivers, bring traffic to a halt and leave thousands of people struggling to move. What seems like an ordinary environmental event can quickly become an urban crisis lasting for hours, sometimes more than a day.

But is this how a megacity is supposed to function?

The answer lies deeper than a single clogged drain, a flooded road or an inadequate pumping station. It lies somewhere within the way we have planned the city, the way we have built it, the way we use it, and perhaps most importantly, the way we think about our collective responsibility towards it. When we take a moment to observe Dhaka closely, the consequences of our actions and inactions become difficult to ignore.

Look at the way we build!

When constructing a building, our attention naturally turns towards our own plot of land. How can we make the best possible use of the limited space we have? How many floors can we build? How much space can we occupy? Where can we fit another room, another parking space, another extension? The surrounding neighborhood can take care of itself. But a city does not work that way.

A building does not exist in isolation. It shares roads, drainage systems, water networks, open spaces and access routes with everything around it. What may seem like a perfectly rational decision when viewed from the lens of individual property, can become part of a much larger problem when thousands of people make similar decisions. And this is where our individual choices begin to create collective consequences.

The same is true of our urban drainage.

We throw away a packet, a plastic bottle or a food container because, at that particular moment, we simply want it out of our hands. Where it goes next is someone else's problem. Perhaps it ends up in a drain. Perhaps it blocks a waterway. Perhaps it is carried further downstream. One piece of garbage may appear insignificant. But what happens when millions of people make the same decision every day?

The drain fills. The water cannot move. The rain has nowhere to go. The road floods. Traffic stops. Businesses suffer. People are stranded. And eventually, the consequences return to every

one of us. Including the person who threw away that seemingly insignificant piece of waste in the first place.

This is perhaps the most uncomfortable part of living in a city: **we cannot escape the consequences of our actions.**

We often speak about Dhaka's urban problems as though they belong to someone else. We blame the authorities, the city corporations, the developers, the planners, the building owners, the waste management system, the drainage system. And many of these institutions and actors do carry significant responsibility. Poor planning, weak enforcement, inadequate infrastructure and fragmented governance are real problems and cannot simply be dismissed as individual failures. But shifting all responsibility upwards does not solve the problem either.

Because while institutions shape the city at a large scale, millions of small decisions shape it every day. We build without considering what happens beyond our boundary. We occupy spaces without considering how that affects the movement of water. We dispose of waste without thinking about where it will eventually end up. We use public spaces as though they belong to no one, when in reality they belong to all of us.

We rarely ask the most important question: *What happens next?*

That question may be the missing link between individual action and urban planning. But at the same time, it would be equally unfair to place the burden entirely on the citizens. People do not make choices in isolation. Our decisions are shaped, often constrained, by the systems around us. If waste collection is inadequate, people will find ways of disposing of their waste. If housing is unaffordable, people will build wherever they can. If rules are poorly enforced, short-term individual interests will naturally take precedence over long-term collective well-being.

This is why Dhaka needs more than building codes and isolated interventions. We need proper planning that works from the institutional level to the policy level, while also involving the people who live in the city. Building codes are necessary, but relying on them alone will only prolong our urban distress. What we need is a collaborative approach where policymakers, planners, institutions and citizens can understand how their decisions intersect and what consequences those decisions may create over time.

There also needs to be a cognitive shift from constantly looking for someone else to blame, towards recognizing our own responsibilities. More meaningful urban dialogues with higher-level policymakers could help bridge the communication gap between everyday experiences at the individual level and decisions made at the policy level. People need to be able to ask not only what is being built, but why it is being built, where it is being built, and what happens next.

Instead of continuously finding new ways to build taller, shinier skyscrapers, perhaps we should first ask a more fundamental question: *why does two drops of rain practically disables a significant portion of the city?*

Investing in disaster-proofing the city should therefore become an essential part of urban development, not an afterthought. Strengthening drainage systems, protecting natural water retention areas, improving emergency access, and integrating Nature-based Solutions (NbS)

into the management of urban waterways can reduce the pressure that Dhaka faces every time nature tests its limits.

A city cannot be made resilient through infrastructure alone. It requires a shared understanding that every road, building, drain, waterway and piece of waste exists within a larger system. Our individual actions become collective realities. And when those realities are multiplied across millions of people, they become the city itself. Great communities, therefore, are not simply built by planning what we want to have. They are built by planning for what happens next.

We need to be resilient. But we can't build Dhaka from the ground all over again, rather we can stop the city from turning to dust. Our resilience planning has to start way before a blueprint is drawn, not after the consequences is faced.

Because, we may not be able to stop the butterfly from flapping its wings on the other side of the world, but we can plan our city well enough to withstand the storm that it may follow.

Planning for Self-Reliance: Why Our Towns Should Adopt Local Economic Development

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Walk into almost any municipal office in Bangladesh during budget season and one will find the same quiet anxiety. The engineer has a list of roads that need repair, the conservancy section needs more vehicles, and the market committee wants better drainage. Everyone is waiting for the same thing: the next allocation from Dhaka. Outside the office, meanwhile, the town is busy. Workshops are running, traders are loading trucks, and small factories are shipping goods to other districts. The money that could be spent on those roads and drains is circulating in the town every day. The municipality simply has no plan to connect with it.

Given the context, the theme of this year's World Town Planning Day, "Great communities are built on planning", is a timely reminder. Planners have become good at planning land, roads and drainage. Planners have been far less deliberate about planning the local economy that must ultimately pay for them. This article argues that Local Economic Development offers a practical way to close that gap and to help our towns become financially self-reliant.

Why self-reliance matters

Our municipalities face familiar constraints: limited funds, too few trained staff, weak financial management and inadequate planning. Holding tax and trade licence fees are the main sources of own revenue for most towns, but even these are underused because assessment is outdated, collection is weak and records are poor. In many places there is no reliable count of the houses and businesses in operation, which makes collection uncertain and prone to leakage.

The budget of Sirajganj Municipality illustrates the pattern. Between FY 2021-22 and FY 2025-26, centrally supported grants and project allocations made up roughly 55 to 65 per cent of total annual resources, while own-source revenue accounted for about 35 to 45 per cent, according to the municipality's annual budget documents (Sirajganj Municipality, 2021-2026). The budget grew steadily over those five years, yet the ratio of transfers to own revenue stayed close to 60:40. Growth, in other words, did not bring autonomy. Earlier work published in this Institute's own journal reached a similar conclusion: municipal revenue and central grants together are often insufficient even for basic operational needs (Reza et al., 2015).

Dependency has costs beyond the balance sheet. A town that relies on central allocations cannot plan with confidence, because it never knows what it will receive or when. It is exposed to decisions shaped by political alignment rather than local need. Above all, it weakens the relationship between citizens and their local government. When people see no link between the taxes they pay and the services they receive, they have little reason to pay more willingly, and the municipality has little reason to account for them.

Economists have long explained why this happens. Fiscal federalism holds that responsibility for delivering services should be matched with the authority and capacity to raise revenue, and with accountability to those who pay (Oates, 1999). When our municipalities are given responsibilities without the means to finance them, dependency becomes structural rather than accidental. Self-reliance does not mean cutting towns off from central support. It means building a local revenue base strong enough that central funds complement local effort instead of replacing it.

Every town has an economy worth planning

At its heart, Local Economic Development is a process in which local government, businesses and communities work together to improve the conditions for economic growth and employment, so that the quality of life improves for everyone in the locality. Its logic is simple. Rather than waiting for centrally financed projects, a town builds on its own comparative advantages, solves the problems that hold its enterprises back and reinvests part of the resulting growth in better services.

Our secondary towns are well placed for this. Travel across the country and one will find a footwear cluster here, a light engineering belt there, a handloom tradition, a rice-milling hub, a mango economy, a fishing port or a growing base of young ICT freelancers. These activities already generate trade licences, market leases and rising property values. What is usually missing is a municipal institution that understands these economies, speaks regularly with the people who run them and plans around them.

International experience shows what becomes possible when that institution exists. In South Africa, for example, municipalities carry a formal mandate to design and implement Local Economic Development strategies that link local planning with national development priorities (Mumba & Van der Waldt, 2023). The details differ from our context, but the principal travels well: when local economic development is treated as a core municipal function rather than an optional extra, towns begin to plan their own futures.

The potential of adopting a Local Economic Development approach

The first and most immediate gain is a stronger revenue base built on better knowledge of the town. Periodic household surveys can identify unregistered holdings and reveal the real tax base. Economic surveys of local businesses can help set fair trade licence fees and reduce the scope for discretionary decisions. Mapping properties with community participation and basic digital tools can quickly widen the pool of taxpayers, and once records are updated, mobile payment services such as bKash or Nagad let citizens pay without queuing at the municipal office. None of this requires heavy investment. It requires planning, transparency and trained staff.

The second is a virtuous cycle of trust. When citizens see their taxes turning into repaired streets, clean drains and working streetlights, they are more inclined to keep paying. When businesses see fair taxation and transparent use of funds, they are more willing to formalise and invest locally. Locally raised revenue finances better services, and better services increase

compliance and participation. In my experience, this cycle does more to raise collection than any enforcement drive.

The third is partnership. Local Economic Development gives municipalities a reason and a method to sit regularly with chambers of commerce, traders' associations, sector bodies, universities and civil society. Structured dialogue of this kind helps keep business registries up to date, ensures that revenue reforms follow real business dynamics rather than discouraging enterprise, and turns the municipality from a distant regulator into a convener that solves problems with its citizens.

The fourth is inclusion and resilience. A town that plans its economy deliberately can create space for women entrepreneurs, young people and informal workers who are often invisible in municipal records. It can also frame environmental standards, cleaner production and better waste management as sources of competitiveness rather than burdens. Growth that reaches more people and damages less of the environment is growth a town can sustain.

The fifth is a wider national benefit. Towns that create decent jobs closer to home can ease some of the pressure of rural-to-urban migration, since people are less likely to leave when they can earn a living where they live. Strong secondary towns are also a precondition for more balanced urbanisation, which our largest cities badly need.

What stands in the way?

The obstacles are real. Many municipalities lack trained staff for assessment and collection. Informal payments remain common in trade licence renewals. There is limited understanding of how to design fair, transparent and citizen-friendly systems. Experience elsewhere also shows that Local Economic Development gains are difficult to sustain when they depend on a single project or a single enthusiastic leader rather than on institutions (Mumba & Van der Waldt, 2023). There is a governance risk too: decentralisation can be captured by local elites when accountability mechanisms are weak (Bardhan & Mookherjee, 2006). Any private public platform must therefore be open about its membership and decisions, and subject to monitoring.

Institutional theory offers the key lesson here. Lasting change depends on stable rules and routines rather than individual goodwill (North, 1990). For Local Economic Development, that means dedicated staff, a place in the municipal plan and budget, and a formal platform for dialogue, all of which should survive changes of mayor, officer or donor.

A practical pathway

Adoption should be phased. In the short term, the priority is capacity: a national orientation programme for municipal officials, and pooled or shared personnel/consultants for smaller towns that cannot afford their own. Guidelines encouraging every municipality to establish an open public-private dialogue platform would require no new legislation.

In the medium term, Local Economic Development priorities should be written into municipal plans and budgets, supported by a modest dedicated budget line. Municipalities should modernise property valuation, strengthen trade licence administration and digitise collection.

The ICT Division and the Local Government Division, working with technology firms and research partners, could offer simple cloud-based revenue management platforms, backed by training for assessors and awareness campaigns for citizens.

In the long term, the Local Government (Pourashava) Act, 2009 could recognise Local Economic Development as a core municipal function. Intergovernmental transfers could also reward effort, with part of each town's allocation linked to measurable growth in own-source revenue, business registration and inclusive employment. Towns that help themselves should find the centre more willing to help them.

Where planners come in

Planners are well placed to lead this shift. They already map land use, infrastructure and hazards. They can equally map enterprises, holdings and markets, and bring economic survey data into master plans and detailed area plans. Decisions on where to locate markets, industrial clusters, truck terminals and waste facilities should be made with the local economy in view. A plan that shows where revenue is generated and how it will be reinvested is far more likely to be implemented than one that waits for an allocation from the centre.

When a mayor can renovate a market or build a community centre with revenue raised locally, it is more than administrative efficiency. It is democracy at work. It restores balance between the centre and the local, between authority and accountability, and between promise and performance. Great communities are indeed built on planning, provided planners plan not only the spaces people live in but also the economy that sustains them.

References

Bardhan, P., & Mookherjee, D. (2006). Decentralisation and accountability in infrastructure delivery in developing countries. The Economic Journal, 116(508), 101-127.

Mumba, N. B., & Van der Waldt, G. (2023). Systemic and institutional local economic development challenges: The case of JB Marks Local Municipality. African Journal of Public Administration and Environmental Studies, 2(2), 25-50.

North, D. C. (1990). Institutions, Institutional Change and Economic Performance. Cambridge University Press.

Oates, W. E. (1999). An essay on fiscal federalism. Journal of Economic Literature, 37(3), 1120-1149.

Reza, F., Hossain, S. M. N., Miti, S. S., & Haq, M. E. (2015). Major features of municipal finance in Bangladesh: A case study-based investigation. Journal of Bangladesh Institute of Planners, 8, 103-109.

Safronova, V., Fransen, J., & Jachnow, A. (2024). Local economic development in secondary cities in Bangladesh. Swisscontact.

Sirajganj Municipality. (2021-2026). Annual budget documents, FY 2021-22 to FY 2025-26. Sirajganj Municipality, Sirajganj.

Beyond Concrete: Practical Water Management for Bangladeshi Cities

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Introduction

Urban flooding is a severe, recurring problem in Bangladeshi cities like Dhaka and Chittagong. Every rainy season, streets transform into rivers, disrupting daily movement and causing widespread economic damage. While common belief points toward a lack of drainage, the core issue goes deeper.

In reality, drainage networks exist, but they fail to function effectively due to chronic waste clogging and unrealistic planning. To build safer, livable communities, we need practical solutions that combine strict waste control with natural water absorption systems like the **Sponge City** model- fully embracing the belief that *"Great Communities Are Built on Planning"*.

The Real Root Cause: Plastic Waste and Unregulated Posters

Before investing in large-scale engineering, we must solve the most direct cause of waterlogging: **unmanaged physical blockages**.

- **Everyday Plastic Trash:** Chips packets, plastic bags, and water bottles thrown onto the street wash straight into drainage inlets during rainstorms, stopping water from entering the drains.
- **Year-Round Unregulated Advertisements:** Beyond political elections, city walls, poles, and trees are covered daily with posters from coaching centers, private tutors, herbal clinics, and small businesses. Political groups sometimes clean up a portion of their banners after elections, but commercial posters have zero management. Over time, rain damages these laminated posters, causing them to tear off and fall onto the ground. Rainwater then sweeps them into drainage channels, sealing the grates shut.

No drainage system-no matter how advanced-can work when its entry points are blocked with plastic and paper debris.

The Sponge City Model: Affordable & Realistic

A sponge city acts like a natural sponge. It absorbs, cleans, and reuses rainwater locally instead of letting it overflow onto streets.

Many people assume a sponge city requires demolishing old neighborhoods or breaking building codes, which is nearly impossible for dense Bangladeshi cities. However, a sponge city does not mean rebuilding everything. It focuses on small, low-cost modifications:

- **Porous Footpaths:** Replacing solid concrete slabs on public footpaths with permeable bricks that let rainwater soak into the earth.
- **Repurposing Open Parks:** Turning small sections of public parks and green spaces into shallow retention gardens (bio-swales) that temporarily hold storm water.
- **Green Rooftops:** Encouraging Garden roofs on existing buildings to absorb rainwater and reduce heat without changing the building's structural framework.

Actionable Steps for Urban Authorities

To make a lasting impact, urban planning should focus on achievable steps rather than impractical rules:

1. **Enforce Strict Waste and Poster Rules:** Ban laminated plastic posters and establish clear cleaning responsibility for commercial advertisers.
2. **Prioritize Drain Cleaning Over Demolition:** Clean and clear existing canals, rivers, and drain outlets regularly before the monsoon begins.
3. **Upgrade Public Spaces Gradually:** Incorporate water-absorbing materials into new footpaths, roadsides, and public grounds during routine repairs.
4. **Target New Developments Only:** Apply strict water-retention building rules to upcoming government and large private projects rather than penalizing existing structures.

Conclusion

Solving urban waterlogging in Bangladesh does not require massive budgets or impossible ideas. By addressing everyday plastic waste, regulating commercial posters, and making smart, low-cost upgrades to existing roads and parks, we can steadily transform our cities into ‘sponges.’ Practical planning and waste management are the true foundations of a liveable future.

Great Communities Are Built on Planning: The Power of Integrated Transport Planning in Bangladesh

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Introduction

Great communities are the result of intentional design and connect people to opportunities, strengthen social networks and create the possibility for sustainable daily living. World Town Planning Day 2026's theme "Great Communities Are Built on Planning" is a reminder that the quality of our neighbourhoods and cities is not measured by the amount of infrastructure we install, but in the quality of our planning of the systems that make up our lives.

Transportation is one of the pivotal systems. Transportation affects residents' access to jobs, schools, health care, markets and public spaces. Congestion, isolation, inequality and lower liveability are the outcomes for communities when transport planning is disconnected and prioritizes the movement of vehicles. Transport can be a key enabler for creating more resilient, inclusive and economically viable communities if it is designed to serve people.

Bangladesh is in a critical situation. Rapid urbanisation, greater motorisation and massive investment in metro rail, bus rapid transit and planning projects pose challenges and opportunities. It is not about the need for more transport infrastructure; it is about how we can plan the infrastructure to improve community life.

The idea of "Integrated Transport Planning" (ITP) that links public transport, walking, cycling, land use and economic activity is essential to the creation of great communities in Bangladesh, this article argues. It discusses the issues with the current fragmented planning process, illustrates how integrated planning is implemented and proposes a structure for connecting transport systems to the needs of people and places.

The Problem: Fragmented Transport Development in Bangladesh

Despite significant investments in urban and national transport infrastructure in Bangladesh, mobility issues are strongly related to the lack of coordination, accessibility and urban planning. The World Bank has long recognized that institutional fragmentation, weak public transport, and lack of agencies' coordination are major challenges for managing urban transport in Dhaka. It has also highlighted the importance of better connectivity between transport investments and land use planning and urban development.

One of the symptoms of this is the planning of transport modes and infrastructure in isolation from the wider urban context. Public transport and walking and cycling are not considered as part of a holistic mobility system. Pedestrian access, feeder connections and land use and urban environment around stations are also important factors that can be improved by the development of mass transit.

There is also important transport–land use linkages. Lack of coordination of employment, housing, services and transport infrastructure can result in unequal access to these services in the city. In this context, the World Bank has highlighted the importance of better coordination between spatial planning and public infrastructure and transport in Bangladesh, especially as more and more economic activities are shifting away from the traditional urban centres.

The effects are at the community level. Traffic Congestion makes travel more time consuming and less efficient and poor public transport and pedestrian facilities can make it more difficult to get to work, school and to access key services. Transport also has an effect on the environment, leading to air pollution and reducing the quality of life.

It is not simply a matter of building more roads, rail lines or transit facilities. It is to arrange the connections between the different modes, land use, economic activities and public spaces. The question that underlies the planning is how to transport people to opportunities and not just vehicles from one place to another.

What Integrated Transport Planning Really Means?

Integrated transport planning is often understood as the physical connection of different modes; for example, linking bus stops to metro stations and the functional design of interchange facilities. These connections are important, but true integration goes further. It must be connected to the larger mobility patterns utilized to access opportunities, take advantage of available urban space and access community activities.

Of special interest are four dimensions. First, modal integration: public transport, walking, cycling and road systems must work as complementary parts of one connected system. Second, transport–land use integration: the location of housing, employment, services and public space in relation to transport and accessibility. Third, planning for access: instead of considering how the vehicles move and how fast they go, it's about how people can get to a place safely, affordably and conveniently. Fourth, social and economic integration: transport decisions affect access to jobs, education, health services and markets, to public space, and to the location of economic activity.

It is a broader planning setting in which the transport sector is not viewed as an independent sector of the infrastructure industry, but as part of urban development. It is not merely about speed and efficient movement of people or vehicles; it is about whether people and communities can fully participate in society and the economy.

This is especially important to Bangladesh. The benefits of mass transit investment to communities are significant; however, this broader community benefit is linked, in part, to how mass transit is integrated with pedestrian facilities and the broader public transportation system, as well as its relationship to the community land use and economic development. All of these factors need to be considered together in integrated planning – transport investment is not an infrastructure project in isolation but an integral part of an accessible, functional community.

How Integrated Transport Planning Builds Stronger Communities

Transportation can have more positive and lasting impacts on communities if the four dimensions of integration are brought together. The first is easier accessibility. Citizens gain better access to jobs, education, health services, public services and markets. If public transport can be improved, walking environments and land use can be coordinated, the opportunities can be enhanced within walking distance in dense urban areas such as Dhaka.

Integrated planning can also help to build neighborhood linkages. Feeder and walking/bicycling services can link residential districts to major transport systems and reduce dependency on a single mode of transportation. The connectivity is particularly relevant in rapidly growing cities where growth can lead to the physical separation of population and jobs, as well as access to key services.

Another key outcome is inclusiveness. Coordinated transport is less effective if it is not done properly: this can create additional challenges for women, older persons, people with disabilities and low-income groups. Limited access to jobs and services may be due to poor pedestrian facilities, poor public transport service and poor transfer service. This challenge is clearly shown in a recent study of walkability in Dhaka's central business districts, which found serious deficiencies including narrow and discontinuous footpaths, physical barriers, limited accessibility, and widespread obstructions from illegal parking and hawkers. These results illustrate the need for transport planning to take into account the quality of the full trip.

In the context of integrated transport planning, the local economy can also be promoted. Transport nodes can be conceived not only as locations for passengers getting on and off vehicles, but also as places where people work and shop for retail goods and services. Improved access can increase the customer base, allow easier access to the workforce and shorten the time and expense of daily operations.

Last but not least, integration can contribute to making public areas healthier and more habitable. Walking, cycling and efficient public transport can be given appropriate priority in planning, which can reduce unnecessary private vehicle use and make streets and public places safer and more usable.

Combined, all these results demonstrate that integrated transport planning is not just about more efficient personal mobility. It is about the relationship between people and opportunities, neighbourhoods and services, and transport investment and economic and social development.

A Transition from Isolated Projects to Integrated Planning in Bangladesh

The government of Bangladesh is putting significant efforts into developing urban transport infrastructure, particularly in Dhaka, and planning is now increasingly considering the connections between transport and urban development. The growth of mass transit, better public transportation and a rise in interest in TOD have given rise to a chance to move from project to planning. But the development of a major transport project does not guarantee integrated outcomes. The interconnection of mass transit stations with adjacent neighbourhoods is a factor in the community benefits of mass transit. The broader benefits of accessibility can be limited without safe pedestrian access to the stations, reliable feeder

services, convenient transfers and land use around stations. Because of this, the relevance of TOD has grown. In 2025, the Ministry of Housing and Public Works, with support from JICA, advanced the Project for Development of Policy and Guidelines for Transit Oriented Development along Mass Transit Corridors. Draft TOD guidelines were prepared and the formalisation process continued through consultation.

The broader planning context is also significant. Transport corridors have an impact on the location of housing, employment, commercial activity and public facilities. If decisions are taken independently, the benefits of improved movement may not be fully realised in the quality of life of the surrounding communities. In this context, the Spatial Planning Ordinance, 2025 (which was later converted into the Spatial Planning Act, 2026) is gaining importance in Bangladesh.

The transformation is not just from road to transit; it is about moving from project delivery to system planning. Major investments need to be seen as anchors in broader networks, not as stand-alone investments. This will need an integrated land use plan and multimodal links, pedestrian and bicycle facilities, accessibility criteria and suitable transport corridor development controls.

Ultimately success should be measured not only by the kilometres of road or rail built or travelled but in terms of whether people can safely and affordably reach jobs, education, health care, markets and public spaces.

A Practical Framework for Bangladesh

To translate these principles into practice, Bangladesh needs a clear and usable planning framework that links transport investment with community outcomes. The following sequence offers a practical structure:

Integrated Transport Planning
↓
Land-use Integration
↓
Multimodal Connectivity
↓
Accessibility-focused Design
↓
Economic Integration
↓
Community Participation
↓
Connected + Inclusive + Economically Vibrant Communities

Figure 1: A Practical Framework for Integrated Transport Planning in Bangladesh

These factors can be combined to make transport planning a more direct contributor to connected, inclusive and economically vibrant communities. The approach is designed to be

simple in its form and concept, as it is intended that it will be applied consistently on projects and within cities.

Conclusion

Great communities are not created simply by constructing more roads, rail lines or transit stations. Planning the relationship between people, spaces, services and opportunities is essential. Integrated transport planning is a feasible way to make that connection for Bangladesh. A coordinated planning of transport and land use, multimodal networks, accessibility criteria, local economic activity and community needs make it more than a transport system. It turns into a base for inclusion, economic opportunities and everyday liveability. The investments in progress and the developing planning tools in relation to TOD and spatial coordination are an important building block. The key is to consistently use these instruments and then structure infrastructure delivery to reflect community outcomes. In this regard, the theme of World Town Planning Day 2026 is a reminder and a challenge. Great communities are about planning and planning of transport is one of the most powerful tools to build great communities.

References

Khan, F. A., et al. (2024). Assessing walkability in Dhaka's Central Business Districts. Transportation Research Interdisciplinary Perspectives, 27, 101184.

Ministry of Housing and Public Works / RAJUK / JICA. (2025). Project for Development of Policy and Guidelines for Transit Oriented Development along Mass Transit Corridors – TOD Guidelines (Draft). Government of Bangladesh.

Government of Bangladesh. (2025). Spatial Planning Ordinance, 2025 (Ordinance No. 71 of 2025). Bangladesh Gazette, 26 November 2025. (Subsequently enacted as the Spatial Planning Act, 2026).

World Bank. (2018). Toward Great Dhaka: A New Urban Development Paradigm Eastward. Washington, DC: World Bank.

Great Communities Are Built on Planning: How Transportation Connects People, Places and Possibilities

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A great community does not happen by chance. It is built step by step through careful development and the development follows planning. In a well-planned community, people can move safely, reach schools, hospitals and markets easily, and find good opportunities close to home, While the Government gets a productive workforce. At the center of this planning is "Transportation". Roads, footpaths, buses, trains, boats and bicycles are not just physical structures; They connects people to education, healthcare, jobs, markets and one another. This souvenir explains why transportation planning is the foundation of a strong community. It examines lessons from history, the importance of accessibility and mobility, the challenges Bangladesh faces in putting its transport policies into practice, ways to bring government plans closer to people, and inspiring examples from around the world.

Lessons from Ancient Civilizations

People have understood the value of planned movement for thousands of years. The Indus Valley Civilization built cities with grid-like streets and drainage systems, which gave them an organized urban network (Kenoyer, 1998). Ancient China developed a system of roads, rivers, canals and bridges, and the Grand Canal was especially important for moving people and goods. The Inca built a road network across the Andes Mountains, with stone-paved roads, stairs, bridges and relay stations that kept distant places connected across very difficult land (D'Altroy, 2002). These societies teach us one clear lesson-When movement is planned well, communities grow stronger.

Accessibility and Mobility: Two Sides of One Idea

Transportation planning starts with a simple question: *How can people move better?* The answer is more than reducing traffic every morning of a working day. A good transportation system should be accessible, safe, healthy, efficient, inclusive and sustainable for everyone.
Accessibility means that people can reach the places and opportunities they need. Mobility means that people can move between places safely, quickly and comfortably (Litman, 2003). A community needs both. A road may exist, but if it is unsafe for a child or impossible for a wheelchair user, it does not serve the purpose properly. Planning can improve both in several ways:

- Place schools, markets, clinics and workplaces near neighborhoods. This reduces travel distances and makes daily life easier.

- Connect neighborhoods with efficient roads and link many modes of travel. Walking, cycling, buses, trains and waterways should work together.
- Provide the basics for safe movement. These include well-placed bus stops, continuous footpaths, pedestrian crossings and safe cycling lanes.
- Design for everyone. Ramps, tactile paving and barrier-free paths help elderly people and persons with disabilities take part in community life independently.

The benefits reach far beyond travel. Easy access to schools and workplaces supports education and jobs. Access to hospitals helps people get care when they need it. Good connections help local shops and markets because people and goods can move easily. Well-designed streets and public spaces also bring people together and build community feeling (Gehl, 2010).
Most importantly, inclusive planning means that mobility is not only for people who own private vehicles. When walking, cycling and public transport are safe and convenient, more people can join community activities. It can also reduce dependence on private cars and support a cleaner environment. This fits the global goal of making cities and human settlements inclusive, safe, resilient and sustainable (United Nations, 2015).

Bangladesh's Transport Policies and the Gap in Practice

Bangladesh has many policies and laws to guide its transport sector. They can be grouped into five areas:

1. **Large-scale plan:** The National Land Transport Policy 2004 (Ministry of Communications, 2004).
2. **Integrated and infrastructure planning:** The National Integrated Multimodal Transport Policy (NIMTP) 2013 and the Road Master Plan 2009.
3. **Regulation and safety:** The Road Transport Act 2018 (Government of the People's Republic of Bangladesh, 2018), the Road Transport Rules 2022, the BRTA Act 2017 and the Axle Load Policy 2012.
4. **Public and emerging mobility:** The Metro Rail Act 2015, the Ridesharing Guideline 2017 and the EV Registration and Movement Policy 2023.
5. **Financing and management:** The Toll Policy 2024 (Revised).

Having good policies is only the first step. The bigger challenge is implementation. Different agencies often do not coordinate well. Funding is limited, and land acquisition can cause long delays. Enforcement of traffic and safety rules is weak, and there is a shortage of staff and equipment. Support systems such as electric vehicle charging stations are still limited.
At the community level, other problems appear:

- **Awareness gap:** Many people do not know about new traffic rules, tolls, electric vehicles or public transport services.
- **Resistance to change:** People may be slow to leave old habits and try new systems.

- **Affordability:** New services, tolls or electric vehicles may cost too much for many families.
- **Land and space issues:** Widening roads or building metro lines may cause worries about displacement.
- **Informal transport:** Many people and workers depend on informal transport, so new regulated systems can disturb their livelihoods.
- **Social inequality:** The needs of low-income people, women, children, older adults and persons with disabilities are often overlooked.

These challenges show that planning is not only a technical job. It is also a social one, and it needs people's understanding and trust.

Bringing Government Plans Closer to the Community

Government plans work best when communities are part of them. Communication must be simple, local, easy to reach and **two-way**, so that the government shares information and people share feedback. Arnstein (1969) explained that real participation means citizens have a genuine voice, not just a chance to hear decisions after they are made.

Some practical steps are:

1. **Local meetings.** Small ward-level or neighborhood meetings can share plans and collect residents' problems and ideas.
2. **Simple language.** Posters, leaflets, infographics and short videos work better than complex policy terms.
3. **Social media.** Facebook, WhatsApp and Messenger can share news about projects, route changes, traffic rules and public consultations.
4. **Schools and colleges.** Students can learn about road safety, walking, cycling and public transport, and take the message home to their families.
5. **Local leaders and groups.** Ward representatives, resident associations and NGOs can reach people quickly and with trust.
6. **Complaint and feedback systems.** Hotlines, apps, online forms or QR codes let people report problems with roads, footpaths and bus stops.
7. **Improve Public transport system.** Public transports need comfort, proper schedule and specially safety for all in busy cities. Also, number of public transports are not enough with the growing population. So, it should be projected while planning.
8. **Pilot projects.** Small trials, such as a safe crossing or a better bus stop in one area, let planners collect feedback and improve before expanding.

The whole process can be seen as a cycle: government information, community feedback, local problem identification, improved planning, implementation and community monitoring. Each round makes the system better.

Ideas Around the World

Some planning has helped many cities solve their transport problems:

- **Flexible road management:** Movable Road dividers in China and the Road Zipper in the USA change lanes to match traffic demand. They use existing road space better instead of building new roads.
- **Cable cars as public transport:** Medellín (MetroCable), Bogotá (TransMiCable) and La Paz use cable cars to serve hilly areas where roads are hard to build. This gives residents better access to jobs and education.
- **Accessible infrastructure:** Outdoor electric escalators in Medellín help people move through steep hillside neighborhoods and reach schools and public spaces.
- **High-capacity buses:** Bus Rapid Transit (BRT) systems in Guangzhou, Lanzhou and Yichang use dedicated lanes and smart station designs. Yichang also combined BRT with cycling and parking reform. Dedicated Bus lanes can reduce time of public transport user.
- **First and last-mile links:** Dockless bike sharing helps people cover the short distance between home and a bus or metro station.
- **People-centered streets.** Seoul changed parts of the city from car-focused areas into public spaces for people.



Figure 1: (a) Reversible Lane. Source: NDTV, Sep 2022. (b) Cable Car For Hilly Areas. Source: Medellín's Metrocable, Use. (c) Public Bus Lane. Source: KPBS, 2016 (d) Split Station Source: BRT Planning Guide, ITDP.

- **Split-Station BRT.** A unique station design allows buses travelling in the same direction to stop on both sides of the platform. Also, an underground road crossing help to maintain the flow.
- **Transport and land-use together.** Curitiba linked its BRT with urban planning, so development grew along public transport corridors (Rabinovitch, 1992). This idea is also central to the "transit metropolis" concept (Cervero, 1998).
- **Clean public transport.** Dakar's electric BRT combines mass transit with low-emission technology.

The common lesson is that solutions should fit local needs and geography. No single idea works everywhere, but the principle is the same: put people first.

Planning is not simply about building roads. It is about creating a connected system where people, places and opportunities come together. The chain is simple: better planning leads to better accessibility and mobility, which leads to better opportunities and, in the end, to stronger, safer and more inclusive communities.

For Bangladesh, the path forward is clear. We already have many good policies. Now we need stronger coordination, fair and affordable services, careful respect for people's livelihoods, and a real partnership between government and citizens. Ultimately, transportation is not only about moving vehicles. It is about moving people, connecting communities and creating possibilities.

References

Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners, 35*(4), 216–224.

Cervero, R. (1998). *The transit metropolis: A global inquiry*. Island Press.

D'Altroy, T. N. (2002). *The Incas*. Blackwell.

Gehl, J. (2010). *Cities for people*. Island Press.

Government of the People's Republic of Bangladesh. (2018). *Road Transport Act, 2018*.

Kenoyer, J. M. (1998). *Ancient cities of the Indus Valley Civilization*. Oxford University Press.

Litman, T. (2003). Measuring transportation: Traffic, mobility and accessibility. *ITE Journal, 73*(10), 28–32.

Ministry of Communications, Government of the People's Republic of Bangladesh. (2004). *National land transport policy*.

Rabinovitch, J. (1992). Curitiba: Towards sustainable urban development. *Environment and Urbanization, 4*(2), 62–73.

United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development* (A/RES/70/1)

Great communities are built on planning: A Bangladesh Perspective on Shaping Places for People

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Introduction

Every neighbourhood we admire has a story behind it, and that story is rarely one of luck. The quiet lane where children walk to school without fear, the market that stays dry in the monsoon, the pond that anchors village life, the park where elderly neighbours meet each evening: these places exist because someone decided where a road should go, where water should rest, and which land should stay open for everyone. Planning is the name we give to that act of deciding together, before crisis decides for us.

This year's World Town Planning Day theme, "Great Communities Are Built on Planning," reminds us that a community is more than a cluster of buildings. It is a web of relationships between people, and between people and the places they share. Buildings rise in months, but the trust, safety, identity, and opportunity that make a place great grow slowly, and they grow best on a foundation laid with care. In Bangladesh, where towns are expanding faster than the institutions meant to guide them, this message is a practical necessity and not merely a slogan.

What Makes a Community Great

Great communities are not defined by wealth or grand architecture. Some of the most loved places in the world are modest, and some of the most expensive districts are lonely and fragile. Four qualities appear wherever people say they are proud of where they live.

First, a great community is accessible: schools, clinics, markets, jobs, and open space can be reached within reasonable time and cost by the young and old, the rich and poor, and people living with disabilities. Second, it is safe and healthy, with clean water, working drainage, breathable air, and protection from floods, fires, and heat. Third, it is inclusive, giving women, children, elderly residents, low-income families, and minorities a real place in the public realm. Fourth, it is resilient and rooted, able to absorb shocks such as cyclones, river erosion, and economic change while keeping its character and sense of belonging.

None of these qualities appears automatically. Left entirely to market forces, land tends to go to its most profitable use rather than its most valuable use for the public. Open space shrinks, water bodies are filled, roads clog, and the cost is paid by everyone else, often for generations. Planning exists to balance private interest with the common good.

Planning as Foresight, Memory, and Fairness

Modern planning grew from a simple observation: cities left unguided produce crowding, disease, and injustice. Ebenezer Howard answered the crowded industrial city with his vision of the garden city, and Patrick Geddes insisted that a place must be surveyed and understood before it is planned. Later, Jane Jacobs showed that lively streets, mixed uses, and "eyes on the street" make neighbourhoods safer than any barrier could, while Kevin Lynch reminded us that people understand and love a city through its paths, edges, districts, nodes, and landmarks.

Three ideas from this tradition remain essential. Planning is foresight: it anticipates growth, climate risk, and demand for services before they arrive. Planning is memory: it protects the heritage, waterways, and cultural landscapes that give a place its identity. And planning is fairness: it shares the benefits and burdens of development justly, so that lack of money does not mean lack of safety, dignity, or opportunity. A community with all three can call itself great. A community missing any one of them will eventually feel the absence.

The Bangladesh Context: Growth Without Guidance

Bangladesh is among the most densely populated countries on earth, and its towns are growing quickly as people move in search of work and services. Dhaka is the clearest example. Traffic congestion, disappearing canals and low lands, and recurring waterlogging after heavy rain show what happens when growth outruns guidance. Many residents spend hours each day in transit, and many neighbourhoods lack a playground, a footpath, or any public space at all. Chattogram, Khulna, Sylhet, Rajshahi, and smaller towns face similar pressures in their own forms.

It would be unfair to say planning is absent. Bangladesh has a hierarchy of structure plans, master plans, and detailed area plans, prepared by bodies such as RAJUK and the Urban Development Directorate and administered with local authorities like city corporations and pourashavas. The real challenge lies in coordination between agencies, the capacity of local governments, the enforcement of land use rules, and keeping plans current and connected to residents' lives. A plan that sits on a shelf builds nothing. A plan owned by the community it serves can change a place.

There are encouraging signs. Hatirjheel in Dhaka shows what becomes possible when drainage, waterfront, walkways, and traffic are considered together. Along the coast, community-based cyclone preparedness, with its shelters and trained volunteers, has saved countless lives and shows that careful preparation combined with local participation produces resilience. Good planning is not foreign to Bangladesh. It must become the rule rather than the exception.

Beyond the Capital: Regional Change and Small Towns

Too often the planning conversation in Bangladesh begins and ends with Dhaka, yet the country's future will be shaped as much by its secondary cities, upazila towns, and rural growth centres. The opening of the Padma Bridge in 2022 has altered the geography of opportunity in the southwest. Such connectivity is a powerful chance, but also a test. Without foresight, better

roads can trigger land speculation, ribbon development along highways, loss of farmland and wetlands, and rising prices that push out local residents. With foresight, the same infrastructure can support balanced regional growth, strengthen market towns, and spread opportunity beyond the capital.

The northwest offers a different lesson. In drought prone areas around Rajshahi, water is the central planning question, and sustainable communities depend on how rainwater, groundwater, ponds, and canals are managed and shared. A city admired for its greenery still needs deliberate protection of its trees, open spaces, and water bodies as development pressure rises. Every region has its own ecological and social logic, and planning those copies one template everywhere will fail most places.

Principles for Building Great Communities

Drawing on these experiences, several principles can guide planners and decision makers in Bangladesh.

- **Plan with nature, not against it.** Bangladesh is a delta, and water is its organizing force. Rivers, canals, wetlands, and floodplains are free infrastructure. Plans should keep natural drainage intact, reserve retention areas, and treat climate risk as a basic input rather than an emergency afterthought.
- **Plan for people on foot.** Much of daily travel in Bangladeshi towns happens by walking, rickshaw, and public transport, yet streets are often designed mainly for private cars. Safe footpaths, shaded crossings, accessible bus stops, and well-lit public spaces serve the majority and benefit women, children, elderly people, and persons with disabilities first.
- **Mix uses and keeps daily needs close.** When homes, shops, schools, clinics, and workplaces lie near one another, people save time and money and streets stay active and safe. Traditional Bangladeshi settlements and bazaars already worked this way.
- **Provide housing and services for all.** Planning that ignores low-income households does not make them disappear; it pushes them into informal settlements with poor services and high risk. Inclusive planning secures land tenure where possible, supports affordable housing, and extends water, sanitation, and electricity to every household.
- **Protect public space as a shared asset.** Parks, playgrounds, ponds, riverbanks, and marketplaces are where strangers become neighbours. Once built over, they are almost impossible to recover.
- **Make participation real.** Sherry Arnstein's ladder of citizen participation warns that consultation without influence is only a performance. Communities should join early, when choices can still change, and should see how their voices shaped the plan. Residents know where water collects, where women feel unsafe, and where children cross dangerous roads.
- **Implement, monitor, and adapt.** A plan is a promise, and promises need follow through: clear responsibility among agencies, transparent land use rules applied equally, reliable data, and regular review as conditions change.

The Roles of Planners, Institutions, and Citizens

Building great communities is shared work. Planners bring knowledge of land use, transport, environment, economics, and social needs, and carry a professional duty to speak for the public interest even when it is inconvenient. Institutions such as the Bangladesh Institute of Planners can strengthen this duty by promoting professional standards, supporting education and research, and encouraging dialogue between practitioners, academia, and government. Government agencies must coordinate rather than compete, with the authority and resources to enforce what is planned. Developers contribute greatly when they work within clear and fair rules. Citizens are not merely beneficiaries; they live with the results and often hold the most useful local knowledge.

For students and young planners, this moment carries special responsibility. Our generation will inherit the consequences of decisions made in the next two decades, from the shape of our cities to the condition of our rivers. We must combine technical skill with humility, using data, mapping, and modern analytical tools to understand places better while remembering that numbers serve people and not the other way around.

Conclusion

A great community is never an accident. It is the visible result of many invisible decisions: where to build and where not to build, whom to include, what to protect, and how to share the costs and benefits of growth. Planning is how those decisions are made with care, evidence, and fairness instead of being left to chance or to the loudest voice.

As Bangladesh becomes a more urban nation, the question before us is not whether our cities and towns will grow, but what kind of communities that growth will produce. On this World Town Planning Day, let us commit to plans that respect water and land, that serve the walker as much as the driver, that include the poor as well as the powerful, and that invite every citizen to take part. Great communities are built on planning, and planning is built on our willingness to think ahead, to listen, and to act together.

Planning for People: Building Inclusive, Connected and Livable Communities in Bangladesh

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Introduction

A good city is not just where people travel faster, but where people can get access to things without wasting time and money in unnecessary traveling. In the rapidly urbanizing countries like Bangladesh, the increasing gap between residential area, workplace, educational institutions, healthcare facilities, markets, and recreational areas is making the issue of accessibility an essential concern for urban planning. The population of Bangladesh became more urbanized with the number of urban people in the country growing up by approximately 11.5 million in the period from 2011 to 2022 (World Bank, 2025). This change in demographics put increasing pressure on housing, transport infrastructure, and urban services. The city of Dhaka represents a good example, where the gap between affordable housing and workplaces, and the lack of transport infrastructure make daily travels lengthy (World Bank, 2020). Against this background, the concept of 15-minute city provides an interesting approach to the future urbanization. Instead of the fast means of transport, the idea poses another question – can people access the majority of their needs in the vicinity of their place of living?

From Mobility to Accessibility

The 15-minute city concept has been devised and popularized by Carlos Moreno and his associates. This concept advocates those urban areas would have essential services that could be accessed within a shorter timeframe, especially through walking and cycling (Moreno et al., 2021). But what is more important is not the question of distances. It is the issue of accessibility. The school can be just one kilometer away from the neighborhood, but a lack of walkways, crossing points, shade, and safe access may make it inaccessible to the residents. According to the International Transport Forum, the matter of accessibility involves reaching job opportunities and accessing services in the area rather than merely traveling (ITF, 2017).
It is all the more important in the context of Bangladesh. For a thriving neighborhood, it is not enough to have the services close by. There must be ways to reach them easily and conveniently as well.

Why Bangladesh Needs a Context-Sensitive 15-Minute City

15-minute cities should not be blindly adapted from European cities for Bangladesh. Our cities have different densities, transportation modes, land-use practices, socio-economic status, and problems.

Current studies have also found that accessibility levels vary a lot among and within cities, and a single model cannot be used without taking into consideration local factors (Bruno et al., 2024). This means that 15 minutes should be regarded as a planning principle rather than a standard.

In the densest areas of Dhaka, most services that a person uses regularly could be available within 15 minutes by walking or cycling. In case of the less dense peri-urban areas, the correct travel time could be slightly more, provided there is a good public transportation system. In cities such as Chattogram and Rajshahi, a similar approach can focus on strengthening compact neighborhoods where schools, markets, healthcare, recreation, and public transport are easily accessible within a reasonable travel time. The appropriate time and distance may vary according to each city's density, urban form, and transportation system.

The ultimate goal is quite straightforward:

"Essential services need to be available within a manageable distance, while public transportation needs to connect the neighborhoods to the city."

Dhaka and the Challenge of Everyday Accessibility

Dhaka demonstrates why this approach is relevant to Bangladesh.

Employment, education, housing and services are not always located close to one another. Affordable housing may be located far from major employment areas, while inadequate public transportation and road infrastructure can make these journeys difficult (World Bank, 2020).

This creates a familiar pattern:

Separated land uses → longer journeys → greater transport demand → congestion → increased travel time.

Thus, the solution is not only about the construction of additional roads. In urban planning, it is necessary to think about residential areas, location of services, and ease of connecting these locations.

A compact neighborhood should have all the amenities within itself including residences, education, shopping, medical care, recreational amenities, and transportation. An efficient public transport system could easily connect employment and specialized facilities.

In other words, this is a shift from "moving people further and faster" to "bringing services closer to people."

A Community Must Work for Everyone

A community of 15 minutes should not be planned with an average citizen in mind. Various social groups perceive the same city differently.

Safe travel options from their homes to the schools and playgrounds are important for children. Comfortable walking routes and easy access to healthcare can make a huge difference in the case of elderly citizens. Accessible pathways, crossings and public transportation are crucial for people with disabilities.

Accessibility in urban areas is a gendered and disability-based concept in Bangladesh that varies between women and people living with disabilities in different cities of Bangladesh. For

example, women in the country can have accessibility issues related to safety, quality of public places, pedestrians and the presence of good walking zones. In the same way, people with disabilities can have access problems with regards to sidewalks, pedestrian crosswalks, footpaths, public transport stations and other facilities within the urban environment.
Therefore, the question should not simply be:
"Is the destination within 15 minutes?"
It should be:
"Can different people reach it safely, affordably and independently?"
This makes accessibility an issue of social inclusion, not merely spatial planning.

From Streets to Community Spaces

Great communities need more than houses, roads and service facilities. They also need places where people can meet, interact and spend time.
Streets, parks, playgrounds, markets, and public spaces help enhance social interaction and sense of community. According to UN-Habitat, access to public spaces is critical for healthy urban communities (UN-Habitat, 2022).
Bangladesh already has examples of this approach. In Dhaka, a UN-Habitat-supported initiative worked to transform footpaths and streets into more child-friendly public spaces through community participation. More than 750 people participated through 80 activities in the project (UN-Habitat, 2022).
This demonstrates that even relatively small planning interventions can change how people experience their neighborhoods.

- A footpath can become more than a path.
- A street can become more than a traffic corridor.
- A park can become more than an empty space.
- Together, they can become places that build community.

A Planning Direction for Bangladesh

Thus, the "15-minute city" concept could be approached for Bangladesh from five basic planning principles:

1. **Locate essential facilities in proximity:** Proximity to schools, hospitals, markets, recreational and other facilities is crucial.
2. **Ensure safe and affordable accessibility:** It should include good walking paths, crossing points, cycle paths, and affordable public transport.
3. **Consider diverse groups of people:** Consider children, women, the elderly, poor people, and people with disabilities during neighborhood planning.
4. **Provide meaningful public spaces:** Streets, parks and open spaces should be designed to ensure social interactions and leisure.
5. **Connect neighborhoods with the rest of the city:** Everything does not need to be within fifteen minutes. There should be good public transport connecting neighborhoods with key economic centers and educational institutions. The above-mentioned points could help

Bangladesh develop a form of people-oriented urban planning taking into account its own context.

Conclusion

Bangladesh is becoming highly urbanized; there is an increasing need to rethink the way cities are planned. What needs to happen is not just accommodating the population growth, but making sure that people have access to all the opportunities and services they require without too much effort, cost and time. While the idea of a 15-minute city is certainly relevant and practical in terms of planning, the real strength of the 15-minute city concept for Bangladesh is not the number 15. Rather, it is the idea of proximity, accessibility and inclusivity. The best neighborhood is one in which a kid can get to school, an old person can get healthcare, a working adult can get to work, a woman can move around in safety, a disabled individual can travel freely, and the citizens have a chance to visit a good place close by. In other words, Bangladesh does not have to make its cities bigger. It must make them better connected.

References

Bruno, M., Monteiro Melo, H. P., Campanelli, B., & Loreto, V. (2024). A universal framework for inclusive 15-minute cities. *Nature Cities, 1*, 633–641. https://doi.org/10.1038/s44284-024-00119-4

International Transport Forum. (2017). *Linking people and places: New ways of understanding spatial access in cities*. OECD Publishing.

Kotikula, A., & Arango, D. J. (2019, December 10). *Walking the street with DIGNITY: Women's inclusion in urban Bangladesh*. World Bank.

Moreno, C., Allam, Z., Chabaud, D., Gall, C., & Pratlong, F. (2021). Introducing the "15-Minute City": Sustainability, resilience and place identity in future post-pandemic cities. *Smart Cities, 4*(1), 93–111. https://doi.org/10.3390/smartcities4010006

Sakaki, S., & Gomes, J. W. (2018, October 31). *Too often, Dhaka remains inaccessible for people with disabilities*. World Bank.

UN-Habitat. (2023). *10 years of Global Public Space Programme: Annual report 2022 and reflections on a decade of public space*. United Nations Human Settlements Programme.

World Bank. (2020, February 5). *Planning a more livable Dhaka*. World Bank.

Pesme, J. (2025, December 15). *How can cities in Bangladesh become engines of inclusive growth?* World Bank.

When Cities Leave No Room to Breathe: The Future of Urban Open Spaces in Bangladesh- From Unplanned Growth to Planned Green Networks

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Leaving Room for the City to Breathe

While cities measure themselves in roads, buildings, bridges and business activity, there is another dimension to the urban experience that often gets overlooked in the race to build, which is ‘space’.
As Bangladesh has urbanized, its cities have densified. But while buildings have proliferated, parks, playgrounds, wetlands, green corridors and other open spaces have not been prioritized in planning and implementation. The result is that Bangladesh's cities are growing bigger and busier but their capacity to support healthy and enjoyable living is in danger.

Space, not just land

Parks, playgrounds, wetlands, water bodies, and other open spaces are not just land waiting to be developed; they are infrastructure. Parks offer recreation and exercise; trees provide temperature moderation; playgrounds give children space to play and socialize; wetlands and water bodies aid in drainage; public squares help foster a sense of community. The World Bank has emphasized that public spaces offer value to neighbourhoods and cities, but when they are poorly planned and managed, this potential is not realized (Jon Kher Kaw, Hyunji Lee, Sameh Wahba, 2020). This is especially pertinent in Bangladesh, where rapid urbanization is putting immense pressure on land.

Bangladesh: The Space Conundrum

A World Bank assessment of Dhaka found that open space constitutes only about 14.5% of the city's land area (according to the study's parameters; the report also identified 310 hectares as parks and gardens) and emphasized the importance of retaining open spaces for natural drainage in a flood-prone city, while noting that Dhaka's public and open space has decreased as a percentage of its land use (Ede Ijjasz-Vasquez,David Mason, 2018).
The greatest impact is at the neighbourhood scale: a resident of Dhaka is surrounded by hundreds of apartment buildings but has no playground nearby; children play in the street; elderly people have no place to sit and walk; pedestrians are forced to navigate on narrow footpaths, amidst traffic and commercialization. In many growing areas, the value of land as a resource for real estate is prioritized over the open spaces it hosts. If every vacant lot is seen

as an opportunity to build another apartment building or office complex, the city has little recourse in preserving space that was not planned or is difficult to recreate.

The Missed Link: Planning Before Building

It is not as though Bangladesh lacks planning. Dhaka has had a rich history of both metropolitan- and detailed planning; RAJUK's DAP, for example, seeks to direct land use, infrastructure and environmental protection planning for the capital. Dhaka's RAJUK states that the DAP aims to improve drainage and ensure flood-flow areas are not encroached upon, and that it designates land for parks, playgrounds, lakes and community facilities (RAJUK, 2024).

The real issue is not "Do we have plans?" but "Are our plans strong enough, coordinated enough and consistently implemented to protect the spaces future communities will need?"

A perfectly prepared land-use map cannot plan a liveable city if the open spaces slowly get occupied, cut up and converted. Planning needs to move from the preparation for the enforcement, monitoring and updating process.

What Can We Learn from Singapore?

High density does not have to mean high rise. According to the National Parks Board, Singapore has been transitioning towards a "City in Nature" based on expanding nature networks, restoring nature, and connecting nature (NationalParksBoard, City in Nature, 2026). The most important lesson is that parks are not seen as isolated islands; the Park Connector Network creates linear green corridors that connect nature areas, parks and neighbourhoods. According to NParks, there are more than 380 km of trails and has a target of reaching 500 km by 2030 and strives to ensure that all households are within 10 minutes walking distance from a park (NationalParksBoard, About Recreational Connectivity , 2026).



Figure 1: City in Nature, Singapore

Rather than asking "Where can we fit a park?", the question turns into "How can the entire city be a connected green network?" Dhaka's city parks, playgrounds, canals, lakes, institutional grounds and river corridors could be similarly interconnected by green pedestrian-friendly corridors. All neighbourhoods would have some form of outdoor space nearby.

Copenhagen: Planning Green Space for the Future

Green and blue areas are seen as an integral part of the capital's urban structure in Copenhagen, whose 2024 municipal plan sets out a vision that new housing should have larger green spaces within 500 metres walking distance, and existing residential areas should have access to green
or blue spaces within 300 metres. It also aims to strengthen the connection between the parks, water bodies and other green spaces (MunicipalPlan, 2024). It turns open space from "whatever land remains after development" into "infrastructure planned alongside development." Copenhagen even has a green planning tool to evaluate the quantity and quality of urban nature in development projects, including permeable surfaces, water, trees, green roofs and green façades (CopenhagenUrbanDevelopment, 2015-2025).



Figure 2: The Opera Park, Copenhagen

For Bangladesh, the question is whether every new neighbourhood should have to show not only how many buildings it will hold, but how much accessible green and public space it will provide.

Seoul: When a City Decides to Give Space Back

The Cheonggyecheon Stream in Seoul had been buried beneath roads, but in 2003, Seoul began removing the road structure and restoring the stream and finished the project in 2005. The corridor has brought greenery and walkways into the capital (SeoulMetropolitanGovernment, 2026).

Its value is not in the fact that Seoul has created another park, but in the fact that planning has given back space to communities in a developed city. Seoul has also engaged in green-network initiatives that connect existing green areas, especially in places where green space is scarce. The lesson for Dhaka is that solutions need not entail finding a huge empty plot of land to put a park; they can come in the form of reclaiming and reconnecting canals, waterfronts, road corridors, abandoned infrastructure and neglected public land.



Figure 3: The city of Seoul

What Bangladesh Needs: From Isolated Parks to Green Networks

Bangladesh does not have to copy these cities, since their contexts are different. However, from these cities, Bangladesh can learn to:

- **Protect what has already been created:** Parks, playgrounds, wetlands and canals are public assets with long-lasting value and should not be treated as vacant land.
- **Plan at the neighbourhood scale:** A huge metropolitan-level park cannot replace a small park or playground in the neighbourhood. New neighbourhoods should have accessible public space from the get-go.
- **Connect instead of isolate:** A connected 5-kilometre green corridor may provide more value per day than several separate green plots.
- **Make accessibility a planning standard:** A space that is hard or unsafe to access cannot provide value to all. Walking distance, pedestrian access, universal accessibility and safety should be built.
- **Integrate water and green space:** Rather than treating rivers, canals, wetlands and ponds as only drainage or obstacles, planning can tie them together with parks, walking routes and ecological corridors.
- **Make implementation as important as the plan:** A DAP or master plan is not sufficient in guaranteeing a planned city. Land-use control, monitoring, enforcement and institutional coordination are essential.

Planning Should Not Come Only from Above

Community participation also matters. A park designed without knowing how the community uses it or a public space made unsafe for women and elderly people is a wasted planning opportunity. Planning should involve the people who will utilize the spaces. Singapore's City in Nature, for example, has programs that encourage people to assist in caring for the spaces (NParks, 2020). People should be participants in planning, not just its end-users.

Conclusion: Leave Room for the Future

Bangladesh has been urbanizing rapidly, and many more people will need housing, roads, schools and workplaces than before. Development is inevitable; what is not so is how we choose to develop. If every piece of land is consumed by buildings, roads and parking, today's city may look productive, but tomorrows become hard to live in. Singapore has shown how space can be planned as a network; Copenhagen has demonstrated the importance of accessibility and green infrastructure; Seoul has illustrated the importance of restoring public spaces even in developed cities. Bangladesh does not have to copy them; it needs its own planning model which suits its density, climate, culture and land constraints.

The principle is simple: rather than asking how much land we can build on, we should first ask what our people, nature and future need to live on. A great city is not measured by the number of buildings but the amount of space that is left for people to live, interact, play, breathe and belong.

References

CopenhagenUrbanDevelopment. (2015-2025). *Urban Nature*. Retrieved from Urban Development: https://urbandevelopmentcph.kk.dk/urban-planning/urban-nature

Ede Ijjasz-Vasquez, David Mason. (2018, November 20). *Toward a livable Dhaka*. Retrieved from World Bank Blogs: https://blogs.worldbank.org/en/endpovertyinsouthasia/toward-livable-dhaka

Jon Kher Kaw, Hyunji Lee, Sameh Wahba. (2020, Feb 11). *THE HIDDEN WEALTH OF CITIES Creating, Financing, and Managing*. Retrieved from World Bank: https://www.worldbank.org/en/topic/urbandevelopment/publication/the-hidden-wealth-of-cities-creating-financing-and-managing-public-spaces?

MunicipalPlan. (2024). Retrieved from https://www.kk.dk/sites/default/files/2025-05/KP24_pixie_engelsk_opt-a.pdf

NationalParksBoard. (2026, September 10). *About Recreational Connectivity* . Retrieved from PNC NParks: https://pcn.nparks.gov.sg/aboutrecreationalconnectivity

NationalParksBoard. (2026, September 02). *City in Nature*. Retrieved from NParks: https://www.nparks.gov.sg/who-we-are/city-in-nature-key-strategies

NParks. (2020, March 04). *nparks-to-work-with-the-community-to-transform-singapore-into-a-city-in-nature*. Retrieved from nparks/news: https://www.nparks.gov.sg/news/news-detail/nparks-to-work-with-the-community-to-transform-singapore-into-a-city-in-nature

RAJUK. (2024, June 3). *Dap Home Page*. Retrieved from RAJUK: https://rajuk.gov.bd/pages/static-pages/6922de6c933eb65569e1a88a

SeoulMetropolitanGovernment. (2026). *cheonggyecheon*. Retrieved from SEOUL METROPOLITAN GOVERNMENT: https://english.seoul.go.kr/service/amusement/stream/1-cheonggyecheon/

From Plan to Community

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The Beginning

Great communities are rarely created by chance; they begin with a vision, a purpose, and a plan. From the earliest settlements to today's modern cities, people have organized their surroundings to make life safer, easier, and more connected. Planning gives a community direction by bringing together homes, streets, public spaces, services, and natural areas.It determines not only where people live, but also how they move, work, meet, and experience their surroundings. A thoughtful plan can turn scattered development into an organized and meaningful place. In this way, the journey from a settlement to a great community has always been closely connected with planning. The map may be the beginning, but the people who live there give the plan its true meaning.

Why Communities Need Planning

A community needs planning to grow in a balanced, healthy, and meaningful way. Good planning provides accessible roads, suitable housing, schools, healthcare, parks, public transportation, and spaces for social interaction. It helps organize different land uses and creates districts where residential, commercial, institutional, and recreational activities can function together. Planning also supports businesses by providing suitable locations, infrastructure, accessibility, and connections to markets and workers. Well-designed public spaces can encourage people to meet, interact, relax, and develop a stronger sense of belonging. The physical environment can influence how comfortable, safe, connected, and confident people feel in their everyday surroundings. Good planning can also reduce congestion, prevent incompatible land uses, and make essential services easier to reach.

At the same time, it helps communities prepare for population growth, environmental risks, and future changes. Therefore, planning is not simply about controlling land; it is about creating an environment where people and the local economy can flourish together.

Lessons from Great Communities

History provides many examples of communities whose physical form was strongly influenced by planning. Ancient Mohenjo-daro, developed more than 4,000 years ago, demonstrated organized streets, drainage systems, and carefully structured urban areas.

In the modern era, Brasília provides another remarkable example of planning shaping an entire capital city. Created from 1956 to 1960, Brasília was planned by Lucio Costa, with major architectural works by Oscar Niemeyer, around a monumental urban structure. Singapore also demonstrates how long-term planning can guide the growth of a modern city through housing, transportation, business districts, greenery, and public spaces. Its 1971 Concept Plan

established a framework for housing towns, industrial estates, transport infrastructure, and recreation, while later plans continued to adapt the city to changing needs. These examples show that although planning methods have changed across centuries, the fundamental idea remains: organized development can shape communities for generations.

Planning for Greater Communities

Today, planning can be used not only to build greater communities but also to improve the systems that connect and sustain them. In Bangladesh, our riversides can be planned as safe, accessible, attractive public spaces while protecting waterways and natural ecosystems. Transportation systems can be planned around efficient public transport, walkability, cycling, road connectivity, and better links between residential and employment areas. Business districts can be carefully located and connected with transport networks so that economic activity does not create unnecessary congestion. Residential areas can be planned with different housing options, schools, healthcare, parks, markets, and daily services within convenient reach. Industrial areas can be separated and connected appropriately to protect residential communities while maintaining efficient movement of goods. Districts can also be given their own character through public spaces, landmarks, heritage, greenery, and appropriate building forms. Modern planning should consider climate resilience, drainage, heat, flooding, waste management, and the protection of natural resources. Most importantly, communities should participate in planning decisions so that development reflects the needs and identity of the people who live there. When these elements work together, planning can create communities that are not only larger, but more connected, resilient, inclusive, and enjoyable.

Conclusion

A plan is more than lines drawn on a map; it is a vision of how people will live together. When thoughtful planning becomes streets, homes, parks, businesses, transport systems, and public spaces, a physical settlement becomes a living community. The greatest communities are those where development serves both people and place, balancing economic opportunity with social and environmental needs. From ancient settlements to modern cities, the lesson remains clear: communities grow stronger when their future is planned with purpose. From plan to place, and from place to community, thoughtful planning shapes the places we call home.

A letter to and from Dhaka

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“Bhaiya,
You sent another video today. Some parks in Bremen, little kids on bicycles, a canal so clean I could see the bottom of it, and you wrote "wish you were here" like that's a normal thing to say to someone standing ankle-deep in sewage water. Because that's where I was, by the way. Not metaphorically. Actually ankle-deep, actually sewage, actually ruined my only good pair of shoes on the way back from the pre-test exam. It rained for forty minutes, bhaiya. Forty minutes. And Tajmahal Road turned into a river.
I watched your video twice anyway. I always do. I don't know why I do that to myself.
You've been gone six years now and every year Dhaka gets a little more like it's daring me to still love it. This year alone: the rickshaw-garage next to our building started running a generator at 2 AM because of loadshedding, so now I fall asleep to the sound of a machine dying slowly. The lamppost outside gate 4 has been dark since Ramadan, not flickering or dim, just gone, and Amma won't let me walk back from tuition after Maghrib anymore because "you know what happened to Trisha's cousin." I do know. Everybody knows. Nobody did anything about it, though. That's the part that gets me. Everybody just... knows, and moves on, and buys a better torchlight.
You'd think after a point I'd get used to it. I haven't. If anything I notice it more now, which honestly might be your fault. Before you started sending me pictures of Bremen, I thought traffic jams and stinking khals and hawkers taking over the whole footpath was just what a city was. Now I know it's what a city becomes when nobody's steering it.
Actually, remember that video you sent last month, the one of the little park two streets from your flat? You called it "just a normal neighbourhood park," like it was nothing, like every neighbourhood is just supposed to have one. There were old people playing chess under actual shade, not the shade of a half-built flyover pillar. There was grass that wasn't fenced off with a *"DO NOT ENTER, DEVELOPMENT PROJECT"* sign that's been up since I was in class six. I showed it to Nafisa at school and she said "okay but that's Europe, we can't compare," and I wanted to scream, because why not? Why is "we deserve a park with grass in it" automatically an unreasonable thing to want here? Dhaka used to have more trees, Nanu said so all the time, back when she was my age she says you could walk from Azimpur to Dhanmondi under actual tree cover, and now every third footpath tree gets cut down to widen a road that's still going to be jammed anyway because nobody built anything to reduce the number of cars, they just made more room for them, which nanu said is like loosening your belt instead of eating less. I laughed when she said that but honestly, she's not wrong, and it kind of scares me that my seventy-year-old grandma had better instincts about city planning than the actual plan we apparently have sitting unused.

I looked it up after, for a school assignment, thinking I'd write about "poor infrastructure in Dhaka" like some kind of angry op-ed. Turns out, and this is the part that actually made me angrier than the flooding itself, we have a plan. Multiple plans, actually. There's an entire Detailed Area Plan sitting in a RAJUK office somewhere with zoning and drainage reservations and green space allocations, drawn up by actual planners who apparently know exactly what should go where. Roads that should stay a certain width. Land marked for canals and retention ponds that is now, very illegally, someone's five-storey building. It's not that nobody planned this city, bhaiya. It's that somebody planned it properly once, and then everybody just walked past the plan like it was a suggestion. That's so much worse, somehow? I could forgive "nobody thought of this." I can't forgive "somebody thought of this and we ignored them anyway."

Can I tell you something and you're not allowed to say "I told you so"? Two weeks ago, there was a night I actually got scared for real, not the normal amount of scared I am of this city, but real scared. Abbu started having chest pain around 11 pm. Ammu tried to get a CNG, then tried to call one, then just started walking toward the main road with him half-carried, because Mohammadpur was completely underwater from the evening's rain and nothing was moving, not rickshaw, not car, nothing. It took forty-five minutes to go a distance that takes eight on a normal day. Forty-five minutes bhaiya, with Abbu barely breathing properly, because some engineers thirty years ago apparently decided drains only need to handle a certain amount of rain and nobody's updated that number since, even though everyone in this city can tell you it rains harder now than it used to. He's fine. I need you to know he's fine before you finish reading this, because I know you and you'll go into a full panic otherwise. But I haven't been able to stop thinking about it since. Not about him being sick. About the forty-five minutes. About how something as stupid and preventable as a road not draining properly almost mattered more than the actual medical emergency.

I keep thinking about why Bremen gets to have canals you can see the bottom of and we get canals you can't see the surface of because of the garbage. And it's not like German people are just built different, come on. Half your videos are of streets that used to be bombed flat eighty years ago. Somebody sat down and decided to rebuild it a certain way, on purpose, and then kept deciding it, year after year, instead of drawing a nice plan once and letting it rot in a filing cabinet.

I'm not saying this to make you feel guilty for leaving, by the way, in case that's what this sounds like. I know why you left. I was twelve but I wasn't stupid, I know Abbu's shop on the old road didn't get "compensated," it got "acquired," and there's a difference, and that difference is the whole reason you had to go find a life somewhere that would actually let you build one. I don't blame you. I used to, a little, when I was younger and it felt like you'd abandoned me for cleaner canals. I don't anymore. I get it. You went to go live in a city that was already planned for you.

Here's the thing though. I don't want to go live in a planned city. I want to plan one.

I told Ammu I want to study Urban and Regional Planning and she looked at me like I'd said I want to become a professional cloud-watcher. "What will you even do, draw maps?" Sort of,

Amma, yes, sort of exactly that, except the maps decide whether some other Maliha in some other neighborhood gets to walk home after dark, or whether some other family's forty-five minutes turns into something we don't get to fix afterward. I want to be the person who doesn't let the plan sit in a filing cabinet. I know that sounds naive. I'm seventeen, I'm allowed one naive sentence per letter.

So, keep sending the videos, bhaiya. Send me every canal, every bicycle lane, every embarrassingly clean street corner. I'm not jealous anymore, or…okay, I'm a little jealous, I'm not a saint. But mostly I'm taking notes. Not to move there. To bring it back here, properly, this time, and actually stay to make sure it sticks.

Love,

Maliha"

Sakib read the email twice, the way she apparently reads his videos twice, sitting on the edge of his bed in Bremen with the heating clicking on somewhere behind the wall. Outside his window a tram went past, unhurried, on time, the way trams there always seemed to be, as if punctuality were just a fact of physics rather than something a city had to fight for.

He chuckled at the "professional cloud-watcher" line. Then he read the paragraph about nanu and the belt again and didn't chuckle at all.

His little sister was growing up sharper than he'd given her credit for. He still pictured her sometimes as twelve years old, sulking on the stairs the morning he left, refusing to say goodbye properly because she'd decided being angry hurt less than being sad. Somewhere in the six years since, without him watching it happen, she'd turned into someone who could take apart a city's failures paragraph by paragraph and hand you the diagnosis wrapped in a joke so you wouldn't notice how much it actually cost her to write it. In a year or two she'd sit for admission tests, and he had no doubt at all which subject she'd list first. Urban and Regional Planning. He could already imagine her, twenty years old, insufferable about drainage capacity at the dinner table. Good. The city needed someone insufferable about drainage capacity. It needed her exact combination of temper, memory, and refusal to accept "that's just how Dhaka is" as an answer, more than it needed another quiet, agreeable graduate who'd file a plan and never ask what happened to it.

He thought about the Dhaka he'd grown up in, before hers. Streets that felt too wide for how few cars there were on them. A short walk to school under shimul trees that actually met overhead. The DIT Lake before everyone just started calling it "the polluted one" like it had never had another name. He hadn't thought of any of that as something being planned at the time, it had just been Dhaka, ordinary, the way Maliha's park in Bremen was "just a normal neighbourhood park" to him now. It was only from this distance, watching it disappears tree by tree and monsoon by monsoon in his sister's letters, that he understood it had been a kind of planning too, or at least a plan's leftover shade, spent slowly over thirty years by a city that kept drawing new blueprints and honouring none of them. Not a single flood, not a single felled tree, not a single dead streetlamp had ever been an accident, exactly. Just a plan, somewhere, being quietly ignored until the ignoring added up to a crisis. A city doesn't collapse all at once,

he thought. It just keeps un-deciding itself, one shortcut at a time, until the fire's already halfway through the building before anyone agrees to call it one.

He opened a blank email to reply, then closed it. Some letters didn't need an answer yet. This one needed him to go home and see it for himself, and this time, actually help her build the plan that would finally hold.

Great Communities Are Built on Planned Mobility: A Lightweight, Topology-Informed Graph AI Framework for Resilient Traffic Forecasting Under Data Scarcity and Sensor Faults

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Executive Abstract for Urban Planners

Anyone stuck on Airport Road in Dhaka or crossing Agrabad in Chittagong knows that when mobility fails, a community fractures. Gridlock wastes hours and pollutes our air. Yet for planning agencies like RAJUK, modern traffic forecasting feels unattainable: commercial deep learning demands years of clean data and expensive cloud servers. Newly opened corridors have barely weeks of records, roadside telemetry frequently fails, and municipal budgets are constrained. In this paper, we show that smarter traffic planning does not require heavier computing. By grounding AI in physical road topology and predicting residual velocity momentum rather than raw speeds, we introduce TrafficGCN-Delta. With just 897 parameters and training in 47 seconds on a standard desktop CPU, it matches or outperforms 300,000-parameter neural networks. Tested under 80% data scarcity and severe sensor dropouts, its accuracy degrades by less than 5%. This gives planners an accessible, high-fidelity tool to anticipate gridlock 15 to 60 minutes ahead, prioritize public transit, and build resilient communities.

Keywords: *Urban Planning, Sustainable Mobility, Graph Neural Networks, Data Scarcity, Sensor Faults, Liveable Communities, BIP WTPD 2026.*

Introduction: Building Great Communities Through Planned Mobility

When town planners celebrate World Town Planning Day under the theme "Great communities are built on planning," discussions often center on zoning, green space, and density. Yet no community can thrive if its residents cannot move safely, predictably, and affordably. Transportation is the daily pulse of urban life, determining whether parents return home in time for dinner, whether local commerce thrives, and whether emergency services reach patients. When mobility breaks down, the planned community fractures into isolated pockets separated by gridlock.

Across Bangladesh's metropolises-most acutely in Dhaka and Chittagong-congestion is a grueling daily reality. Commuters lose millions of productive hours weekly while inhaling hazardous PM2.5 emissions. Historically, the default response was pouring concrete: building flyovers and widening roads. But urban experience proves this backfire. Under induced demand, expanded asphalt quickly attracts more private vehicles, reproducing gridlock at enormous public expense. Authentic town planning is not about endless concrete; it is about intelligent stewardship of existing street space.

Proactive management means anticipating bottlenecks 15 to 60 minutes before physical queues choke key junctions. Yet realizing this in developing cities requires overcoming operational constraints that conventional technology paradigms have largely ignored.

The Planning Dilemma: Data Scarcity and Sensor Vulnerability in Developing Cities

Commercial vendors routinely promote deep learning as the solution to urban congestion. But when municipal authorities in the Global South attempt deployment, they face three harsh operational realities:

Cold-Start Data Scarcity: Deep neural networks demand years of historical sensor logs. When planners open a newly built bypass or elevated expressway, agencies have at most 2 to 4 weeks of records, causing heavy models to overfit and errors to jump by 14% to 25%.

Fragile Telemetry & Dropouts: In tropical cities, roadside sensors endure monsoon floods, power cuts, and damaged fiber. Telemetry feeds frequently lose 10% to 50% of readings or go dark for hours, crashing complex recurrent networks.

Prohibitive Computing Costs: Leading traffic architectures contain over 300,000 parameters, requiring cloud GPU servers costing thousands of dollars monthly-an unsustainable expense for RAJUK, CDA, or secondary pourashavas.

Planners do not need fragile, expensive black boxes. We need data-frugal AI: analytical models that respect physical road geometry, train in seconds on ordinary office PCs, and remain dependable when roadside sensors fail.

Planning Imperative: Data-Frugality for Developing Metropolises: Developing cities cannot rely on AI systems that collapse under sensor dropouts or require months of data. Urban mobility requires lightweight, physics-grounded models that run reliably on municipal hardware.

Bridging Urban Form and Artificial Intelligence: The Graph Neural Network Paradigm

Standard AI models struggle with traffic because they treat cities like flat grids. But any planner knows that a city is fundamentally an interconnected spatial graph $G = (V, E)$. Corridors, ring roads, and neighborhood streets form vertices and edges. Congestion does not spread in straight lines; delay shockwaves propagate strictly along physical roadway geometry according to upstream and downstream connectivity.

To operationalize this spatial reality, we designed TrafficGCN-Delta, an ultra-compact Graph Convolutional Network that couples localized spectral graph convolutions with continuum traffic flow physics (Figure 1). The framework operates across four stages: (1) Road graph

ingestion; (2) Leak-free normalization; (3) Spatiotemporal GCN processing; and (4) Physical velocity reconstruction.

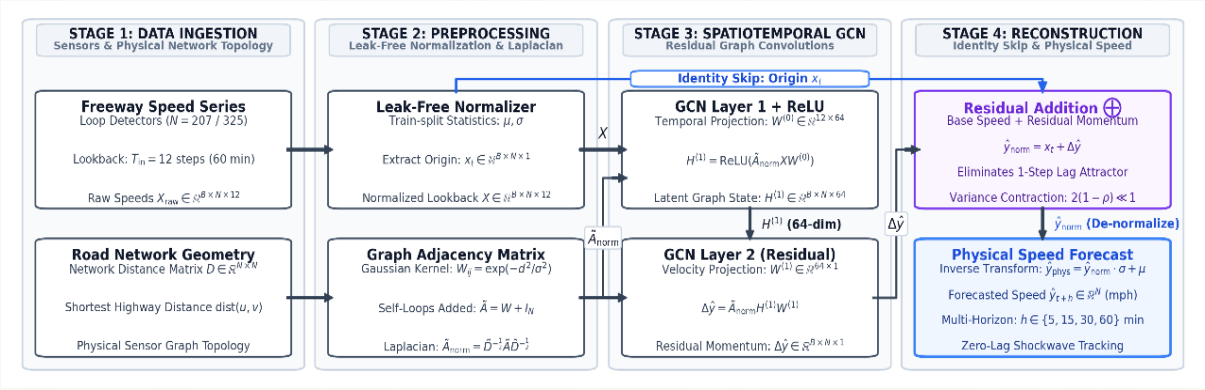


Figure 1: TrafficGCN-Delta framework: road graph geometry, leak-free normalization, localized spectral convolutions, and velocity reconstruction.

The architecture introduces two decisive innovations tailored for municipal planning:

Residual Velocity Momentum*:* When neural networks predict raw speeds directly, they fall into an inertia trap: because traffic speeds change smoothly ($\rho \approx 0.95$–0.99), models simply output current speed, lagging behind sudden braking waves. Grounded in macroscopic viscous Lighthill-Whitham-Richards (LWR) continuum dynamics, TrafficGCN-Delta predicts velocity momentum change: $\Delta y_t = x_\{t+1\} - x_t$. This cuts target variance by >80%, eliminates persistence lag, and achieves zero-lag tracking during rapid deceleration (Figure 4(a)).

Radical Parameter Economy: Instead of stacking complex recurrent layers, TrafficGCN-Delta compresses 60 minutes of lookback into a 64-dimensional latent state via localized graph convolution. With only 897 parameters-a 99.7% reduction versus Graph WaveNet (312,280 parameters)-it trains in 47 seconds on a standard desktop CPU, enabling local execution without cloud servers.

What the Data Shows: Resilience Under Scarcity and Chaos

We evaluated this approach on two metropolitan highway networks: METR-LA (207 detectors; 34,272 timesteps) and PEMS-BAY (325 detectors; 52,116 timesteps; Figure 2). To simulate newly opened corridors, models were tested across three data regimes: 100% Data (~80 days), 50% Data (~40 days), and 20% Data (~16 days of logs).

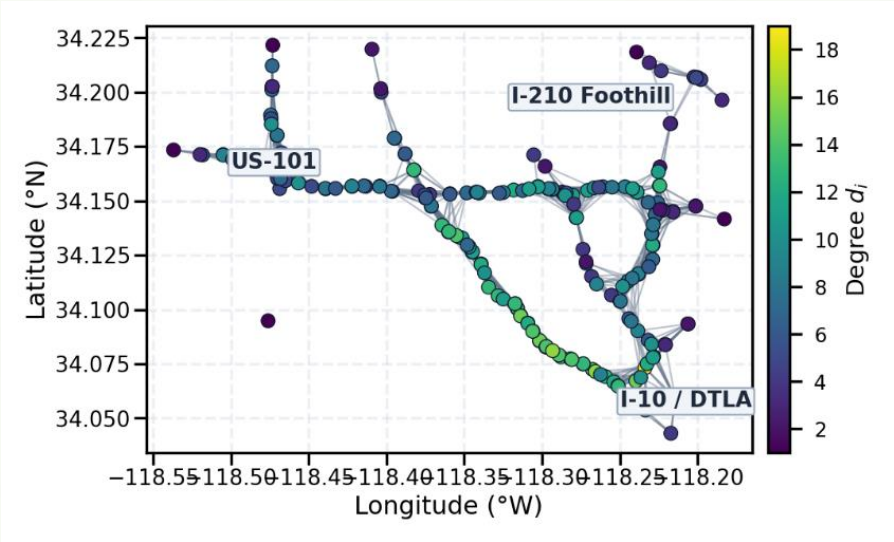


Figure 2: Highway sensor topology (N=207, Los Angeles), showing how physical network geometry governs shockwave propagation.

Table 1 and Figure 3 summarize benchmark findings. When training data dropped to 20%, Linear Regression error jumped by 15.53% (MAE 4.12 to 4.76 mph), Random Forest degraded by 13.47%, and deep GNNs (DCRNN, STGCN, Graph WaveNet) degraded by 11.7% to 14.1% from parameter starvation. In contrast, TrafficGCN-Delta maintained an MAE of 3.61 mph at 20% data-degrading by merely 4.94% ($p < 0.001$, Cohen's $d = 3.51$) and outperforming Graph WaveNet (3.61 vs. 3.82 mph), proving that road graph regularization provides an indispensable prior under data scarcity.

Empirical Evaluation across Historical Data Scarcity Regimes

Table 1: Benchmark across data scarcity regimes on METR-LA (5-seed mean). TrafficGCN-Delta maintains stability with 99.7% fewer parameters.

Model	**Params**	**CPU Train**	**100% Data**	**50% Data**	**20% Data**	**Degradation**	**Feasibility**
Linear Regression	2,484	4.2 s	4.12 mph	4.39 mph	**4.76 mph**	+15.53%	Poor (Overfits)
Random Forest	Ensemble	42.1 s	3.86 mph	4.05 mph	**4.38 mph**	+13.47%	Moderate
DCRNN (Deep GNN)	372,480	8.3 hrs	3.60 mph	3.82 mph	**4.08 mph**	+13.33%	Infeasible (GPU)
STGCN (Deep GNN)	315,136	3.4 hrs	3.55 mph	3.79 mph	**4.05 mph**	+14.08%	Infeasible (GPU)
Graph WaveNet	312,280	2.1 hrs	3.42 mph	3.63 mph	**3.82 mph**	+11.70%	Infeasible (Cloud GPU)
Direct TrafficGCN	897	45.2 s	3.65 mph	3.78 mph	**3.92 mph**	+7.39%	Good (Lightweight)
TrafficGCN-Delta (Ours)	**897**	**47.0 s**	**3.44 mph**	**3.52 mph**	**3.61 mph**	**+4.94%**	**Excellent (Runs on PC)**

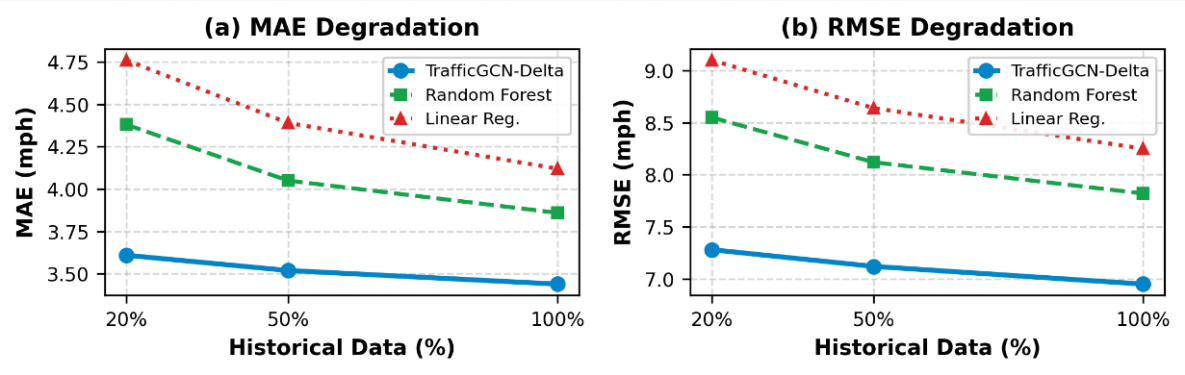


Figure 3: Forecasting resilience across 100%, 50%, and 20% data. TrafficGCN-Delta degrades by merely 4.94%, outperforming deep baselines.

On the 325-sensor PEMS-BAY network, TrafficGCN-Delta achieved an MAE of 0.948 mph at 20% training availability-an error rise of only 1.72% (compared to +75.47% for Ridge Regression and +4.01% for Direct GCN)-demonstrating robust cross-metropolitan generalizability.

We also tested resilience against sensor disruptions: random packet drops from 10% to 50% and a 2-hour continuous blackout across 20% of the network (Figure 4(b)). Combining temporal forward-fill with spatial graph convolutions allowed TrafficGCN-Delta to maintain 2.73 mph MAE under severe 50% sensor dropouts (a graceful 14% error rise, avoiding catastrophic failure).

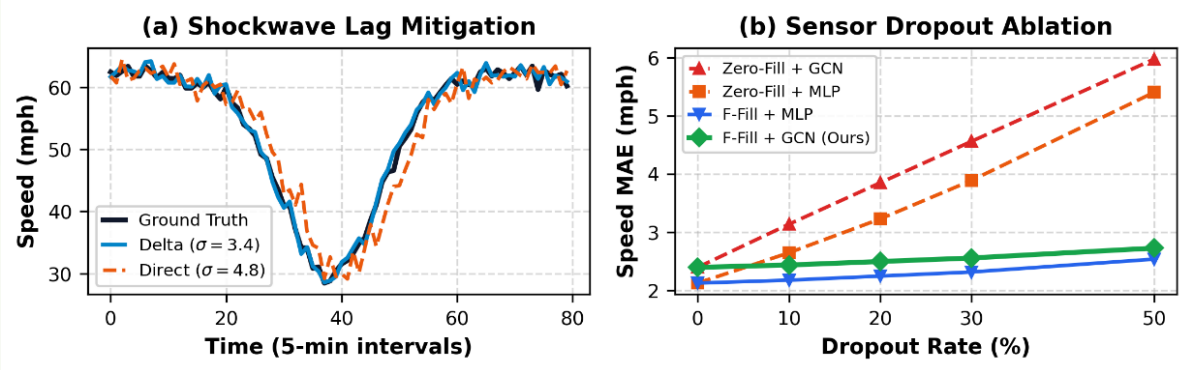


Figure 4: (a) Residual formulation eliminating persistence lag during braking; (b) Robustness under 10%–50% sensor dropouts.

Practical Applications for Town Planning and Municipal Traffic Governance

How can town planners translate these capabilities into practical improvements on the street? The applications are immediate:

Proactive Signalization: 15- to 30-minute forecasts allow municipal control centers to adjust signal splits before queues spill back into upstream intersections.

Transit Priority Corridors: Speed forecasting enables dynamic bus-lane priority for BRT and MRT feeder routes, protecting public transit reliability.

Emergency & Disaster Routing: Sub-4 ms inference enables instant recalculation of network travel times during monsoon waterlogging, routing emergency vehicles along viable paths.

Protecting Neighborhoods: Predicting arterial bottlenecks allows planners to deploy proactive signal gating, preventing commercial traffic from rat-running through quiet residential streets.

Accessible Municipal Deployment*:* 47-second CPU training enables secondary cities and pourashavas across Bangladesh to deploy localized models without cloud infrastructure fees.

Strategic Recommendations for BIP and Urban Planning Authorities in Bangladesh

To harness topology-informed predictive intelligence in national planning, four strategic actions are proposed for BIP, the Ministry of Housing and Public Works, city corporations, and development authorities (RAJUK, CDA, RDA, KDA):

1. **Prioritize Topology-First Digital Twinning:** Municipalities should curate GIS street network graphs before buying roadside sensors, maximizing predictive value from sparse hardware.
2. **Mandate Data-Frugal AI Standards:** Authorities should incorporate sample-efficient AI standards into Strategic Transport Plans (STP) to avoid vendor lock-in with fragile black-box systems.
3. **Rapid Onboarding of New Corridors:** Leverage 20% data efficiency (16 days of logs) to operationalize predictive control immediately upon opening new roads, eliminating multi-month blind phases.
4. **Cross-Disciplinary Planning Education:** BIP and planning schools (BUET, JU, CUET, RUET, KUET) should establish joint curricula bridging urban planning, GIS, and lightweight graph AI.

Conclusion: Engineering the Resilient, Liveable Communities of Tomorrow

The theme of World Town Planning Day 2026-"Great communities are built on planning"-reminds us that liveable cities do not happen by accident. They are shaped through deliberate spatial design, respect for human needs, and thoughtful stewardship of urban space.

By uniting spatial town planning with frugal, physics-grounded AI, we can move past the false choice between crippling gridlock and endless concrete expansion. TrafficGCN-Delta proves that smart cities do not require massive budgets or supercomputers. With thoughtful planning, road topology, and lightweight technology, we can build towns and cities that are resilient, sustainable, and truly great places to live.

References

[1] Bangladesh Institute of Planners, "World Town Planning Day Souvenir: Great communities are built on planning," Dhaka, 2026.

[2] E. I. Vlahogianni et al., "Short-term traffic forecasting: Where we are and where we are going," Transp. Res. C, vol. 43, pp. 3–19, 2014.

[3] T. N. Kipf and M. Welling, "Semi-supervised classification with graph convolutional networks," in ICLR, 2017.

[4] Y. Li et al., "Diffusion convolutional recurrent neural network: Data-driven traffic forecasting," in ICLR, 2018.

[5] B. Yu et al., "Spatio-temporal graph convolutional networks for traffic forecasting," in IJCAI, pp. 3634–3640, 2018.
[6] Z. Wu et al., "Graph WaveNet for deep spatial-temporal graph modeling," in IJCAI, pp. 1907–1913, 2019.
[7] M. J. Lighthill and G. B. Whitham, "On kinematic waves II: Traffic flow on long crowded roads," Proc. R. Soc. A, vol. 229, pp. 317–345, 1955.
[8] P. Hall and M. Pfeiffer, "Urban Future 21: A global agenda for twenty-first century cities," Routledge, 2013.

Powering Urban Communities by Integrating Renewable Energy into Urban Planning

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Introduction

Rapid urban growth and heavy reliance on fossil fuels have pushed Bangladesh into a severe energy crisis. The country generates over 84% of its electricity from fossil fuels, with domestic natural gas reserves depleting so fast that they could run out by 2031. To fill this gap, the government has turned to expensive imported liquefied natural gas (LNG). However, recent global conflicts and shipping disruptions in the Strait of Hormuz caused spot LNG prices to jump to nearly $17 per MMBtu, pushing state subsidy bills to BDT 16,600 crore.(Hasan et al., 2025) (Al Kabir, n.d.)

World Town Planning Day 2026 reminds us that 'Great communities are built on planning.' In Bangladesh, building a great community is impossible without energy sovereignty. By integrating renewable energy into spatial planning, building codes, and municipal design, planners can transform fragile, fossil-fuel-dependent cities into self-sustaining urban for future generations. Frequent loadshedding, gas rationing, and repeated tariff hikes have driven up the cost of living, transport fares, and basic commodities, making daily survival very hard for low- and middle-income families. Cities like Dhaka, which consume about 55% of the nation's electricity with 90% going to homes, bear the heaviest burden. Because every 1% rise in urbanization increases greenhouse gas emissions by 2.46%, continuing with imported fuels is no longer sustainable. Urban planning must now integrate decentralized renewable energy, like rooftop solar, to protect cities and citizens from volatile fuel prices.(Al Kabir, n.d.) (Asaduzzaman et al., 2026).

Objectives

1. To identify why nonrenewable energy dependency is increasing and why renewable energy is needed for great communities.
2. To recommend feasible policies and solutions so that obstacles of renewable energy can be removed and increase dependency.

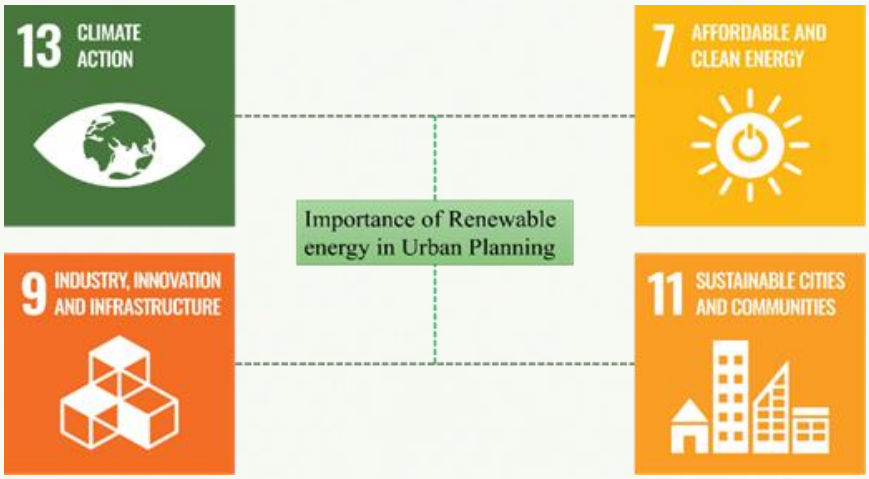


Figure 1: SDG Alignment with renewable energy
Source: Author's illustration

Table: SDG alignment with renewable energy on urban planning

SDGs	**Alignment**
SDG 7: Clean Energy	Self-contained solar power is essential in urban design to keep electricity bills stable and provide uninterrupted supply.
SDG 9: Industry & Infrastructure	Smart grids and local clean energy are needed to stop the financial losses of frequent load shedding in factories
SDG 11: Sustainable Cities	It is impossible to build a 'Great Community' or sustainable city without a planned energy system.
SDG 13: Climate Action	To keep city skies, free of smog and avoid the disaster of climate warming.

Problems Created by Non-Renewable Energy

In Bangladesh, structural dependency on non-renewable energy sources- specifically natural gas, imported LNG, furnace oil, and coal that systematically disrupts urban economic productivity and deepens socio-economic inequity. At the structural core of this vulnerability lies a centralized, fossil-fuel-dominated energy grid plagued by rapidly depleting domestic gas reserves, expensive spot-market LNG imports, and foreign exchange constraints. This structural imbalance triggers widespread load-shedding exceeding 2,500 megawatts and persistent industrial gas pressure shortfalls across urban sectors.(Al Kabir, n.d.)

Urban economic productivity suffers direct disruption across major manufacturing hubs like Dhaka, Gazipur, and Narayanganj. Energy-intensive export industries, particularly ready-made garments and steel, face recurrent power outages and volatile grid frequency fluctuations. A single blackout causes severe machinery damage, fabric dyeing defects, and rapid furnace cooling, forcing factories to operate significantly below capacity or rely on costly, inefficient diesel generators that double operational expenses throughout supply chains. (Asaduzzaman et al., 2026).

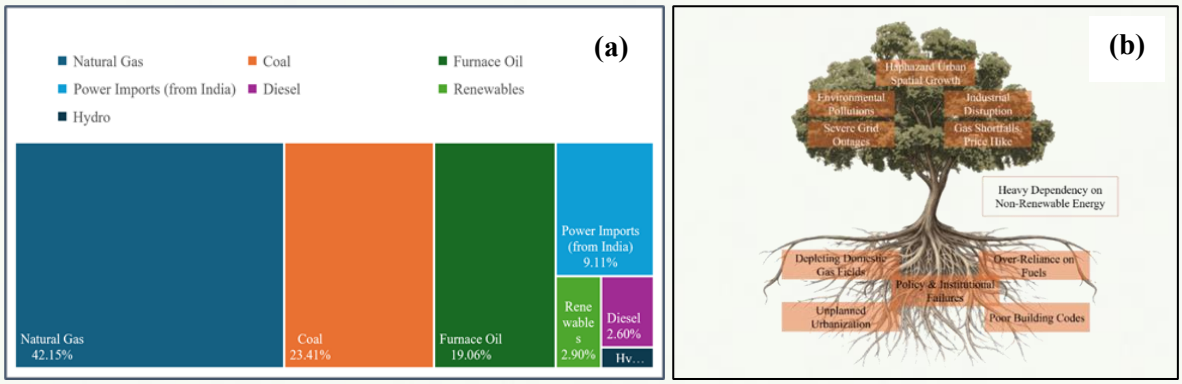


Figure 2: (a) Electricity generation. Source: TDS, 2026 (b) Problem tree analysis of non-renewable energy. Source: Author

This diagram shows that from natural gas, one kind of non-renewable energy, electricity has been sourced the highest where from coal and furnace oil are respectively second and third. But the ratio of renewable and hydro
energy is too low. This dependency deepens socio-economic inequity through economic burdens. As global fuel prices surge and energy subsidies shrink, domestic tariff hikes pass directly onto consumers. Low-income urban households absorb disproportionate living expenses for basic domestic energy and transportation.
Here is a problem tree analysis which indicates root causes, main problem and effects of the problem.

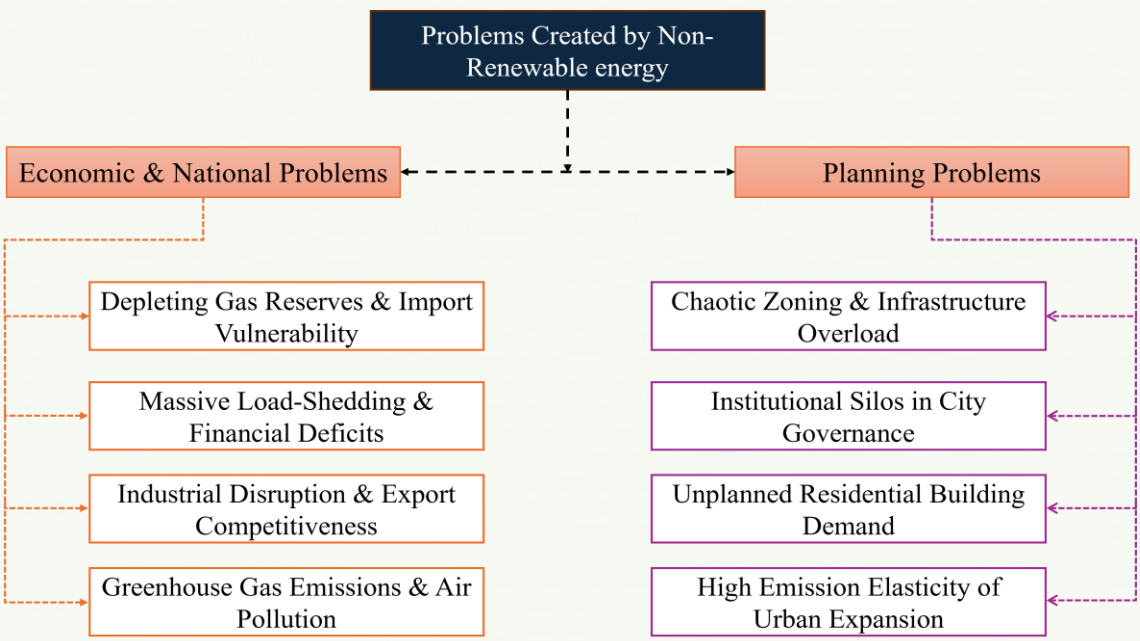


Figure 3: Problems with non-renewable energy

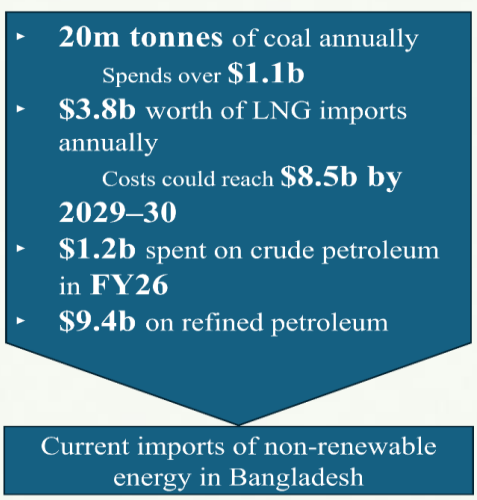
Necessity of Renewable Energy in Planning

A community can only be truly great when everyday life is dependable, not broken by sudden power blackouts, suffocating smoke, or raising utility bills every time global fuel prices shoot

up. It is an integrated system that connects spatial design, environmental protection, transportation networks, and the socioeconomic well-being of all people, whether lower, middle, or upper class. Because energy powers every single function of urban life, clean renewable energy must be treated as a core component of urban planning.

Table: How renewable energy helps in urban planning sectors

Transportation Planning	Electric buses, trains, and local transport with renewable electricity prevent daily commuter fares from rising every time global oil prices jump.
Environmental Planning	It will replace noisy diesel generators and fossil-fuel plants with rooftop solar. Moreover, green spaces cut dangerous air pollution, reduces the urban heat island effect, and keeps city neighborhoods cooler and healthier.
Sustainability	Bangladesh's domestic natural gas reserves are depleting so fast that they could run out by 2031, while every 1% rise in urbanization drives up emissions by 2.46% (Hasan et al., 2025) (Das et al., 2024). So, decentralized solar energy provides a clean, permanent power source that stops the country from falling into an endless cycle of costly fuel imports.
Socio-Economic Condition	It shields low- and middle-income families from sudden electricity tariff hikes, prevents factory shutdowns during blackouts, and keeps basic living costs stable.



Source: TBS, 2026

Where Bangladesh Will Stand in 10 Years Under Continued Fossil-Fuel Dependency

If Bangladesh continues its heavy reliance on non-renewable energy amid rising global fuel prices, the country will face a severe energy and economic crisis within 10 years.

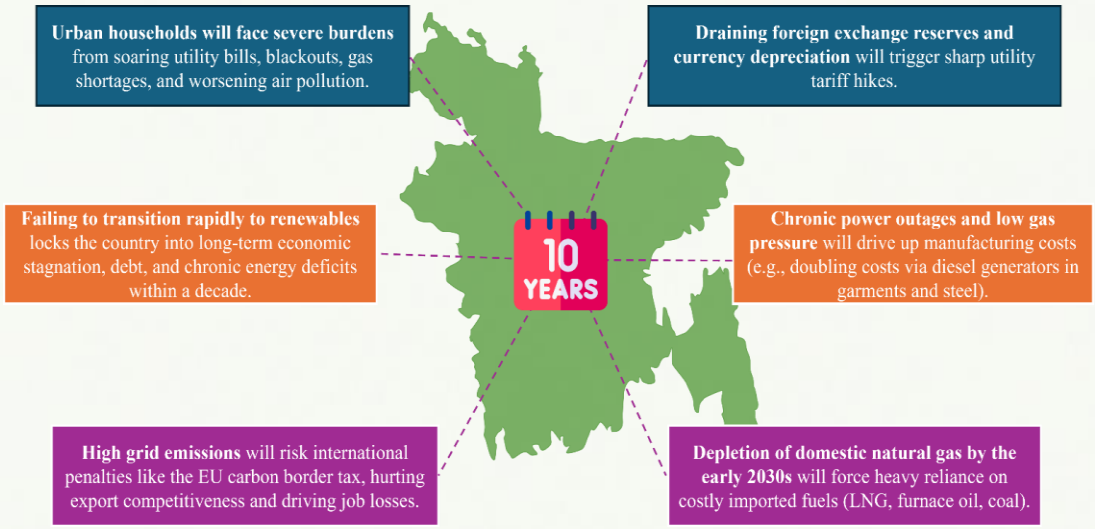
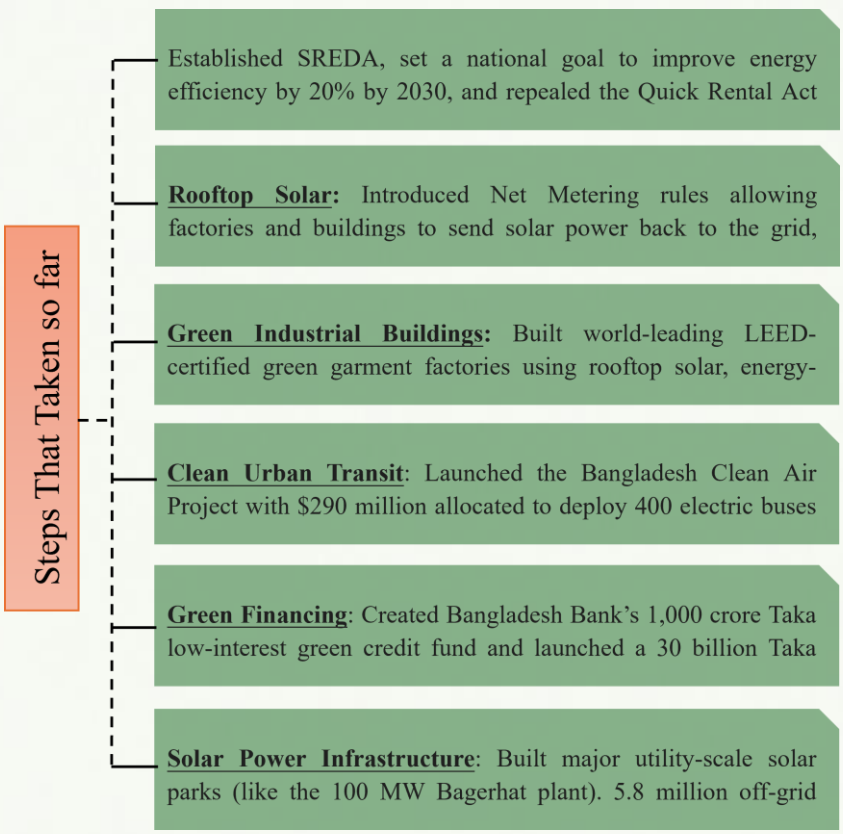


Figure 4: Predictable situation after 10 years

Initiatives that Bangladesh has already taken

Bangladesh has taken several concrete steps to integrate renewable energy, sustainability, and urban-industrial planning. Government is already taking steps to set solar panels on all government buildings and Zila Parishads as well. This is an appreciable step.



Sources: Asaduzzaman et al., 2026; Harun & Rashid, 2020; Sikder et al., 2016

Recommendations

By integrating energy planning into urban design and government policies, Bangladesh can steadily upgrade its renewable energy supply across every city, department, and sector.

Micro-Steps

1. Require all government departments, public schools, hospitals, and large commercial centers to install rooftop solar panels.



Figure 5: Solar Panel at BRAC University
Source: Brac University Online



Figure 6: Solar Panel at JUST
Source: Prothom Alo



Figure 7: Solar Panel at BUET
Source: Prothom Alo



Figure 8: Solar Panel at J.B High School
Source: Prothom Alo

These are examples of rooftop solar panels installed in some Bangladesh prominent universities and schools.

2. Need initiatives to make the net metering system customer-friendly by resolving various problems including bureaucratic hassles. Also, government should take steps to
   - → Reduce Approval processes
   - → Remove Financial constraint and high cost
   - → Remove unclear compensation and policy gaps
   - → Increase awareness of net metering
3. A system must be developed so that middle- and lower-income people can easily take low-interest loans for their homes or their shops/businesses such as Bangladesh Bank's low-interest refinancing scheme. Should eliminate import taxes on solar panels, inverters, and lithium batteries.

4. To make public transport in the country more sustainable, EVs need to be imported and the dependence on all non-renewable energies including diesel, gas and petrol needs to be gradually reduced. This requires some specific steps, and the government needs to take initiative.

Land Use & Zoning Regulations

1. Vertical Spatial Utilization: There is a severe shortage of land in cities in developing countries. Instead of destroying open space for power generation, the roofs of tall buildings and car parking sheds can be turned into mini power plants.
2. Segregation of power lines: The master plan should zone heavy industrial areas (steel and cement) and light or export-oriented industries (garments) separately and allocate separate high-voltage utility corridors for them to avoid voltage drops. Convert old coal plant sites into solar installations (such as the World Bank proposal for six sites providing over 6,300 MW).
3. Space allocation for community microgrids: Mandatory specific plots for central battery energy storage (BESS) and local power distribution hubs in DAPs for new residential and commercial zones.



Figure 9: Central battery energy storage. Source: Adirondak Explorer

Building Code Policies

1. Solar and Passive Design: Bangladesh National Building Code (BNBC) and RAJUK plan approvals require mandatory rooftop solar panels and north/south facing ventilation designs in all new buildings of a certain size to reduce energy consumption.
2. FAR and tax exemption incentives: Developers who implement building-integrated photovoltaics (BIPV), solar roofs and green roof gardens in their buildings should be given additional floor area ratio (FAR) and a specific period of exemption in holding tax.
3. Solar charging nodes: Solar-canopies and fast-charging stations should be constructed at Metrorail stations, bus depots and major intersections under the Transit-Oriented Development (TOD) policy.

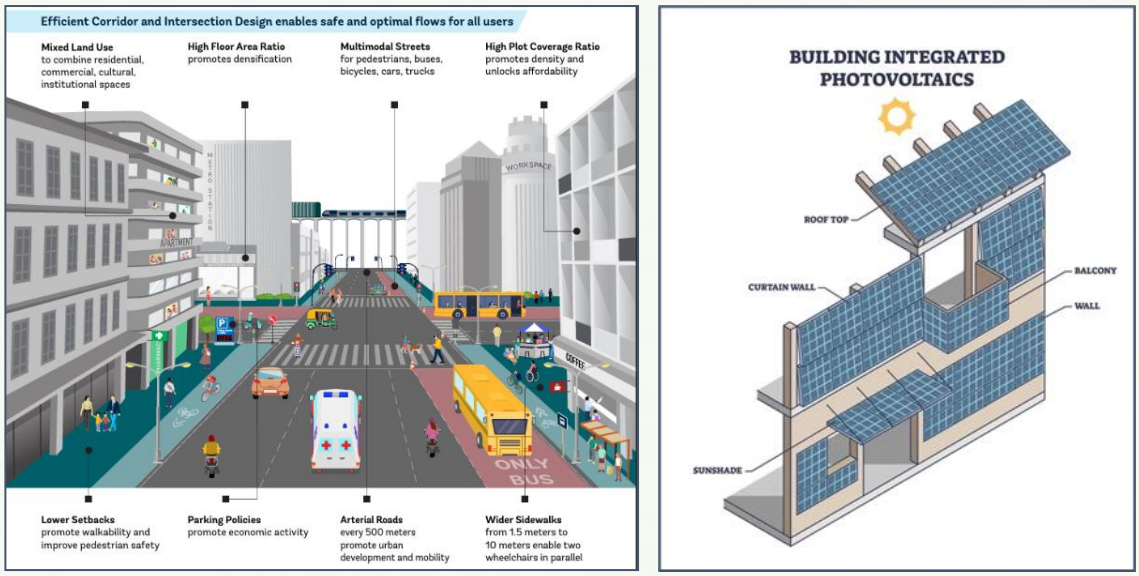


Figure10: Transit Oriented Development. Source: World Bank. (Left) (b) Building integrated Photovoltaics. Source: NEXT IAS (Right)

4. United Commission: RAJUK, City Corporation (DNCC/DSCC), DESCO, DPDC and SREDA should be brought under an umbrella to form a 'Single Urban Development and Energy Committee'. Permission for electricity connection will be given only when the building meets the basic conditions of energy efficiency.
5. Solar Panels in Roofs (BIPVGREEN): Planners should encourage combining rooftop solar panels with rooftop gardens and vertical greenery. Plants cool the surrounding air through natural evaporation, which lowers the urban heat island effect and boosts solar panel electricity output by 2% to 3.3% (Karamanis et al., 2024).

Predictable Outcomes from these recommendations

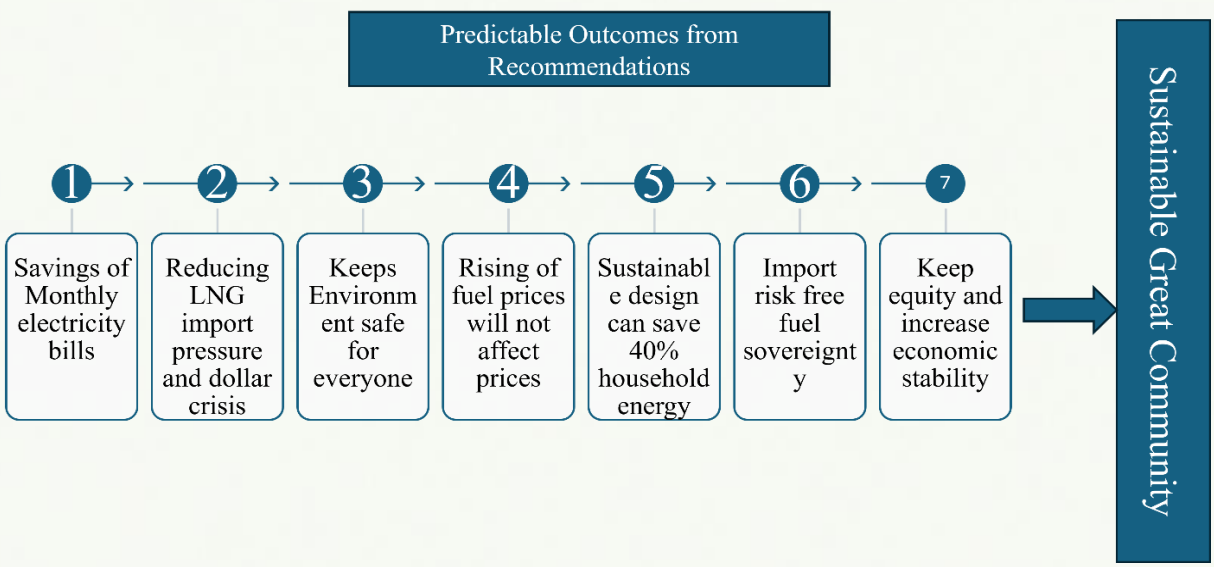


Figure 11: predictable outcomes

Conclusion

Renewable energy is indeed a very important resource for this world, and for Bangladesh. Because at some point, non-renewable energy will run out. If we cannot properly utilize renewable energy and achieve sustainable urban development, then there will be no end to the suffering of the city dwellers and the countrymen. The problem mentioned here tells us that our current dependence on non-renewable energy will cause us a lot of harm and shows that if this continues after the next 10 years, where will the situation of our country be. Also, if the solutions and recommendations given here are properly implemented, then the goal of sustainable urban development that Bangladesh is moving towards by reducing dependence on non-renewable energy will be realized very quickly and the urban planning will be more beautiful, orderly and long-lasting.

References

Al Kabir, F. (n.d.). *Navigating Bangladesh's Energy Crisis Immediate Priorities and the Path to a Sustainable Energy Future*.

Asaduzzaman, A., Syed, P., Al, A., Salehin Surfaraz, A. M., Murad, M., Suhel, A., Mahan, R. M., Mahamudul, M., Kausar, H., & Majumder, A. (2026). *Bangladesh Industrial Energy Efficiency Policy A Draft for Sustainable Progress Policy Paper F e b r u a r y 2 0 2 6 Team Leader: Selim Raihan*.

Das, A., Shuvo, R. M., Mukarram, M. M. T., & Sharno, M. A. (2024). Navigating the energy policy landscape of Bangladesh: A stern review and meta-analysis. In *Energy Strategy Reviews* (Vol. 52). Elsevier Ltd. https://doi.org/10.1016/j.esr.2024.101336

Harun, M., & Rashid, O. (2020). *Sustainable Energy Transition in Dhaka City, Bangladesh in Response to Climate Change: Challenges and Opportunities*.

Hasan, M. M., Riaz, M. H., Ahmed, Z., Islam, S., Uddin, M. S., Roshid, M. M., Ridwan, M., & Atasoy, F. G. (2025). Decarbonizing Bangladesh: The Roles of Technological Innovation, Energy Transition, and Urban-Industrial Dynamics in Greenhouse Gas Emissions. *Environment, Innovation and Management*, *01*. https://doi.org/10.1142/s306090112550019x

Karamanis, D., Liu, H. Y., Skandalos, N., Makis, A., Kapsalis, V., D'Agostino, D., Maduta, C., Tolis, A., Trandafir, S., & Parker, D. (2024). Transitioning to building integration of photovoltaics and greenery (BIPVGREEN): case studies up-scaling from cities informal settlements. In *Environmental Research: Infrastructure and Sustainability* (Vol. 4, Number 4). Institute of Physics. https://doi.org/10.1088/2634-4505/ad8374

Sikder, S. K., Eanes, F., Asmelash, H. B., Kar, S., & Koetter, T. (2016). The contribution of energy-optimized urban planning to efficient resource use-a case study on residential settlement development in Dhaka City, Bangladesh. *Sustainability (Switzerland)*, *8*(2). https://doi.org/10.3390/su8020119

পরিকল্পনায় থাকুক শহরের নিজের গল্প

নওশীন নাওয়ার রাফা

স্নাতকোত্তর শিক্ষার্থী, শিল্পকলার ইতিহাস বিভাগ, ঢাকা বিশ্ববিদ্যালয়
যোগাযোগঃ ০১৬৪২-২৪২৫১৩

একটি শহরের কথা ভাবুন। সকালে ব্যস্ত বাজার, রাস্তার পাশে চায়ের দোকান, কোনো এক পুরোনো ভবনের সামনে মানুষের ভিড়, বিকেলে নদীর ধারে বসে থাকা কয়েকজন তরুণ, আর কোনো উৎসবের দিনে রঙে-আলোয় বদলে যাওয়া একটি চত্বর। এসবের কোনোটিই হয়তো শহরের সবচেয়ে বড় অবকাঠামো নয়। তবু এই ছোট ছোট দৃশ্যই একটি শহরের স্বাতন্ত্র্য, স্মৃতি ও মানুষের সঙ্গে তার সম্পর্ককে দৃশ্যমান করে।

আসলে একটি শহর শুধু ইট, কংক্রিট, রাস্তা আর ভবনের সমষ্টি নয়। প্রত্যেক শহরেরই নিজস্ব চরিত্র থাকে, যা তৈরি হয় সেখানকার মানুষের জীবনযাপন, ইতিহাস, স্মৃতি, সংস্কৃতি ও শিল্পের মধ্য দিয়ে। পরিকল্পনার কাজ তাই শুধু কোথায় কী নির্মাণ হবে তা নির্ধারণ করা নয়; বরং একটি জায়গার নিজস্ব পরিচয়কে কীভাবে ভবিষ্যতের উন্নয়নের সঙ্গে যুক্ত করা যায়, সেটিও ভাবা। “Great Communities Are Built on Planning”, এবারের বিশ্ব নগর পরিকল্পনা দিবসের এই প্রতিপাদ্যটি এজন্যই গুরুত্বপূর্ণ। ভালো কমিউনিটি কেবল অবকাঠামো দিয়ে তৈরি হয় না; মানুষের প্রয়োজন, সম্পর্ক, পরিচয় ও জীবনযাপনের সঙ্গে স্থানকে যুক্ত করার মধ্য দিয়ে একটি প্রাণবন্ত কমিউনিটি গড়ে ওঠে। আর সেই সংযোগ তৈরির প্রধানতম মাধ্যম হলো পরিকল্পনা। বাংলাদেশের প্রতিটি জনপদেরই এমন কিছু নিজস্ব বৈশিষ্ট্য রয়েছে, যা তাকে অন্য জায়গা থেকে আলাদা করে। কোথাও নদী ও নৌযাত্রা, কোথাও পুরোনো হাট-বাজার, কোথাও মৃৎশিল্প, তাঁত, নকশিকাঁথা, বাঁশ-বেতের কাজ কিংবা লোকজ উৎসব একটি এলাকার পরিচয় বহন করে। পুরোনো শহর ও জনপদগুলোর স্থাপত্য, রাস্তার বিন্যাস, বাজার কিংবা জনসমাগমের স্থানেও স্থানীয় জীবনযাত্রার ছাপ রয়েছে। এগুলো কেবল অতীতের স্মৃতি নয়; এগুলো একটি কমিউনিটির সাংস্কৃতিক সম্পদ।

কিন্তু দ্রুত নগরায়নের চাপে নতুন উন্নয়ন অনেক সময় এসব বৈশিষ্ট্যকে ধারণ করার পরিবর্তে সেগুলো সম্পূর্ণ এড়িয়ে যায়। ফলে একসময় দেখা যায়, একটি শহর থেকে আরেকটি শহরের পার্থক্য ক্রমেই কমে আসছে। একই ধরনের ভবন, একই ধরনের বাণিজ্যিক স্থাপনা, একই ধরনের রাস্তা ও বিজ্ঞাপনের ভিড়ে স্থানীয় পরিচয় ধীরে ধীরে আড়ালে চলে যায়। উন্নয়ন তখন জায়গার ভৌত পরিবর্তন ঘটায়, কিন্তু সেই জায়গার নিজস্ব চরিত্রকে সমৃদ্ধ করতে পারে না।

এখানেই পরিকল্পনার ভূমিকা গুরুত্বপূর্ণ। একটি ভালো পরিকল্পনা শুধু কোথায় রাস্তা হবে, কোথায় ভবন হবে বা কোথায় আবাসিক এলাকা গড়ে উঠবে, তা নির্ধারণ করে না। মানুষের ব্যবহার, সামাজিক সম্পর্ক, স্থানীয় ইতিহাস এবং সাংস্কৃতিক বৈশিষ্ট্যও পরিকল্পনার বিবেচনায় আসতে পারে। ফলে কোনো এলাকার উন্নয়ন তার পুরোনো পরিচয়কে মুছে না দিয়ে বরং নতুনভাবে তুলে ধরার সুযোগ তৈরি করে।

এর একটি সহজ উদাহরণ হতে পারে স্থানীয় কোনো বাজার, চত্বর বা নদীতীর। সেখানে শুধু দোকান ও চলাচলের জায়গা রাখার পরিবর্তে স্থানীয় নকশা, শিল্পকর্ম, বসার স্থান, ছায়া, পথচারীবান্ধব ব্যবস্থা কিংবা এলাকার ইতিহাস তুলে ধরা শিল্পকর্ম যুক্ত করা যায়। একইভাবে পার্ক, উন্মুক্ত স্থান কিংবা গুরুত্বপূর্ণ সড়ককে এমনভাবে নকশা করা সম্ভব, যেখানে মানুষের দৈনন্দিন ব্যবহার এবং স্থানীয় পরিচয়, দুটিই জায়গা পায়।

স্থানীয় শিল্প এখানে শুধু সৌন্দর্য বৃদ্ধির উপাদান নয়। এটি একটি জায়গার সঙ্গে মানুষের সম্পর্ককে আরও গভীর করতে পারে। একটি দেয়ালে স্থানীয় ইতিহাসের চিত্র, একটি চত্বরে স্থানীয় শিল্পীর ভাস্কর্য, রাস্তার নকশায় আঞ্চলিক মোটিফ কিংবা জনপরিসরের আসবাব ও স্থাপত্যে স্থানীয় উপকরণের ব্যবহার, এসব ছোট উদ্যোগও একটি স্থানের চরিত্র বদলে দিতে পারে।

এখন আমাদের ঐতিহ্য ধারণ করার সংজ্ঞাটিও যেন ধীরে ধীরে বদলে যাচ্ছে। অনেক সময় আমরা কোনো ঐতিহাসিক নামে একটি ভবন, চত্বর বা স্থাপনার নামকরণ করেই মনে করি, স্থানীয় ঐতিহ্যকে ধারণ করা হয়েছে। কিন্তু সেখানে তাঁর সাহিত্যকর্মের কোনো প্রতিফলন নেই, তাঁর চিন্তা, দর্শন কিংবা সৃষ্টিশীলতার কোনো প্রকাশ নেই; থাকে কেবল একটি নাম। একটি গতানুগতিক ভবন নির্মাণ করে সেই স্থাপনার সঙ্গে একজন মনীষীর নাম যুক্ত করে দিলেই কি সত্যিই তাঁর ঐতিহ্যকে ধারণ করা যায়? বরং কোনো স্থানের পরিকল্পনা ও নকশায় সেই ব্যক্তির চিন্তা, কর্ম, সৃষ্টিশীলতা কিংবা সময়ের কোনো অর্থবহ প্রতিফলন থাকলেই সেই নামকরণ অর্থবহ হয়ে উঠতে পারে। নইলে সেটি ঐতিহ্য ধারণ নয়; কেবল ঐতিহ্যের নাম ব্যবহার করা।

তবে স্থানীয় শিল্পকে পরিকল্পনায় যুক্ত করার অর্থ অতীতকে হুবহু পুনর্নির্মাণ করা নয়। একটি শহর পরিবর্তিত হবে, আধুনিক হবে, এটাই স্বাভাবিক। প্রয়োজন হলো আধুনিকতার সঙ্গে স্থানীয় পরিচয়ের একটি সৃজনশীল সমন্বয়। নতুন ভবন আধুনিক হতে পারে, কিন্তু তার জনপরিসর, প্রবেশপথ, উন্মুক্ত স্থান বা নকশার কিছু উপাদানে স্থানীয় সংস্কৃতির ছাপ থাকতে পারে। অর্থাৎ, আধুনিকতা ও নিজস্ব পরিচয় পরস্পরের বিরোধী নয়।

বাংলাদেশের মাঝারি ও ছোট শহরগুলোর ক্ষেত্রে বিষয়টি আরও গুরুত্বপূর্ণ। এসব শহরের অনেকগুলোরই নিজস্ব ইতিহাস, নদী, বাজার, শিক্ষা, শিল্প ও সাংস্কৃতিক বৈশিষ্ট্য রয়েছে। উন্নয়ন পরিকল্পনায় যদি সেই বৈশিষ্ট্যগুলোকে গুরুত্ব দেওয়া যায়, তাহলে প্রতিটি শহর তার নিজস্ব চরিত্র নিয়ে বিকশিত হতে পারে। অন্য কোনো শহরের সফল মডেল হুবহু অনুসরণ করার পরিবর্তে স্থানীয় সম্ভাবনা ও বাস্তবতাকে ভিত্তি করে পরিকল্পনা করা তখন বেশি অর্থবহ হয়ে ওঠে।

এক্ষেত্রে স্থানীয় মানুষের অংশগ্রহণও জরুরি। একটি এলাকার কোন জায়গাটি মানুষের কাছে গুরুত্বপূর্ণ, কোন উৎসব বা ঐতিহ্য তাদের পরিচয়ের অংশ, কোন স্থানটি সামাজিকভাবে ব্যবহৃত হয়, এসব তথ্য স্থানীয় মানুষই সবচেয়ে ভালো জানেন। তাই পরিকল্পনাবিদ, স্থপতি, প্রকৌশলী, শিল্পী, সংস্কৃতিকর্মী, স্থানীয় প্রশাসন এবং নাগরিকদের মধ্যে সমন্বয় তৈরি করা গেলে পরিকল্পনা আরও বাস্তবসম্মত হতে পারে। এতে শুধু ভালো নকশা তৈরি হয় না; মানুষের মধ্যে সেই জায়গার প্রতি মালিকানাবোধও তৈরি হয়।

স্থানীয় শিল্প ও সংস্কৃতিকে অর্থনৈতিক সুযোগের সঙ্গেও যুক্ত করা সম্ভব। কোনো শহরের নির্দিষ্ট কারুশিল্প, স্থানীয় নকশা বা সাংস্কৃতিক ঐতিহ্যকে জনপরিসর, বাজার, পর্যটন এলাকা কিংবা সাংস্কৃতিক কেন্দ্রের পরিকল্পনার সঙ্গে যুক্ত করা গেলে স্থানীয় শিল্পীরা নতুন বাজার পেতে পারেন। অর্থাৎ, পরিকল্পনা তখন শুধু স্থান তৈরি করে না; স্থানীয় অর্থনীতি ও সংস্কৃতির জন্যও নতুন সুযোগ তৈরি করতে পারে।

তবে এসব উদ্যোগকে বিচ্ছিন্ন সৌন্দর্যবর্ধন প্রকল্প হিসেবে দেখলে চলবে না। স্থানীয় শিল্প ও সংস্কৃতিকে শহরের মাস্টার প্ল্যান, স্থানীয় এলাকার পরিকল্পনা, জনপরিসর উন্নয়ন, সড়ক নকশা, নদীতীর উন্নয়ন এবং অন্যান্য অবকাঠামো প্রকল্পের বৃহত্তর পরিকল্পনার অংশ হিসেবে বিবেচনা করা প্রয়োজন। তাহলেই শিল্প পরিকল্পনার বাইরে থাকা কোনো আলাদা বিষয় না হয়ে একটি কমিউনিটি তৈরির প্রক্রিয়ার অংশ হয়ে উঠবে।

শেষ পর্যন্ত একটি ভালো শহর শুধু তার ভবনের উচ্চতা, সড়কের প্রস্থ কিংবা অবকাঠামোর আধুনিকতায় পরিচিত হয় না। মানুষ সেখানে কতটা স্বাচ্ছন্দ্যবোধ করে, নিজের ইতিহাস ও পরিচয়ের কতটা প্রতিফলন দেখতে পায় এবং পারস্পরিক সম্পর্ক ও সামাজিক জীবন কতটা বিকশিত করতে পারে, সেটিও শহরের সাফল্যের গুরুত্বপূর্ণ অংশ।

তাই ভালো কমিউনিটি গড়তে পরিকল্পনার প্রয়োজন শুধু জায়গাকে সংগঠিত করার জন্য নয়; মানুষ ও জায়গার মধ্যে সম্পর্ক তৈরি করার জন্যও। আর সেই সম্পর্ক আরও গভীর হয় যখন পরিকল্পনার মধ্যে স্থানীয় জীবন, স্মৃতি, ইতিহাস, শিল্প, সংস্কৃতি ও মানুষের নিজস্ব পরিচয়ের জায়গা থাকে।

The Disappearing Public Space: Why Bangladesh's Cities Are Losing Places to Live, Meet and Belong

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Introduction

Every city sets aside a share of itself for no one a footpath, a pond, a bench under a tree. A city can be densely built and still socially empty, lacking places to rest, play and meet.
Public space includes parks and playgrounds, but also sidewalks, waterfronts, markets, ponds and canals - any space people may freely use, vital to social interaction, health, economy and inclusion [1, 3].
In Bangladesh, this common ground is being quietly consumed not just land, but a city's capacity to live and belong. Treated as residual, it grows vulnerable to encroachment and neglect.
This article uses Dhaka and Chattogram as case studies of how this happens and what a planned city would do differently whether its cities preserve places to live, meet and belong.

Why Public Space Matters

Public space is often judged by physical features trees, benches, paving. Its real value is social: it gives people reason to stay in the city, not merely pass through it.
UN-Habitat names six dimensions for public-space strategies quantity, distribution, connectivity, diversity, accessibility, quality [1] since many neighborhoods stay underserved even where famous parks exist.
Sociologists call spaces like parks, tea stalls and riverside ghats "third places": neither home nor workplace, but where community happens the adda on a bench, cricket on a field. These are not decorative extras; they build social trust across class and generation, give children essential unstructured play, and offer relief from heat, noise and crowding.
Public space also supports health: walking routes and green space encourage activity and cooling [2, 3]. Ponds and canals form a city's drainage and flood buffer; losing them strips infrastructure a monsoon city needs.

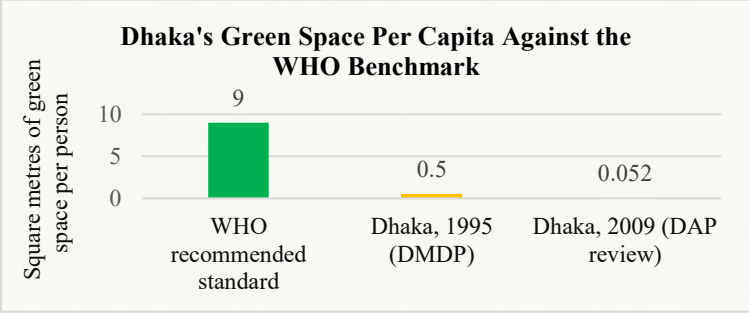
Urban Growth and the Pressure on Open Space

Bangladesh's urban population has increased from roughly 23% in 2000 to about one-third in 2024 [9]. Dhaka and Chattogram absorb much of this growth, but rapid expansion has reduced parks, playgrounds, footpaths, canals and ponds.
The World Bank has highlighted the scarcity and decline of public and open spaces in Dhaka, noting their importance for drainage and ecological functions [4,5]. RAJUK's planning documents also emphasize protecting parks, playgrounds, lakes and community facilities [6].

Open spaces should therefore be planned alongside housing and infrastructure, not treated as leftover land.

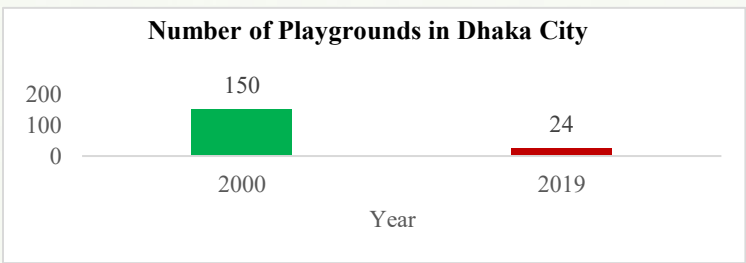
Dhaka's Shrinking Commons

Dhaka illustrates the scale of it: WHO recommends around 9 square metres of green space per resident [10]; Dhaka offered as little as 0.5 in the mid-1990s, falling to 0.05 by the late 2000s. Dhaka's green cover fell from about 80 percent in 1960 to roughly 41 percent by 2005, as built-up land quadrupled [12]; by 2020 it had lost most of what remained [13, 14].



Source: RAJUK DMDP (1995); DAP review (2009); WHO open-space guideline.

Playground numbers tell the same story: around 150 in Dhaka in 2000; by 2019 the Bangladesh Institute of Planners found only 24, most fenced, few usable by girls at all [11].

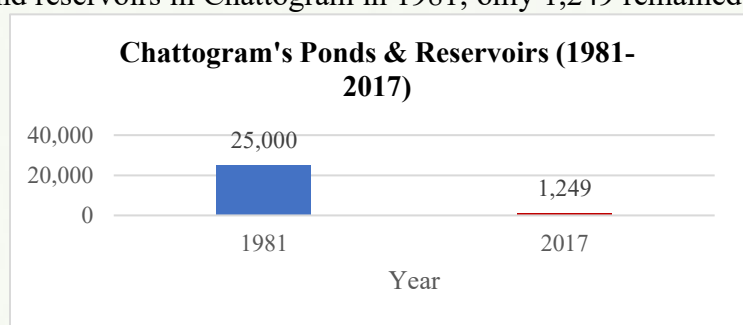


Source: Bangladesh Institute of Planners (BIP) survey, 2019; The Business Standard, 2020

What replaces a park is rarely nothing: parks are "appropriated" for offices, or "renovated" with walls and restricted hours [18]. Barely two percent of Dhaka's open space is usable for recreation [21].

Chattogram's Vanishing Waters

Chattogram's crisis runs through water: once dense with ponds, tanks and canals for drinking water, fire-fighting and drainage an inheritance vanishing fast. Department of Environment records show about 25,000 ponds and reservoirs in Chattogram in 1981; only 1,249 remained by 2017 [15, 16]. Roughly 70 percent have been filled over five decades, and over half of the 4,600 on record are reportedly under land grabbers' control [16, 17].



Source: Department of Environment, Chattogram; cited in *The Business Standard*, 2022

The canal network fared no better: 72 canals in a 1995 survey, only 56 recognized today, most narrowed or blocked [19]. The port city now floods for days on ordinary tides, a crisis megaprojects keep failing to reverse, since that retention capacity has been built over.

A legal framework exists: the Playground, Open Space, Park and Natural Water Body Protection Act, 2000 punishes filling a water body with up to five years' imprisonment or a fine [23]. Enforcement is negligible a handful of cases in over a decade [20].

Dhaka and Chattogram: Public Space and the Everyday Urban Experience

Everyday streets, sidewalks and waterfronts are as much public space as parks. The photos below contrast Dhaka and Chattogram, highlighting street activity, pedestrian accessibility and the availability of shared public space.



Figure 1: (a) Dense Commercial Development and Intense Street Activity at New Market, Dhaka. Photo: Kroisenbrunner, Wikimedia Commons, Cc By-Sa 4.0. (b) A Sidewalk on Sheikh Mujib Road, Chattogram, Showing the Physical Setting of Everyday Pedestrian Movement. Photo: Kritzolina, Wikimedia Commons, Cc By-Sa 4.0. (c) Hatirjheel At Evening: A Connected Waterfront Path and Public Open Space Within a Dense City. Photo: Uddinkabir, Wikimedia Commons, Cc By-Sa 4.0.

Planning Perspective: Competing activities and limited pedestrian space can constrain the public realm; connected waterfronts, by contrast, support movement and social interaction.

Why the Loss Keeps Happening

The pattern across both cities points to shared underlying mechanisms rather than isolated bad actors:

- **Land value versus public value:** In a land-scarce country, a filled pond or "underused" field turns instantly into valuable real estate - nothing rewards keeping land open.
- **Fragmented authority:** Open space and drainage responsibility is split across RAJUK/CDA, city corporations, WASA and the DoE, with no body accountable for the net loss.
- **Plans on paper, not on the ground:** Structure plans mark land for parks and water retention, but these are routinely overridden by land-use changes and political influence [22].
- **Enforcement without consequence:** Even where protective law exists, prosecution is rare and penalties are small next to land value, so the law works more as a talking point than a deterrent.
- **Roads becoming parking:** When sidewalks and road edges are occupied by parked vehicles, the street ceases to function as a shared public realm.
- **"Improvement" that excludes:** Where parks are renovated rather than grabbed, the redesign often adds walls and fixed hours excluding children and women first.

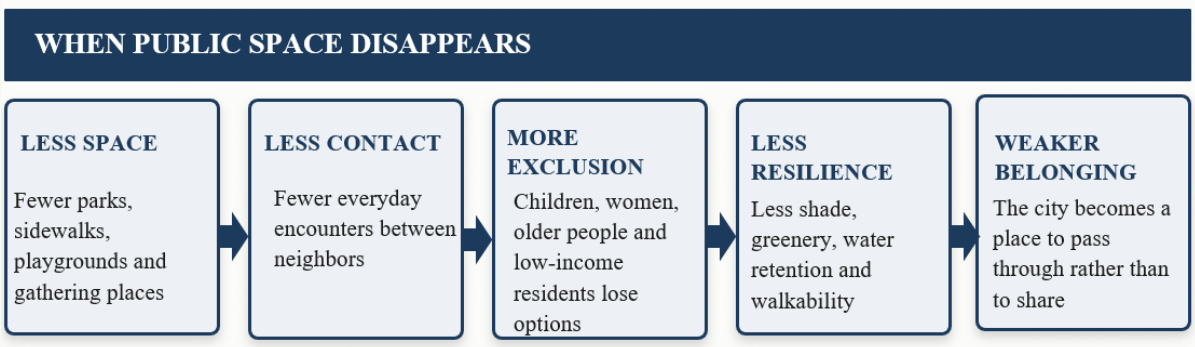
- **Poor maintenance:** A legally protected space may still become socially unusable if it is unsafe, inaccessible or poorly maintained.
- **Unequal distribution:** A city may contain large landmark parks while dense, low-income neighborhoods have little or no open space nearby.

The Hidden Cost of Losing Public Space

When a playground disappears, children lose a daily chance to play; when a shaded sidewalk goes, a safe route may vanish; when a square is fenced off, residents lose a place for community life.

Public space should be understood as urban infrastructure: a road carries movement, drainage carries water, public space carries social life.

The effects fall unevenly: children, older people, women and low-income households have fewer alternatives. SDG Target 11.7 calls for universal access to safe, inclusive public and green space for all [3].



Planning message: protect public space as a connected system, not as isolated leftover plots.

Source: Author's conceptualization based on UN-Habitat (2020, 2025) and RAJUK planning frameworks.

Public Space as Climate Infrastructure

The climate dimension matters increasingly: trees shade, permeable surfaces manage rainfall, wetlands aid drainage, and walkable space cuts short trips. Chattogram's waterlogging shows what happens when it disappears.

This doesn't mean every park must become a drainage facility planning can combine social and environmental roles, echoing UN-Habitat's focus on climate resilience and inclusion [2]. Protecting a canal edge, retaining a neighborhood pond or planting a shaded pedestrian corridor is at once a public-space decision and a climate-adaptation decision.

From "Leftover Land" to Social Infrastructure

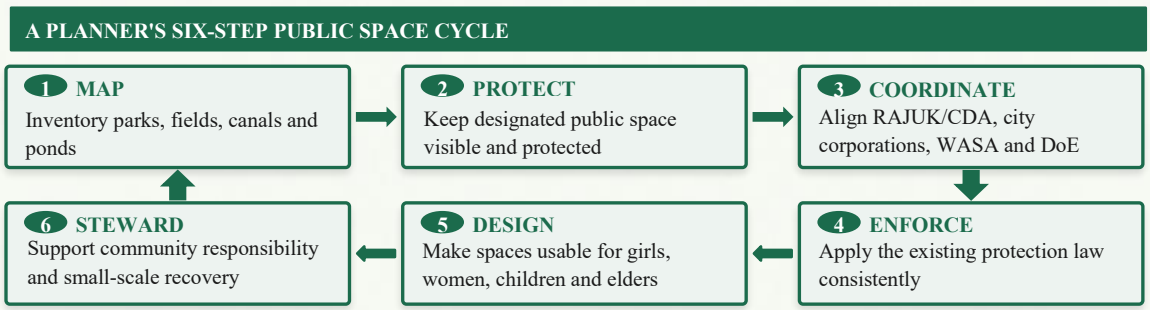
The planning mindset must change: public space should structure the urban plan from the outset, mapping parks, ponds, canals and streets, and protecting or creating space where gaps are largest matching RAJUK's people-oriented direction [6, 7].

Bangladesh Already Has Examples to Build On

None of this is uniquely Bangladesh's failure, and it is solvable. Dhaka shows public space can be recovered when planning and management align - Hatirjheel combines a major water system with pedestrian movement, now a key destination.
At the neighborhood scale, Gulshan South Park shows a community with real responsibility for upkeep resists encroachment far better than one managed remotely [24].

Reclaiming the Commons: The Way Forward

The solution isn't simply more parks. Bangladesh's cities need connected, protected public-space systems, built through six-step cycle planners can apply continuously.



Source: Author's synthesis based on UN-Habitat (2020) and *City-Wide Public Space Strategies: A Guidebook for City Leaders*, and RAJUK planning frameworks.

- **Map what remains:** A continuously updated public GIS inventory of every remaining park, canal and pond would make encroachment visible in real time.
- **Protect:** Use planning controls to prevent conversion or encroachment of designated public spaces, so designations survive land-use changes.
- **Coordinate:** Bring RAJUK/CDA, city corporations, WASA and the DoE under one open-space and drainage mandate.
- **Enforce:** The 2000 Act works only if violations are prosecuted; even modest, consistent enforcement would shift the incentives.
- **Design for everyone:** Judge renovation projects by how many more residents - women, older people, persons with disabilities, children can freely use the space afterward, not just how it looks.
- **Steward:** Give communities real responsibility for upkeep, and recover small spaces a blocked canal, a leftover junction turned plaza, a restored pond - cheaply, at scale.

Three principles cut across every step: connect spaces into a network, prioritize dense low-access neighborhoods, and measure quality, safety and use over time.

References

[1] UN-Habitat (2020). City-Wide Public Space Strategies: A Guidebook for City Leaders.

[2] UN-Habitat (2025). Global Public Space Programme.

[3] UN-Habitat. Public Space; and SDG 11.7 - Universal access to safe, inclusive and accessible green and public spaces.

[4] World Bank (2018). Toward a Livable Dhaka.

[5] World Bank. Mainstreaming Strategic Environmental Assessment in Dhaka.

[6] RAJUK. Detailed Area Plan (DAP), 2016–2035.

[7] RAJUK. Dhaka Structure Plan (2016–2035).

[8] UN-Habitat (2019). City-Wide Public Space Strategies: A Compendium of Inspiring Practices.

[9] World Bank (2024). World Development Indicators: Urban population (% of total) - Bangladesh.

[10] World Health Organization. Urban green space guideline (9 m² per capita benchmark).

[11] Bangladesh Institute of Planners (BIP) (2019). Survey on playgrounds in Dhaka city.

[12] Dewan, A. M., & Yamaguchi, Y. (2009). Land use and land cover change in Greater Dhaka. Applied Geography, 29(3), 390–401.

[13] Nawar, N., et al. (2022). Land cover change and loss of green space in Dhaka, 1989–2020.

[14] Rahman, M. H. (2022). Built-up expansion and vegetation change in Dhaka, 2001–2021.

[15] Department of Environment, Chattogram Metropolitan Office (1981, 2017 data). Records on ponds and reservoirs, Chattogram city.

[16] The Business Standard (2022). No relief from filling up water bodies in Chittagong.

[17] The Business Standard (2025). Another public pond faces encroachment in Ctg, ‘indifference of DoE office’ protested.

[18] The Daily Star (2024). Public spaces under siege in Bangladesh.

[19] The Daily Star (2023). Chattogram’s Achilles’ heel [editorial on canal loss and waterlogging].

[20] The Daily Star (2019). No one here goes to jail for filling up water bodies.

[21] Rahman, S., & Ahmed, N. (n.d.). Open space management of Dhaka city: parks and playgrounds. ResearchGate.

[22] ScienceDirect (2026). Gaps in urban green space policy for Dhaka city.

পুনঃকল্পনায় সোহরাওয়ার্দী উদ্যান

নকশা হোক নিরাপত্তার চাবিকাঠি: CPTED ও প্লেসমেকিংভিত্তিক নগর-নকশা বিশ্লেষণ ও প্রস্তাবনা

মোঃ সাজিদ ইকবাল[1], রুফাইয়াত হোসেন মাহা[2], মুসাররাত আবিয়াত[3]

[1] নগর পরিকল্পনাবিদ, শেলটেক কনসালট্যান্টস (প্রা.) লি., sajid.iqbal.sid@gmail.com

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সারসংক্ষেপ

ঢাকার প্রাণকেন্দ্রে অবস্থিত ঐতিহাসিক সোহরাওয়ার্দী উদ্যান একই সঙ্গে জাতীয় ইতিহাস ও স্মৃতির ধারক এবং নগরের গুরুত্বপূর্ণ সবুজ উন্মুক্ত স্থান। কিন্তু নির্জনতা, অপর্যাপ্ত আলো, ঘন ঝোপঝাড়, ভাঙা অবকাঠামো, আবর্জনা ও অনিয়ন্ত্রিত ব্যবহার এর বিভিন্ন অংশকে অনিরাপদ করে তুলেছে। ফলে সন্ধ্যার পর সাধারণ মানুষ, বিশেষ করে নারী, শিশু ও বয়স্কদের উপস্থিতি কমে এবং সেই শূন্যতা অনাকাঙ্ক্ষিত কর্মকাণ্ডের সুযোগ তৈরি করে। এই লেখায় সমস্যাটিকে কেবল আইনশৃঙ্খলার বিষয় হিসেবে নয়, বরং ভৌত নকশা, সামাজিক ব্যবহার ও ব্যবস্থাপনার সমন্বিত সংকট হিসেবে দেখা হয়েছে। CPTED (Crime Prevention Through Environmental Design), Broken Windows, 'Eyes on the Street' এবং Placemaking-এর আলোকে ১৩টি নকশা-হস্তক্ষেপ প্রস্তাব করা হয়েছে। এগুলো চারটি ধারায় সাজানো: দৃশ্যমানতা ও প্রাকৃতিক নজরদারি; প্রবেশ, পথনির্দেশনা ও দ্রুত সাড়া; মালিকানাবোধ, রক্ষণাবেক্ষণ ও শৃঙ্খলা; এবং কার্যক্রম, সম্প্রদায় ও ঐতিহ্যভিত্তিক প্লেসমেকিং। মূল নীতিবাক্য- "Design out the crime, design in the people."

ভূমিকা: প্রেক্ষাপট ও সমস্যার স্বরূপ

রমনা রেসকোর্স ময়দান নামে পরিচিত বর্তমান সোহরাওয়ার্দী উদ্যান বাংলাদেশের ইতিহাসের দুটি নির্ণায়ক মুহূর্ত- ৭ মার্চের ভাষণ ও ১৬ ডিসেম্বরের আত্মসমর্পণ- এর সঙ্গে যুক্ত। শিখা অনির্বাণ, স্বাধীনতা স্তম্ভ, জাদুঘর এবং ঢাকা বিশ্ববিদ্যালয়ের নিকটবর্তী অবস্থান এর প্রতীকী ও নগর-গুরুত্ব বাড়িয়েছে।

তবু ঘন ঝোপঝাড়, অন্ধকার কোণ, ভাঙা বেঞ্চ, গ্রাফিতি ও আবর্জনা 'পরিত্যক্ত' পরিবেশ তৈরি করে। মানুষের উপস্থিতি কমলে নজরদারি কমে এবং অনিরাপত্তা বড়ে- একটি আত্মবর্ধমান দুষ্টচক্র। পুলিশি অভিযান সাময়িক স্বস্তি দিলেও এর মূল কারণ সমাধান করে না। তাই কেন্দ্রীয় প্রশ্ন হওয়া উচিত- কাকে সরানো হবে তা নয়, বরং কার জন্য স্থানটি নকশা করা হবে?



চিত্র ১: রমনা রেসকোর্স (বর্তমানে সোহরাওয়ার্দী উদ্যান): ঐতিহাসিক আলোকচিত্র

তাত্ত্বিক কাঠামো: CPTED ও প্লেসমেকিং

CPTED: পরিবেশের মাধ্যমে আচরণের নকশা

CPTED-এর মূল দর্শন হলো ভৌত পরিবেশের পরিবর্তনের মাধ্যমে অপরাধের সুযোগ কমানো ও নিরাপত্তাবোধ বাড়ানো। জেফরি ও নিউম্যানের কাজ থেকে বিকশিত এই কাঠামোর চারটি নীতি–প্রাকৃতিক নজরদারি, প্রবেশ নিয়ন্ত্রণ, আঞ্চলিকতা ও রক্ষণাবেক্ষণ– সোহরাওয়ার্দী উদ্যানের নকশায় প্রয়োগযোগ্য:

স্তম্ভ	মূল ধারণা	উদ্যানে প্রয়োগ
প্রাকৃতিক নজরদারি (Natural Surveillance)	ঝোপঝাড় ও 'ব্লাইন্ড স্পট' এমনভাবে পুনঃনকশা করা, যাতে পথচারী বা নিরাপত্তাকর্মী দূর থেকে সবকিছু দেখতে পান। মূলমন্ত্র–'See and be seen'।	২ ফুট–৬ ফুট নিয়ম, আলোকিত বোর্ডওয়াক, স্বচ্ছ টয়লেট ভবন
প্রাকৃতিক প্রবেশ নিয়ন্ত্রণ (Natural Access Control)	প্রবেশপথ ও হাঁটার রাস্তা এমনভাবে নকশা করা, যাতে অপরাধীরা সহজে পালাতে না পারে, কিন্তু সাধারণ মানুষ ও পর্যটক স্বচ্ছন্দে চলাচল করতে পারেন।	ট্রানজিশনাল জোন, ওয়েফাইন্ডিং সাইনেজ, নিরাপত্তা নোড
আঞ্চলিকতা জোরদারকরণ (Territorial Reinforcement)	বসার জায়গা, বাগান ও অ্যাক্টিভিটি জোন স্পষ্টভাবে চিহ্নিত করা, যা সাধারণ মানুষের মধ্যে 'মালিকানাবোধ' (Sense of Ownership) তৈরি করে।	ভেন্ডিং কিয়স্ক, স্টুডেন্ট কর্নার, সাইকেল হাব
যথাযথ রক্ষণাবেক্ষণ (Maintenance)	অপরিচ্ছন্ন বা ভাঙা জায়গা অপরাধীদের আকৃষ্ট করে; তাই নিয়মিত পরিচ্ছন্নতা ও সংস্কার নিরাপত্তার অবিচ্ছেদ্য অংশ।	ভ্যান্ডাল-প্রুফ আসবাব, আর্ট মুরাল, নিয়মিত পরিচর্যা

'ভাঙা জানালা' তত্ত্ব: যত্নই সবচেয়ে বড় সংকেত

'Broken Windows' তত্ত্ব অনুযায়ী ভাঙা বেঞ্চ, গ্রাফিতি বা আবর্জনা 'যত্নহীনতার' সংকেত দেয়। তত্ত্বটি বিতর্কিত হলেও এখানে এটি কেবল স্থানীয় যত্ন ও রক্ষণাবেক্ষণের দৃষ্টিকোণ থেকে ব্যবহৃত হয়েছে, শাস্তিমূলক নীতির ভিত্তি হিসেবে নয়।

'Eyes on the Street', সমষ্টিগত কার্যকারিতা ও প্লেসমেকিং

জেন জ্যাকবসের 'Eyes on the Street' ধারণা অনুযায়ী নিয়মিত মানুষের উপস্থিতি ও স্বতঃস্ফূর্ত নজরদারি নগর নিরাপত্তার গুরুত্বপূর্ণ ভিত্তি। 'Collective Efficacy' পারস্পরিক আস্থা ও সম্মিলিত দায়বদ্ধতাকে গুরুত্ব দেয়, আর Placemaking স্থানকে মানুষের কাজ, আড্ডা ও সাংস্কৃতিক কর্মকাণ্ডের কেন্দ্রে পরিণত করে। দ্বিতীয় প্রজন্মের CPTED-ও সামাজিক সংহতি ও কমিউনিটি সংযোগের ওপর জোর দেয়।

নকশার কেন্দ্রীয় সূত্র

"Design out the crime, design in the people."

অর্থাৎ নকশার মাধ্যমে অপরাধকে হটিয়ে মানুষকে আমন্ত্রণ জানানো; কারণ মানুষের উপস্থিতিই উদ্যানের সবচেয়ে বড় রক্ষাকবচ।

বিদ্যমান সংকটের নকশাগত ত্রুটি নির্ণয়

সোহরাওয়ার্দী উদ্যান-এর বর্তমান অবস্থা পর্যালোচনা করলে বোঝা যায়, উদ্যানের সংকট কোনো একক সমস্যা নয়; এটি কয়েকটি পরস্পর-সংযুক্ত নকশা-ব্যর্থতার সমষ্টি। নগর-নকশার দৃষ্টিতে এগুলোকে ছয়টি শ্রেণিতে ভাগ করা যায়:

- দৃষ্টিসীমার বাধা: উঁচু ঝোপঝাড়, নিচু ডালপালা, লেকপাড়ের আগাছা এবং আড়ালে থাকা বসার জায়গা পথচারীর চোখকে অন্ধ করে রাখে।
- পথ-বিভ্রান্তি ও সহায়তাহীনতা: দিকনির্দেশনার অভাব ও অনির্দিষ্ট প্রবেশ-সীমানা মানুষকে বিভ্রান্ত করে এবং নির্জন কোণায় ঠেলে দেয়; জরুরি সহায়তার কোনো দৃশ্যমান ব্যবস্থাও নেই।

- যত্নহীনতার সংকেত: ভাঙা বেঞ্চ, গ্রাফিতি, আবর্জনা ও এলোমেলো হকারি এলাকাটিকে 'পরিত্যক্ত/ অনিরাপদ' বলে ঘোষণা করে।
- ভীতিপূর্ণ অবকাঠামো: অন্ধকার, নির্জন টয়লেট এবং আলোহীন কোণ নারী, শিশু ও বয়স্কদের জন্য ভয়ের এলাকা তৈরি করে।
- ব্যবহারের শূন্যতা ও বিচ্ছিন্নতা: টিএসসি ও দোয়েল চত্বরের কাছে থেকেও শিক্ষার্থীরা উদ্যানের অংশটি ব্যবহার করেন না; ঐতিহাসিক স্থাপনাগুলো পরস্পর বিচ্ছিন্ন; সাইকেল লেন ও খেলার জায়গা অনাদৃত।
- সময়ভিত্তিক শূন্যতা: বড় অংশ সারাদিন পরিত্যক্ত থাকে এবং রাতে সেই শূন্যতা অপরাধীরা দখল করে।

এই নকশাগত ত্রুটি নির্ণয় থেকে একটি গুরুত্বপূর্ণ সিদ্ধান্তে পৌঁছানো যায়: সমস্যার মূল 'অপরাধী'র উপস্থিতি নয়, বরং 'সাধারণ মানুষের অনুপস্থিতি'। তাই সমাধানের কেন্দ্রেও থাকতে হবে মানুষকে ফিরিয়ে আনার নকশা।

প্রস্তাবিত নকশা-হস্তক্ষেপ

হস্তক্ষেপগুলো চারটি ধারায় বিন্যস্ত: দৃশ্যমানতা ও নজরদারি; প্রবেশ ও দ্রুত সাড়া; মালিকানাবোধ ও রক্ষণাবেক্ষণ; এবং প্লেসমেকিং।

ক. দৃশ্যমানতা ও প্রাকৃতিক নজরদারি

১) ২ ফুট–৬ ফুট নিয়ম: ঝোপঝাড় নিচু রেখে এবং গাছের নিম্ন ডালপালা যথাযথভাবে ছাঁটাই করে দৃষ্টিরেখা পরিষ্কার করা হবে। এতে নিরাপত্তার জন্য নির্বিচারে গাছ কাটার প্রয়োজন হবে না; বরং সবুজের স্তরবিন্যাস পুনর্গঠন করা হবে। পুরোনো ও পরিবেশগতভাবে গুরুত্বপূর্ণ গাছের ক্ষেত্রে সংবেদনশীলতা জরুরি।



চিত্র ২: প্রাকৃতিক সীমানা ও দৃষ্টিরেখা ব্যবস্থাপনা (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

২) আলোকিত বোর্ডওয়াক: লেকপাড়ে ধারাবাহিক, আলোকিত হাঁটার পথ তৈরি করা হবে। বসার স্থান প্রধান পথ থেকে দৃশ্যমান থাকবে এবং পাড়ের আগাছা নিয়ন্ত্রিত থাকবে। এতে হাঁটাচলা বাড়বে এবং চলমান পথচারী স্বাভাবিক নজরদারি তৈরি করবে।



চিত্র ৩: আলোকিত বোর্ডওয়াক ও প্রাকৃতিক নজরদারি (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

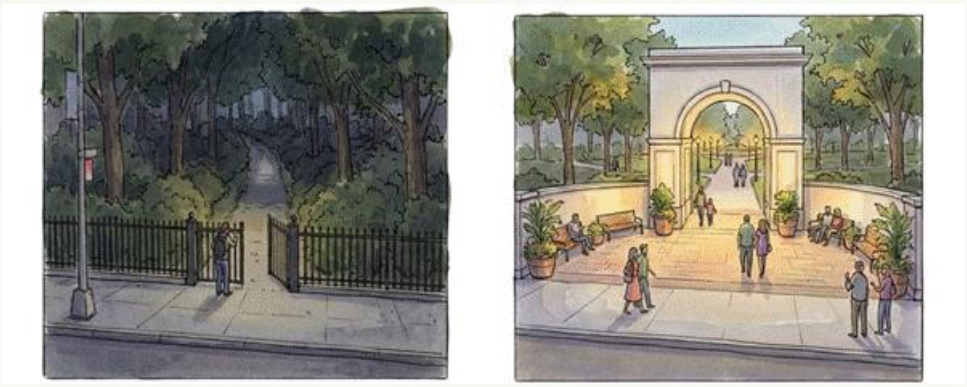
৩) টয়লেট স্থানান্তর ও দৃশ্যমানতা: টয়লেটকে অন্ধকার বা নির্জন অংশে না রেখে সহজে শনাক্তযোগ্য, আলোকিত ও প্রধান চলাচলপথের কাছাকাছি স্থাপন করা হবে। নকশায় গোপনীয়তা বজায় রেখে বাইরের অংশে পর্যাপ্ত দৃশ্যমানতা নিশ্চিত করতে হবে।



চিত্র ৪: জনবহুল কার্যকেন্দ্রের কাছে পাবলিক টয়লেট স্থানান্তর (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

খ. প্রবেশ, পথনির্দেশনা ও দ্রুত সাড়া

৪) ট্রানজিশনাল জোন: প্রবেশপথকে হঠাৎ পার্কে ঢোকার পরিবর্তে স্বাগতপূর্ণ প্রবেশ-চত্বর বা ট্রানজিশনাল জোনে রূপ দেওয়া হবে। এতে প্রবেশের সীমানা স্পষ্ট হবে এবং ব্যবহারকারীর নিরাপত্তাবোধ বাড়বে।



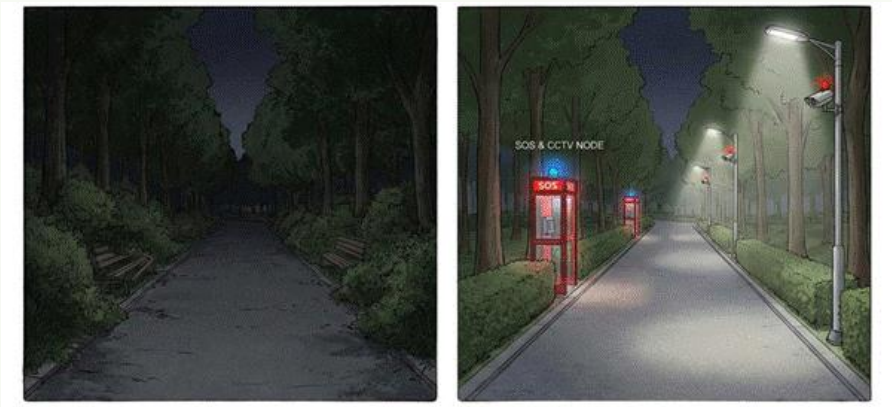
চিত্র ৫: ট্রানজিশনাল জোন নকশা (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

৫) স্মার্ট সাইনেজ ও ওয়েফাইন্ডিং: মোড়ে আলোকিত, দ্বিভাষিক ও উচ্চ-কনট্রাস্ট ম্যাপ ও দিকনির্দেশক স্থাপন করা হবে। টিএসসি, শাহবাগ, ঐতিহাসিক স্থাপনা ও নিকটস্থ নিরাপত্তা নোডের দিক ও দূরত্ব উল্লেখ থাকবে। সহজে পাঠযোগ্য স্থান মানুষের ভয় কমায় এবং চলাচলকে সংগঠিত করে।



চিত্র ৬: স্মার্ট সাইনেজ ও ওয়েফাইন্ডিং (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

৬) নিরাপত্তা নোড: দৃশ্যমান স্থানে এসওএস বুথ বা সহায়তা পয়েন্ট স্থাপন করা হবে। এগুলো এমনভাবে বসাতে হবে যাতে ব্যবহারকারী দ্রুত সহায়তা চাইতে পারেন এবং নিরাপত্তা ব্যবস্থাও দ্রুত সাড়া দিতে পারে।



চিত্র ৭: নিরাপত্তা নোড (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

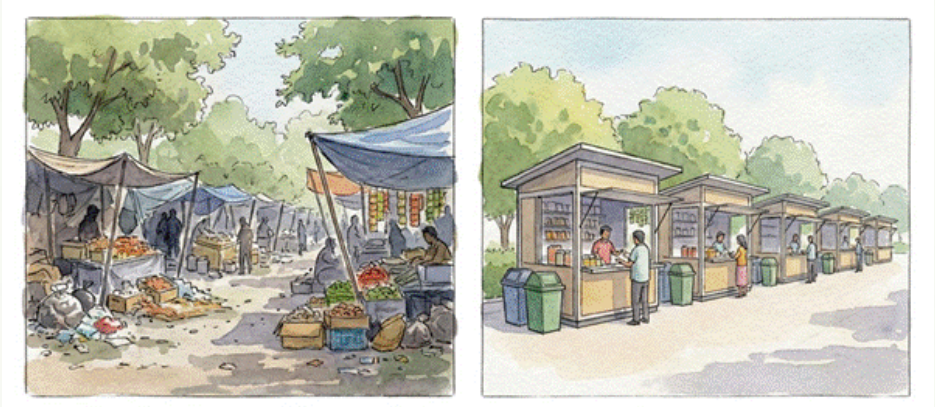
গ. মালিকানাবোধ, রক্ষণাবেক্ষণ ও শৃঙ্খলা

৭) টার্গেট হার্ডেনিং ও রক্ষণাবেক্ষণ: টেকসই, মেরামতযোগ্য ও ভ্যান্ডাল-প্রতিরোধী বেঞ্চ ও অন্যান্য আসবাব ব্যবহার করা হবে। গ্রাফিতির পরিবর্তে স্থানীয় শিল্পী ও শিক্ষার্থীদের অংশগ্রহণে আর্ট মুরাল করা যেতে পারে। মূল লক্ষ্য কঠোরতা নয়; 'এই স্থানটির যত্ন নেওয়া হয়'–এই বার্তা দৃশ্যমান করা।



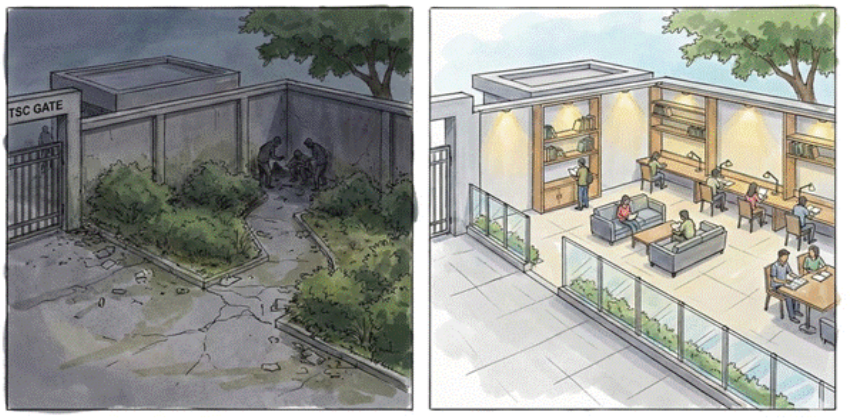
চিত্র ৮: টার্গেট হার্ডেনিং ও রক্ষণাবেক্ষণ (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

৮) ভেন্ডিং কিয়স্ক: অনিয়ন্ত্রিত হকারি কমিয়ে নির্দিষ্ট, নান্দনিক ও শৃঙ্খলাবদ্ধ কিয়স্ক জোন তৈরি করা হবে। এতে জীবিকার সুযোগ ও স্বাভাবিক উপস্থিতি বজায় থাকবে, একই সঙ্গে পথ ও দৃষ্টিসীমা অবরুদ্ধ হবে না।



চিত্র ৯: সংগঠিত ভেন্ডিং কিয়স্ক (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

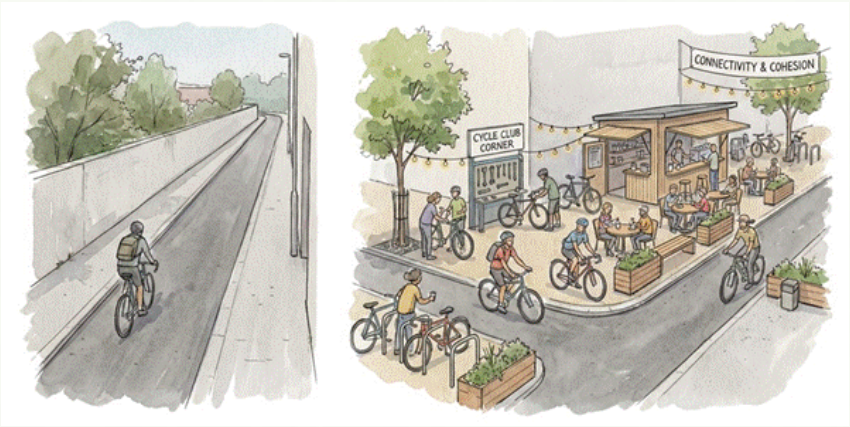
৯) স্টুডেন্ট কর্নার ও রিডিং জোন: ঢাকা বিশ্ববিদ্যালয়ের নিকটবর্তী অবস্থান কাজে লাগিয়ে শিক্ষার্থীদের জন্য বসা, পড়াশোনা ও সামাজিক যোগাযোগের স্থান তৈরি করা হবে। নিয়মিত শিক্ষার্থী উপস্থিতি প্রাকৃতিক নজরদারি ও মালিকানাবোধ বাড়াবে।



চিত্র ১০: টিএসসি/দোয়েল চত্বর: স্টুডেন্ট কর্নার ও রিডিং জোন (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

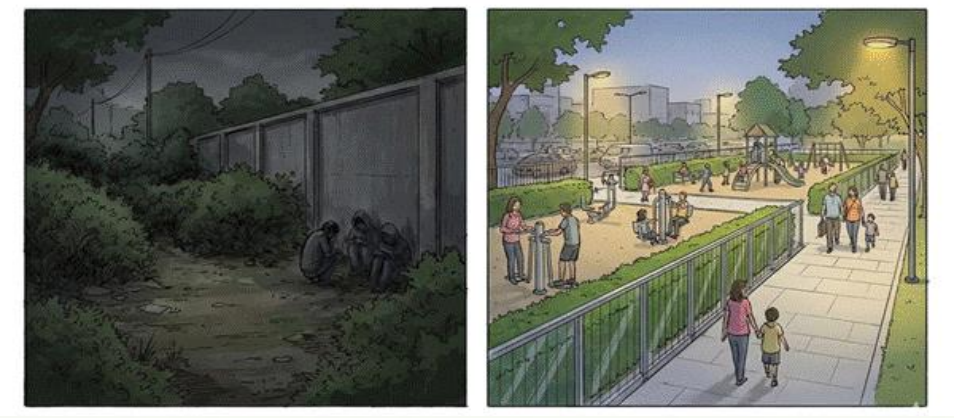
ঘ. প্লেসমেকিং: কার্যক্রম, সম্প্রদায় ও ঐতিহ্য

১০) সাইকেল হাব: সাইকেল পার্কিং, ছোট সার্ভিস পয়েন্ট ও কমিউনিটি ক্লাবের মাধ্যমে সাইক্লিস্টদের নিয়মিত উপস্থিতি নিশ্চিত করা যেতে পারে। সচল পথ ও কমিউনিটি কার্যক্রম নিরাপত্তাকে সামাজিকভাবে শক্তিশালী করবে।



চিত্র ১১: সাইকেল হাব: সমষ্টিগত কার্যকারিতার জন্য (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

১১) অ্যাক্টিভিটি জোন: পরিবার, শিশু ও খেলাধুলার জন্য নির্দিষ্ট ও দৃশ্যমান জোন তৈরি করা হবে। বিভিন্ন বয়সের ব্যবহারকারী একই স্থানে থাকলে 'Eyes on the Street' কার্যকর হয় এবং সামাজিক সংহতি বাড়ে।



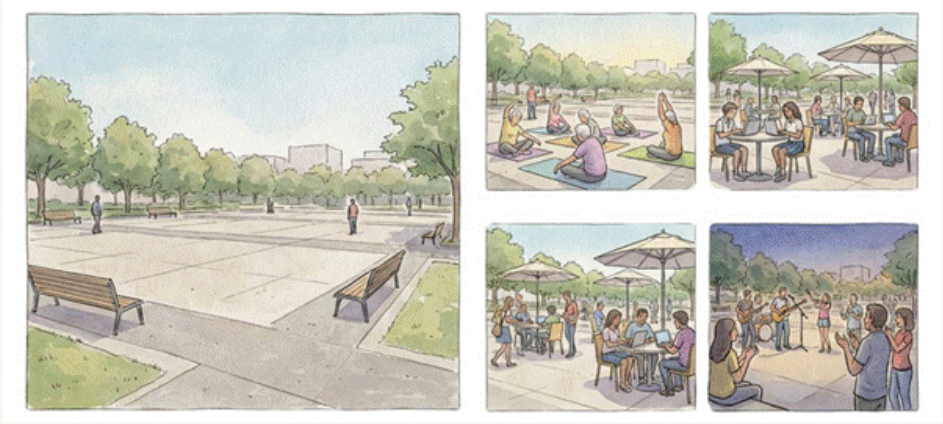
চিত্র ১২: সামাজিক সংহতির জন্য অ্যাক্টিভিটি জোন (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

১২) হেরিটেজ/কালচার ওয়াক: শিখা অনির্বাণ, স্বাধীনতা স্তম্ভ ও জাদুঘরসহ ঐতিহাসিক স্থানগুলোকে একটি ধারাবাহিক হেরিটেজ ট্রেইলে যুক্ত করা হবে। পথে ছোট সাংস্কৃতিক চত্বর, পপ-আপ গ্যালারি ও বসার স্থান রাখা যেতে পারে। এতে ইতিহাস নাগরিকের দৈনন্দিন অভিজ্ঞতার অংশ হবে এবং দর্শনার্থীর উপস্থিতি প্রাকৃতিক নজরদারি তৈরি করবে।



চিত্র ১৩: ঐতিহ্য ও সংস্কৃতি পদযাত্রা (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

১৩) বহুমুখী ব্যবহার বা Programming of Space: সময়ভেদে ভিন্ন কার্যক্রম চালু করা হবে–সকালে বয়োজ্যেষ্ঠদের জন্য হাঁটা, যোগ বা লাফিং ক্লাব; দিনে শিক্ষার্থীদের জন্য আউটডোর কো-ওয়ার্কিং/রিডিং স্পেস; সন্ধ্যায় ছোট সাংস্কৃতিক বা সংগীতভিত্তিক কার্যক্রম। উদ্দেশ্য হলো দিনের বিভিন্ন সময়ের শূন্যতা কমিয়ে ধারাবাহিক ব্যবহার তৈরি করা।



চিত্র ১৪: উন্মুক্ত স্থানের বহুমুখী ব্যবহার (বামে: বর্তমান অবস্থা; ডানে: প্রস্তাবিত নকশা)

সমন্বিত বিশ্লেষণ

১৩টি হস্তক্ষেপ তিনটি পরস্পর-পরিপূরক স্তরে কাজ করে–ভৌত (দৃষ্টিরেখা, আলো, আসবাব, টয়লেট, বোর্ডওয়াক), সামাজিক (স্টুডেন্ট কর্নার, সাইকেল হাব, অ্যাক্টিভিটি জোন, হেরিটেজ ট্রেইল ও কার্যক্রম) এবং প্রযুক্তি/ব্যবস্থাপনা (এসওএস, সাইনেজ ও রক্ষণাবেক্ষণ)। কোনো স্তর একা যথেষ্ট নয়; নিরাপত্তার জন্য তিনটির সমন্বয় জরুরি।

হস্তক্ষেপ	প্রধান নীতি	প্লেসমেকিং ও সামাজিক ফল
২ ফুট–৬ ফুট নিয়ম	প্রাকৃতিক নজরদারি	উন্মুক্ত দৃষ্টিরেখা; ছায়াদায়ী বৃক্ষ অক্ষত
আলোকিত বোর্ডওয়াক	প্রাকৃতিক নজরদারি	লেকপাড়ে ধারাবাহিক হাঁটার অভিজ্ঞতা
টয়লেট স্থানান্তর	নজরদারি ও আঞ্চলিকতা	নারী-শিশুবান্ধব নিরাপদ সুবিধা
ট্রানজিশনাল জোন	প্রাকৃতিক প্রবেশ নিয়ন্ত্রণ	স্বাগতিক প্রবেশ-চত্বর
স্মার্ট সাইনেজ	প্রাকৃতিক প্রবেশ নিয়ন্ত্রণ	আত্মবিশ্বাসী চলাচল ও পথের পাঠযোগ্যতা
নিরাপত্তা নোড	নজরদারি ও দ্রুত সাড়া	সহায়তা নাগালে থাকার আস্থা
টার্গেট হার্ডেনিং ও রক্ষণাবেক্ষণ	রক্ষণাবেক্ষণ	যত্নের সংকেত; কমিউনিটি আর্ট

ভেন্ডিং কিয়স্ক	আঞ্চলিকতা	জীবিকা ও শৃঙ্খলা
স্টুডেন্ট কর্নার ও রিডিং জোন	নজরদারি ও আঞ্চলিকতা	শিক্ষার্থীদের মালিকানাবোধ
সাইকেল হাব	সমষ্টিগত কার্যকারিতা	কমিউনিটি ক্লাব; সচল পথ
অ্যাক্টিভিটি জোন	নজরদারি ও সামাজিক সংহতি	পরিবার, শিশু ও খেলোয়াড়ের মিলনস্থল
হেরিটেজ ট্রেইল	সমষ্টিগত কার্যকারিতা	ইতিহাসের সঙ্গে সংযোগ; সাংস্কৃতিক জীবন
বহুমুখী ব্যবহার	আঞ্চলিকতা ও কার্যক্রম-সহায়তা	সারাদিনের প্রাণবন্ত উপস্থিতি

বাস্তবায়ন-ভাবনা, ঝুঁকি ও সতর্কতা

নিচের আলোচনা ইনফোগ্রাফিকের প্রস্তাবনার ওপর ভিত্তি করে একজন নগর-পরিকল্পনাবিদের পেশাগত পর্যবেক্ষণ; এগুলো প্রস্তাবনাকে বাস্তবায়নযোগ্য ও ন্যায়সংগত করার উদ্দেশ্যে সংযোজিত।

ধাপভিত্তিক বাস্তবায়ন

- স্বল্পমেয়াদি (প্রথম ধাপ): আলোকায়ন, ঝোপঝাড়ের ছাঁটাই ও ২ ফুট–৬ ফুট নিয়ম, ভাঙা আসবাব মেরামত, আবর্জনা ব্যবস্থাপনা এবং প্রাথমিক সাইনেজ। এগুলো ব্যয়সাশ্রয়ী ও দ্রুত দৃশ্যমান ফল দেয়, যা জনআস্থা গড়ে তোলে।
- মধ্যমেয়াদি: ট্রানজিশনাল প্লাজা, বোর্ডওয়াক, টয়লেট স্থানান্তর, এসওএস বুথ ও সংগঠিত কিয়স্ক, স্টুডেন্ট কর্নার ও অ্যাক্টিভিটি জোনের ভৌত নির্মাণ।
- দীর্ঘমেয়াদি: হেরিটেজ ট্রেইল, সাইকেল হাব, ‘প্রোগ্রামিং অব স্পেস’-এর নিয়মিত কার্যক্রম এবং কমিউনিটিভিত্তিক ব্যবস্থাপনা কাঠামো।

একটি অংশগ্রহণমূলক উদ্যান ব্যবস্থাপনা কাঠামোতে নগর কর্তৃপক্ষ, ঢাকা বিশ্ববিদ্যালয়, স্থানীয় ব্যবসায়ী ও হকার, সাংস্কৃতিক ও ক্রীড়া সংগঠন, নিরাপত্তা সংস্থা এবং বিভিন্ন ব্যবহারকারী গোষ্ঠীর প্রতিনিধিত্ব থাকা উচিত।

ঝুঁকি, নৈতিকতা ও সাফল্য পরিমাপ

নকশার উদ্দেশ্য অনাকাঙ্ক্ষিত মানুষকে শুধু স্থানান্তর করা নয়; প্রয়োজনে স্বাস্থ্যসেবা ও পুনর্বাসনের সঙ্গে সমন্বয় জরুরি। এআই সিসিটিভিতে তথ্য-সুরক্ষা ও জবাবদিহি নিশ্চিত করতে হবে। বাণিজ্যিকীকরণ যেন নিম্নআয়ের মানুষ বা হকারদের অযথা বহিষ্কার না করে। আলো পরিবেশবান্ধব হওয়া এবং দীর্ঘমেয়াদি রক্ষণাবেক্ষণ তহবিল নিশ্চিত করা জরুরি।

সাফল্য পরিমাপের জন্য দিনের বিভিন্ন সময়ে ব্যবহারকারীর সংখ্যা ও বৈচিত্র্য, বিশেষ করে নারী, শিশু ও বয়স্কদের উপস্থিতি; নিরাপত্তা-অনুভূতির জরিপ; ঘটনা-প্রতিবেদনের প্রবণতা; সচল আলোর হার; পরিচ্ছন্নতা ও মেরামতের সাড়ার সময়; এবং জরুরি সহায়তার সাড়া-গতি পর্যবেক্ষণ করা যেতে পারে। প্রকৃত সাফল্য কেবল অপরাধের সংখ্যা কমায় নয়, মানুষের সংখ্যা, বৈচিত্র্য ও আস্থায়ও প্রকাশ পাবে।

উপসংহার

সোহরাওয়ার্দী উদ্যানের নিরাপত্তা-সংকটকে শুধু পুলিশি ব্যবস্থার সমস্যা হিসেবে দেখলে এর নকশাগত ও সামাজিক কারণগুলো অদৃশ্য থেকে যায়। ঘন ঝোপঝাড়, অন্ধকার কোণ, ভাঙা আসবাব, অস্পষ্ট পথ এবং ব্যবহারহীন স্থান সম্মিলিতভাবে একটি বার্তা তৈরি করে–এখানে কেউ নেই, কেউ দেখছে না। এর বিপরীতে CPTED ও Placemaking একটি ইতিবাচক পথ দেখায়: দৃষ্টিসীমা পরিষ্কার করা, প্রবেশ ও পথনির্দেশনা সহজ করা, যত্নের দৃশ্যমান সংকেত তৈরি করা এবং সর্বোপরি মানুষকে ফিরিয়ে আনা।

পুলিশি অভিযান বা কঠোর অবকাঠামোর পরিবর্তে সাধারণ মানুষের নিয়মিত, বৈচিত্র্যময় ও স্বতঃস্ফূর্ত উপস্থিতিই দীর্ঘমেয়াদি নিরাপত্তার গুরুত্বপূর্ণ ভিত্তি হতে পারে। তাই সোহরাওয়ার্দী উদ্যানের পুনঃকল্পনার লক্ষ্য হওয়া উচিত–অপরাধকে নকশার মাধ্যমে নিরুৎসাহিত করা এবং মানুষকে নকশার মাধ্যমে আমন্ত্রণ জানানো: “Design out the crime, design in the people.”

পরিশিষ্ট: উৎস ও তাত্ত্বিক সূত্র

Jacobs, J. (1961). The Death and Life of Great American Cities.
Lynch, K. (1960). The Image of the City.
Jeffery, C. R. (1971). Crime Prevention Through Environmental Design.
Newman, O. (1972). Defensible Space: Crime Prevention Through Urban Design.
Wilson, J. Q., & Kelling, G. L. (1982). Broken Windows: The Police and Neighborhood Safety. The Atlantic Monthly.
Whyte, W. H. (1980). The Social Life of Small Urban Spaces.
Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy. Science.
Saville, G., & Cleveland, G. (দ্বিতীয় প্রজন্মের CPTED সম্পর্কিত কাজ, ১৯৯০-এর দশক)

Planning Literacy: Preparing People to Shape Great Communities

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Being invited to participate in planning does not automatically make participation meaningful. A resident may know a neighborhood intimately: which road becomes difficult during rain, where children gather, which market supports local livelihoods, which shortcut people actually use, or which public space has gradually become important to the community. Such knowledge may never appear on a formal map, yet it can be essential to understanding how a place really works.

Sometimes people already know what they are facing and can speak about it clearly. They bring a problem, a memory, a concern or an idea to a public meeting. Their experience becomes a valuable source of information for planners.

But not every planning problem is immediately visible as a planning problem. Someone may experience longer travel times without connecting them to land-use or transport patterns. Another person may see a vacant space simply as unused land, without recognizing its importance for drainage, public access or community life. A household may feel that a proposed development will change its neighborhood without knowing which design or land-use decisions are producing that effect.

This creates a gap in participation. Communities possess knowledge that planners may not have, while planners possess professional knowledge that communities may not have had the opportunity to encounter. If either side relies only on its own knowledge, something can be missed.

This does not mean residents need to become planners. Planning remains a professional field requiring technical knowledge, evidence, analysis and responsibility for decisions affecting many interests. Community participation instead brings professional planning knowledge together with the experience of people who live with its consequences.

For that exchange to work well, however, people need some familiarity with how places are planned.

This is where planning literacy becomes useful. Planning literacy does not mean memorizing zoning regulations, learning professional planning terminology or turning every citizen into a GIS analyst. At a basic level, it means understanding that decisions about land, housing, streets, public facilities, open spaces, transport and the environment are connected; recognizing that different choices have different consequences; asking informed questions; and expressing priorities in ways that can enter a planning discussion.

People do not study physical education because everyone is expected to become a professional athlete. They learn basic concepts because understanding the body and physical activity is

useful in everyday life. Similarly, people do not need to become planners to understand some of the basic ideas through which their communities are shaped.

Learning before the Consultation

Participation often begins when a project is already proposed: a consultation meeting is announced, a plan is displayed, or residents are asked for comments. By then, people are expected to respond to choices that professionals may have spent months or years developing. Planning literacy can begin much earlier. School is one place where people can gradually become familiar with how communities' function and change.

This does not require creating a separate subject called "planning." Existing learning in geography, social studies, environmental education, civics and creative activities can provide opportunities to explore how different parts of a community are connected.

Some planning and education organizations have already developed practical ways of doing this.

One useful example is *A Kid's Guide to Building Great Communities*, developed by the Canadian Institute of Planners and made available through the San Francisco Planning Department. The manual includes activities for different levels, from kindergarten–3 through Grades 3–8 and Grades 9–12. Rather than beginning with professional terminology, students can imagine a room, design a home and then bring those homes together to construct a neighborhood.

Another activity, Felt Community**,** introduces different land uses and asks students to consider how a community began, why people selected a particular location, what people needed and what might be built as the community developed. How Communities Grow**,** designed for older students, goes further by bringing housing, agriculture, industry, shops, schools and transportation into a developing community.

These activities are not miniature versions of professional planning. Their value is in helping students recognize relationships that can otherwise be overlooked. A house is connected to a street; a neighborhood needs services; a shop needs access; a school affects movement; and where something is placed can influence what happens around it.

That is already a form of planning literacy. The benefit is not that every student will become interested in planning. Some will eventually become residents, volunteers, community representatives, parents, business owners or participants in decisions affecting their neighborhoods. Familiarity with basic planning ideas can give them a starting point for understanding those decisions when they encounter them later.

What about adults and existing communities?

The need for planning literacy does not disappear when someone leaves school. Older residents may possess decades of knowledge about a neighborhood. They may remember previous floods, road changes, lost wetlands, changing markets, disappearing public spaces or shifts in local livelihoods. Such knowledge can be impossible to reconstruct from a recent survey.

At the same time, communities can encounter conditions that previous generations never faced: changing rainfall patterns, new mobility technologies, rapid population growth, redevelopment pressure or unfamiliar infrastructure demands. Past experience remains valuable, but it may need to be combined with new ways of understanding change.

Planning literacy can therefore also be developed through accessible community activities. WRI India's Neighborhood Improvement Program, for instance, uses an interactive card-based activity through which citizens, experts and decision-makers identify neighborhood challenges, envision solutions and prioritize actions.

The Centre for Understanding the Built Environment (CUBE) provides another educational example through activities such as Box City and Walk Around the Block, while the American Planning Association offers resources such as a neighborhood scavenger hunt that encourages young people to explore the places where they live.

Such approaches show that planning ideas can be made accessible through activities rather than professional terminology. For existing communities, this learning could continue through community volunteers. At the beginning of a project, planners could provide interested local volunteers with basic training and materials on the project, relevant planning concepts, alternatives and major trade-offs. Volunteers could then help residents understand the evolving project, discuss alternatives and gather local observations and questions between formal planning stages.

When planners return for consultation, the community would already have some familiarity with the issue and choices under discussion. Volunteers would not make professional decisions; they would help carry basic planning knowledge into the community throughout the longer planning process.

The objective is not to produce professional plans, but to help people enter planning discussions with greater understanding.

From knowing a place to understanding choices

There is another skill that matters in participation: learning to listen to perspectives other than one's own.

A community is rarely one voice. A new road may help one group while creating difficulties for another. A new commercial area may create jobs while increasing traffic. More housing may be necessary while residents are concerned about pressure on infrastructure or open space. Protecting an existing feature may have cultural value while limiting other forms of development.

People do not need professional planning qualifications to understand that such trade-offs exist. But they do need opportunities to practice thinking through them before responding to an actual planning proposal.

This preparation can make later consultation more meaningful. If people already understand basic planning ideas, different interests and the possibility of trade-offs, more consultation time can be used to discuss the actual proposal, local concerns and alternatives rather than basic concepts.

It can also help people understand why a particular option is selected. Planning decisions often involve compromises, and no option can satisfy every interest equally. When residents understand the alternatives considered, the constraints involved and the reasoning behind a selected option, they may better understand or accept a decision even when it requires compromise.

This does not mean planning literacy will make everyone agree. Its value is that people enter consultation prepared to understand the choices, question them meaningfully and contribute their own knowledge.

Planning literacy therefore complements professional planning. Planners bring technical and professional knowledge; communities bring lived and local knowledge. Preparing people beforehand can help these forms of knowledge meet more effectively when planning decisions are discussed.

Digital Twins and Planning Choices

Planning is becoming increasingly visual and data-driven. Digital twins can take this further by representing existing places digitally and allowing planners to model and compare possible future scenarios.

There are already examples of digital twins being used to communicate alternative development possibilities. In Morrisville, North Carolina, a digital twin was used to visualize different development scenarios for a town center and help the community compare options. Other applications use 3D digital twins to examine land use, building form, energy use, shadows and viewsheds.

This can make planning decisions easier to see. Rather than showing plans or explaining changes in written descriptions, people can now see the before-and-after impacts of different design choices in a real place.

But the value of the technology depends on people being able to understand what they see in a digital twin. If a digital twin presents several scenarios, one may retain more open space but accommodate less development, while another may improve connectivity but require changes to existing land uses. The purpose of showing these alternatives is to help people understand the choices and trade-offs.

With basic planning literacy, residents can move beyond asking which image they prefer. They can consider what each scenario improves, what it compromises and why planners may recommend one option over another.

Digital twins can therefore serve several purposes at once: analyzing places, testing alternatives, communicating proposals and educating communities**.** For Bangladesh, their educational value could be particularly useful as planning decisions become more complex.

Digital twins, however, do not replace basic planning literacy. People still need some understanding of land use, movement, public space, environmental systems and trade-offs to interpret what they see. Bangladesh could therefore adapt digital twins as part of a broader approach to planning literacy: earlier tools can introduce the basic language of planning, while digital twins can help people see that language applied to the places they know.

The purpose would not simply be to show people a future city, but to help them understand the choices that shape it.

Planning as a shared language

The goal is not to turn communities into planning professionals or replace lived experience with technical information. A good planning process needs both.

Planners bring methods, evidence, spatial analysis, policy knowledge and an understanding of how different systems interact. Communities bring local experience, memory and knowledge of how decisions affect everyday life. Planning literacy can help these two forms of knowledge meet more effectively.

It can help a resident move from “something feels wrong here” to identifying what may be happening and explaining why it matters. It can help people understand why a preferred solution may create another problem elsewhere, and engage with maps, scenarios and digital tools without needing to master professional planning language.

Most importantly, planning literacy can widen meaningful participation. People who already know how to describe a problem should have the opportunity to be heard, while others should have opportunities to recognize planning issues and develop the questions they want to ask.

Participation, therefore, need not begin only when people are asked to comment on a plan. The ability to understand places, recognize choices, consider consequences and communicate priorities can develop much earlier and continue throughout community life.

Great communities are built on planning. They become stronger when the people who live in them have the understanding to see what is being planned, the confidence to question it, and the shared language to contribute their knowledge.

They do not need to become planners. They need a meaningful chance to understand planning.

Planning With People, Not Just for Them: Why Bangladesh's Cities Need Young Voices

Shahriar Hossain Shagor
Founder, NextGen Doctors

Introduction

Bangladesh's cities are in trouble. And the numbers back it up. Our 12 city corporations run on a combined annual budget of just Tk 230 billion. That's it. And that's despite hosting more than half of the country's economic activity. Bad planning and weak coordination cost the economy somewhere between 6 and 10 percent of GDP every year. Urban employment growth dropped from 4 percent between 2010 and 2017 to just 0.8 percent after that. Industrial employment actually went negative.

These aren't abstract figures. They show up in daily life. Traffic that never moves. Drains that overflow after a normal rain. Parks that exist only on paper.

Planning is supposed to prevent this. Sometimes it does. But too often, planning happens far from the people it affects. Consultants come in. Reports get written. Maps get drawn. Then residents see the result and ask, nobody talked to us.

This year's World Town Planning Day theme says great communities are built on planning. I'd add one word. Great communities are built on planning with people, not just for them. And when I say people, I mean young people too.

The Problem with Planning from a Distance

Most planning decisions in Bangladesh get made by a small group. Government agencies. Engineering firms. Development partners. A handful of elected representatives. These are people with training and good intentions. But they usually don't live in the neighbourhood they're designing.

So, a footpath gets built where nobody walks. A market gets relocated to a spot with no transport link. A drainage plan ignores the canal residents have been complaining about for a decade.

None of this happens because planners are incompetent. It happens because the information that matters most sits with the people on the ground. They know which road floods first. They know where women don't feel safe after dark. They know which school has forty students sharing one toilet.

Good planning needs that knowledge. Getting it means bringing communities in early. Not at the consultation stage when the design is already finished.

Why Young People Specifically

Here's the case for youth participation.

Young people will live with today's planning decisions for the next fifty years. A road built now will still be there when a fifteen-year-old becomes a grandparent. So will the park. Or the lack of it. So will the drainage. Or the flooding.

That's the moral argument. There's also a practical one. Young people in Bangladesh today are more connected and more willing to speak up than any generation before them. They organise through social media. They run clubs. They volunteer. They collect data. They show up.

In my own work, I've seen this at scale. Through NextGen Doctors, a platform I founded in 2023, we've built a network of over 1,100 active members across 22 universities and 40 colleges. Our programmes have reached more than 6,000 students. Over 3,000 of them are girls from rural and low-income families.

That network isn't just a mailing list. It's a group of people who organise. They run awareness campaigns on safe water. They lead tree plantation drives. They talk about climate resilience in their own neighbourhoods. They mentor younger students in villages that never get visitors from the city.

If planners want eyes and ears across Bangladesh, that kind of network already exists. It just isn't being used.

What Youth Participation Actually Looks Like

Let me be specific. Youth participation in planning doesn't mean giving a student a seat at a meeting and calling it inclusion. It means building young people into the actual work.

Data collection. Young people can do household surveys and mapping exercises. Needs assessments too. They live in the areas being studied. They speak the local dialect. They get answers an outside survey team won't.

Awareness and behaviour change. Planning works better when people understand it. When a community knows why a drain is being widened, or why a road is being rerouted, they cooperate more. Young people are effective messengers here. They communicate differently. People listen.

Community monitoring. Once a project is built, someone has to watch it. Young volunteers can track whether a footpath is maintained. Whether a park is actually usable. Whether a waste collection point is functioning.

Fresh ideas. Young people grow up with new tools. They use apps. They think in terms of digital platforms. Some of the best ideas for community-level service delivery come from people who have never known a world without smartphones.

I've seen this work. In rural outreach programmes, students from my network reached more than 3,000 underprivileged children with free mentorship, learning materials, and awareness sessions on health and hygiene. That didn't happen because someone in an office decided it should. It happened because young volunteers in those areas took ownership.

The Urban Youth Council initiative shows what's possible at scale. Across Bangladesh's secondary cities, over 2,000 young people have been trained. More than 800 were elected as council members. Half of them are women. They've engaged over 15,000 residents on climate-resilient planning, gender-responsive budgeting, and community-led environmental initiatives.

That model works. It can be replicated. It should be.

The Environmental Reality

Let's talk about what's actually happening to our cities.

Dhaka's green coverage fell from 21.6 percent in 1980 to 11.6 percent in 2024. Water bodies dropped from 12.3 percent to just 4.8 percent. Built-up areas expanded more than sevenfold, from 20.7 square kilometres to 148.8 square kilometres.

Temperatures are rising accordingly. In 1990, the maximum average was 36.8°C. By 2024, it hit 39.8°C.

The World Health Organisation recommends at least 9 square metres of tree cover and 4.5 square metres of water body space per urban resident. Dhaka fails on both. In the north, average tree cover per person is 4.23 square metres. In the south, it's 2.33. Per capita water body space is 1.79 square metres in the north and just 0.97 in the south.

Waterlogging is now routine. Dhaka experienced major flooding incidents in 2021, 2023, 2024, 2025, and 2026. Daily rainfall during these events ranged between 71 and 196 millimetres. And it's not just Dhaka. In Chattogram, Tk 17,000 crore was spent on roads and footpaths. Yet 64 percent of streets still lack pedestrian crossings. 97 percent of city roads are partially encroached. 71 percent of footpaths are occupied by illegal vendors.

These aren't planning failures in isolation. They're failures to include the people who live with the consequences.

The Half of Bangladesh We Keep Forgetting

There's another gap in planning conversation. It's almost entirely about cities. Dhaka, Chattogram, Sylhet, Khulna. That's where the attention goes.

But a large share of Bangladesh still lives in small towns, union parishes, and villages. Those places have planning problems too. Some are worse.

Consider water. In many rural communities, the nearest safe drinking water source is a long walk away. Climate change is making it worse. Saline intrusion in coastal districts has pushed communities onto water that isn't fit to drink. Migration from those areas is partly a planning failure, not just an environmental one.

Consider healthcare access. A family in a remote union might live three hours from the nearest functioning health facility. Women in those areas die in childbirth at rates that would be unacceptable in Dhaka.

Consider education. Schools exist, but many don't have safe sanitation for girls. That one issue keeps girls out of classrooms. Planning that ignores it isn't neutral. It actively excludes.

If we want great communities everywhere, planning has to reach these places. And it has to bring the people who live there into the conversation.

What the Data Says About Our Youth

Young people aged 18 to 35 make up 35 percent of Bangladesh's population. But nearly 30 percent of them are not in education, employment, or training.

That's a massive waste of potential. And it connects directly to planning. If young people don't have safe transport, affordable housing, reliable internet, or accessible skills training, they can't participate in the economy. They can't contribute to their communities.

The National Urban Policy 2025, Bangladesh's first comprehensive urban framework, acknowledged this. It covers urban planning and management, inclusive services and housing, socio-economic development, accountable governance, and climate-resilient cities.

But policy on paper isn't enough. Implementation requires capable local institutions, adequate financing, and locally led solutions. And that's where young people come in.

How to Actually Include Young People

Vague commitments don't help anyone. Here are concrete steps planners, local government bodies, and community organisations can take.

Build youth advisory panels at the ward or union level. Not symbolic. Give them a real agenda. Ask for input before designs are finalised, not after.

Pay for participation. Poor students can't take unpaid time off. A small stipend for surveys, mapping, or monitoring work removes a real barrier. It also signals that their time matters.

Use universities as a resource. Student networks already exist. Bangladesh has thousands of students in planning, geography, environmental science, sociology, and public health. Connect them to local projects as fieldwork partners.

Fund student-led data collection. Small grants for community mapping exercises can produce information that would otherwise cost a consultancy a fortune.

Create a feedback loop. If young people report a problem, tell them what happened to it. Nothing kills participation faster than silence.

Recognise the work publicly. Certificates, competitions, local media coverage. Recognition makes participation sustainable.

Reach beyond the city. Partner with rural student volunteers and organisations that already work in villages. Don't assume you need to start from scratch.

What Planners Can Learn from Young Organisers

I've been running community programmes for a few years now. I've learned a few things that might be useful for planners.

First, people respond to honesty. If you tell a community a project will take four years, they'll accept it. If you promise six months and deliver in four years, you lose them.

Second, small wins matter. A working streetlight. A clean drain. A functioning water point. These build trust faster than a master plan presentation ever will.

Third, don't design for the average person. There is no average person. There's a woman who works night shifts. There's a boy with a disability. There's a grandmother who can't climb stairs. Planning that works for the most vulnerable usually works for everyone else too.

And fourth, young people aren't a separate category you add at the end. They're already doing the work. They run clubs. They lead campaigns. They collect information. They organise communities. If planning frameworks don't include them, the frameworks are just out of date.

World Town Planning Day 2026 asks us to think about how great communities get built. The answer isn't only technical. It's about who gets to sit at the table.

Bangladesh has a huge resource it hasn't fully used. Millions of young people with energy, networks, and a stake in the future. They're already active in their communities. They're already collecting information. They're already leading initiatives that make places more liveable.

What they need is a formal role. A way in. A reason to believe their input will shape something.

The National Urban Policy 2025 gives us a framework. The Urban Youth Council model gives us a proven approach. What's missing is the political will and institutional space to make youth participation standard practice, not an afterthought.

Great communities are built on planning. But good planning is built on listening. And listening means making room for the people who will still be here in fifty years.

That's not just a nice idea. It's the practical thing to do.

Seeking Disaster-Resilient Settlements on The Coastal Belt of Bangladesh

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Introduction: From Housing to Safe, Resilient Settlements

World Town Planning Day highlights the role of planning in shaping safer, more inclusive and sustainable places. For Bangladesh, this means looking beyond the number of houses built and asking a broader question: are settlements being planned in locations where people, livelihoods, infrastructure and essential services can withstand future risks?

This challenge is particularly significant in Bangladesh, where high population density, land scarcity, rapid urbanization, poverty, climate change and recurring disasters interact. Along the coast, settlements face cyclones, storm surges, flooding, waterlogging, riverbank and coastal erosion, salinity intrusion and sea-level rise-often in combination. These pressures make coastal resilience a spatial-planning issue as much as a housing and disaster-management concern.

A resilient settlement cannot be achieved through stronger buildings alone. It requires risk-informed site selection, appropriate land-use controls, reliable infrastructure and services, secure access to livelihoods, inclusive public facilities and housing that people can afford. These elements must be planned together at settlement, union and upazila scales.

Why Settlement Planning Matters?

A settlement functions well when homes are connected to safe water, sanitation, electricity, roads, schools, healthcare, markets and livelihood opportunities. Planning must also consider affordability, secure tenure, walkability and the needs of women, children, older people and persons with disabilities. These needs are linked: a structurally safe home may still leave residents vulnerable if it is isolated from services or located in a high-risk area.

Along the coast, disaster risk should be a basic consideration in every land-use and infrastructure decision. When low-income households cannot access safer land, they may settle in low-lying, erosion-prone or storm-surge-exposed areas. Risk-sensitive planning must therefore combine hazard information with social vulnerability, land availability and livelihood needs, prioritizing protection for communities facing the greatest risks.

Coastal Bangladesh: The Current Picture

A large share of Bangladesh's coastal settlements sits close to rivers, canals, estuaries and the sea, where livelihoods are bound to farming, fishing, shrimp cultivation, small trade and water transport. Settlement location is shaped not only by hazard exposure but by the pull of livelihoods, which keeps people anchored to exposed land.



Figure 1: Damaged Settlements along the Southern Coast of Bangladesh after Cyclone Sidr, 2007. Source: Photograph by the United States Navy; preserved on Wikimedia Commons.



Figure 2: Coastal Household Dwelling Damaged after Cyclone Remal. Source: Plan International Bangladesh, 2024

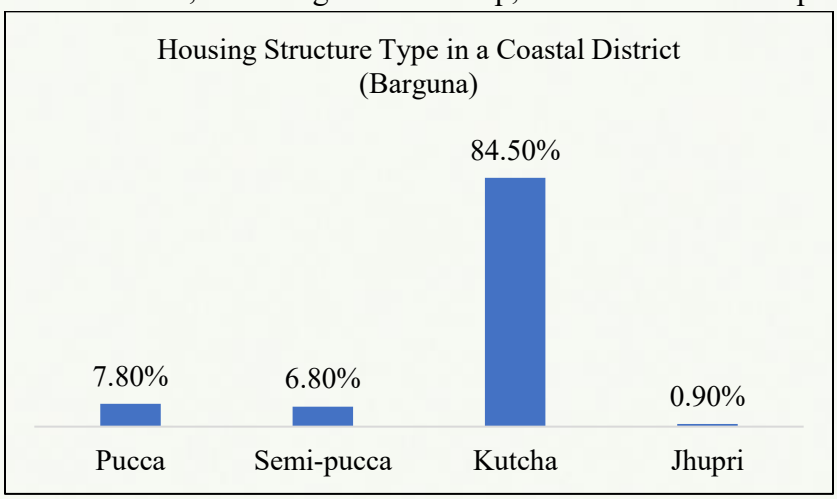
Cyclones tear off roofs and damage walls; storm surges flood homes; river and coastal erosion permanently wipe out homesteads and property; salinity strains safe water supply; and prolonged waterlogging makes living conditions unhealthy. The cost of post-disaster repair or rebuilding can push already low-income families further into poverty. A destroyed house is rarely just a lost structure food stocks, furniture, farm inputs, livestock, fishing gear, small-business assets and savings are lost with it. Coastal housing planning therefore needs to treat the house not as an isolated building but as the centre of a family's assets and livelihood.

Multi-Hazard Exposure: How Many Risks Can One House Withstand?

Table 1: Multi-hazard exposure in the coastal belt and its impact on housing. Source: author's compilation.

Hazard	Typical Season / Extent	Main Impact on Housing
Cyclones & high winds	April–May and Oct–Nov	Roofs blown off, walls and structures collapse, total destruction
Storm surge	Accompanies cyclones	Foundation erosion, flooding, homesteads submerged
Salinity intrusion	Worst in dry season	Deterioration of building materials, unsafe water, declining habitability
River & coastal erosion	Year-round; worse in monsoon	Permanent loss of homestead and property
Flood & waterlogging	June–September	Prolonged waterlogging, sanitation crisis, structural decay
Sea-level rise	Long-term trend	Permanent loss of habitable land, long-term displacement risk

These hazards rarely act alone. A cyclone can combine with storm surge and heavy rain; the waterlogging, salinity and disease risk that follow can make recovery even harder. The same family therefore faces different risks before, during and after a single event which is why a multi-hazard risk assessment, not a single-hazard map, is needed for coastal planning.



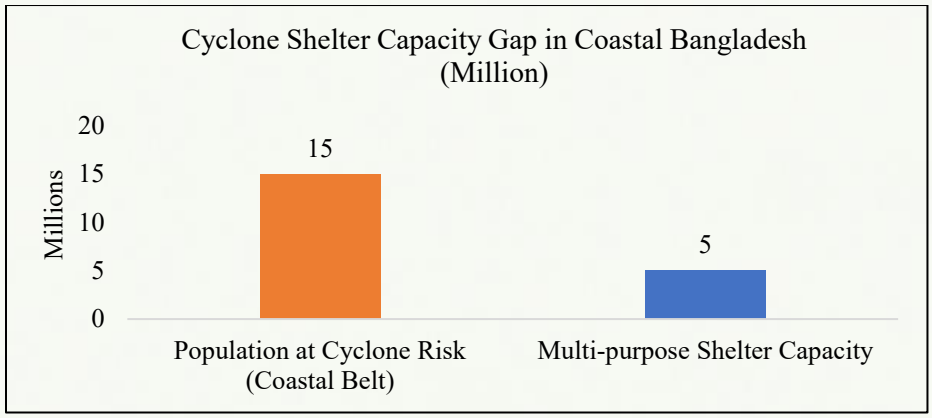
Source: BBS 2022

Structural Vulnerability: The Reality Behind the Numbers

Representative data from a coastal district like Barguna illustrates the scale of structural weakness in coastal housing: about 84.5% of households live in kutcha (temporary/informal) houses, 7.8% in pucca (permanent, engineered) houses, and 6.8% in semi-pucca houses, with the remaining 0.9% in makeshift jhupri shelters. This raises a basic planning question: alongside counting how many houses have been built, are we measuring how many can safely survive? If kutcha and lightweight structures are not built to withstand strong wind, surge or flooding, the same house often has to be rebuilt after every disaster placing sustained pressure on both government assistance and household resources. Disaster-resilient construction for low-income families should therefore be treated as a basic housing standard, not a costly extra.

Cyclone Shelters: Progress, but a Persistent Gap

One of Bangladesh's clearest disaster-management successes has been the sharp reduction in cyclone deaths, achieved through early warning systems, volunteer networks, rescue arrangements and multi-purpose cyclone shelters. Even so, a significant gap remains between the number of people at risk and available shelter capacity. Roughly 15 million people in the coastal belt face cyclone risk, against a combined shelter capacity of about 5 million a substantial shortfall. Closing it requires new shelters, but also local housing that can itself serve as safe refuge, especially for older people, children, persons with disabilities and communities living outside embankments or on isolated char land. ‘Home’ and ‘shelter’ need not always be separate structures.



Source: MoDMR and BRAC

Sidr and Remal: Two Storms, One Lesson

Cyclone Sidr (15 November 2007) struck the southern and south-western coast with winds up to 223 km/h and a storm surge several meters high, hitting Barguna, Bagerhat, Pirojpur and Patuakhali hardest. Official figures record 3,363 deaths, 55,282 injuries and 871 missing; about 563,877 houses were completely destroyed and 955,065 partially damaged, affecting over 8.9 million people. A World Bank assessment estimated around 1.5 million houses partially or fully damaged, with water and sanitation facilities also badly hit. Cyclone Remal (26 May 2024) damaged 173,866 houses 40,338 completely destroyed and 133,528 partially damaged affecting roughly 4.6 million people and causing extensive damage to water and sanitation infrastructure alongside housing (UN humanitarian reporting).



Aerial view of a coastal settlement after cyclone

In one coastal family's account from Bhola, floodwater damaged the kitchen roof and walls and washed away the mud floor; the family had to move to safety while also protecting their livestock and belongings a reminder that livestock, boats, farm tools, fishing nets and food stocks must be part of the safety plan too, not just the building itself. Sidr and Remal together show that 'repairing one house' does not solve the housing problem after a disaster-water, sanitation, power, livelihoods and asset security must all be restored together, as an integrated settlement-recovery programme. Rebuilding the same weak houses on the same exposed land only invites repeat damage; recovery should instead follow 'Build Back Better', using each disaster as an opportunity to build safer, more resilient housing.

What Does Adequate, Climate-Resilient Coastal Housing Look Like?

No single design will work everywhere on the coast. Storm-surge height, soil type, erosion trends, flood depth, wind speed, salinity and local building practice all vary by location, and design and construction standards must respond accordingly through safe site selection, raised

foundations, wind-resistant structural connections, safe water and rainwater harvesting, and sanitation that remains usable during disasters.



Figure 6: A climate-resilient coastal housing model developed under the BRAC Climate Resilient Housing Programme.

BRAC's model is a two-storey, ~708 sq ft house on a raised foundation, designed for local hazard levels and projected sea-level rise to 2050, with rainwater harvesting, solar power, disability-friendly features and space for livestock. It can shelter 35–40 people temporarily during disasters serving as everyday housing, an asset-safe space, and a small local shelter in one. Scaling any such model requires matching it to local climate, cost, land type, culture and household affordability.

Preparedness, Planning and Livelihoods

Resilience also depends on household and community preparedness checking foundations, reinforcing roofs and structural connections, moving livestock to safety, protecting water sources, and safeguarding documents and valuables before a cyclone. Coordinated with local disaster-management committees, volunteers, union councils and schools, one household's resilience can strengthen an entire area.

Housing cannot be planned apart from land use and livelihoods. A safe house with no road, water, sanitation, school or livelihood nearby is not viable long-term. The sequence should be: multi-hazard risk assessment; risk-based land-use zoning that restricts new building in extreme-risk areas; and planned housing with integrated services steered toward safer land. Multi-criteria decision analysis combining cyclone, surge, flood, salinity, erosion and socio-economic vulnerability can classify zones by risk level to prioritize approvals, investment and relocation. Employment, markets, services and the mobility need of women, children, older people and persons with disabilities must stay integral to any relocation or new-housing plan.

Priority Actions for Disaster-Resilient Settlement Planning

1. Make multi-hazard risk assessment mandatory in national and local housing planning.
2. Designate risk-based housing zones at upazila/union level; restrict new building in extreme-risk areas.
3. Set zone-specific construction and design standards for local wind, surge, flood and salinity conditions.

4. Make climate-resilient housing affordable via subsidies, low-cost credit and technical support.
5. Expand combined house-and-small-shelter models where large shelters remain out of reach.
6. Integrate safe water, rainwater harvesting, resilient sanitation and power into every housing project.
7. Secure long-term tenure rights for landless households and those on unsafe land.
8. Build upazila/union spatial databases to identify at-risk housing and service gaps.
9. Apply 'Build Back Better' after every disaster instead of rebuilding the same vulnerable housing.
10. Strengthen data and research collaboration among universities, government and development agencies.

Conclusion: A Safe Home, a Safe Settlement, a Stable Future

Disaster-resilient settlements are not created by stronger houses alone; they result from coordinated decisions about land, infrastructure, services, environment and livelihoods. In coastal Bangladesh, the safety of a community depends on where development occurs, how buildings are constructed, whether essential services remain accessible, and whether residents can protect their assets and recover after a disaster.

Bangladesh's progress in reducing cyclone deaths demonstrates the value of early warning, public engagement and investment in protective infrastructure. The next step is to embed these strengths more firmly in spatial planning through risk-informed land-use decisions, accessible public facilities, resilient infrastructure and meaningful community participation.

The future of coastal Bangladesh depends on settlements that are safe, inclusive, affordable, climate-resilient and connected to livelihoods. World Town Planning Day offers an opportunity to recognize planning as a practical tool for reducing risk before disasters strike, protecting communities during emergencies and supporting dignified recovery afterwards.

References and Visual Credits

BRAC, Climate-Resilient Housing Programme.

Plan International Bangladesh, photographs and reporting on Cyclone Remal (2024).

World Bank (2010), Policy Research Working Paper 5280: Vulnerability of Bangladesh to Cyclones in a Changing Climate.

UN-Habitat, The Right to Adequate Housing, Fact Sheet No. 21.

United Nations, SDG 11: Sustainable Cities and Communities.

Internal Displacement Monitoring Centre (IDMC), Bangladesh Disaster Displacement Data, 2008–2024.

Ministry of Housing and Public Works, Government of Bangladesh, National Housing Policy.

Ministry of Disaster Management and Relief (MoDMR) & BRAC Disaster Risk Management Programme, *Assessment of Cyclone Shelter Capacity and Risk-Exposed Coastal Population in Bangladesh*.

Constitution of the People's Republic of Bangladesh, Article 15(a).

Bangladesh Bureau of Statistics (BBS), *Population and Housing Census 2022, National Report (Volume I)*, Statistics and Informatics Division, Ministry of Planning.

Bangladesh Meteorological Department (BMD), historical cyclone archives.

Dhaka Tribune; The Business Standard; ReliefWeb; UNICEF Bangladesh, cyclone and Remal reporting.

Streets For People: Reclaiming Urban Space for Better Communities

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Introduction

The most familiar and utilized public space in a city is its street. Every day, people use streets to go to work, attend school, shop, meet with friends, and stay connected with their neighborhood. Yet, in modern urban planning, streets are only being used for one thing - vehicular movement. As a result, city roads are widening and the number of vehicles is increasing, but the space for people to safely walk, sit, cycle, or interact with one another is shrinking. This raises a critical planning question:
"Are streets only for cars, or are they for people too?"
In other words, a street is not just transportation infrastructure; it is community infrastructure as well.

Bangladeshi Cities: Roads Exist, But How Much of Them Belong to the People?

A common pattern emerges when looking at the rapidly urbanizing cities of Bangladesh. The space on roads is primarily consumed by motorized traffic, while pedestrian space is often treated as a secondary priority. In many areas, sidewalks are:

- Illegally occupied
- Used for shops or commercial business purposes
- Turned into parking zones
- Damaged and broken
- Or abruptly cut off.

As a result, a pedestrian is forced to walk sometimes on the sidewalk, sometimes along the edge of the road, and at times directly amidst moving vehicles. The issue is not just about mobility. If walking in a neighborhood is not safe and comfortable, people naturally become more dependent on private cars or other motorized transport. This can lead to increased traffic congestion, pollution, and noise. More importantly, when roads are not user-friendly for people, community life also weakens. Children cannot walk safely. Elderly people feel discouraged from walking in the neighborhood. Women and other vulnerable groups may worry about their safety. Local shops and small businesses can also suffer due to the lack of a pedestrian-friendly environment.

Is the problem with the roads, or the planning?

Often, a city's traffic problem is simply seen as an issue of having too many cars. But the problem has a planning dimension. If in a city-

Housing - School -Workplace - Market- Park

These are located far away from each other; people have to travel long distances. If there are no good footpaths in the neighborhood, people will not want to walk. That means it is hard to build an effective city if you view transport planning, land-use planning and public-space planning separately. A road does not function in isolation. Its performance depends on surrounding land use, population density, public transport, pedestrian networks, parking, street design and development pattern.

Therefore, a planned city does not just build big roads. Instead, it treats roads, land use, public transport, pedestrian networks, and public spaces as parts of the same planning system.

What Makes a Street People-Friendly?

Planning Element	Conventional Approach	People-Centered Approach
Pedestrian space	Narrow/incomplete footpaths	Continuous, accessible footpaths
Road allocation	Vehicle-dominated	Balanced space for people, public transport and vehicles
Street crossing	Few and convenient	Frequent, safe and accessible crossings
Cycling	Often overlooked	Dedicated and connected facilities
Public transport	Focus on vehicles	Easy connection between transit and pedestrians
Street greenery	Limited	Trees, planting and shaded walking routes
Community use	Street as movement corridor	Street as movement+ social space
Accessibility	Difficult for vulnerable use	Universal design for children and disable persons

Copenhagen: When walking is part of urban planning

Copenhagen, Denmark has demonstrated how pedestrian and cycling infrastructure can be integrated into long-term urban planning. For decades, the city has worked towards creating a pedestrian-friendly and cycling-oriented urban environment. As a result, streets are no longer viewed merely for vehicular movement, but are also designed for human mobility and public life. Copenhagen's Stroget pedestrian street is a prime example. In this pedestrian-oriented environment at the heart of the city, people can walk, shop, and enjoy public spaces. The key lessons here for Bangladesh are: Widening roads is not always the solution to mobility; how road space is allocated is equally important. If every part of a road is allocated solely for cars, it becomes difficult to find space for pedestrians. However, if the planning states from the very beginning-"This road is for people, bicycles, and public transport, alongside cars"-then the utilization of the street can be completely transformed.

Bogotá: When streets become community spaces

Bogotá, Colombia is another interesting example. Through its Ciclovia program, the city closes many roads to motorized traffic on specific days and times, opening them up for pedestrians, cyclists, and recreational activities. This is not just a transportation program; it is also a social program. People walk with their families, ride bicycles, exercise, and enjoy the public space. This brings forward an important concept: the use of a street does not always have to be the same. A street can be a traffic corridor at one time of the day, and become a community space at another designated time. It could be possible to launch such car-free periods or open-street programs on an experimental basis in specific neighborhood streets or selected roads in Bangladeshi cities as well. Especially on holidays, some roads in residential areas could be opened up for children, elderly people, and pedestrians.

Barcelona: The Concept of the Superblock

The Superblock approach in Barcelona, Spain is another important example. Here, several city blocks are grouped together to manage traffic. This reduces through-traffic and creates more space for pedestrians and community activities on the inner streets. The goal of planning is not just:
"Where will cars go?"
Instead, a new question becomes important:
"Where will people stay?"
This method reorganizes the inner street space of a neighborhood. It creates room for social interaction, walking, greenery, and local activities. The exact Barcelona model may not work fully in the densely populated urban areas of Bangladesh. However, its core planning principle-reducing through-traffic and giving internal neighborhood space back to people-can be adapted locally.

What can Bangladesh learn?

There is no need to turn Bangladeshi cities into Copenhagen, Bogotá, or Barcelona. The need is to adopt their planning principles and apply them to our local context.

Pedestrian-first priority

Footpaths should not be treated as leftover spaces of the road. Instead, they must be planned as a critical part of the transportation infrastructure. A good pedestrian network must be:

Continuous + Safe + Accessible + Connected

Redistribution of road space

The entire width of the road should not be allocated solely for cars. Space should be redistributed based on actual needs to include:

- Pedestrians
- Bicycles
- Public transport

- Street narrowness
- Drainage

Safer streets in school and residential areas

Special emphasis needs to be placed on pedestrian safety around schools, hospitals, residential neighborhoods, and marketplaces. Specifically, traffic calming, safe crossings, and wider pedestrian spaces in front of schools can create a safe environment for children.

Car-free or Open Street initiatives

Clearing vehicles from certain neighborhood streets for a specific period of time can open them up for:

- Walking
- Cycling
- children's activities
- community events

This makes it possible to create public spaces without purchasing new land.

Public transport + walking must be planned together

Merely building a bus stop does not ensure public transport accessibility. Ensuring that people can walk safely from their homes to the bus stop must also be a part of the planning. Therefore, "Land-use planning + transport planning + pedestrian planning" must be integrated together.

A New Planning Vision for Bangladesh

Bangladesh can adopt a "People-First Approach" to streets in its future urban planning.Its core principles could be:

Walk → Connect → Access → Interact → Belong

That is, so that people can-Walk → Connect with different places → Access necessary services → Interact with others → Feel like they belong to their neighbourhood.
This is the foundation of building a good community.

Conclusion

Urban development is often measured by the number of new roads, flyovers, bridges, and buildings. However, another crucial question determining a city's success is:
"*How do the people of this city commute every day, and what kind of urban experience do they have during that commute?"*
Copenhagen has shown how pedestrian and cycling infrastructure can be part of long-term urban planning. Bogotá has demonstrated how streets can be transformed into community spaces at specific times. Barcelona has proven that it is possible to create more space for people by redesigning inner- neighbourhood streets. These lessons are vital for Bangladesh as well. Our cities do not just need more roads; they need better-planned streets. Streets must be designed in a way where cars can drive, but people are not lost. Because-

A street is not successful merely because it moves vehicles efficiently. It is successful when it helps people move, connect, interact and belong.

And therein lies the true purpose of planning-

We should not only plan roads for cities. We should plan streets for people.

Projected Urban Maneuvers Seeking a More Ecological Urban Equilibrium- Ways to Defy Urban Oppression

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Great communities are fabricated through systematic frameworks that transition basic or mediocre housing developments into inclusive, resilient ecosystems with reinforced infrastructure, green spatial intervals and readily accessible intermediate communal services. Preserving an equilibrium between concrete-dominated structural erections and natural ecosystems, urban master plans can actively moderate the Urban Heat Island Effect and regulate prevalence of cooling effect amongst the lower urbanscape.

Incorporating vegetation directly into building envelopes can help alleviate the otherwise reliance on HVAC loads which could lead to a spike in artificial energy consumption. Integrating green roofs and green vertical walls on the hyper-dense blocks could effectively curb absorption of excessive solar heat during daytime. Contemporary urban planning advocates for green and blue infrastructure networks which intercept the rigid concrete grids and connect pocket green parks, open plazas into coherent urban system. Surrogates of primitive heat absorbing dark asphalt paving can be made through introducing more permeable materials such as high albedo reflective paving which can lower excessive heat traps in the lower urban tier. Through careful calibration of green plot ratio, urban designers could design multi-layered canopy structures by arranging trees over shrubs and groundcover in a more strategically coordinated array to inhibit regular lining of green turf which could lead to exponential cooling.

Sustainable drainage systems could be introduced within the urban sphere which could integrate bioswales, retention cells and rain gardens to filter rainwater runoff while naturally irrigating urban flora. These elements could escalate cooling amongst the urbanscape. Urban morphology can be engineered to escalate natural wind movements onto adjacent structures and pedestrian pathways. Designing narrow street profiles with high height -to -width ratios assure that tall vertical structures cast overlapping shadows onto the streets. Also, during designing structures, staggering the tall envelope could redirect wind movements towards other lower structures and replacing solid concrete envelopes with breaks in between could penalize trapped heat and further reregulate wind flows amongst the arrayed blocks within the urbanscaping. Urban formation could be placed under a specific geometry following an alignment of primary streets and urban axes parallel to the seasonal wind flow directions for an uplifted ventilation that utilizes opposite pressure zones and act as a suction to pull trapped heat out through convection. Besides, raising buildings on pilotis create passageways for uninterrupted wind flow which assist in retainment of the cooling effect within the lower urban stratum. Stepping back upper floors or introducing structural voids on intermediate levels could deviate wind flow and create channels which could pull air out and improve the cooling the

microclimate of Dhaka city. Applying reflective coatings with high solar reflective index on flat rooftops and exposed concrete surfaces could reflect incoming solar radiation. Integrating water bodies within the urbanscape could alter the conventional solar heat gain and infuse cooling effect within the urban ambience. Small scale green infrastructure arrayed within continuous concrete vertical structures could make provision for shading the pedestrian ways and contribute to added cooling effect. These green canopies can act as urban apertures and fracture the solid dense blocks that clog the lower urban tier and obstruct wind from flowing.

Green bodies such as trees with broad leaves could act as an ecological sanction which invites a solicit for cool wind flow and announce complete or partial solar heat outage. Planting green bodies could eliminate 25% solar heat capture and the constant rehearsal of this green urban practice could lead to the microclimatic cooling of the urban fabric. These green canopies act as thermal buffers and insulate the upper layer of the streetscape which transmits the incident solar radiation outward and stabilizes a balance within the urban ecology. Urban planners could potentially design canopies featuring varied height differentials that correspond to a smoother mobility of the wind flow. The high altitude of the elevated structures could dominate the lower urban components and act as eclipse which further tyrannize the lower urbanscape. Proposing construction of repetitive tall towers without green intercepts could lead to urban fabric suffocation and stifle appropriate air circulation which might project urban islands to be extensively heated. These essentially raise the tropical temperature, and the building occupants encounter thermal discomfort alongside the pedestrians on the streetscape level. The urban communal design should adopt certain analyzed morphology which could alter existing urban development patterns and geometry and cultivate in retrofitting urban elements within the fabric to soothe the heat and pacify the solar heat gain. An alternate adoption of both green and blue infrastructure into the urban mesh could generate interventions in solar heat gain as both the green and blue urban elements act as composite components which could segregate the trapped heat away from the lower hemisphere, thus conditioning the air more and enhancing the cooling effect. Urban planning in the contemporary extension of master planning of futuristic Dhaka should embed consolidated urban parameters which would regulate future controlled municipal planning of the city. The urban block saturation could be fragmented through interrupting the linear urban block array with pocket spaces, green open plazas which could rechannel the wind circulation within the rigid vertical blocks and maintain wind flow hierarchy. The variety of urban tiers rely on natural climatic factors for the sake of habitation. Thus, urban planners should be aware of existing tropical climate in Dhaka, and through proper acknowledgement of these climatic criteria and conditions and through a thorough assessment of the designated urban region, the designers should make tailored suggestions which would officially proclaim the futuristic urban metamorphoses.

The urban planners should associate within the master plan proposal communal congregation spaces for active regular social assembly within the neighbors. To promote green community, open plazas and green canopies and urban oasis which serve as future sanctuaries within the urban fabric. There ought to be spaces acting as convergence points for regular communal and seasonal celebrations hosted within the urban community. To process the leverage towards a

greener urban ecosystem, the planners need to contemplate existing urban conditions of Dhaka city and the associated climatic metrics and formulate well designed inclusive methodologies which could terminate the previous malfunctioning urban mechanism and would greet new strategies that could surely hoist the ecology of the Dhaka urban fabric.

To further make provision for urban buttress urban planners need to extract systematic antidotes that can heal the prevailing stress exerted through unplanned hyper-dense concrete structures. To pause the linear continuous cycle of heaving vertical towers following a repetitive pattern in the name of urbanization needs to be addressed by the urban experts. The newer strategies could act as real therapy towards easing down the extreme heat accumulated during the tropical monsoon season. Coating the lower urban tier with interim green canopies accommodated with regular punctures of the ubanscape with water bodies act as an urban veneer which could potentially breed a notable deflection in the solar heat radiation receival.

Green infrastructures such as integrating external building envelopes with vertical plantations could insulate the towers and seclude the structures away from incoming solar heat radiation. Also, constructed wetlands such as natural retention basins which purify greywater and manage overflow safely. Installing community solar microgrids and geothermal heat pumps to decarbonize local energy consumption. When rapid urbanization intersects with poor infrastructure and fragile ecosystems. Dhaka municipality has been undergoing extreme vulnerability and has received exposure to ruptures in the balance of urban ecosystems. Revitalization and ecological upheaval of Dhaka municipality can be made through nature-based solutions which feature urban corridors and green belts that can act as immediate buffers towards curtailment of heat retention. The linear concrete hedge aligned along the urban edge has made the urban system sensitive towards endorsement of solar heat gain can be interrupted through biodiversity habitats and mangrove rehabilitation which could act as a transitioning pivot in permanently altering the deteriorating state of the urban system.

The transformation of the urban city of Dhaka necessitates cross-disciplinary collaboration, coordinating efforts across real estate, energy, mobility, and commerce sectors. Also, renaturalized brownfields and urban agriculture. This urban expansion increases exposure to climatic hazards such as urban flooding, heat waves, and water stress. The chain through which urbanization has been taking place previously ought to be altered and integrating new urban corridors could act as effective portals through which massive transformation could be brought along that could lead to eco-friendly urban upheaval.

Through careful urban expert verdicts and radical overhauls, the existing urban anomaly could encounter ecological mutation. Urban tribunals can be arranged to make decisions and consolidate integrated urban elements to help mitigate excessive urban strain imposed by the solar heat from the tropical monsoon climate of Dhaka. A series of adaptations could be made to release the urban constraints projected by the tropica harsh climate of Dhaka. The shackles of rigid concrete towers that have engulfed natural urban configuration need to be freed to further relieve urban oppression. Decarbonizing structures and through distributive renewables and promoting local composting and greywater recycling, Creating decentralized energy strategies where wastewater through server rooms or local commercial operations is funneled

directly into low water heating loops. Installation of low-E triple glazing glass which marginally drops daylight factor due to lower visual light transmittance coatings and cuts harsh glare maintaining the natural ambient light. To refine the parameters for community framework, urban planners need to consider dynamic, real-world metrics and provide solutions to oppose severe heat retention, monsoon waterlogging and promoting active community participation. Using multilayered native forestry rather than exotic decorative plants to maximize carbon sequestration and prioritize vehicle-restricted, shaded walking and cycling lanes within the community layout to curb local emissions. Urban ecology and eco-sustainability could potentially marginalize the rapid urban constraints and moderate the projected urban inequalities.

Rooftops: An Overlooked Community Resource?

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In a land-scarce country with its highly dense urban areas such as the two Dhaka City Corporations, the rooftops look like useful resources. However, to what use(s) to put these resources? Each of some of the biggest problems facing our cities has led to a different proposed use for rooftops:

1. The scarcity of ground and surface sources of water has led to the proposal for rooftops, residential ones included, to be used for rainwater harvesting.
2. Increasing urban temperature has led to proposals of greening of rooftops (as well as vertical walls).
3. Rooftop agriculture has also been promoted for healthy sources of food as well as for greening of rooftops.

There is an idea that does not appear to have been talked about much, but we would like to add to this list: rooftops for park-like uses.

None of the above ideas appear to have been put to use to any large extent, except perhaps rooftop gardening. Given the extent of each of the above urban problems, scrutinizing these proposed uses of the residential rooftops is worthy of our time. This paper is a short synopsis of the experiments so far in each of these uses, and for the case of rooftops for park-like uses, an exploration into the relevant issues.

Rainwater harvesting

Harvesting rainwater requires (a) the whole or part of a roof as catchment (b) conveyance pipes, and (c) a storage. While this technology appears to have great potential in cities (or parts thereof) with depleting groundwater, it must pass scrutiny. Otherwise, we end up with another good idea wastefully invested on. Some of the questions to ask are:

a) What will be the implication of the annual rainfall pattern, especially the one that climate change might bring?

b) How can harvesting and storage be carried out?

c) What will be the quality of harvested water, and what uses can it be put to?

d) How strong is the financial incentive for a relatively wealthy apartment/building owning household to look for an alternative to the DWASA water at its current price?

a. Rainfall pattern

Bangladesh climate is marked by what is called a dual hydrological regime. The four months of monsoon (June, July, August, September) typically see approx. 65% of the annual rainfall. Dhaka district's rainfall mimic the national pattern. These four months are also the time when ground water is relatively more available. On the other hand, three months of summer (March-May) and two months of post-monsoon (October and November) see just over 20% and 10% of rainfall respectively. These are also the times when ground water is often low, water demand is high, and water is scarce in many parts of Dhaka city. The rainfall data prompts the question: Why harvest when you have ground water aplenty? When ground water is scarce, the rain is also scarce. During that scarcity, there is often very little of what we are proposing to harvest.

There are further problems associated with the technology of rainwater harvesting.

b. Storage, quality of water, and plumbing

To harvest water when it is plenty for use during the periods of low rain and scarce ground water, we need to solve the problem of storage. A related issue is the quality of water and determination of which household uses they will be good for. The quality of harvested rainwater precludes any use other than flushing toilets, watering of plants, and washing of cars, unless highly expensive chemical treatment is done on the harvested water. However, even though water quality for car washing is acceptable, using water for car wash will likely not be universal as many residential buildings do not allow washing of cars in the parking lots.

For flushing toilets, the consumption per capita per day is often taken to be 12 liters. To use the harvested water in cisterns in existing buildings, retrofitting a separate plumbing line will need expenses that will surely be prohibitive given the benefits. In new buildings, with the addition of 15% of cost, a separate plumbing line can be added for use of harvested rainwater.

Taking 12 liters per person per day for a 7 storey-building: 70 people x 15 liters per day per person x 30 days gives 25200 liters. To allow for free board, 10% volume needs to be added, and the storage tank turns out to be approximately 27.72 cubic metres to meet the demands of 30 days. For a perfect cube shaped storage, each dimension on the inside of the tank has to be more than 3 metres (approx. 10 feet). Where to put this tank? Many residential buildings in Dhaka do not have room for septic tank even. Putting the storage tank on roof top will need some pumping. Putting them below ground will require even more pumping. It would turn out that storage in individual residential buildings on plots of 3 to 6 katha will be so costly that there will be no economies of scale. However, according to this author's calculations with a colleague, rainwater harvesting in rooftops can potentially work in residential colonies with significant open spaces in between buildings, where underground storage can be built that is large enough to offer higher economies of scale than in one typical residential building.

The outstanding message however remains that rainwater harvesting in dual hydrological regime makes it challenging because water might have to be stored for several months to make full use of the plentifulness of water in the four months of heavy rain. There is retrofitting cost, and the uses of harvested rainwater is limited. The use of the entire or substantial part of the rooftop also takes the rooftop from many other uses. The price of DWASA at less than 17 takas per 1000 litres also create little incentive for people wealthy enough to own apartments and buildings to harvest the free water from rain.

Rooftop gardening/greening

Rooftop gardening for food and vegetables has champions in several countries. Generally, the argument is that a large portion of the vegetables needed in the urban areas can be produced on the rooftops. Literature on the subject includes studies in several cities on different continents that make estimates of how such agriculture can be beneficial. For example, in Singapore one study estimates that if rooftops are brought under rooftop gardening, 35.5% of the city state's need for agriculture can be met. Greening with the intent of reduction of urban heat is a complementary objective.

The first major wave of rooftop gardens in Dhaka is taken to be the ones of Kazi Peyara-I as they got popular in the late 1980s. No data on the extent and nature of rooftop gardening exist until a 2018 survey by Rajuk that puts the number of rooftops with gardens in Dhaka city at 6638. Rooftop gardens have seen quite a bit of patronage over the years in Bangladesh. In 2013 the Department of Agricultural Extension (DAE) took a program of offering assistance to Dhaka residents to promote rooftop gardening. Subsequent projects[1] from different organizations such as BARC and FAO throughout the 2010s kept training a small number interested gardeners. The Sher-e-Bangla Agricultural University had a program of training small batches of interested gardeners until their funding ran out in 2022. There are NGOs that worked with DNCC to promote and assist with rooftop gardening. It has to be pointed out, however, that the number of rooftops that got assistance is fairly small. The 2018 project of the DAE had a target of 600 rooftops. There are YouTube channels and Facebook groups of rooftop gardening enthusiasts. In 2023, both DNCC and DSCC announced 10% rebate of holding tax for eligible rooftops with gardens.

Sourcing some of the food in the big cities from rooftops make intuitive sense, and many successful growers are putting that into practice. The right kind of rooftop gardens perhaps reduce the heat island effect, although the extent of reduction is unknown without refined modelling. However, several potentials issues need to be addressed before we promote rooftop gardening. When not done properly, there is potential for using too much water on scorching concrete rooftops for very little yield of vegetables. When the ownership of rooftops is uncertain, rooftop gardening can be a source of potential discord among the residents of a building. When not prevented gardens and stagnant water can be breeding grounds for mosquitos, especially the vector of Dengue. Nevertheless, with proper awareness building, extension of technology, and resolution of governance issues in coordination of multiple roof

[1] For example, the National Agricultural Technology Program-II, funded by Bangladesh Agricultural Research Center had components for rooftop gardening in Dhaka.

(i.e. apartment) owners, and the right public policy incentives, rooftop gardening stands to be a significant use of the resource that is rooftop.

Rooftops in park-like use

Eighty four percent of Dhaka city's population was estimated to have no access to parks or open spaces[2] . Dhaka's total open space is merely 6.17 sqkm in an area of approximately 130 square km of the city corporation areas[3]. For a population of 8.6 million, there are only 235 parks and playgrounds, of which only 42 are open to the public. The rest are part of entry-restricted residential areas or institutions (such as a school playfield). To make matters worse, several parks have been encroached and thereby, taken out of citizen's access.

This near absence of open spaces is exacerbated by the fact that Dhaka city, with a density of 47000 people per square km in some parts, is the densest megacity in the world. Dhaka, astoundingly has only 0.16 square meter of open space per capita[4] , while Mumbai, a populous and dense city has 1.1 sq. meter per capita. Cities that are perceived as dense, such as Hong Kong (2.7 sqm per capita) and Tokyo (3 sq meter per capita) have much more.

Even the most stringent urban planning standards in land-scarce countries require a park for children within walking distance, often taken to be 300 meters. Despite existence of planning standards in Bangladesh for long, Dhaka city grew with little to no provision of parks and open spaces. In fact, the trend in Dhaka is to lose open spaces. In the absence of accessible parks, the city's population, especially the children rarely get a chance to engage in any physical activity and often go without. The absence of parks will lead to increased obesity, reduced psychological well-being in children, higher non-communicable diseases such as diabetes, and reduced associational life and neighborliness. It appears that a great public health crisis, with its associated financial and other costs to the society, is looming on the horizon. Faced with this cost, some drastic solutions and commitments to new ideas are worth a try.

One rather drastic way to provide parks would be to buy up plots in existing built-up areas, and if present, demolish an existing structure to provide neighborhood parks. On an average, a ward in Dhaka city has 1 lac population. To provide for such population, every ward would need 12 parks. To provide these parks by retro-fitting Dhaka, even with the assumption of only 5 katha parks, the cost would be at least 10 thousand crore taka, the cost of the Karnaphuly tunnel! Such financial commitment will be hard to come by because the nation has other priorities and needs. Retrofitting Dhaka's (as well as the other large cities of the country) with parks will require a level of prosperity in the economy that is at least a generation away.

2 As estimated by the Bangladesh institute of Planners in a study titled "Playgrounds of Dhaka City: Existing Condition and Way Out" and published in a dialogue on 9 May 2019, and reported on national dailies the following day, including at The Daily Sun: https://www.daily-sun.com/printversion/details/391265/Dhaka-lacks-adequate-open-spaces

3 Until 2016, the two city corporation areas of Dhaka had an area of approximately 130 sqkm. New areas such as Vatara and Satarkul were added to the DNCC and DSCC areas in 2016, making the city area approximately 300 sqkm.

4 Dhaka Structure plan (2016–2035), Chapter 10: Preserving open space for recreation, livability and identity, p213. Page 2 of 8

To play devil's advocate, it could be argued that in the age of easy availability of digital entertainment, there is not even a desire and demand for open spaces among most people. A large proportion of the people with jobs, and the students of all ages get little free time. They do not have need or desire for open spaces. However, this assertion is a hypothesis that needs to be tested. People perhaps engage in digital entertainment in the absence of open spaces, in a classic manifestation of chicken and egg.

May be there is room for behavioral changes by creating opportunities for physical activity and socialization. Not engaging in physical activity of any form is not merely an inconsequential cultural choice. It has real health and welfare consequences.

A research agenda focused on how rooftops can be used for park like uses[5] deserves attention and should grow from the following premises and observations:

1. *Ownership and access*: When a residential building is owned by one owner, a rooftop is a private property, from which the owner can exclude all tenants. Our exploratory research shows that drying of clothes, often during morning and afternoon windows, is commonly the only use allowed by the owner. In a small number of cases however, tenants can access the rooftops any time they want. When the apartment building is owned by multiple apartment owners, the rooftop can become an open access resource. If some form of governance of access and use of the roof is arranged, rooftops then become a common property resource. We can borrow from the literature on common property resource management to inform our public policy for rooftops.
2. *The (normative) goal* is to increase the use of rooftops of all ownership types for park-like functions. These functions include children's play, an afternoon/evening stroll for adults, and mingling of neighbors.
3. *Use:* From several studies supervised by this author, we know that some rooftops are used largely as a garden. Some are for solar panels. Others have a small residential unit. Still others are used for children to bike, or run around.

With these observations, research projects need to establish basic descriptive facts such as diurnal pattern of activities of people of different ages, employment types, sex, vehicle ownership, neighborhoods, and income and housing types. Ownership types, current access and use and governance of access to rooftops need to be explored too. Our exploratory research found nuances in how access and use are refined. For example, a sole owner of a building will allow all tenants except when his plants are bearing fruit! The physical state of buildings and rooftops and the relationship of different physical characteristics with the use of rooftop needs to be understood too. A building with low railings and infestation of mosquito will likely see less use, as per our research.

[5] Another physical space that can be used as temporary parks is road segments in neighborhoods that can be closed to traffic for a few hours on certain days of the week. Such roads can be paved well, and provided temporary furniture and painted courts for games such as hopscotch.

Conclusion

There is reason to believe that we as an urban community can get more social benefit out of the rooftops of the residential buildings in Dhaka. We also have to believe that there are appropriate public policy tools such as creation of positive and negative incentives, regulations, and awareness building and citizen involvement that can be devised effectively to get the most out of the resource that is rooftops. This belief calls for research and perhaps collective brainstorm in the form a task force from BIP or, perhaps one or more agencies of the local and/or central government.

পরিকল্পনায় গড়ে ওঠে প্রাণের শহর

তিথি সাহা

স্থাপত্য, শাহজালাল বিজ্ঞান ও প্রযুক্তি বিশ্ববিদ্যালয়

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একটি শহর কেবল রাস্তা, ভবন, সেতু কিংবা অবকাঠামোর সমষ্টি নয়। শহর মূলত মানুষের বসবাস, চলাচল, কাজ, আনন্দ, সম্পর্ক, স্মৃতি এবং ভবিষ্যতের সমষ্টিগত স্বপ্নের একটি জীবন্ত প্রকাশ। একটি শহরের ভবন যত সুন্দরই হোক, যদি সেখানে মানুষ নিরাপদে হাঁটতে না পারে, প্রতিবেশীর সঙ্গে দেখা করার সুযোগ না থাকে, শিশুর খেলার জায়গা না থাকে কিংবা প্রকৃতির সঙ্গে মানুষের সম্পর্ক বিচ্ছিন্ন হয়ে যায়, তবে সেই শহরকে সত্যিকার অর্থে বাসযোগ্য বলা যায় না।

এই কারণেই একটি সম্প্রদায় গড়ে ওঠার পেছনে পরিকল্পনার ভূমিকা অত্যন্ত গুরুত্বপূর্ণ। পরিকল্পনা শুধু ভবিষ্যতের জন্য জমির ব্যবহার নির্ধারণ নয়; এটি মানুষের প্রয়োজনকে বোঝা, বৈচিত্র্যকে গ্রহণ করা এবং একটি ন্যায়সঙ্গত, অন্তর্ভুক্তিমূলক ও প্রাণবন্ত পরিবেশ তৈরির প্রক্রিয়া।

পরিকল্পনা মানে মানুষের কথা শোনা

একটি ভালো পরিকল্পনার প্রথম ধাপ হওয়া উচিত মানুষকে বোঝা। কোনো এলাকার জন্য পরিকল্পনা করার আগে জানতে হবে– সেখানে কারা বাস করে, তারা কীভাবে চলাচল করে, কোথায় কাজ করে, কোথায় সময় কাটায়, কী নিয়ে সমস্যায় পড়ে এবং ভবিষ্যতে তারা কী ধরনের পরিবেশ চায়।

একই শহরে বসবাসকারী মানুষের চাহিদা এক নয়। একজন শিশুর কাছে খেলার মাঠ গুরুত্বপূর্ণ, একজন শিক্ষার্থীর কাছে নিরাপদ হাঁটার পথ ও বসার স্থান গুরুত্বপূর্ণ, একজন বয়স্ক মানুষের কাছে সহজ প্রবেশযোগ্যতা ও বিশ্রামের জায়গা গুরুত্বপূর্ণ। একজন কর্মজীবী মানুষের কাছে গণপরিবহন গুরুত্বপূর্ণ, আবার একজন নিম্ন-আয়ের মানুষের কাছে সাশ্রয়ী আবাসন ও কর্মসংস্থানের সুযোগ অত্যন্ত গুরুত্বপূর্ণ।

তাই পরিকল্পনা যদি কেবল মানচিত্র, রাস্তার প্রস্থ কিংবা ভবনের উচ্চতার হিসাব হয়ে যায়, তবে সেখানে মানুষের বাস্তব জীবন অনুপস্থিত থেকে যায়। মানুষকে পরিকল্পনার বিষয় নয়, পরিকল্পনার অংশ হিসেবে দেখতে হবে।

একটি ভালো সম্প্রদায়ের কেন্দ্রে থাকে ‘Public Space’

একটি সম্প্রদায়ের প্রাণ বোঝা যায় তার পাবলিক স্পেসগুলোতে। পার্ক, মাঠ, খেলার জায়গা, বাজার, হাঁটার পথ, জলাধারের পাড় কিংবা ছোট একটি উন্মুক্ত চত্বর এসব স্থান মানুষকে একে অপরের কাছাকাছি নিয়ে আসে।

একটি বেঞ্চ কখনো শুধু বসার জায়গা নয়। সেখানে একজন বয়স্ক মানুষ বিশ্রাম নিতে পারেন, দুই বন্ধু কথা বলতে পারেন, কোনো মা তার সন্তানকে খেলতে দেখতে পারেন। একটি মাঠ শুধু খেলাধুলার জন্য নয়; এটি একটি এলাকার সামাজিক পরিচয়ের অংশ হতে পারে। একটি বাজার শুধু কেনাবেচার স্থান নয়; এটি মানুষের প্রতিদিনের দেখা-সাক্ষাতের একটি সামাজিক পরিসর। অর্থাৎ, public space সামাজিক সম্পর্কের অবকাঠামো।

কিন্তু দ্রুত নগরায়ণের ফলে অনেক শহরে উন্মুক্ত স্থান ক্রমশ কমছে। জলাশয় ভরাট হচ্ছে, খেলার মাঠ হারিয়ে যাচ্ছে এবং পথচারীবান্ধব পরিবেশের পরিবর্তে গাড়িকেন্দ্রিক উন্নয়ন গুরুত্ব পাচ্ছে। ফলে মানুষ একই শহরে থেকেও একে অপরের থেকে বিচ্ছিন্ন হয়ে পড়ছে।

পরিকল্পনার মাধ্যমে তাই এমন একটি connected public-space network তৈরি করা জরুরি, যেখানে বাসস্থান, শিক্ষা, কর্মক্ষেত্র, বাজার, বিনোদন ও প্রকৃতি একে অপরের সঙ্গে যুক্ত থাকবে।

নীল-সবুজ পরিসরে শহরের শ্বাস-প্রশ্বাস

শহরের নদী, খাল, পুকুর, দিঘি, জলাভূমি এবং সবুজ স্থান শুধু পরিবেশগত সম্পদ নয়, এগুলো সামাজিক সম্পদও। একটি জলাশয়ের পাড় হতে পারে হাঁটার স্থান, বসার স্থান, সাংস্কৃতিক কার্যক্রমের স্থান কিংবা মানুষের দৈনন্দিন মিলনস্থল।

বিশেষ করে বাংলাদেশের মতো নদী, খাল ও জলাভূমিনির্ভর ভূপ্রকৃতির দেশে নগর পরিকল্পনায় Green-Blue Infrastructure -এর গুরুত্ব আরও বেশি। জলকে শহরের সমস্যা হিসেবে দূরে সরিয়ে দেওয়ার পরিবর্তে পরিকল্পনার অংশ হিসেবে গ্রহণ করা যেতে পারে। একইভাবে গাছপালা ও সবুজ স্থানকে শুধু সৌন্দর্য বৃদ্ধির উপাদান হিসেবে না দেখে মানুষের স্বাস্থ্য, আরাম এবং সামাজিক যোগাযোগের অংশ হিসেবে ভাবা দরকার।

একটি জলাশয়কে ঘিরে হাঁটার পথ, বসার স্থান, ছোট সাংস্কৃতিক চত্বর, শিশুদের খেলার স্থান এবং স্থানীয় ব্যবসার সুযোগ তৈরি করা হলে একই জায়গা পরিবেশগত ও সামাজিক এই দুই ধরনের মূল্য সৃষ্টি করতে পারে।

Inclusive Community: কার জন্য এই শহর?

একটি মহান সম্প্রদায় তখনই গড়ে ওঠে, যখন শহরটি তার সব মানুষের জন্য। শিশু, নারী, বয়স্ক মানুষ, প্রতিবন্ধী ব্যক্তি, নিম্ন-আয়ের মানুষ কিংবা ভিন্ন সামাজিক ও অর্থনৈতিক শ্রেণির মানুষ সবারই শহরে সমানভাবে স্থান পাওয়ার অধিকার রয়েছে। পরিকল্পনায় যদি কেবল নির্দিষ্ট একটি শ্রেণির মানুষের প্রয়োজনকে গুরুত্ব দেওয়া হয়, তাহলে শহর কখনোই পূর্ণাঙ্গ হয়ে উঠবে না।

একটি inclusive neighborhood-এর জন্য নিরাপদ ও সহজগম্য ফুটপাত, universal accessibility, পর্যাপ্ত আলো, বসার স্থান, গণপরিবহনের সংযোগ, সাশ্রয়ী আবাসন এবং বিভিন্ন ধরনের পাবলিক স্পেস প্রয়োজন।

এখানে স্থপতি ও নগর পরিকল্পনাবিদদের ভূমিকা শুধু নকশা করা নয়। তাদের কাজ হলো এমন একটি পরিবেশ তৈরি করা যেখানে একজন মানুষ অনুভব করতে পারেন যে “এই শহরটিও আমার।”

পরিকল্পনা শুধু ভবিষ্যৎ নয়, স্মৃতিরও সংরক্ষণ

শহর পরিবর্তিত হবে এটাই স্বাভাবিক। কিন্তু উন্নয়নের নামে একটি শহরের পরিচয় মুছে ফেলা উচিত নয়। পুরোনো বাজার, ঐতিহাসিক ভবন, রাস্তার বিন্যাস, জলাশয়, গাছ কিংবা কোনো নির্দিষ্ট স্থানকে ঘিরে তৈরি সামাজিক স্মৃতি একটি সম্প্রদায়ের সাংস্কৃতিক পরিচয়ের অংশ।

তাই urban regeneration মানেই পুরোনো সবকিছু ভেঙে নতুন কিছু তৈরি করা নয়। অনেক ক্ষেত্রে বিদ্যমান স্থানের চরিত্রকে বুঝে, প্রয়োজনীয় পরিবর্তন এনে এবং মানুষের স্মৃতিকে সংরক্ষণ করেই নতুন জীবন দেওয়া সম্ভব।

একটি পুরোনো বাজারকে আধুনিক সুযোগ-সুবিধা দিয়ে পুনর্গঠন করা যেতে পারে, কিন্তু তার সামাজিক প্রাণ যেন হারিয়ে না যায়। একটি পুরোনো জলাশয়ের পাড়কে উন্নত করা যেতে পারে, কিন্তু তার সঙ্গে মানুষের দীর্ঘদিনের সম্পর্ক যেন বিচ্ছিন্ন না হয়। ভালো পরিকল্পনা পরিবর্তন আনে, কিন্তু পরিচয় মুছে দেয় না।

Resilient Community: সংকটের মধ্যেও টিকে থাকার ক্ষমতা

আজকের শহরকে শুধু বর্তমানের জন্য নয়, ভবিষ্যতের অনিশ্চয়তার জন্যও প্রস্তুত করতে হবে। শহরের পরিকল্পনায় জলাবদ্ধতা, বন্যা, অতিরিক্ত তাপ, অগ্নিকান্ড, ভূমিকম্প কিংবা অন্যান্য দুর্যোগ এসব ঝুঁকি বিবেচনা করা জরুরি।

বিশেষ করে বাংলাদেশের নগরগুলোতে পানি ব্যবস্থাপনা ও জলাবদ্ধতা একটি গুরুত্বপূর্ণ পরিকল্পনাগত বিষয়। প্রাকৃতিক জলপ্রবাহ বন্ধ করে দেওয়া, জলাধার হারিয়ে ফেলা কিংবা অপরিকল্পিতভাবে ভূমি উন্নয়ন করা দীর্ঘমেয়াদে শহরের ঝুঁকি বাড়াতে পারে।

একটি resilient community তাই প্রকৃতির বিরুদ্ধে নয়, প্রকৃতির সঙ্গে কাজ করে। বৃষ্টির পানি ধরে রাখা, permeable surface ব্যবহার, জলাধার সংরক্ষণ, সবুজ পরিসর বৃদ্ধি এবং নিরাপদ evacuation space তৈরি ইত্যাদি এসব পরিকল্পনার অংশ হতে পারে।

শহর পরিকল্পনা ও মানুষের অংশগ্রহণ

কোনো পরিকল্পনা কাগজে সুন্দর হলেই সফল হয় না। তার সফলতা নির্ভর করে মানুষ সেটিকে কীভাবে গ্রহণ করছে তার ওপর। তাই participatory planning অত্যন্ত গুরুত্বপূর্ণ। স্থানীয় মানুষ, প্রশাসন, পরিকল্পনাবিদ, স্থপতি, প্রকৌশলী, ব্যবসায়ী, শিক্ষার্থী এবং বিভিন্ন সামাজিক গোষ্ঠীর মতামত পরিকল্পনা প্রক্রিয়ায় অন্তর্ভুক্ত করা গেলে একটি এলাকার প্রকৃত প্রয়োজন সম্পর্কে অনেক বেশি বাস্তব ধারণা পাওয়া সম্ভব।

মানুষ যখন কোনো পরিকল্পনার অংশ হয়, তখন সেই স্থানটির প্রতি তাদের দায়বদ্ধতাও তৈরি হয়। ফলে planning শুধু উপর থেকে চাপিয়ে দেওয়া সিদ্ধান্ত না হয়ে একটি collective process-এ পরিণত হয়।

আগামীর শহর: মানুষকেন্দ্রিক পরিকল্পনার দিকে

ভবিষ্যতের শহর হয়তো আরও উঁচু হবে, আরও প্রযুক্তিনির্ভর হবে, আরও দ্রুত পরিবর্তিত হবে। কিন্তু শহরের মূল উপাদান একই থাকবে; মানুষ।

Smart city হওয়া গুরুত্বপূর্ণ হতে পারে, কিন্তু তার চেয়েও গুরুত্বপূর্ণ হলো Smart Community তৈরি করা- যেখানে প্রযুক্তি মানুষের জীবনকে সহজ করবে, কিন্তু মানুষের সামাজিক সম্পর্ককে প্রতিস্থাপন করবে না।

আমাদের ভবিষ্যৎ শহরে এমন রাস্তা দরকার যেখানে মানুষ হাঁটতে পারে, এমন উন্মুক্ত স্থান দরকার যেখানে মানুষ একত্রিত হতে পারে, এমন জলাশয় দরকার যা শহরের সঙ্গে জীবন্ত সম্পর্ক তৈরি করে এবং এমন আবাসন দরকার যেখানে অর্থনৈতিক অবস্থার কারণে কেউ শহর থেকে বিচ্ছিন্ন হয়ে না পড়ে।

শেষ পর্যন্ত একটি শহরের সাফল্য তার ভবনের সংখ্যা বা উচ্চতা দিয়ে পরিমাপ করা যায় না। বরং প্রশ্ন হওয়া উচিত মানুষ সেখানে কতটা নিরাপদ, কতটা স্বাচ্ছন্দ্যবোধ করে, কতটা অন্তর্ভুক্ত বোধ করে এবং একে অপরের সঙ্গে কতটা সংযুক্ত হতে পারে।

একটি সম্প্রদায় হঠাৎ করে তৈরি হয় না। এটি তৈরি হয় মানুষের প্রয়োজন বোঝার মাধ্যমে, সঠিক স্থান নির্ধারণের মাধ্যমে, প্রকৃতিকে সম্মান করার মাধ্যমে, স্মৃতিকে সংরক্ষণ করার মাধ্যমে এবং ভবিষ্যতের কথা ভেবে আজকের সিদ্ধান্ত নেওয়ার মাধ্যমে। তাই planning কেবল ভবিষ্যতের শহরের নকশা নয়; planning হলো মানুষের ভবিষ্যৎ সম্পর্কের নকশা।

একটি ভালো ভবন একজন মানুষকে আশ্রয় দিতে পারে। একটি ভালো শহর হাজার মানুষকে সংযুক্ত করতে পারে। আর একটি ভালো পরিকল্পনা একটি সম্পূর্ণ সম্প্রদায়কে তার ভবিষ্যৎ তৈরি করার সুযোগ দিতে পারে।

Let's build a green bangladesh: how grassroots planning grows great communities

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Figure 1: A planned, tree-lined neighbourhood, the everyday scale at which green planning takes shape.

Abstract

This article argues that "Great Communities Are Built on Planning" is incomplete without a green dimension that is planned rather than incidental. Drawing on field experience from BYO Development Foundation's youth-led work in Gaibandha, a char and floodplain district of northern Bangladesh, it argues that tree cover, drainage, and embankment vegetation should be core infrastructure, not decoration added after a layout is finalised, and that young people should be planning partners rather than passive beneficiaries. It closes with practical recommendations for local bodies, planners, and community organisations working toward a genuinely green Bangladesh.

Introduction

This year's theme reads, at first glance, like a statement for architects and city officials working from drafting tables in Dhaka. But from the vantage point of Gaibandha, planning looks different. It is the daily work of deciding where a tree should stand, how a drain should run, and who in a community gets to make that decision. Since 2019, BYO Development Foundation has worked at exactly this scale, and one conviction has grown out of it: a green Bangladesh will not be built by policy alone. It will be built neighbourhood by neighbourhood, sapling by sapling, by young people given the tools and the trust to plan their own surroundings.

Green Cover as Infrastructure, Not Decoration

Urban planning in Bangladesh has long treated greenery as an afterthought, a park sketched into a corner once roads, drains, and plots have already claimed the rest of the land. Dhaka's green cover has shrunk even as its population has swelled, and secondary towns following its growth pattern risk repeating the mistake at a smaller scale. A truly great community treats vegetation as infrastructure: trees that lower ambient temperature, wetlands and canals that absorb monsoon flooding, and shaded walkways that make streets usable and safe. Planting a tree is a planning decision with the same weight as laying a road.

A Field Lesson from Gaibandha

Gaibandha sits along the Brahmaputra-Jamuna River system, and its char lands, shifting river islands home to some of the country's poorest, most climate-exposed communities, are redrawn every flood season. Riverbank erosion swallow's homesteads with little warning, and lost tree cover along embankments has made that erosion worse, not better. Working directly with these communities, BYO Development Foundation has seen that unplanned, reactive land use is often the result of communities never having been included in planning conversations at all, not a lack of ambition on their part. Formally established on 27 January 2025 after years of grassroots work, BYO's mostly student and young-professional volunteers have run skill-development workshops, educational support, health camps, and community drives including clean-ups, tree planting, and traffic management with local Fire Service and Traffic Police units. None of this is, by itself, urban planning in the technical sense, but together it shows that a community organising its own labour around a shared, visible goal is practising planning even without a planner in the room. The task for trained planners is to give that energy structure: mapping where tree cover is thinnest and where informal settlements need recognition before infrastructure can reach them.



Figure 2: A grassroots green planning cycle observed in BYO Development Foundation's community work, repeating each season.

Youth as Planning Partners, Not Beneficiaries

A recurring finding from BYO's work is that young people are treated as beneficiaries of development rather than partners in shaping it. Bangladesh's demographic weight is overwhelmingly young, and any community-level plan without a channel for youth participation, in ward-level consultations, in tree-plantation drives, in the upkeep of public space after a project is inaugurated, is planning for a population that no longer exists. BYO's model suggests a practical answer: pair every green infrastructure project with a defined role for local youth in its planning, execution, and long-term maintenance. A tree planted by a committee and forgotten dies within a season; one planted by a student who checks on it weekly usually survives.

Practical Recommendations and Equity

Three steps follow for towns like Gaibandha. First, local bodies should require a brief green-cover statement alongside every road or drainage project, an accounting of trees lost and replanted, made public before construction begins. Second, riverside plantation should be funded and maintained as flood-protection infrastructure, since roots stabilise soil in ways engineering alone cannot. Third, ward-level green committees made up substantially of young volunteers, modelled on BYO's clean-up and plantation drives, should be given a formal advisory role in local planning, so maintenance is established alongside the project itself. None of this is separable from equity: the char communities BYO works with are among the first in Bangladesh to feel a warming climate and among the last consulted about adapting to it. A Bangladesh that greens only its capital while leaving such districts bare of shade is not, in any meaningful sense, a great community.

Conclusion

"Great communities are built on planning" is true, but it is worth finishing the sentence: they are built on planning that includes the people who will live inside its results. BYO Development Foundation's work in Gaibandha, modest in scale, consistent in effort, reflects a belief that a green Bangladesh is not a slogan delivered from above but a local habit built from below: a tree checked on, a canal kept clear, a road divider replanted after every flood. As Bangladesh's planners shape its next generation of towns and cities, the youth-led, field-tested lessons of organisations working in districts like Gaibandha deserve a seat at that table. A great community is simply a well-planned one that its own people have helped to plant.

The Lungs of Rangpur: Why the Shyama Sundari Canal Must Live Again: Reclaiming a century-old waterway as the backbone of nature-based, climate-resilient urban development

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Introduction

In the heart of Rangpur, a major divisional city of northern Bangladesh, a quiet crisis is unfolding along an old waterway. The Shyama Sundari Canal, dug in 1890 and long known locally as the "Lungs of Rangpur," once carried boats, drained monsoon water and shaded the city with riverside greenery. Today it survives as a fetid trickle, squeezed by encroachment and choked by waste. Its fate has become a test of whether Bangladesh's secondary cities can learn to grow around their natural assets rather than over them. The stakes go far beyond nostalgia. Bangladesh is urbanising rapidly: more than a third of its population now lives in urban areas (United Nations, 2019), even as the country remains among the most climate-vulnerable in the world, ranked seventh on the Climate Risk Index for losses from extreme weather between 2000 and 2019 (Eckstein et al., 2021). For a city such as Rangpur, exposed to both monsoon flooding and dry-season scarcity, the natural infrastructure left inside the city matters as much as any concrete drainage project.

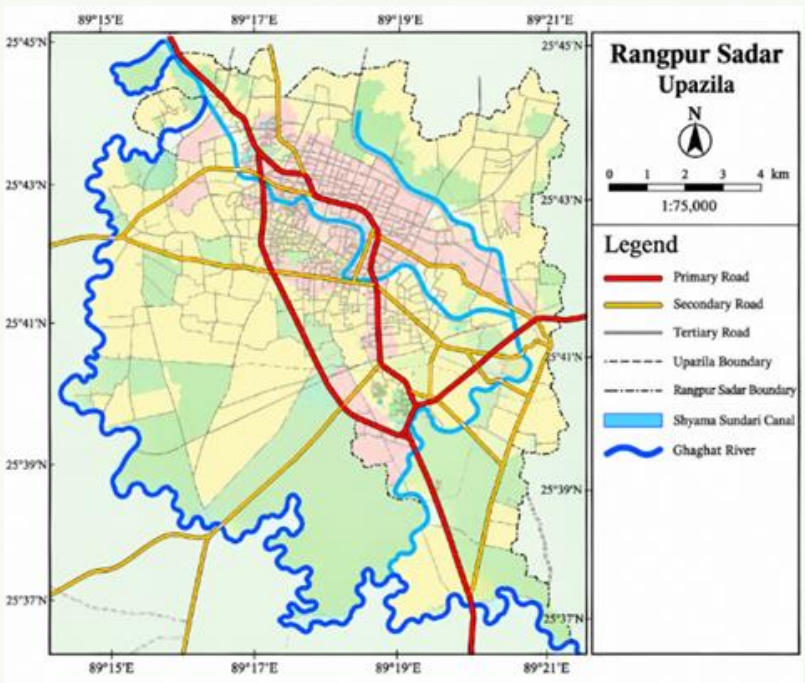


Figure 1. The Shyama Sundari Canal and the Ghaghat River in Rangpur Sadar Upazila. Map: Author

Around the world, planners are increasingly turning to nature-based solutions: actions that protect, restore and sustainably manage ecosystems to address societal challenges while also benefiting biodiversity (United Nations Environment Assembly, 2022). Evidence shows such approaches deliver most when they are embedded in city policy rather than treated as add-ons (Frantzeskaki et al., 2019). This article examines the history of the canal, the services it can still provide, the pressures pushing it toward extinction, and a practical agenda for restoring it as the blue-green spine of a climate-resilient Rangpur.

A Waterway Born of Grief and Public Health

The canal's story begins with a personal tragedy. In the late nineteenth century, Raja Janaki Ballav Sen of the Rangpur estate lost his mother, Shyama Sundari Sen, to malaria, then the scourge of the region's wetlands. Determined to preserve her memory while protecting his people from the disease, the Raja commissioned a canal that bears her name, marked after completion by a commemorative plaque in the Kacharibazar area of the city. Public health, in other words, was written into the canal's foundations from the very beginning.

The engineering ambition was remarkable for its time. The waterway ran roughly 16 kilometres, up to 100 feet wide and 40 feet deep, linking the Co Bazar area in the city's east with the Khokhsa and Ghaghat river systems. Stagnant wetlands that bred mosquitoes gave way to flowing water, seasonal floodwater gained an outlet, and malaria pressure in the adjoining settlements eased.

Through the twentieth century the canal became an artery of commerce. Small boats ferried agricultural produce and goods between Rangpur's markets and its rural hinterland, and prosperous settlements, bazaars and cultural centres grew along both banks. As the city modernised, the canal quietly took on a second job: for decades it served as the backbone of Rangpur's drainage and sewerage system. Every era of the city's growth leaned on this waterway, even as that same growth began, slowly, to consume it.



Figure 2: Development along both banks has progressively narrowed the canal's natural course. Source (Author)

What Rangpur Stands to Gain: The Canal as Nature-Based Infrastructure

Nature-based solutions (NbS) work with, rather than against, natural processes to deliver social, economic and environmental benefits. The United Nations Environment Assembly's landmark 2022 resolution defines them as actions to protect, conserve, restore, sustainably use and manage ecosystems in ways that address societal challenges effectively and adaptively, while securing human well-being and biodiversity benefits in parallel (United Nations Environment Assembly, 2022). The IUCN Global Standard exists to verify that interventions genuinely deliver such outcomes (IUCN, 2020). Viewed through this lens, the canal is not a neglected drain at all; it is a single piece of natural infrastructure supplying at least three families of services simultaneously.

The first service is water regulation. During the monsoon, the canal collects stormwater from across the central city and carries it westward, relieving pressure on neighbourhoods that would otherwise flood. In the dry season, canal water percolates into the aquifer, supporting the groundwater table on which Rangpur's households and tube wells depend. A functioning natural channel performs this work continuously and at almost no operating cost, whereas a purely engineered drainage network replicates it only with heavy capital investment and constant maintenance (Kabisch et al., 2016).

The second is the canal's role as a green corridor. Native trees and vegetation established themselves naturally along its banks. This strip of foliage filters air pollution, replenishes oxygen and provides habitat: birds, fish, frogs and insects persist along the less-disturbed reaches, forming one of the few continuous ecological networks inside the city. Protected and replanted with indigenous species, the corridor could double as a shaded civic spine for walking and cycling.

The third service is climate comfort. Cities overheat because concrete, asphalt and rooftops absorb solar radiation while the vegetation and moist open soil that cool the air through evapotranspiration disappear; this is the well-documented urban heat island effect (Oke, 1982). Water bodies and riparian greenery counteract it directly. A systematic review of field studies found that urban greening delivers consistent daytime cooling of roughly one degree Celsius on average, with substantially larger reductions in and around parks and tree canopies (Bowler et al., 2010). For Rangpur, where summer heat stresses public health, the canal is effectively a natural cooling system running the length of the city.

From Drain to Destination: The Blue-Green Corridor Opportunity

These functions multiply when the canal is treated as blue-green infrastructure: the deliberate integration of water systems with vegetation networks within urban design. The concept has many relatives worldwide, from sustainable drainage systems to water-sensitive urban design, but all share one idea: stormwater, ecology and public space should be planned as a single system rather than three separate ones (Fletcher et al., 2015). Reviews of blue-green infrastructure consistently find that this integration reduces flood risk, moderates urban heat, improves air quality and lifts the quality of everyday public life (Ghofrani et al., 2017).

For Rangpur, the geometry is unusually favourable. The canal runs along the city's east–west axis, threading through dense commercial and residential quarters. Restored and managed, it becomes a linear corridor on which an entire mobility and public-space programme can be hung: an east–west connector road, continuous walkways, cycle lanes, benches, lighting and safe crossings, interspersed with parks, children's play areas and open-air gyms. If water quality improves far enough, boating and water-based recreation become realistic, as do boat races, festivals and riverside markets that could make the canal a year-round destination.

International experience shows such transformations are achievable. London's Thames and Singapore's Marina Bay illustrate how waterfronts can anchor urban identity and investment, while Seoul's Cheonggyecheon demonstrates something closer to Rangpur's situation: a degraded urban water corridor brought back to life, with documented benefits for biodiversity, microclimate and civic pride (Everard & Moggridge, 2012). None was quick; all began with the decision to treat the water body as an asset rather than an obstacle.

The canal also offers Rangpur climate insurance. The northern division is exposed to both flash flooding and drought, and national frameworks, from the Bangladesh Delta Plan 2100 to the National Adaptation Plan 2023–2050, repeatedly call for locally managed water retention and ecological restoration (General Economics Division, 2018; Ministry of Environment, Forest and Climate Change, 2022). A re-excavated canal is exactly that: a monsoon flood buffer, a dry-season reserve, and a living laboratory for ecology and climate research in partnership with Begum Rokeya University.

A Heritage Under Siege

Why, then, is the canal dying? The primary cause is encroachment. Around 500 illegal structures now occupy land on and beside the canal, and in many reaches its channel has narrowed from 40 to 90 feet to barely 6 to 8 feet. Domestic sewage and household waste are discharged directly into the water, while polythene, plastics and industrial effluent add to the load. Stagnant, oxygen-poor water has devastated aquatic life and turned the canal into a prolific breeding ground for mosquitoes, sharpening the risk of dengue and malaria in precisely the neighbourhoods the Raja sought to protect more than a century ago.

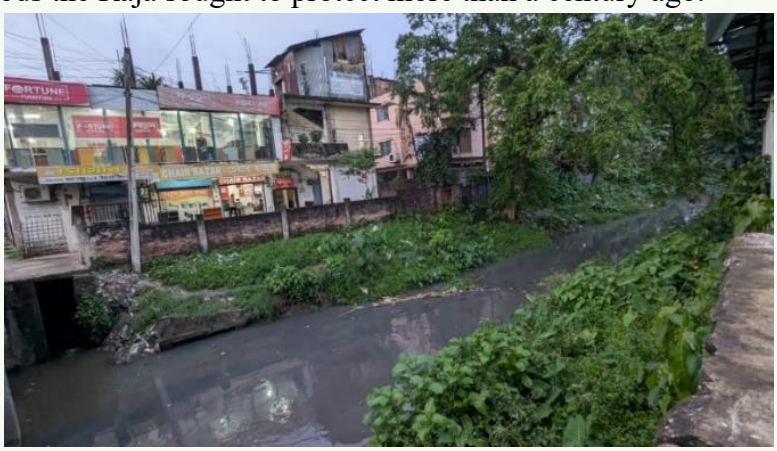


Figure 3. Commercial construction pressing against the canal's edge near Shapla Chattar.
Source: (Photo: Author)

Siltation compounds the problem. Decades without systematic dredging have raised the canal bed, shrinking its holding capacity exactly when heavier monsoon rainfall makes that capacity most valuable. The consequence is visible every rainy season: waterlogging in low-lying wards, damaged property and lost working days.



Figure 4. Stagnant water and floating debris along an encroached reach. Source: (Photo: Author)

Governance failures run through all of this. Responsibility for the canal is scattered across the City Corporation, the Water Development Board, the Department of Public Health Engineering, the Department of Environment and the district administration, a fragmentation that researchers identify as a classic barrier to delivering urban nature-based solutions (Kabisch et al., 2016). The record of past investment illustrates the cost. Tk 120 million was allocated for renovation in FY2008–09 and Tk 248 million in 2012 for reconstruction, walkways and bridges, yet encroachment and slow implementation swallowed the results. A Bangladesh Water Development Board re-excavation project in FY2018–19 recovered only 2.5 kilometres for about Tk 35 million. The most hopeful recent signal came in May 2024, when voluntary youth organisations working with Rangpur City Corporation cleaned roughly five kilometres of the canal with about a thousand participants. That effort proved public energy exists; it also showed that volunteer cleanups cannot substitute for structural action.



Figure 5. Solid-waste dumping reducing the canal to a de facto landfill.



Figure 6. A residential reach narrowed to 6–8 feet in places.

The Way Forward: Five Actions

Restoring the canal to a living waterway will demand sustained political will, but the necessary actions are well understood.

- First, physical restoration must come urgently. A full re-excavation programme, restoring the canal's original width and depth, removing encroaching structures and reconnecting it to the Ghaghat system, should be led by the ministries of Water Resources and of Local Government, in step with the national commitment to excavate 20,000 kilometres of canals over five years. A transparent audit of these past allocations would help rebuild public confidence that public money can produce public outcomes.
- Second, a balanced greening programme should plant native species, among them neem, bakul, shishu, krishnachura and jamun, along both banks, contributing to the national target of 250 million trees while creating shade and habitat for wildlife.
- Third, pollution must be cut at its sources: area-based waste collection around the canal, disconnection of septic-tank outlets, regular monitoring backed by mobile courts, and strict enforcement against factories discharging untreated effluent.
- Fourth, a comprehensive feasibility study should precede canal-side development, translating its recommendations into phased, nature-based infrastructure: parks, walkways, cycle tracks, benches, lighting and CCTV-equipped safety features, delivered with community oversight.
- Fifth, governance must be consolidated. An integrated canal conservation and management authority should bring the district administration, Rangpur City Corporation, Rangpur development authority, line agencies, planners, researchers, businesses, environmental groups and public representatives to a single decision-making table, with youth organisations and residents engaged in long-term stewardship. The law already points the same way: under the Local Government (City Corporation) Act, 2009, keeping drains and canals operational is a statutory obligation of the City Corporation, not a discretionary favour (Government of Bangladesh, 2009).



Content and Graphic: Author

Figure 7. Key recommendations for the canal's restoration at a glance.

Conclusion: The Time to Act Is Now

Dhaka's experience is the cautionary tale: decades of unplanned growth consumed farmland, wetlands and natural drainage, and the megacity now manages flood risk on heavily concrete terms (Dewan & Yamaguchi, 2009). Rangpur still holds what Dhaka largely lost, a continuous and restorable water corridor through its urban heart, but the window is closing with every monsoon.

The Shyama Sundari Canal is more than infrastructure. It is living heritage: a memorial to a mother, a public-health instrument, an ecological network and, potentially, the most loved public space in the city. Restored through the lens of nature-based solutions and blue-green infrastructure, it can anchor a green, healthy and climate-resilient Rangpur and become a replicable model for secondary cities across Bangladesh. The ingredients are known, the laws exist and the national programmes are in place; local citizens have already demonstrated their willingness to act. What remains is the decision. Made today, it protects Rangpur from waterlogging, pollution and climate risk for generations. Postponed, the cost of recovery will only grow.

References

Bowler, D. E., Buyung-Ali, L., Knight, T. M., & Pullin, A. S. (2010). Urban greening to cool towns and cities: A systematic review of the empirical evidence. *Landscape and Urban Planning, 97*(3), 147–155. https://doi.org/10.1016/j.landurbplan.2010.05.006

Dewan, A. M., & Yamaguchi, Y. (2009). Land use and land cover change in Greater Dhaka, Bangladesh: Using remote sensing to promote sustainable urbanization. *Applied Geography, 29*(3), 390–401. https://doi.org/10.1016/j.apgeog.2008.12.005

Eckstein, D., Künzel, V., & Schäfer, L. (2021). *Global climate risk index 2021: Who suffers most from extreme weather events? Weather-related loss events in 2019 and 2000–2019.* Germanwatch.

Everard, M., & Moggridge, H. L. (2012). Rediscovering the value of urban rivers. *Urban Ecosystems, 15*(2), 293–314. https://doi.org/10.1007/s11252-011-0221-7

Fletcher, T. D., Shuster, W., Hunt, W. F., Ashley, R., Butler, D., Arthur, S., Trowsdale, S., Barraud, S., Semadeni-Davies, A., Bertrand-Krajewski, J.-L., Mikkelsen, P. S., Rivard, G., Uhl, M., Dagenais, D., & Viklander, M. (2015). SUDS, LID, BMPs, WSUD and more-The evolution and application of terminology surrounding urban drainage. *Urban Water Journal, 12*(7), 525–542. https://doi.org/10.1080/1573062X.2014.916314

Frantzeskaki, N., McPhearson, T., Collier, M. J., Kendal, D., Bulkeley, H., Dumitru, A., Walch, C., Noble, B., van Wyk, E., Kok, M., & Pintér, L. (2019). Nature-based solutions for urban climate change adaptation: Linking science, policy, and practice communities for evidence-based decision-making. *BioScience, 69*(6), 455–466. https://doi.org/10.1093/biosci/biz042

General Economics Division. (2018). *Bangladesh Delta Plan 2100 (Vol. 1): Strategy.* General Economics Division, Bangladesh Planning Commission, Government of the People's Republic of Bangladesh.

Ghofrani, Z., Sposito, V., & Faggian, R. (2017). A comprehensive review of blue-green infrastructure concepts. *International Journal of Environment and Sustainability, 6*(1), 15–35.

Government of Bangladesh. (2009). *The Local Government (City Corporation) Act, 2009 (Act No. XXIX of 2009).* Ministry of Law, Justice and Parliamentary Affairs.

IUCN. (2020). *IUCN global standard for nature-based solutions: A user-friendly framework for the verification, design and scaling up of NbS* (1st ed.). IUCN. https://doi.org/10.2305/IUCN.CH.2020.09.en

Kabisch, N., Frantzeskaki, N., Pauleit, S., Naumann, S., Davis, M., Artmann, M., Haase, D., Knapp, S., Korn, H., Stadler, J., Zaunberger, K., & Bonn, A. (2016). Nature-based solutions to climate change mitigation and adaptation in urban areas: Perspectives on indicators, knowledge gaps, barriers, and opportunities for action. *Ecology and Society, 21*(2), Article 39. https://doi.org/10.5751/ES-08373-210239

Ministry of Environment, Forest and Climate Change. (2022). *National adaptation plan of Bangladesh (2023–2050).* Ministry of Environment, Forest and Climate Change, Government of the People's Republic of Bangladesh.

Oke, T. R. (1982). The energetic basis of the urban heat island. *Quarterly Journal of the Royal Meteorological Society, 108*(455), 1–24. https://doi.org/10.1002/qj.49710845503

United Nations. (2019). *World urbanization prospects: The 2018 revision (ST/ESA/SER.A/420).* United Nations, Department of Economic and Social Affairs, Population Division. https://population.un.org/wup/

United Nations Environment Assembly. (2022). *Nature-based solutions for supporting sustainable development (Resolution 5/5, UNEP/EA.5/Res.5).* United Nations Environment Programme.

A Thematic Study of Urban Settlements in History

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Introduction

In human history, the most enduring and successful communities have shared one essential characteristic, deliberate, thoughtful planning. From the earliest Neolithic settlements to the grand imperial capitals of the Mughals. The evidence is unmistakable communities that planned their growth, organized their spaces, and anticipated the needs of their inhabitants created environments that sustained civilization for centuries. This essay explores how planning shaped the great communities of the ancient and medieval world, drawing evidence from prehistoric settlements, Mesopotamian cities, Egyptian complexes, Indus Valley civilizations, Vedic towns, Mauryan capitals, and Mughal architectural ensembles.

Çatalhöyük (c. 7000 BC): The Honeycomb City

Çatalhöyük in southern Turkey covering 32 acres, houses were deliberately clustered together like cells in a honeycomb. The planning logic was precise: rectangular houses with windows but no doors, entered through roofs. Each house projected slightly above its neighbor on the sloping site, creating space for windows. This was not accident it was intelligent adaptation to topography and defense. The settlement's density, estimated at over 2,000 inhabitants, required careful management of shared walls, roof access, and waste disposal. Vivid murals and shrines found throughout suggest organized religious and communal life.

Khirokitia, Cyprus (6500 BC): The Planned Village

Khirokitia the round tent like house reached a more complete form. Most rooms had a dome like roof in corbelled stone or brick. One step up from outside led to several steps down into each room, seats and storage spaces were shaped into the walls, and in at least one house, a ladder led to an upper sleeping platform. However, the most striking innovation was a paved road running through the village a central thoroughfare for the community, with paths leading off to courtyards around which houses were built. This is evidence of a community that thought collectively about circulation, access, and shared space

Mesopotamia (4th–3rd millennium BC): The Birth of the City

The Sumerians were the first society to construct the city itself as a built form. They were proud of this achievement, as attested in the Epic of Gilgamesh, which opens with a description of Uruk its walls, streets, markets, temples, and gardens. The construction of cities was the product of trends that began in the Neolithic Revolution. The growth of the city was partly planned and partly organic. Planning is evident in the walls, the high temple district, the main canal with harbor, and the main street. At the core of the city was a high temple complex,

always sited slightly off the geographical center. This high temple usually predated the founding of the city and was the nucleus around which the urban form grew. The typical city divided space into residential, mixed-use, commercial, and civic spaces. Profession grouped residential areas. The transportation network was organized in three tiers: wide processional streets, public through streets, and private blind alleys. The current estimate is that 10% of the city area was streets and 90% buildings. The canals, however, were more important than roads for good transportation. The city always included a belt of irrigated agricultural land, connected to the city by a network of roads and canals.

Babylon, Mesopotamia (7th–6th century BC): The Glorious Planned Metropolis

Under Nebuchadnezzar, Babylon became the largest city in the world, covering about 4 square miles. The Euphrates, which has since shifted its course, flowed through it, with the older part of the city on the east bank. There the central feature was Esagila, the great temple of Marduk, with its associated ziggurat Etemenanki popularly known as the Tower of Babel, with a base 300 feet on a side and seven stages reaching a total height equal to that of its base. The river was spanned by a bridge on brick piles with stone capping. The streets were laid out on a grid, with the main axis parallel to the river. From Esagila northward passed the paved Processional Way, its walls decorated with enameled lions. Passing through the Ishtar Gate, adorned with enameled bulls and dragons, it led to the Akitu House. West of the Ishtar Gate were two palace complexes covering about 40 acres with their fortifications. A massive double wall, protected by a fosse, enclosed the city on both sides of the Euphrates. Beyond the city walls to the east, an outer rampart of triple construction, 11 miles long, met the Euphrates south and north of the city. Between the inner and outer defenses was irrigated land with a network of canals. Greek tradition refers to the Hanging Gardens of Babylon; a simulated hill of vegetation-clad terracing over a vaulted substructure deemed one of the Seven Wonders of the World. Babylon demonstrates planning at a monumental scale for defense, for trade, for religion, and for beauty.

Mohenjo-Daro and Harappa, Indus Valley (3300–1300 BC): The Grid and the Drain

The Indus Valley Civilization represents one of history's most remarkable examples of urban planning. Mohenjo-Daro's layout was based on a street grid of rectilinear buildings, covering an estimated 300 hectares. The city was divided into two parts: the Citadel and the Lower City. The Citadel, a mud-brick mound around 12 meters high, supported public baths, a large residential structure designed to house about 5,000 citizens, and two large assembly halls. The city had a central marketplace with a large central well. The layout was a gridiron pattern of streets about 30 feet wide, running north south and east west. The streets divided the city into 12 blocks, each measuring approximately 1200 x 800 feet. Apart from the central western block, the remaining area was largely residential. The basic unit was a house of different sizes and stories, constructed with brick walls, roofed by brick tiles laid over timber rafters. It was planned as a series of rooms around an open-to-sky central courtyard. From the main streets, residents approached individual houses through irregular, narrow, and shaded walkways. The residential unit had no entrances opening directly to the main street, and no windows toward

subsidiary walkways. It depended for its light and ventilation entirely on the open central court-very much like most traditional housing in India even today. The most remarkable feature was the world's first known urban sanitation system. Within the city, individual homes or groups of homes obtained water from wells. From a room set aside for bathing, wastewater was directed to covered drains, which lined the major streets. The ancient Indus systems of sewerage and drainage were far more advanced than any found in contemporary urban sites in the Middle East and even more efficient than those in many areas of Pakistan and India today. All houses had access to water and drainage facilities. This gives the impression of a society with relatively low wealth concentration. The Great Bath is without doubt the earliest public water tank in the ancient world. The tank measures approximately 12 meters north south and 7 meters wide, with a maximum depth of 2.4 meters. Two wide staircases lead down into the tank from the north and south. The floor is watertight due to finely fitted bricks laid on edge with gypsum plaster, and a thick layer of bitumen was laid along the sides. Brick colonnades were discovered on the eastern, northern, and southern edges. Most scholars agree that this tank would have been used for special religious functions where water was used to purify and renew the well-being of bathers. Mohenjo-Daro and Harappa demonstrate planning for health, for hygiene, for equality, and for community life.

Vedic Settlements (1500–500 BCE): The Ideal Town

The Vedic period saw emergence of a hierarchy of social classes and the coalescence of peoples into Janapada. The ideal town of the period was to be laid out as a square with a grid-iron pattern, as prescribed in the Arthashastra, the Indian manual of town planning compiled centuries later. The main streets would north south and east west. In general, the cities of the Vedic period were rectangular in plan and divided into four quarters by two main thoroughfares intersecting at right angles, each leading to a city gate. One quarter contained the citadel, another housed the residential area, and a third was reserved for merchants and the last for tradesmen who could display their wares. The village was defined and screened off from the wild life of the surrounding forest by a timber fence. To erect it, rectangular wooden posts were planted at regular intervals. Three horizontal bamboo bars were then strung between the spaces by threading them into holes in the verticals. At points of entry, a portion of the fence was projected out. A gateway was installed in front of it, constructed much as the fence with its horizontal ties raised high enough to provide a controlled entry through which cattle passed. The basic unit was the hut. The Aryan hut, in its most basic shape, was circular in plan with a thatched roof over a bamboo network of ribs. This was later elongated to become rectangular, with roofing of bamboo curved in the shape of a barrel. Clusters of these huts formed a courtyard, much like huts in Indian villages even today. These forms the barrel-vaulted roof, the tie-cord, and the palisade fence and railing formed important motifs for future Indian architecture.

Mauryan Empire (322–180 BCE): The Planned Capital

Pataliputra, adjacent to modern-day Patna, was originally built by Magadha ruler Udayin in 490 BCE as a small fort near the Ganges River. It became the capital of major powers in ancient India, including the Nanda Empire, the Mauryan Empire, and the Gupta Empire. During the Mauryan period, it became one of the largest cities in the world. According to Megasthenes, a wooden wall nine miles long and a mile and a half wide surrounded Pataliputra, with 470 towers and a moat 900 feet wide. Six five-men boards in charge of industries, trade and commerce, tax collection, foreigners, vital statistics, and public works administered the city. Megasthenes also described Chandragupta's lavish palaces, also built of wood. Nothing remains of the palace except fragments of highly polished columns. During the Mauryan period, the city was described as being shaped as a parallelogram, approximately 1.5 miles wide and 9 miles long. 64 gates pierced its wooden walls. Archaeological research has found remaining portions of the wooden palisade over several kilometers. The Pataliputra capital, discovered in 1895, is a monumental rectangular capital with volutes and Classical designs, showing decorative influences of Achaemenid palaces and Persepolis. This suggests that Ashoka may have imported artisans from abroad to build royal monuments. Pataliputra demonstrates planning for administration, for trade, for defense, and for imperial grandeur.

Buddhist Period (3rd century BCE onwards): The Planned Stupa Complex

The Great Stupa at Sanchi is the oldest stone structure in India and was originally commissioned by Emperor Ashoka in the 3rd century BCE. Although it was half the size of the present one at that time, its body of baked bricks was enlarged a century later, in the age of the Shunga Dynasty, by being covered with sandstone. As a result, the Stupa attained an enormous scale: 16 meters in height for the Anda (hemispherical dome) and 36 meters in diameter for the pedestal. There are four gateways known as Torana at the cardinal points of the compass, slightly staggered from the railing-enclosed stupa. The ambulatory or pradakhshina path is fenced by railing 3.35 meters high all around the stupa. Outside the railing, there once stood the famous Ashoka pillar, the fragments of which are noticed now to the right of the southern torana. The stupa was a solid structural dome, usually raised on one or more terraces and surmounted by a railed pavilion from which rose the shaft of the crowning umbrella. Stupas had one or more circumambulatory passages, which were usually enclosed by railing. Sanchi demonstrates planning for ritual, for pilgrimage, and for cosmic symbolism.

Nalanda University (5th century CE onwards): The Planned Campus

Nalanda Mahavihara was one of the first residential universities in the world. According to accounts, it had over 10,000 students and 2,000 teachers. There were 8 separate compounds and 10 temples, with meditation halls and lecture halls. The library was in a nine-story building where manuscripts were copied with great care. Students and scholars from Korea, Japan, China, Tibet, Indonesia, Persia, and Turkey came here to study. Monastery 4 at Nalanda has a sunken court surrounded by monks' cells. In the northwest corner is a well. A stepped platform occupies the center of the north edge of the court. A basic reinforcing lintel caps the doorway

on the east side of the monastery. A cleanly executed corbelled arch, consisting of overlapping courses of brick, frames a small through-and-through piercing of the monastery wall. Temple 3 stands over 100 feet high. Its elevated stupa was accessed by a staircase on the north side. Smaller stupas surround the platform, and original plasterwork is preserved on the NE and SE corners. The temple underwent seven stages of remodeling between 300 BC and 1100 AD. The great stupa was built in the Gupta period. Temple 12 was built right on top of an earlier one. In front is the usual "stupa garden." The stupa is decorated with multiple Buddha images displaying different mudras. Nalanda demonstrates planning for education, for community living, and for the pursuit of knowledge

Fatehpur Sikri, Mughal Empire (1571 AD): The Planned Imperial City

Akbar decided to build Fatehpur Sikri, situated some 26 miles west of Agra. It was organized so schematically and convincingly into a unified dynamic complex. It was a city with no streets but an arrangement of broad terraces and stately courtyards. There were numerous palaces and pavilions, reflecting the spirit that animated Akbar's administration and politics. The politics of architecture at Fatehpur Sikri allowed artisans, architects, and builders from all parts of the country to express their design freely. Functions, orientation, topography, security, and aesthetics were each considered equally. Service areas such as waterworks, serais, and guard quarters were located on the outskirts. Public areas Diwan-i-Am and the Jami Masjid formed a ring around the private audience chamber of the King and Queen's residences, which were located at the heart. Important structures were located along the cardinal directions-buildings with secular nature installed along the north-south axis, Jami Masjid installed symmetrically along the east-west axis. The Diwan-i-Khas is a square symmetrical building measuring 13.18 meters per side on the exterior. It stands on a paneled plinth 0.75 meters high and is made of red sandstone, appearing double-storied with identical elevation. The interior measures 8.47 meters. From the center of the cubed volume chamber rises a carved pillar, which mushrooms into a gigantic capital made up of a series of Jaina vaulted brackets, supporting a circular stone platform. From this central platform, four aerial bridges radiate along diagonals of the hall to connect the hanging balconies, which communicate with the ground by staircases built within the outer wall thicknesses. The emperor, like a God in the cup of a Lotus flower, sat in the center of the corbelled capital, while ministers occupied each of the angles.The Panch Mahal is a pavilion of five stories. The rectangular ground floor is built over 84 columns, each different in design. The five stories above diminish gradually from the northern and western sides, while the eastern and southern facades rise vertically to culminate in a domed canopy supported over 4 pillars. The multiple-storied Buddhist Viharas undoubtedly inspired its receding stories. Also called the "palace of wind," the building was designed for the more than 300 wives of Akbar to enjoy their leisure hours during the long hot months of summer. Fatehpur Sikri demonstrates planning for imperial administration, for cultural synthesis, for leisure, and for symbolic expression.

Conclusion: The Lessons of Planning

Across civilizations and millennia, the evidence is clear: great communities are built on planning. From the honeycomb cells of Çatalhöyük to the grid streets of Mohenjo-Daro, from the cosmic axis of the ziggurat to the nine-fold plan of Humayun's Tomb, from the three-tiered streets of Sumer to the processional ways of Babylon, from the calendar planning of Egypt to the Arthashastra ideal town humanity's most enduring settlements share a common characteristic: deliberate, thoughtful, comprehensive planning. Planning took many forms: defensive planning, hydraulic planning, religious planning, economic planning, social planning, cosmic planning, and aesthetic planning. The communities that planned that thought beyond the immediate that anticipated future needs that integrated function and meaning created environments that sustained civilization for centuries, even millennia. Their ruins still speak to us today, not of chaos or accident, but of intention, intelligence, and aspiration.

As we face the challenges of the 21st century-climate change, rapid urbanization, and resource scarcity the lessons of these ancient planners remain urgently relevant. Great communities are not built by accident. They are built by vision, by discipline, by collective effort, and above all, by planning. Let us remember: every great community, every livable city, every resilient neighborhood began with a plan. Let us continue to plan-thoughtfully, inclusively, and boldly so that the communities we build today may stand as testaments to our wisdom and our care for generations to come.

Planning for Justice: Building Inclusive Communities Through Law, Participation and Equitable Urban Development

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Proposed Introduction

Planning has a much more powerful impact than just on the physical shape of a city; it also affects who is able to access housing, transport, public space and economic opportunity within it. This decision in Bangladesh holds special significance. The 2022 Population and Housing Census shows that the total population of the country is 165,158,616, of which more than 44.4 million people in Dhaka Division are living in the city. This also increases the pressure on the land, services and infrastructure of the city.[6] The World Bank statistics show that the urban population accounted for 41.23% of the overall population in Bangladesh in 2024, which is a significant increase from previous decades.[7] his growth is happening in the context of working planning instruments such as the third tier Dhaka Metropolitan Development Plan (DMDP) that provides statutory land-use and zoning guidance in 1,528 square kilometres of land within the city.[8] Without implementation, enforcement and inclusion, equity in housing, services and public spaces cannot be met. Considering shelter as a basic necessity to be secured through planned economic growth[9], Article 15 of the Constitution of Bangladesh, the question is: Is Bangladesh's planning system achieving fair outcome in three aspects: legal, participatory and equitable urban development?

What Makes a community "Great"?

A great community is not one that has great infrastructure or it is built quickly, but one where residents have reasonable access to housing, education, healthcare, employment, and public space, at affordable prices.[10] It must be inclusive, not systematically excluding low income households, women, older persons, persons with disabilities and informal workers. It also needs participation that influences the decisions, rather than just reports opinions; spatial planning is defined as a multi-stakeholder process, and participation that is symbolic rather

[6] Bangladesh Bureau of Statistics, *Population and Housing Census 2022: National Report* (Volume 1, BBS 2023) < https://www.scirp.org/reference/referencespapers > accessed 17 September 2026

[7] World Bank 'Urban population (% of total population) - Bangladesh' (*World Development Indicators*, 2026) < https://tradingeconomics.com/bangladesh/urban-population> accessed 17 September 2026

[8] Rajdhani Unnayan Kartripakkha (RAJUK), 'Dap Home Page: Detailed Area Plan (DAP) 2022–2035' < https://rajuk.gov.bd/pages > accessed 17 September 2026

[9] Constitution of the People's Republic of Bangladesh, pt II, art 15.

[10] UN-Habitat, *Enabling Meaningful Public Participation in Spatial Planning Processes: A Toolkit* (UN-Habitat 2023) HS/002/23E < https://unhabitat.org/enabling-meaningful-public > accessed 18 September 2026

than meaningful is forewarned in the UN-Habitat toolkit for 2023.[11] Equity is also crucial because the same facilities does not mean the same opportunities for those who have different initial conditions. Last, there must be a quality of community life, such as safety, public space, mobility and environmental health, in a great community.[12] A great community is defined as one in which planning is about more than just built form, it is about access, voice and belonging by 2022, when almost one in four poor Bangladeshis was living in urban areas.[13] This leaves us with the question of what the legal and institutional framework is for this in Bangladesh.

Bangladesh's Urban Planning and Legal Landscape

The Population and Housing Census-2022 revealed that there are 165,158,616 people in Bangladesh of which 52,009,072 were urban population, which indicates the need for coordinated spatial planning.[14] This development is regulated by the legal and institutional framework. The Town Improvement Act 1953 created a Kartripakkha (now RAJUK) to have authority for the improvement of congested places with the laying out of streets, acquisition of land and rehousing people displaced from that land in Dhaka and other municipalities.[15] The third level of planning, the Dhaka Metropolitan Development Plan (DAP 2022-2035) is implemented with RAJUK's jurisdiction of 1,528 sq. km over residential, mixed-use, institutional, industrial and agricultural areas and parks, playgrounds and transport infrastructure.[16] City corporations and municipalities all operate their own services and development, collectively.

This framework indicates that urban development in Bangladesh is functioning under the existing legal and institutional framework. However, the formal planning process does not guarantee implementation or equality. This article thus posits a planning–implementation–outcome gap, which is defined by three factors: does law value public interest and fairness, are communities meaningfully involved in the decision-making process, and is housing, services, and space distributed fairly during implementation? The following sections are based on these.

From Planned Spaces to Inclusive Communities

In Section 3, it was found that the process of urban development takes place in a legal and institutional framework in Bangladesh. However, these channels are not guaranteed to make communities inclusive. The difference between a space and a place where people can use it. Inclusive planning takes people's diverse needs into account and asks, "is it possible for people to really access and gain from service?". More than 800,000 urban poor households in Bangladesh have been served by basic urban services through community-empowerment

[11] UN-Habitat (n 5)
[12] UN-Habitat (n 5)
[13] Jean Pesme, 'How can cities in Bangladesh become engines of inclusive growth?' (*World Bank Blogs*, 15 December 2025) <https://blogs.worldbank.org> accessed 18 September 2026
[14] Bangladesh Bureau of Statistics (n 1)

[15] Town Improvement Act 1953 (Bangladesh) Act No XIII of 1953

[16] RAJUK (n 3).

approaches, demonstrating that inclusion is about access to these services, not the presence of infrastructure.[17]

The same idea holds true for physical infrastructure. A road is not considered successful just because it was constructed; rather, it should be a road that is safe for pedestrians, women, children, the elderly and disabled people to use. Similarly, parks are considered to be socially inclusive when they are safe, accessible and well-maintained. This has been highlighted by the Asian Development Bank in its guidelines for 2024.[18] DAP of RAJUK also identifies the areas meant for residential, recreational, educational and community facilities; the critical issue, however, is whether those areas will be functional or merely mapped out categories.

The topic assumes even greater significance in light of urbanization. According to World Bank estimates, in 2023 some 36 percent of the country's population is urban, while the share is expected to increase to 60 percent by 2050.[19] Planning, thus, needs to be evaluated not only on the basis of what is planned, but rather on how accessible and beneficial those plans are to people.

The Participation Gap

The planning process could conduct consultations where citizens do not get to influence what gets built, where, and for whom. The National Urban Policy of Bangladesh 2025, which was adopted in January 2026, sees improved local governance and "meaningful citizen participation" among its policies.[20] This issue of whether the above actually results in influence and not simply notification, however, is an empirical one. In an academic study done in nine neighborhoods in Dhaka, it was observed that lack of participation was associated primarily with lack of public awareness, poor communication from planning authorities, and distrust that participation could influence outcomes.[21]

Another specific example would be the Dhaka City Neighborhood Upgrading Project that was financed by the World Bank. It was executed by the Dhaka South City Corporation and made use of structured consultation processes, with meetings held specifically for women, among other strategies.[22] This reflects influence in the planning phase, but not in the construction,

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[17] UN-Habitat, 'Bangladesh' (UN-Habitat, undated) < https://unhabitat.org/bangladesh >accessed 19 September 2026.

[18] Asian Development Bank, *Guidelines for Climate-Resilient, Gender-Responsive, and Socially Inclusive Public Open Spaces in Bangladesh* (ADB 2024) <https://www.adb.org/publications/guidelines > accessed 19 September 2026.

[19] Asmita Tiwari, *'Towards Digital Transformation for Resilient Urban Development in Bangladesh*' (World Bank Blogs, 16 May 2023) <https://blogs.worldbank.org/en/sustainablecities> accessed 20 September 2026.

[20] UNDP Bangladesh, 'Government Approves National Urban Policy 2025' (2 January 2026) < https://www.undp.org/bangladesh/news/government > accessed 20 September 2026

[21] Mohammad Swapan, *'Realities of Community Participation in Metropolitan Planning in Bangladesh: A comparative study of citizens and planning practitioners' perceptions*' (2014) 43 *Habitat International* 191

[22] World Bank, *Bangladesh: Dhaka City Neighborhood Upgrading Project* (Project Appraisal Document, Report No: PAD3118, World Bank 2019) < https://documents.worldbank.org > accessed 21 September 2026

maintenance, or evaluation phases, or whether such methods apply to more than just donor-funded projects.[23] The crucial question is whether there is institutionalized community participation through implementation and accountability.

Equity Challenges in Bangladesh's Urban Development

Question 5 enquired about the participation in the planning process; question 6 inquires about who reaps the gains from such a process. Urban equity refers to whether housing, mobility, service provision, and protection from hazards is available based on need. The Bangladesh Poverty and Equity Assessment for 2025 found that whereas national poverty was declining from 2010 to 2022, urban poverty was declining slower than rural poverty, and the urban Gini coefficient increased from 33.1% to 34.5%.[24] By 2022, around one in four of poor Bangladeshis was residing in cities.[25]

There is evidence of inequality even in terms of utilization of public infrastructure. In areas of Dhaka where World Bank funding for upgrading was available, 93% of women were not using public latrines and 42% found local parks as dangerous places.[26] This proves that infrastructure can be present without being equally accessible, thus stressing the difference between planning outcomes and implementation results. Climate change risks exacerbate these disparities. The informal settlements of Chattogram are located in climate-exposed zones, and are receiving investment to support climate-resilient development in a secondary city setting.[27] Thus, issues of equity involve not just which infrastructure is built, but where it is built and what risks it protects from. The issue then becomes not just about whether or not there are planning mechanisms, but whether these provide benefits and protection based on needs and risk.

Towards a JUST Planning Framework

As seen in Sections 3-6, there is a constant problem that while Bangladesh has laws, institutions, and planning tools, planning does not necessarily lead to outcomes that are inclusive, participatory, and equitable. This section, thus, introduces JUST, which is an analytical tool based on

i) Justice
ii) Universal Inclusion
iii) Stakeholder Participation
iv) Transparency & Accountability.

[23] World Bank, 'World Bank Helps Improve Four Large Neighborhoods in Dhaka City' (Press Release, 29 May 2019) < https://www.developmentaid.org> accessed 22 September 2026

[24] World Bank, *Bangladesh Poverty and Equity Assessment: Navigating the Road to Prosperity* (World Bank 2025) <https://openknowledge.worldbank.org > accessed 22 September 2026

[25] Jean Pesme (n 8)

[26] World Bank (n 18)

[27] Global Center on Adaptation, 'GCA Partners with the World Bank and the Government of Bangladesh to Develop Climate Resilient Secondary Cities' (Global Center on Adaptation, February 2025) < https://gca.org/the-world-bank-and-the-government-of-bangladesh > accessed 23 September 2026

The question that Justice raises is who gains access to housing, mobility, services, and protection, while who suffers displacement, congestion, and environmental hazards? The question raised by Universal Inclusion is who can really have access to and utilize planned spaces? The ADB's 2024 Bangladesh guidelines give a concrete platform for this purpose.[28]

Stakeholder Participation is about exerting influence rather than just informing and consulting, following the 2023 participation framework for UN-Habitat and the National Urban Policy of 2025 of Bangladesh.[29] [30] Transparency & Accountability questions who determines, based on what information, and who is accountable when there is a mismatch between the implementation process and the plan - a problem that was recently emphasized in talks about implementing NUP 2025.[31] [32]

JUST is not meant to substitute the current legal and institutional framework in Bangladesh. Rather, JUST is a framework through which one can analyze the implementation of RAJUK DAP, city corporation initiatives and NUP 2025. The success of JUST will still rely on institutional capability, funding and coordination, but the framework alone cannot offer these things.

Conclusion

This research aims to investigate how law, participation and equitable development can contribute to creating inclusive, liveable and just communities in Bangladesh. The evidence compiled suggests a single and a clear answer: lack of planning is not the constraint in Bangladesh. It has laws, institutions and space instruments such as DAP 2022-2035 of RAJUK. What is not even yet is the extent to which those instruments lead to communities that people can access, shape and benefit from fairly. Consultation means nothing if it is not listened to and has no influence on decisions; a road or a park is not a road or a park unless different groups can reach it, use it and afford it; distribution matters because urban growth has not been equally beneficial to all residents as evidenced by the reviewed. The proposed JUST framework - testing whether a planning decision is just, inclusive, participatory and transparently accountable - offers one way to apply this standard consistently, including to the implementation of the recently approved National Urban Policy 2025. Great communities are ultimately built not by planning alone, but by planning whose outcomes are shared.

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[28] Asian Development Bank (n 13)

[29] UN-Habitat (n 5)

[30] UNDP Bangladesh (n 15)

[31] UNDP Bangladesh, '*Speakers Call for Action to Implement National Urban Policy 2025*' (UNDP, 13 August 2026) <https://www.undp.org/bangladesh> accessed 23 September 2026

[32] National Urban Forum 2026 Opens in Dhaka '*Dhaka Tribune*' (Dhaka, 6 September 2026)

< https://www.dhakatribune.com > accessed 23 September 2026

Bringing Everyday Life Closer: Exploring the 15-Minute Community in Bangladesh

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A huge part of city life is decided by one question; how far do people have to go to get the things they need? Going to schools, markets, work-places and public services can decide how much time and money people have to spend moving around each day. In growing cities like Dhaka and Chattogram long travel times, traffic jams and the need for motor cars have become parts of city life. This raises a planning question for Bangladesh; can we plan communities so that more of people's needs are closer to home? The emerging idea of the 15-minute city offers one way.



Source: Moreno et al. (2021), p. 10 / journal p. 102

The 15-minute city is built on the idea that essential services and activities should be reachable by a walk or cycle ride from where people live. Studies point out that closeness, density, variety, connections, flexibility, digital tools and human-scale design are parts of the idea. These features can bring benefits for the environment fairness among people and the quality of neighborhood life. Recent studies also show that GIS and network-based accessibility tools can measure how easily residents can reach services within a travel time.

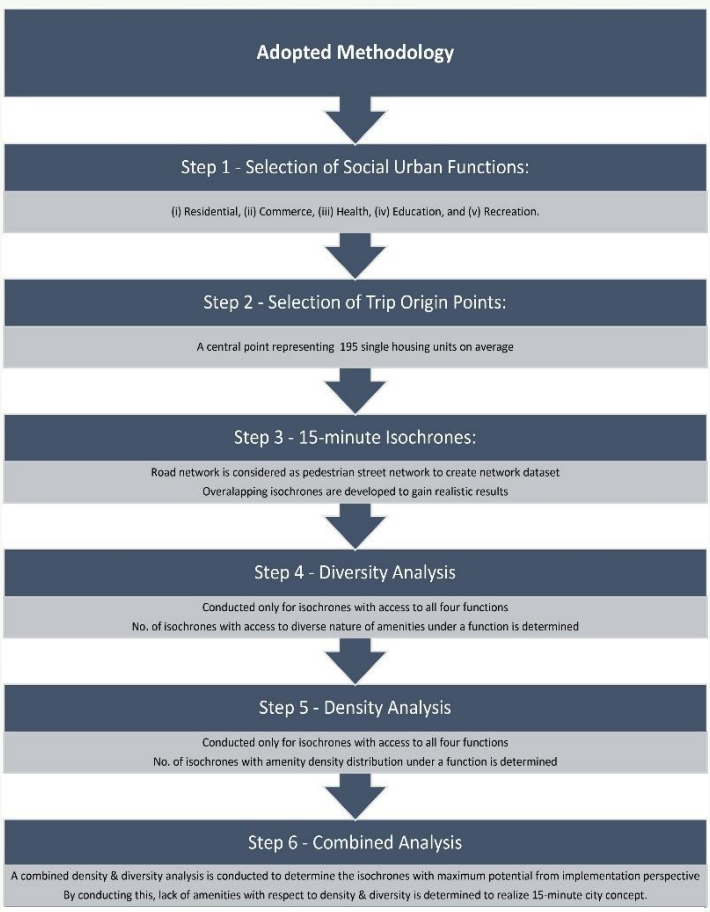
For Bangladesh, the idea is very relevant because daily travel is often affected by fast city growth and an uneven spread of services. A person may live close to a school, clinic or market in line yet still need more time because roads are cut off, walking is unsafe, traffic is heavy or

there are no good facilities. So, a 15-minute community should not be seen as drawing a 15-minute circle around every neighborhood. Accessibility depends on the real street network, the way people travel. Recent global studies found that accessibility changes a lot inside cities and that closeness alone is not enough to guarantee travel habits.

In a Bangladeshi setting, local planners could bring places closer by encouraging uses of land strengthening neighborhood hubs bettering walking and cycling paths, backing local markets and spreading schools, health care and public services more evenly. Of putting all key facilities in a few big city centers, planners can build a network of smaller service hubs linked by safe walking routes and public transport. This could save travel time and reduce transport costs. It could also help businesses because more daily work would happen inside the community.

Planning Approach

The key lesson is that a 15-minute community must not be made by using one fixed distance rule for every neighborhood. Planning should start by finding out what services people really need, where those services sit and how residents reach them today. GIS-based accessibility maps can show areas where schools, health care, markets, parks beyond a reasonable walk or cycle ride. These gaps can then direct where new facilities, neighborhood hubs and walking paths should go. Local planners must also think about cost, age, disability, gender, safety and the quality of the walking environment because a service that is close on a map may still be hard to reach in reality. Importantly residents should help spot needs and judge proposed changes. The aim is not to make every activity happen within 15 minutes but to ensure that essential everyday chances are reasonably reachable while longer trips can still happen through transport.



Source: Baig Et Al. (2025), P. 6 1

Conclusion

The 15-minute community gives Bangladesh a way to rethink neighborhood planning around accessibility of just distance. It tells planners to bring services to residents, improve walking

and cycling, strengthen local. The idea must be adapted to Bangladesh's economic and spatial realities, not copied straight from other cities. A good local model will mix planning, transport planning, GIS-based accessibility analysis and community participation. In the end cutting travel is not, about transport; it is a way to build healthier, fairer and more livable communities.

References

Moreno, C., Allam, Z., Chabaud, D., Gall, C., & Pratlong, F. (2021). Introducing the "15-Minute City": Sustainability, Resilience and Place Identity in Future Post-Pandemic Cities. Smart Cities, 4(1), 93–111. DOI

Pozoukidou, G., & Chatziyiannaki, Z. (2021). 15-Minute City: Decomposing the New Urban Planning Eutopia. Sustainability, 13(2), 928. DOI

Mouratidis, K. (2026). The 15-minute city revisited: A GIS approach to measuring, visualizing, and analyzing accessibility by proximity and by public transport supply. Travel Behaviour and Society, 42, 101151. DOI

Chiaradia, F., Lelo, K., Monni, S., & Tomassi, F. (2024). The 15-Minute City: An Attempt to Measure Proximity to Urban Services in Rome. Sustainability, 16(21), 9432. DOI

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