

Analysis of the Vendor's Impact on Canal Restoration; A Study of the Kajla Canal Under the Dhaka South City Corporation

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Abstract

Original Research Article

Kajla Canal, located in southern Dhaka under the Dhaka South City Corporation (DSCC), has experienced severe environmental degradation due to prolonged commercial encroachment by informal vendors and small businesses along its banks. This Rapid Social Assessment, conducted in June 2026, examines how vendor activities influence canal restoration and the associated social implications. The study is based on field observations, focus group discussions (FGDs), and secondary data. The findings reveal that of the 483 affected units identified, 475 (98.3%) are informal vendors and squatter businesses, almost all operating from temporary structures. The canal corridor has evolved into an important local marketplace for vegetables, fruits, fish, tea, fuska, and other street foods, providing essential services to surrounding communities while supporting the livelihoods of economically vulnerable households. Approximately 94% of vendors depend on a single source of income, and 95.6% earn BDT 30,000 or less per month. However, unregulated commercial activities, indiscriminate waste disposal, and numerous privately constructed bridges have significantly obstructed water flow, reduced the canal's drainage capacity, and contributed to chronic pollution and frequent waterlogging, even after moderate rainfall. The study concludes that successful canal restoration requires a balanced approach that addresses both environmental and social dimensions. Rather than relying solely on eviction, the rehabilitation strategy should integrate managed relocation, livelihood restoration, effective solid waste management, and meaningful stakeholder participation. Such an approach would facilitate sustainable canal recovery while minimizing adverse socioeconomic impacts on vulnerable vendors and ensuring long-term urban resilience and improved drainage management in the DSCC area.

Keywords: Kajla Canal; Canal Restoration; Informal Vendors; Commercial Encroachment; Rapid Social Assessment; Urban Waterlogging; Livelihood Restoration; Resettlement Action Plan (RAP); Economic Displacement; Environmental Degradation; Solid Waste Management; Dhaka South City Corporation (DSCC); Urban Resilience; Stakeholder Participation; Climate Resilience.

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INTRODUCTION

Dhaka's canal system once served as the city's primary natural drainage network, regulating stormwater flow, reducing waterlogging, and maintaining the ecological balance of the urban environment. Over the past several decades, however, rapid and unplanned urbanization, illegal encroachment, indiscriminate landfilling, and uncontrolled waste disposal have severely degraded this network. Although different government agencies report varying numbers of canals

remaining in Dhaka, there is broad consensus that virtually all existing canals have been affected by pollution, encroachment, and loss of hydraulic capacity. Large sections of canals have disappeared beneath roads, walkways, and other unauthorized developments, while many designated retention areas have been significantly reduced, diminishing the city's ability to manage increasingly intense rainfall events. Institutional fragmentation and weak coordination among responsible agencies have further accelerated the deterioration of the canal system.

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Recognizing these challenges, the World Bank is providing Technical Assistance through the Investment Prioritization for Water Security and Resilience in the Metro Dhaka Region to support the Dhaka North City Corporation (DNCC) and Dhaka South City Corporation (DSCC). The initiative aims to strengthen urban water security and climate resilience by reducing waterlogging, restoring canal flow, and improving the overall drainage system. Planned interventions include canal re-excavation and desilting, canal bank stabilization, embankment protection, construction of pedestrian walkways, development of green buffer zones, establishment of master drains, and construction of deep drainage infrastructure. While these interventions are expected to deliver substantial environmental and public health benefits, they will also affect informal settlers, vendors, and business establishments occupying canal corridors, resulting in both physical and economic displacement. Consequently, a Rapid Social Assessment (RSA) has been undertaken to identify the magnitude and nature of potential social impacts and to provide a basis for future resettlement planning.

The degradation of Dhaka's canals is closely associated with the rapid expansion of the city's informal economy. Street vending constitutes one of the largest sources of urban employment for low-income and migrant households, requiring minimal capital investment while providing affordable goods and services to surrounding communities. However, the concentration of informal commercial activities on canal banks has intensified environmental pressures through unauthorized occupation of public land, obstruction of drainage channels, and indiscriminate disposal of solid waste. Previous studies have shown that eviction campaigns alone have rarely produced lasting results because they are not accompanied by sustainable rehabilitation measures, alternative livelihood opportunities, or effective institutional management. As a result, vendors frequently return to previously cleared locations, perpetuating cycles of encroachment and environmental degradation.

Against this broader urban context, Kajla Canal under the Dhaka South City Corporation represents a significant case for examining the relationship between informal commercial activities and canal restoration. Field investigations conducted in August 2026 reveal that commercial encroachment dominates the canal corridor, with 475 of the 483 identified affected units (98.3%) consisting of informal vendors and squatter businesses operating primarily from temporary structures. The canal has evolved into a vibrant local marketplace for vegetables, fruits, fish, tea, fusha, and other street foods that support the daily needs of surrounding communities. At the same time, these vendors represent an economically vulnerable population, with the vast majority depending on a single

source of income and earning relatively low monthly incomes. Waste generated from commercial activities, combined with household refuse and the obstruction created by numerous privately constructed bridges, has substantially reduced the canal's drainage capacity, contributing to pollution, stagnant water, mosquito breeding, and frequent waterlogging.

This study therefore examines the extent to which vendor encroachment influences canal degradation and assesses the potential social implications of canal rehabilitation. By integrating field observations, focus group discussions, and secondary information, the study seeks to provide evidence for balancing environmental restoration with the protection of vulnerable livelihoods. The findings are expected to support the preparation of socially inclusive canal rehabilitation strategies and inform the development of an appropriate Resettlement Action Plan (RAP) that promotes sustainable urban drainage while minimizing adverse impacts on affected communities.

METHODOLOGY

This study adopted a mixed-methods approach, integrating both quantitative and qualitative research techniques to assess the impacts of informal vendor activities on the restoration of Kajla Canal under the Dhaka South City Corporation (DSCC). The methodology combined a desk review, field observation, household survey, community consultation, Focus Group Discussions (FGDs), and Key Informant Interviews (KIIs) to generate comprehensive evidence on the environmental, social, and livelihood conditions of the canal corridor.

Primary data were collected through a structured household survey administered to 100 randomly selected respondents representing vendors, shopkeepers, and nearby residents related with business. In addition, Focus Group Discussions (FGDs) were conducted with 10 - 12 randomly selected affected persons (APs) in each group to capture community perceptions regarding canal encroachment, drainage congestion, environmental pollution, livelihood dependency, and the anticipated impacts of canal rehabilitation. To supplement community perspectives, eight (05) Key Informant Interviews (KIIs) were carried out with local government representatives, community leaders, market representatives, and other relevant stakeholders to obtain in-depth information on canal management, encroachment, and possible mitigation measures.

Field observation formed another key component of the assessment. Walkthrough surveys and photographic documentation were undertaken along the canal corridor to assess the physical condition of the canal, identify encroachments, document temporary and permanent structures, evaluate waste disposal practices,

and record the presence of privately constructed bridges and other physical obstructions affecting water flow.

Secondary data were collected through a review of published literature, project documents, government reports, and existing datasets to establish the broader context of canal degradation, urban drainage, informal livelihoods, and resettlement issues in Dhaka. These sources were also used to develop a quantitative profile of occupancy status, business characteristics, income levels, and the nature of affected structures.

Quantitative data were analyzed using Microsoft Excel and IBM SPSS to generate descriptive statistics and frequency distributions. Qualitative data from FGDs, KIIs, and field observations were reviewed,

categorized, and triangulated with secondary information to ensure reliable and valid findings.

The integration of quantitative and qualitative evidence provided a comprehensive understanding of the relationship between informal commercial encroachment, environmental degradation, and the potential social impacts of canal restoration, forming the basis for the study's conclusions and recommendations.

RESULT AND FINDINGS

01. Types of Businesses along the Kajla Canal: Food-related trade dominates: vegetable, fruit, Fusca, fish and tea stalls make up 61% of all businesses

Considering 100 respondents/businesses, the distribution would be:

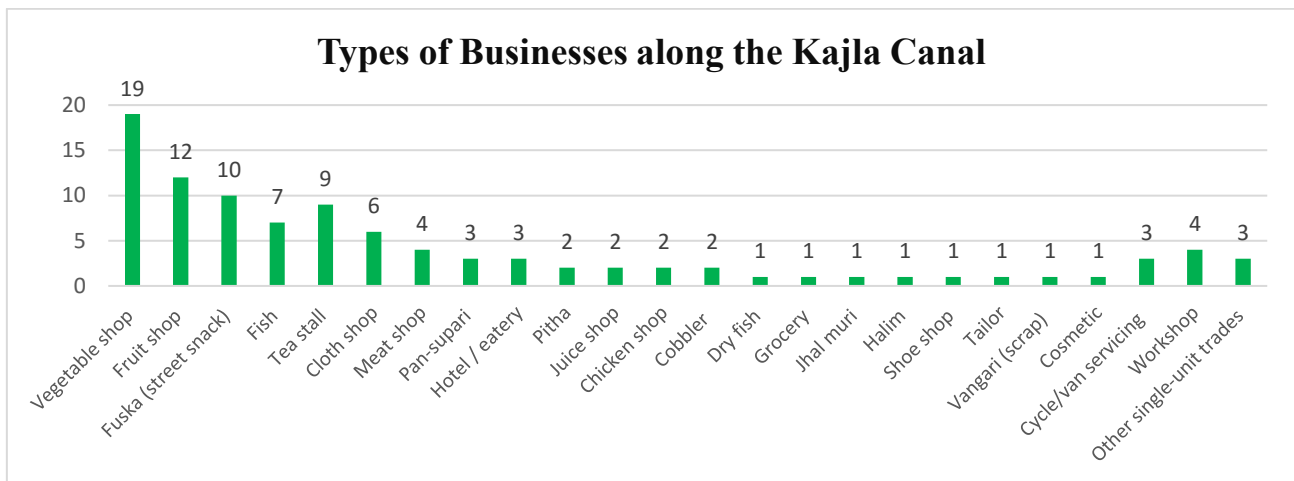


Table 01: (Type of Businesses along the Kajla Canal)

The chart shows that vegetable shops are the most common type of business along the Kajla Canal, followed by fruit shops, fuska (street snack) stalls, and fish shops. Cloth and meat shops also represent a notable share of the businesses. Other businesses, such as pan-supari shops, hotels/eateries, pitha and juice shops, are present in smaller numbers. Tailors, cosmetic shops, scrap businesses, and other specialized trades are relatively limited. Overall, the business pattern indicates a strong dominance of small-

scale food and daily-consumption-related businesses along the canal.

02. Monthly Income Distributions (BDT), Kajla Canal:

The majority of business owners (94%) fall within the low-income group, while only 6% belong to the middle-income group, indicating a predominantly low-income and economically vulnerable business community.

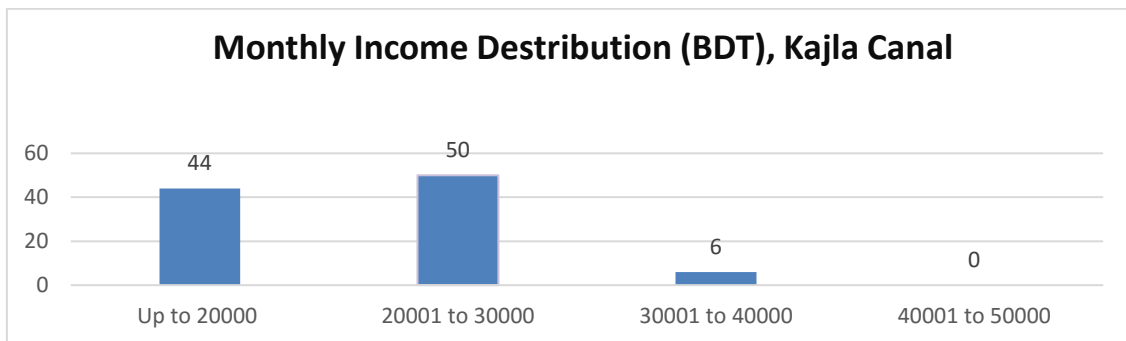


Table 02: (Monthly Income Distribution (BDT), Kajla Canal)

The chart shows that the majority of businesses/households along the Kajla Canal have relatively low monthly incomes. About 44% earn up to BDT 20,000, while the largest group, around 50%, earns between BDT 20,001 and 30,000. Only about 6% earn between BDT 30,001 and 40,000, and none reported an income above BDT 40,000.

Overall, the findings indicate that the Kajla Canal community is predominantly low- to lower-

middle-income and economically vulnerable, with limited income diversification and relatively low earning capacity.

03. Bridge crossing the Kajla Canal by type:

People living in the adjacent areas use various types of bridges including wooden, pucca, steel, and bamboo bridges for their daily movement and access across the Kajla Canal.

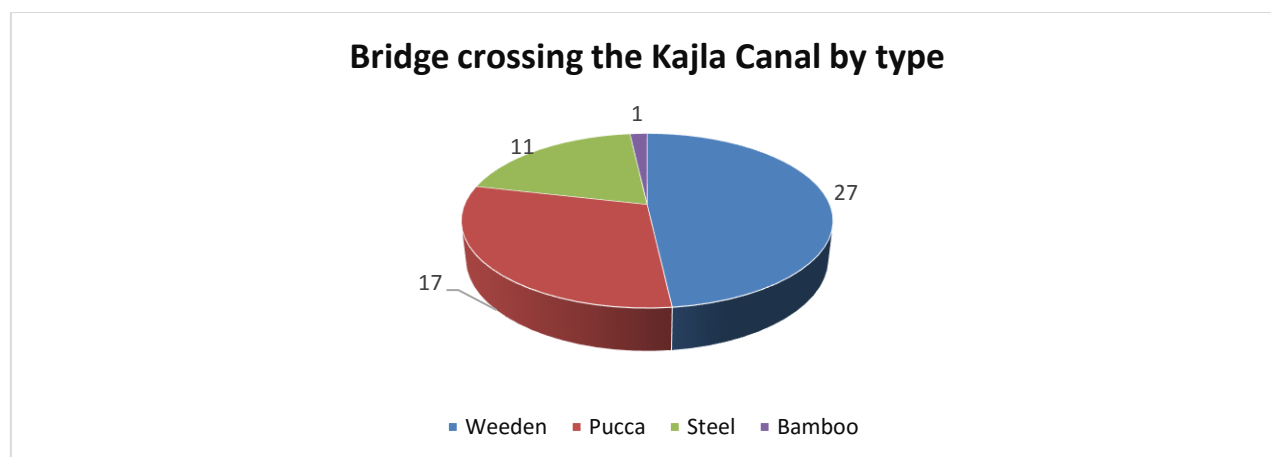


Table 03: (Bridge crossing the Kajla Canal by type)

The chart shows that wooden bridges are the most common (27), followed by pucca bridges (17) and steel bridges (11). Bamboo bridges are the least common (1). Overall, the findings indicate that people in the adjacent areas rely on a variety of bridge types for their

daily movement and access across the Kajla Canal, with wooden bridges being the predominant form.

04. Household Members by sex:

The demographic profile of residents in the Kajla Canal surroundings is as follows:

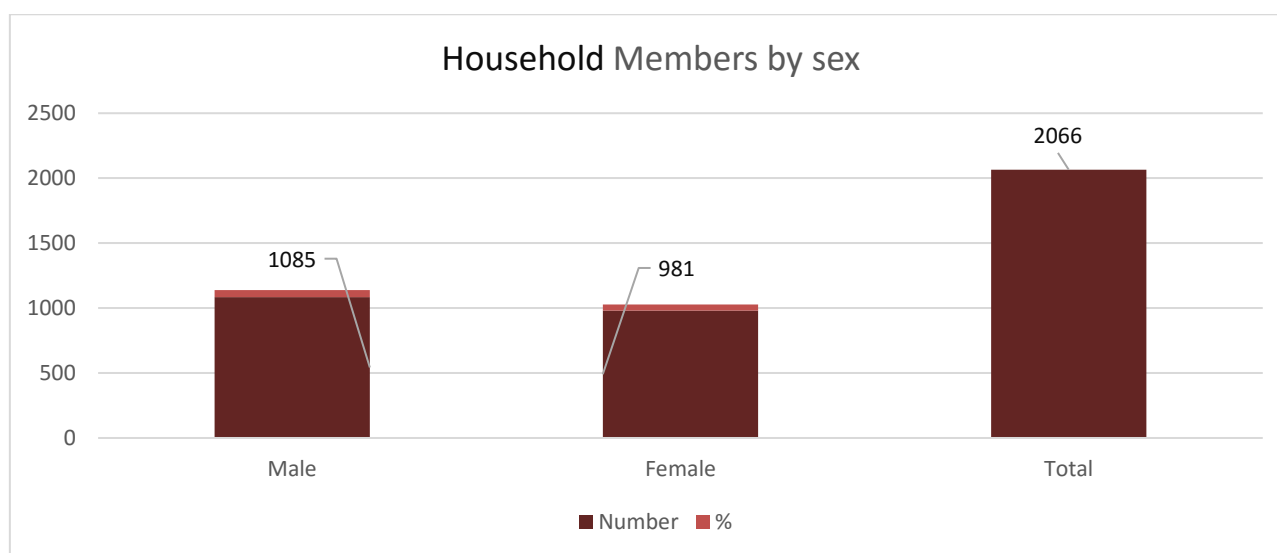


Table 04

The chart shows that the total number of household members surveyed is 2,066, comprising 1,085 males and 981 females. Males account for approximately 52.5%, while females represent 47.5% of the total

household members. The distribution indicates a relatively balanced gender composition, with males slightly outnumbering females by 104 members.

05. Multi-stored Buildings on Canal-Adjacent Land by Floors

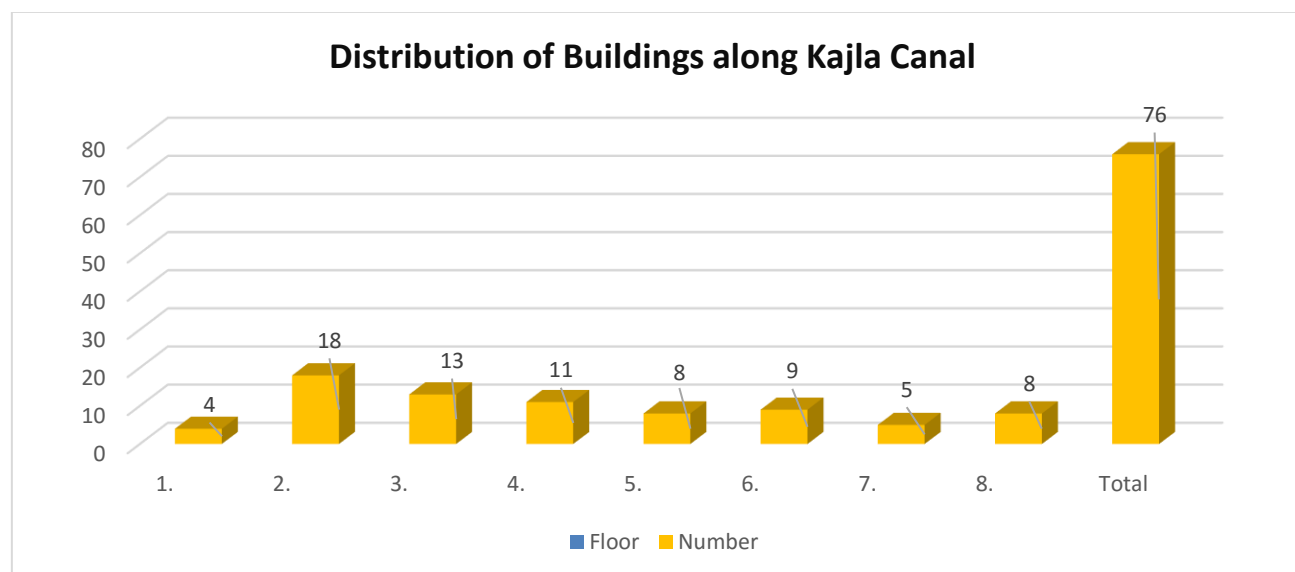
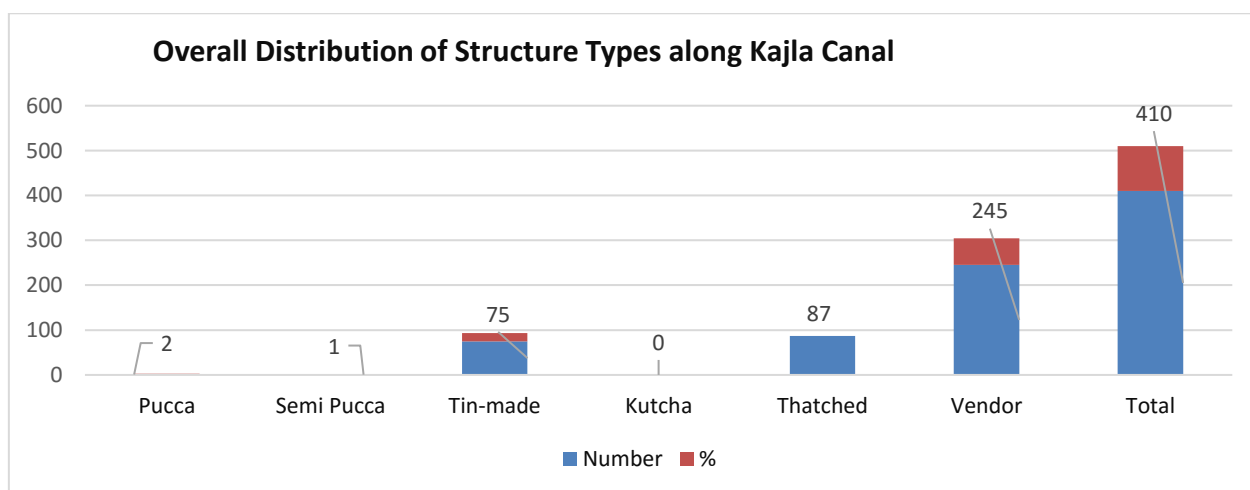


Table 05: (Distribution of Buildings along Kajla Canal)

The chart shows the distribution of 78 buildings recorded along the Kajla Canal. The number of buildings varies across the different surveyed sections/floors, ranging from 5 to 19 buildings. The highest concentration is observed in Section 2, with 19 buildings, followed by Section 3 with 15 buildings and Section 4 with 12 buildings. Sections 6 and 8 each have around 10 and 9 buildings, respectively, while Section 7 has the lowest number, with approximately 6 buildings.

Overall, the distribution indicates that buildings are unevenly concentrated along the Kajla Canal, with relatively higher concentrations in Sections 2–4. This pattern suggests varying levels of development and settlement intensity along different parts of the canal.

06. Distribution of Structure Types

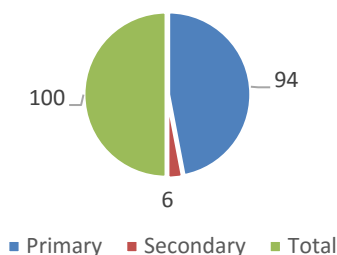


07. Income Sources:

The following data illustrate the income sources of the affected vendors, who largely depend on

customers, visitors, pedestrians, and other people moving along the Kajla Canal for their livelihoods.

Income Sources of Canal-side Households and Businesses (Kajla Canal)



The chart indicates that 94% of the canal-side households and businesses depend on primary income sources, while only 6% have secondary income sources. This demonstrates a high level of dependence on a single/main source of livelihood among the affected households and businesses along the Kajla Canal.

The limited share of secondary income sources suggests that many vendors and households may have fewer alternative livelihood options, making them potentially vulnerable to any disruption to their existing businesses or income-generating activities caused by canal restoration or related interventions.

Qualitative findings: community feedback Loss of the canal edge:

Participants reported that numerous stalls and informal businesses occupy the service road and extend onto the canal bank, significantly restricting the space needed for channel widening, embankment stabilization, pedestrian walkways, and green buffer development.

Drainage failure and waterlogging:

Residents reported that the accumulation of waste and silt has significantly reduced the canal's drainage capacity. As a result, even minor rainfall causes polluted water to overflow onto nearby roads and enter adjacent homes, disrupting daily activities and creating particular difficulties for students, patients, and elderly residents.

Waste in the water:

Residents identified the direct disposal of vendor waste, household garbage, and shop refuse into the canal as a major source of pollution, contributing to foul odours, increased mosquito and fly infestations, and the decline of aquatic and wildlife species such as fish, frogs, and birds.

Disputes over the bank:

Residents and occupants expressed conflicting claims over sections of the canal bank, with those occupying adjacent private land asserting ownership and expressing concern that clearing or widening activities

could overlook their claims. Such concerns will need to be openly addressed as part of the restoration process.

Obstructed cleaning:

Participants highlighted that numerous privately constructed wooden, steel, and bamboo bridges provide access to nearby stalls and homes but obstruct water flow, trap floating waste, and hinder regular canal cleaning and desilting activities.

FUNDING

Identified Social Impacts

Residents reported that indiscriminate waste disposal has severely degraded the canal environment, resulting in foul-smelling water and increased mosquito and fly infestation. They also associated the polluted conditions with a higher risk of infectious diseases among nearby residents. The accumulation of waste and silt has reduced the canal's drainage capacity, causing water to overflow onto adjacent roads and residential areas during heavy rainfall. The resulting waterlogging disrupts daily activities and creates particular difficulties for students, patients, and elderly people.

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Author Contributions:

Md. Mesbaul Haque: Full conceptualization, literature review, research design, research questionnaire develops, methodology, formal analysis, writing-original draft and supervising, finalization.

A.B.S Mahbubar Rahman: Methodology, questionnaire, formal analysis, reviewing critically for intellectual content and full study paper, editing and submission.

Faiza Tanaz Ahsan: Field coordination, data collection, stakeholder consultation, qualitative analysis

Md. Nuruzzaman kakon: Data management and Quantitative data Analysis

Julker Nayeem: Interpretation of demographic profiles, Socioeconomic impact assessment and analysis

CONCLUSION

The Rapid Social Assessment of Kajla Canal demonstrates that vendor activities are both an important source of local livelihoods and a major factor influencing canal degradation and restoration. The 98.3% dominance of informal vendors and squatter businesses among affected units highlights the scale of the socioeconomic dimension of canal restoration. At the same time, unmanaged commercial activities, waste disposal, and privately constructed bridges have reduced the canal's hydraulic capacity, obstructed cleaning and maintenance, and contributed to pollution, waterlogging, and the loss of aquatic and other biodiversity.

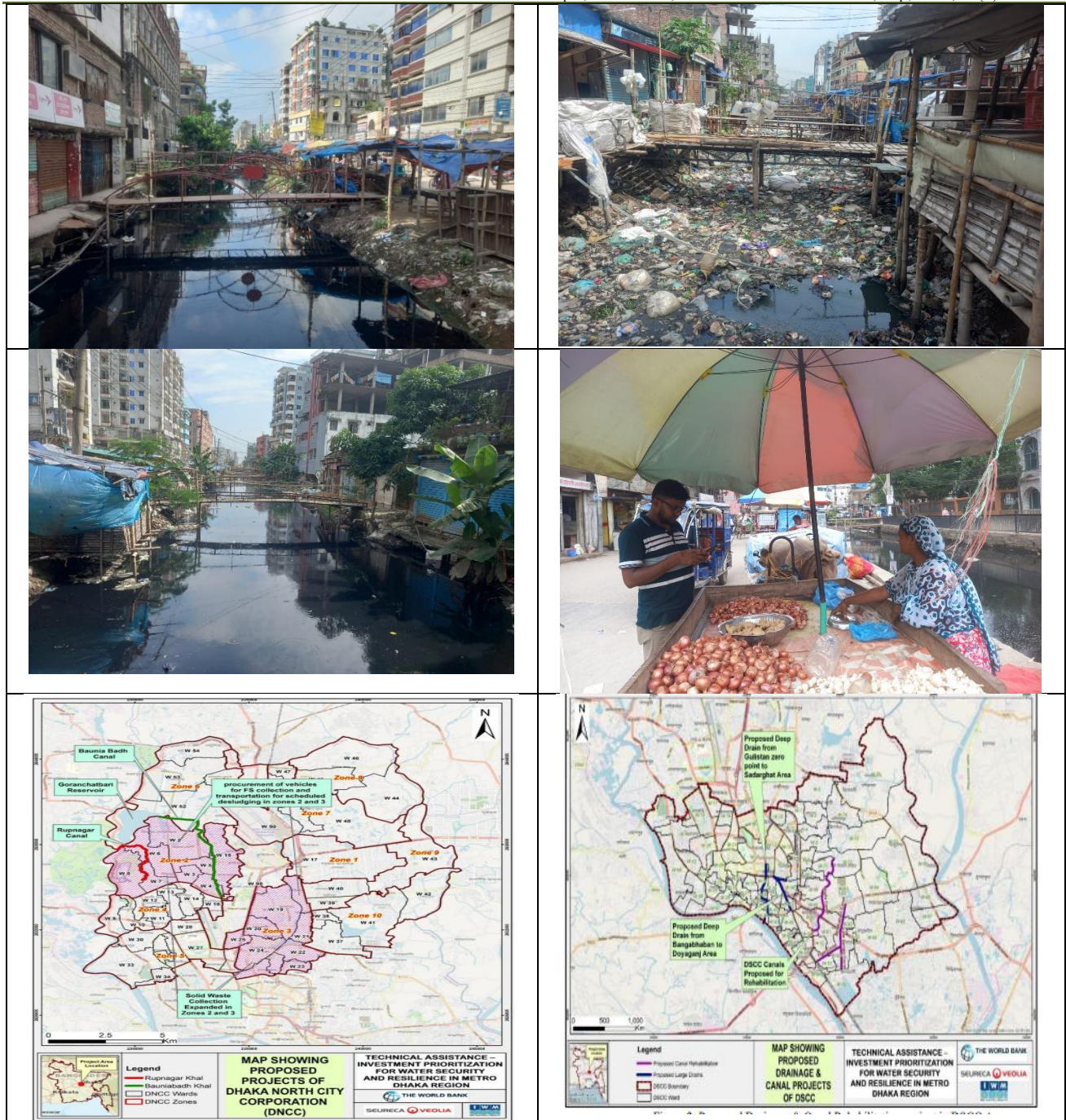
The assessment indicates that the feasibility of canal restoration differs between two distinct sections of the canal. The first section offers relatively favorable conditions for restoration, as vacant land is available on both sides, allowing for embankment improvement, walkway development, and afforestation. The second section faces greater social and technical challenges, particularly due to private land ownership, existing structures along the canal boundary, and privately constructed bridges that restrict canal widening and cleaning activities. Therefore, restoration interventions should be section specific and tailored to the existing physical, social, and land use conditions, rather than applying a uniform approach throughout the canal.

Considering the findings, Kajla Canal restoration should adopt a phased, section-specific, and socially inclusive approach. Canal deepening and improvement of banks should be combined with proper management or relocation of vendors, livelihood restoration measures, alternative arrangements for private bridges, and regular solid waste management. Any land acquisition, demolition, or relocation should be undertaken through meaningful consultation and appropriate compensation and livelihood support for affected persons. Community awareness and participation should also be strengthened to ensure that restored canal areas remain free from future encroachment and waste dumping.

Overall, the sustainable restoration of Kajla Canal requires a balance between environmental recovery, improved drainage and water management, biodiversity restoration, and protection of vulnerable livelihoods. A well-planned restoration strategy can transform the canal from a heavily polluted and obstructed drainage corridor into a functional, accessible, and environmentally sustainable urban waterway, contributing to improved resilience and quality of life in the DSCC area.

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Picture of Kajla Canal and Map Showing proposed projects of Dhaka South City Corporation. Technical assistance investment prioritization for water security and resilience in metro Dhaka Region