Policy Brief

Number BUET/URP/2022/01

Upgrading Low-Income Housing in the Light of Global and Local Commitments: A Case Study from Dhaka

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Rights to better housing (Article 15), living, and livelihood (Article 32) are the constitutional rights of the citizens of Bangladesh, including those living in the slums of the cities. The New Urban Agenda and allied targets in Sustainable Development Goals (SDGs) 2030 reinforce the obligations of 'leaving no one behind'. Slum dwellers in Bangladesh, including Dhaka, do not have quality housing or better access to basic service facilities. This brief discusses the gap between the policy guidelines and field-level experience. Considering slum upgradation as a potential approach to address the problem, the brief presents and summarizes a few ideas for effective implementation and sustainability of the intervention.

This policy brief is prepared based on three undergraduate studies carried out at the Department of Urban and Regional Planning (URP), Bangladesh University of Engineering and Technology (BUET). A national seminar titled "Global and Local Commitments for Low Income Housing in Cities: Present Context and Way Forward", was organized by the Department of URP on 11 June 2022 at BUET to share the findings. Feedback received in the seminar has been extremely useful in preparing this brief.

Photograph 1: National seminar on "Global and Local Commitments for Low Income Housing in Cities: Present Context and Way Forward"

In the seminar, Ms. Fairuz Noshin presented the 1st paper titled "Slums in Dhaka: Location, Area and Population". The research titled "Low Income Housing: Policy Guidelines and Existing Scenario" was presented by Ms. Sayeda Laizu Aktar and Ms. Nazifa Anzum. Finally, Ms. Moon Islam, Mr. Md. Sabbir Hossain Muni, and Mr. Md. Moshiur Rahman Khan discussed their ideas on "On-site Slum Upgradation of Dhaka Match Colony, Shyampur". The Chief Guest of the program was Mr. Md. Atiqul Islam, honorable Mayor of Dhaka North City Corporation (DNCC). It was chaired by Professor Dr. Satya Prasad Majumder, honorable Vice-Chancellor, BUET. Mr. Md. Mamun-Al-Rashid, Member (Secretary), Physical Infrastructure Division, Planning Commission and Professor Dr. Abdul Jabbar Khan, Pro-Vice Chancellor, BUET, addressed the audience at the event as special guests. Dr. Khurshid Zabin Hossain Taufique, Director, Urban Development Directorate (UDD); Mr. Mir Manzurur Rahman, Chief Architect, Department of Architecture; Mr. Md. Ashraful Alam, Director General, Housing and Building Research Institute (HBRI), and Mr. Md. Anisur Rahman Miah, Chairman, RAJUK also graced the occasion. In addition, representatives from the DSCC, DNCC, Planning Commission, Chittagong Development Authority (CDA), NGOs, UNDP Dhaka office, Centre for Urban Studies (CUS) attended the seminar.

Slums of Dhaka at a Glance

According to the Census of Slum Areas and Floating Population 2014, the two city corporations accommodate 3,400 slums, of which 2,908 slums have households less than 50 and 145 slums have more than 200 households (Figure 1). In DNCC, the slum population is 4,99,019, more than three times higher than in DSCC. Big slums of size ranging from around 32 acres to 104 acres are mainly located in DNCC. Slums occupy 6.33% of urban population only within 1% of the total city space. Still, their population is growing.

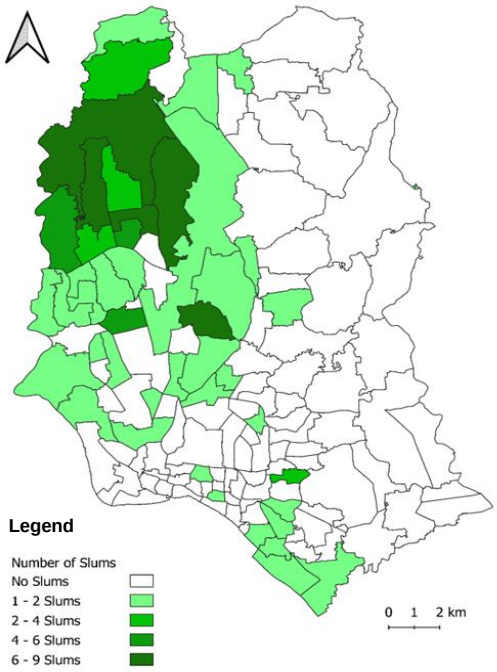


Figure 1: Distribution of slums in DSCC and DNCC [1]

Around 78% of large size slums are located in low-lying areas like *khals*, lakes or rivers. Mirpur (DNCC ward no. 3) and Pallabi (DNCC ward no. 5) areas have the highest number of slums. In DSCC, the concentration is higher in the Jatrabari area (ward no. 49).

In Dhaka, slum size ranges from around 0.42 acre to 104 acres. The average size is 2.4 acres, which approximates a standard football ground. The size of the biggest slum (Korail *Basti*) is equivalent to 40 football grounds. In Korail, the population density is 87,606 people per sq. km. In contrast, Ayub Ali, Saju, Lipur *Basti*, situated in ward no. 18 of DSCC, have population density of 815,790 per sq. km. is close to ten times that of Korail.

In slums, the population density is **2,50,000** people per sq.km. which is **five times higher** than that of Dhaka city's (47,400 people per sq.km.). The density is higher in small slums.

Living Standards of Low-income Settlements

Low-income urban settlements, mainly the slums, are characterized by diversified problems. This policy brief highlights their problems with reference to national and international standards under three broad headings-

i) housing, ii) water supply, and iii) sanitation.

The housing of slum dwellers

Table 1: Slum housing in Dhaka with respect to national and international guidelines

National Guidelines	International Standards	Existing Slum Scenario
Location		
National Housing Policy 2018 says, • Location must be above the highest flood level. • Environment-ally sensitive and critical areas must be avoided. • The uses of cheap and environment friendly local materials are to be supported.	According to UN Habitat, • Hazardous areas, areas around industries and garbage, and environmenta-lly sensitive and critical areas must be avoided.	• 78% of Dhaka's large slums are in low-lying areas [2]. • Dhaka Match Colony is located near hazardous industries.
Overcrowding		
There is no specific standard regarding person per room or per floor area for low-income settlements.	According to UN Habitat, • Not more than 2 persons per room or 5 sq.m. of floor area per person.	• On average around 5-8 members share a room of 14 sq.m. in the slums of Dhaka [3]. • In Agargaon BNP slum, around 2.5 m. to 3 m. size room is shared by two family [4].
Affordability		
National Housing Policy 2018 urges for, • Ensuring affordable housing. • Subsidies to low-income people while land allocation.	SDG 11 defines a housing affordable when less than 30% of household income spent on housing-related expenses.	• Bhasantak slum dwellers spend about 20% to 40% of their total household income on rent [5]. • Korail slum dwellers pay more rent per square feet comparing to upscale areas which comprise around 67% of their income [4, 6].
Tenure Uncertainty		
National Housing Policy 2018 urges to rehabilitate the affected owners under the taken housing projects.	SDG 11 focuses on secured tenure rights to land, with legally recognized documentation.	Over half of all slum residents live in permanent fear of eviction [7]. `

The housing of slum dwellers

Table 1 summarizes national and international guidelines related to housing and existing slum scenarios. Findings show that in the urban areas of Bangladesh, slums tend to grow adjacent to environmentally sensitive areas including- water bodies; hazardous industries; and garbage sites. They are overcrowded and constructed with poor materials like- tin sheets, bamboo, and straws, which are not durable. Nevertheless, they pay more for living in such a poor housing environment. Again, eviction is one of the critical problems the slum dwellers face. Development project owners often face difficulties rehabilitating affected owners without properly documented tenure rights.

Water supply

Inaccessible and poor water supply systems are two crucial problems for slum dwellers. Unfortunately, 97% of Dhaka's slums have no access to improved water sources and around 94% households share water sources [7]. Our National guideline (Table 2) says it should not take more than 20 minutes to collect water; but in reality, it requires 4.5 to 6 times the suggested duration. Even the water collected after so many difficulties is of poor quality to use for washing or bathing let alone drinking.

Table 2: Water supply in slums of Dhaka with respect to national and international guidelines

National Guidelines	International Standards	Existing Slum Scenario
According to National Strategy for WaterSupply and Sanitation 2014- ▪ The water source should be within 150 meters of household. ▪ Maximum 20 minutes for collection. ▪ 50 liters per capita per day. ▪ Permits shared provision for 50-100person/ source. ▪ Must meet the national water quality standards.	SDG 6 asks for- ▪ Accessible water facility on the premises. ▪ Less than 30 minutes for collection. ▪ 20 liters per capita per day. ▪ Available whenever needed. ▪ Free of fecal and chemical contamination.	In Dhaka Match Colony- ▪ Water points available at 5 to 10 minutes. walking distance. ▪ 1.5 to 2 hours is required for water collection. ▪ Women consume less water to avoid hardship of collection. ▪ Water points are used on shared basis. ▪ Pipe leakages contaminate water frequently.

Sanitation facilities

Improved latrines, as portrayed in the national and international documents (Table 3), is a far behind reality in the urban slums of Bangladesh.

Table 3: Sanitation facility in slums of Dhaka with respect to national and international guidelines

National Guidelines	International Standards	Existing Slum Scenario
Sector Development Plan (2011-2025) Water Supply and Sanitation Sector in Bangladesh says, • Basic and improved sanitation facilities, including flush latrines with septic tanks or sewer systems, ventilated pit latrines, and pit latrines with slabs, must be used. • Adopting appropriate fecal sludge management. National Strategy for Water Supply and Sanitation 2014 says, • One hygienic latrine for each household; otherwise, community latrine for a maximum of two families or ten people.	SDG 6 asks for- • Improved sanitation facilities include- latrines to piped sewer system, pit latrines with slab; composting toilets etc. • In-situ sludge treatment or treated off-site. • Improved facilities that are not shared with other households.	In Dhaka Match Colony- • Poor sanitation facilities like- no water supply inside, absence of fecal sludge management, open defecation system, elevated entrances and broken doors. • 3 to 4 families use one toilet on share basis. • 3 to 5 minutes to access toilet.

Temporary toilets or hanging toilets connected to the drainage channels are common practice which have no proper sanitation facilities inside (Photograph 2).

Photograph 2: Toilets in the slums

78% of households still use pit latrines, while 10% use hanging latrines [7]. Around 91% of households share toilets, where a toilet is shared by 16 families [7]. The accessibility to toilets is also not easy. On average people need to wait around seven minutes in line to use the facility [7].

Taking Dhaka Match Colony as the study site, Islam and her colleagues aim to deliver resilient and affordable housing with all essential services and amenities for the slum dwellers [8]. Dhaka Match Colony is located in ward no. 50 of DSCC in Shyampur Thana. Around 3,600 people reside here in an area of 0.0138 sq. mile, per the RAJUK database. Poor living conditions in the slum are demonstrated by the dilapidated katcha housing, absence of legal water supply source, provision of shared toilet etc. Photograph 3 portrays the miserable living condition existing in the slum.

Photograph 3: Poor condition of housing and basic service facilities in Dhaka Match Colony

Islam and her colleagues propose following (Table 4) land use distribution for the site [8]. Three types of housing- Type A (280 sq.ft.), B (250 sq.ft.) and C (150 sq.ft.) are designed to accommodate around 8,000 people in the Dhaka Match Colony area by 2035. Types A and B are family housing of six and five storey respectively, and type C is dormitory-type housing of five storey. The proposal also includes some community facilities.

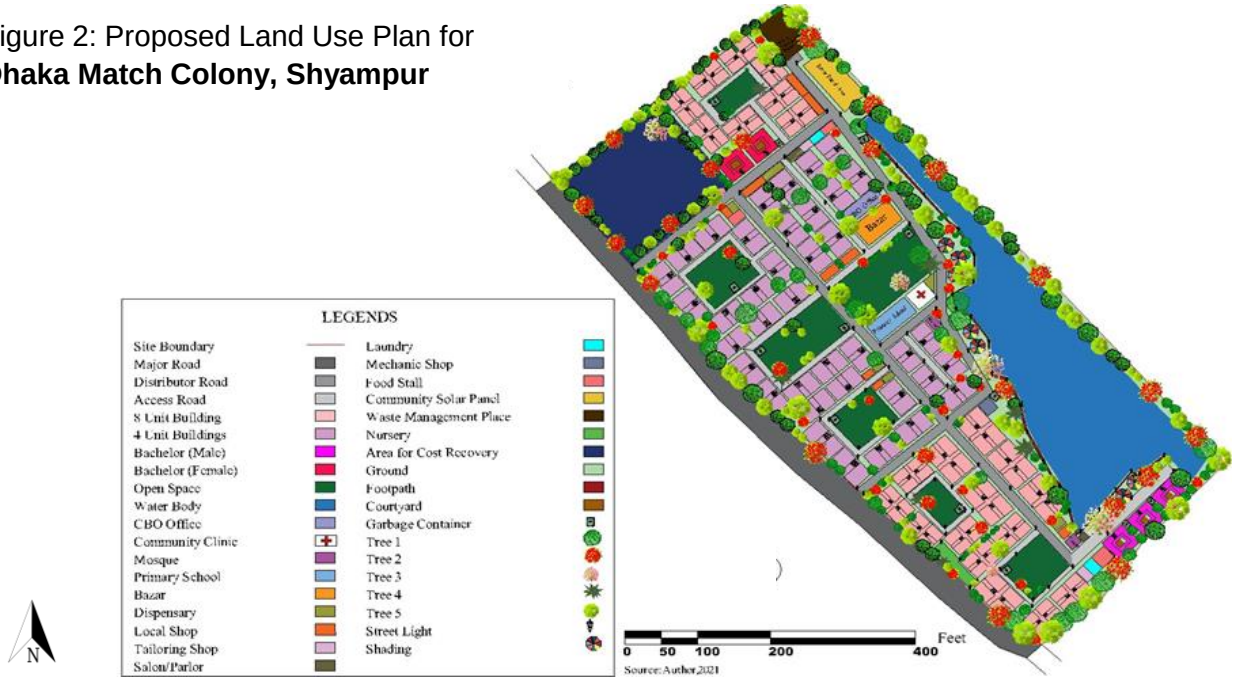
Table 4: Proposed land use distribution in Dhaka Match Colony

Land Use Type	Area (acre)	Area (sq. ft.)	Percentage (%)
Residential	3.1	135,036.00	34.98
Commercial Facilities	0.27	11,761.20	3.05
Community Facilities	0.43	18,730.80	4.85
Transportation Network	1.1	47,916.00	12.41
Open Space	1.06	46,173.60	11.96
Water body	1.43	62,290.80	16.14
Recreational Facility	0.58	25,264.80	6.55
Cost Recovery Site	0.66	28,749.60	7.45
Spare Ground	0.23	10,105.92	2.62
Total	**8.86**	**386,028.72**	**100**

A primary school, community clinic, dispensary, mosque, bazar, open spaces, local shops etc. are proposed. Green buffers are proposed along the pedestrian walkways. The waterbody comprising 62,2901 sq. ft. area (almost 16% of the total area) is recommended to be revived by introducing a fisheries project. Solar panel and rainwater harvesting systems are also proposed. The 2D design proposal is shown in Figure 2.

- For successful implementation of the design proposals, the research team recommends forming a Community Based Organization (CBO) involving both male and female members of different age groups.
- The CBO will collaborate with the local people and the Project Implementing Agency (PIA). The PIA will conduct the construction work for housing development and installation of different services and community facilities.

Figure 2: Proposed Land Use Plan for **Dhaka Match Colony, Shyampur**



On-site Slum Upgradation Solution

- Phase-wise construction and implementation are proposed. In the first phase, it is planned to relocate the people of the Southern part to other parts and construct Type B and C buildings, access roads, and drainage lines along the street.
- The exact process of construction will be followed for the middle part of the site in the second phase. Reviving the water body will also start in the phase two. The construction phase will end in the third phase with the development of the Northern part of the area.
- It would be worthwhile to mention that around 28,750 sq. ft. area is proposed to be kept for cost recovery in the Northernmost part. This land will be allotted to private developers for further development except for industrial use once the upgradation project is completed.
- Existing dwellers having household incomes less than or equal to Tk. 25,000 per month will be eligible to buy dwelling units in the slum. Families with incomes less than Tk.15,000 per month can rent the housing units. For purchasing and renting dwelling units, existing residents will get priority.

Concluding Remarks

A proposal is good when objectively implemented, and sustainability is ensured. The seminar attendees mention that good practices must be preceded by effort and willingness. Here, the city mayor can lead in involving both public and private entrepreneurs to run a sustainable housing system. Land tenure, source of funding, and cost recovery issues need to be resolved for the successful implementation of the slum-upgradation project. The formation of Community Based Organizations (CBOs) and their training can act as catalysts for implementing such tasks. The discussion has promoted the rental housing system instead of individual house ownership.

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