Sustainable Cities and Communities in Bangladesh

Introduction

The importance of SDG 11 is examined in this report. It discusses the challenges posed by urbanization, policy initiatives and key construction projects, as well as offers advice on how to speed up the progress. The future landscape of Bangladesh will hinge on the development of sustainable cities and communities. While urbanization will reshape this nation's socioeconomic makeup, Sustainable Development Goal 11 (SDG 11) advocates the making of cities and communities more inclusive, convenient, safe and well-protected. Bangladesh had an urban population of more than 40% as 2022 drew to a close and is projected to reach the year 2050 56%. Great attention should be directed at addressing these urban challenges. This report discusses the importance of SDG 11, the challenges of urbanization, major policy initiatives and projects, and recommendations for speeding up progress.

Why SDG 11 Matters

1. Managing Rapid Urbanization

Major Cities in Bangladesh: Urbanization and Its Mark on Infrastructure, Housing and Quality of Life Bangladesh is urbanizing fast, raising important challenges for infrastructure, housing and quality of life The world has stipulated that of the total planet's population, more than half of it will become urbanized, then it is absolutely necessary to act right now to develop an awakening, with a view to growth, aiming a sustainability.

2. Addressing Housing Shortages

The share of people living in slum conditions has decreased, to 55.1% in 2014 from 87.3% in 1991, but the absolute number of slum dwellers is growing as a result of population growth. There is a shift towards sustainable, eco-friendly housing.

3. Urban Challenges in Bangladesh

- Overpopulation: Dhaka is one of the world's most densely populated cities.
- Housing Crisis: More than 33% of Dhaka's residents live in slums.
- Traffic Congestion: a slow average speed of just 7 km/h in Dhaka and economic losses.
- **Environmental Concerns:** Elevated pollution parameters (PM2. 5) and poor waste management.
- Climate Change Impact: Frequent flooding and urban heat island rise

SDG 11: Key Targets for Sustainable Cities

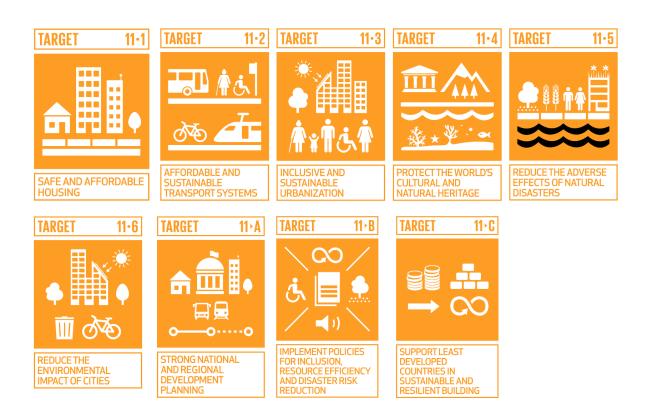


Figure: Key Targets of SDG 11

Target 11.1: Safe and Affordable Housing

Focuses on providing access to adequate, safe, and affordable housing for all residents, particularly addressing the needs of low-income populations and those living in informal settlements.

Target 11.2: Affordable and Sustainable Transport Systems

Aims to develop sustainable transport systems that are accessible, safe, affordable, and environmentally friendly. This includes promoting public transportation, walking, and cycling.

Target 11.3: Inclusive and Sustainable Urbanization

Seeks to promote inclusive and sustainable urbanization by ensuring participatory planning, protecting green spaces, and providing access to basic services for all urban residents.

Target 11.4: Protect the World's Cultural and Natural Heritage

Emphasizes the protection and preservation of cultural and natural heritage sites within urban areas, recognizing their importance for identity, tourism, and environmental conservation.

Target 11.5: Reduce the Adverse Effects of Natural Disasters

Focuses on reducing the vulnerability of urban areas to natural disasters through improved disaster preparedness, risk reduction measures, and resilient infrastructure.

Target 11.6: Reduce the Environmental Impact of Cities

Aims to minimize the environmental footprint of cities by reducing air and water pollution, improving waste management, and promoting sustainable resource use.

Target 11.A: Strong National and Regional Development Planning

Stresses the importance of effective national and regional development planning for sustainable urban development, ensuring coordination and integration across sectors.

Target 11.B: Implement Policies for Inclusion, Resource Efficiency, and Disaster Risk Reduction

Calls for the implementation of policies that promote social inclusion, resource efficiency, and disaster risk reduction within urban areas, addressing the needs of vulnerable populations.

Target 11.C: Support Least Developed Countries in Sustainable and Resilient Building

Highlights the need to provide financial and technical assistance to least developed countries for the development of sustainable and resilient buildings and infrastructure.

Challenges of Urbanization

- 1. Urban Overcrowding and Housing Crisis: Rapid population growth, and urbanization, have exacerbated slum landlords, informal settlements and other overcrowded living situations alongside pressure to public services and physical infrastructure
- **2.** Environmental Degradation and Waste Management Challenges: Expanding industrial activities, deforestation and a lack of waste disposal systems has resulted in extreme pollution, declining air and water quality, and long-lasting damage to the environment.
- 3. Transportation Inefficiencies and Mobility Issues:

Poor Road networks, inefficient public transport, and terrible city planning are causing longer trip durations, costing lost economic productivity, and reducing the quality of life for the city residents.

4. Climate Change and Its Societal Impacts

Rising global temperatures, extreme weather events, and shifting climate patterns threaten urban sustainability, exacerbating flooding, heatwaves, and resource scarcity, requiring urgent mitigation and adaptation strategies.

Sustainable Urban Solutions

Components of Sustainable Urban Solutions

Green Buildings

Promotes energy efficiency and sustainability

Smart Transport

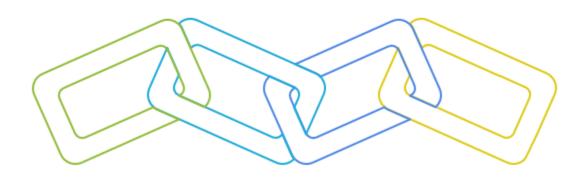
Reduces traffic congestion and emissions

Waste Management

Mitigates pollution through recycling

Urban Green Spaces

Enhances quality of life with greenery



1. Green Buildings

Sustainable development can be further augmented by encouraging energy-efficient buildings with solar panels, vertical gardens, etc.

2. Smart Transport

We are taking a comprehensive look at how adding electric buses, metro rail systems and bike-sharing programs can reduce traffic jams and carbon emissions.

3. Waste Management

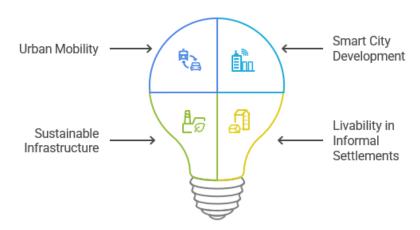
Creating efficient recycling, composting and waste-to-energy projects can reduce pollution.

4. Urban Green Spaces

Urban green space can be improved by parks, rooftop gardens, community farming, etc., which will enhance the quality of life of urban residents.

Key Policies, Projects, and Initiatives

Urban Sustainability Initiatives in Bangladesh



1. Dhaka Mass Transit Project (Metro Rail):



Figure: Dhaka Metro Rail

One of Bangladesh's most ambitious urban infrastructure projects, the Metro Rail system is designed to alleviate Dhaka's chronic traffic congestion. By introducing a

fast, efficient, and eco-friendly mass transit system, the project aims to reduce travel time, lower vehicle emissions, and provide a reliable alternative to private transport. The first phase, MRT Line-6, is already operational, significantly improving daily commuting for thousands.

2. National Housing Policy:

The Metro Rail system is one of Bangladesh's most ambitious urban infrastructure projects and is aimed at solving Dhaka's chronic traffic congestion. The project will not only reduce travel time and vehicle emissions but will also create a reliable alternative to private transport by introducing a fast, efficient, and eco-friendly mass transit system. The first phase, MRT Line-6, is running, reducing long-distance daily commuting for thousands of commuters.

3. Urban Resilience Project:



Figure: LGD & UNDP's Climate Resilient Housing for Urban Poor in Gopalganj

In a country like Bangladesh, which is prone to natural hazards and climate change, the Urban Resilience Project will help improve disaster preparedness and adaptive capacity in major cities. This includes bolstering urban infrastructure against floods, earthquakes, and severe weather markers. And the project also advocates for early warning systems, emergency response mechanisms and resilient urban planning strategies.

4. Solid Waste Management Improvement Projects:

Accelerated urbanization has exacerbated waste management issues in major

cities such as Dhaka and Chattogram. Addressing this situation, the government, working alongside global counterparts, has implemented programs to upgrade waste collection, recycling, and disposal systems. These initiatives involve moving away from landfilling, towards waste-to-value, and engaging the community in responsible waste practices.

Challenges in Achieving SDG 11

1. Financial Constraints:

Bangladesh suffers with a considerable degree of funding gap in urban development, restricting the investment in infrastructure, through housing and public services. Although global investment and public-private collaborations have a place, insufficient budget disposition and dependence on foreign funds hinder timely steps toward forging sustainable and resilient metropolises. There are many important projects that fall by the wayside because of budget constraints: mass transit expansion, housing, you name it.

2. Political and Policy Barriers:

Indigenous peoples are provided with opportunities to express their views and experiences of development, however, there is still limited participation by local residents in the planning process, and they often have little say on what may happen to their habitat. The training of indigenous peoples in environmental protection, however, must be encouraged.

3. Lack of Public Awareness and Participation:

Public participation in sustainable urban initiatives remains low because people are not aware of the subject and lack access to information. Most residents do not realize that as long as publicizing waste management or any way sort of large-scale living without destroying nature is involved with a low-level input from oneself, it will be satisfactory; otherwise, there are problems.

4. Uncontrolled Rapid Urbanization:

The demand to move to established urban areas has risen dramatically, and Dhaka and Chattogram are bearing the brunt: the current infrastructure and services were easily overloaded with these newcomers. The demand for housing, clean water, sanitation and transport is well above what development can keep up with today.

This leads to slums pushed to their limits, traffic jams everywhere and pollution of all sorts. Without sustainable development strategies, uncontrolled urban sprawl causes resources to be overused even further and living conditions get worse.

Recommendations for Accelerating Progress

To achieve SDG 11 in Bangladesh, the following measures should be implemented:

1. Strengthening Urban Planning Policies:

The rapid urban growth can be managed through zoning, land-use plans and environmental impact assessments. The government must take steps to enforce detailed area plans for major cities like Dhaka, and supplementary plans for other urban areas. It also needs to keep urbanization within limits.

2. Expanding Public Transportation Infrastructure:

Chattogram and Dhaka are cities with a huge traffic conflict. It's important to expand the public transport system including metro rail, bus-in-train system, water movement and other forms of public transport for all that help citizens to break out of the one-person one-car model -- this ultimately increases emissions

3. Increasing Investment in Affordable and Sustainable Housing:

Both the public and private sectors need to participate in solving the urban housing issue. The government could offer incentives like tax and subsidized low-interest loans to developers interested in climate-resistant and affordable housing. Improvement in quality of life for the impoverished will come from better slum replenishment programs combined with access to clean water, sanitation, and electricity

4. Adopting Smart City Solutions for Efficient Urban Management:

Improving urban governance, service delivery, and resource management can be achieved by utilizing digital technologies. The city's livability can be enhanced through real-time monitoring of pollution levels, and smart systems for traffic and waste management.



Fig: SDG 11 progress.

Conclusion

Sustainable urbanization is at the core of Bangladesh's future, with its rapidly growing cities and increasing environmental issues. Being a part of the world's most densely populated countries, Bangladesh is suffering from unsustainable pressure on housing, transport, and public services. The response to these issues requires a multi-stakeholder effort from the government, private sector, and civil society in order to create inclusive, resilient, and environmentally sustainable cities.

By adopting well-planned urban policies, Bangladesh can deliver efficient land use, disasterresilient infrastructure, and improved public services. More investments in mass transit systems, affordable housing, and smart city technologies will help manage congestion, reduce pollution, and improve the quality of urban life. Moreover, enhancing waste management and promoting green spaces will result in healthier and more livable cities.

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