

Adopting Citywide Inclusive Sanitation for Urban Sanitation Programming in Bangladesh

SUMMARY

As part of the overall efforts of promoting equitable and sustainable access to safely managed sanitation, UNICEF Bangladesh is piloting a citywide inclusive sanitation (CWIS) initiative to address urban sanitation challenges in Chattogram, Dhaka and Rajshahi. The initiative, which commenced in 2020, aims to ensure equitable access to safely managed sanitation services for all urban dwellers, including marginalized communities. It focuses on holistic planning, institutional strengthening, capacity-building, policy advocacy, inclusive infrastructure development, and gender mainstreaming.

The CWIS project is designed to strengthen the sector policy environment and empower city corporations in inclusive urban sanitation planning, implementation and monitoring. In addition, the project emphasizes community engagement, behaviour change communication, innovation and private sector participation in achieving its goals.

Based on the project achievements to date, UNICEF Bangladesh has made significant progress in mainstreaming CWIS in sanitation-sector dialogue and development processes; strengthening partnerships for harmonization of CWIS approaches; and leveraging its relationship with governments to improve the coordination mechanisms among the different government ministries, departments and agencies for the promotion of inclusive urban sanitation services using CWIS principles.

This field note presents the experiences, lessons learned and emerging issues from the ongoing implementation of the CWIS initiative in Bangladesh.

Introduction

Background

The UNICEF 2016–2030 Global Water, Sanitation and Hygiene (WASH) Strategy emphasizes the importance of WASH in urban areas, responding to the increasing number of vulnerable children in impoverished urban settings worldwide. In addition, UNICEF has developed Global

Framework for urban WASH to provide strategic vision on approaches for inclusive and sustainable WASH services for the most marginalized urban children and their families.¹ This Field Note is part of UNICEF's efforts to document country-specific initiatives in urban sanitation programmes. It specifically details the implementation of citywide inclusive sanitation (CWIS) in Bangladesh, outlining the strategies

and processes adopted by UNICEF Bangladesh to enhance sanitation in slums and densely populated urban regions. These regions often rely on on-site sanitation solutions and face challenges due to rapid urbanization and climate change. The experiences shared in this document offer valuable insights and lessons for other UNICEF country offices that are either implementing or planning to implement CWIS in similar contexts.

Understanding the context: Urban sanitation in Bangladesh

Bangladesh faces unique challenges due to rapid urbanization. The country's urban population was estimated at 70 million in 2023.² Urban growth in Bangladesh is fuelled by 3 per cent annual migration from rural areas,³ which offers economic opportunities but strains the provision of basic services, notably sanitation.

In Dhaka, only 20–25 per cent of residents are connected to a sewerage system, and the rest rely on on-site sanitation facilities.⁴ The lack of appropriate faecal sludge management infrastructure and services is leading to substantial environmental pollution, especially in urban water bodies. The situation is exacerbated by climate change, with erratic rainfall and intense monsoon seasons causing floods and damaging the existing sanitation infrastructure.

To address these issues, the Bangladesh Government has implemented several policies and strategies – such as the National Sanitation Strategy (2011) and Urban Development Policy (2016) – focusing on hygiene, safe sanitation, sustainable urbanization and improved infrastructure. UNICEF has been a key player in supporting governments to address urban sanitation challenges through advocacy, capacity-building and promoting community-led initiatives. Despite these efforts, there has not been accelerated progress in providing equitable and sustainable safely managed sanitation services to the growing urban populations in the country. Hence, there is a need for more pragmatic

BOX 1: KEY POINTS

- *Bangladesh's rapid urbanization boosts economic growth but struggles with basic services, notably in sanitation.*
- *High reliance on non-sewered sanitation, high population densities and significant disparities in service delivery provision intensify the urban sanitation challenges.*
- *Effective policy interventions and projects implemented by state actors are enhancing the sanitation landscape but not sufficiently to accelerate progress on inclusive urban sanitation services.*
- *UNICEF plays a crucial role in promoting inclusive urban sanitation services through policy support, capacity-building, behavioural change campaigns, fostering innovation, and piloting climate-resilient sanitation solutions.*

sanitation approaches that will meet the needs of the most marginalized urban populations, which are often left behind in the provision of services.

Description of UNICEF intervention

UNICEF Bangladesh's CWIS Initiative is designed to tackle the acute urban sanitation challenges arising from rapid urbanization. It is being implemented in three city corporations: Chattogram, Dhaka North and Rajshahi. It commenced in 2020 and focuses on reducing disparities in sanitation access, particularly for marginalized communities. It advocates for comprehensive, inclusive urban sanitation strategies that guarantee equitable access to everyone, regardless of income, gender or disability, aligning with the principles of the CWIS approach.

BOX 2. WHAT IS CITYWIDE INCLUSIVE SANITATION?

CWIS is a public service approach to planning and implementing urban sanitation systems to achieve safe, adequate, equitable and sustainable sanitation for everyone in an urban area, paying special attention to the needs of the poor, the marginalized, women and girls.

The approach is based on seven principles and aims to create a comprehensive and sustainable urban sanitation system that benefits all urban residents, with a particular emphasis on the aforementioned vulnerable groups.

More information on CWIS is proved by Schrecongost et al. (2020).⁵

Project goals and objectives

The CWIS project in Bangladesh is aimed at promoting equitable access to sanitation services for the poor and most marginalized populations in urban areas, with a focus on slums and informal settlements. The specific objectives of the project include the following.

- Supporting the Government to strengthen the policy environment and systems for accelerating progress on inclusive urban sanitation services using the CWIS approach.
- Enhancing UNICEF and sector capacity to promote the CWIS approach for inclusive urban sanitation services.
- Strengthening UNICEF's position as a key player and thought leader on urban sanitation in the country.

Project activities and achievements

The following is a brief description of each of the project interventions and achievements made so far.

Mainstreaming CWIS principles in policies

UNICEF took significant steps to lay the foundation for inclusive and equitable sanitation in Bangladesh. First, it undertook a detailed assessment of existing WASH policies, strategies, guidelines and legal frameworks. This analysis highlighted significant gaps in providing inclusive sanitation for marginalized groups, including slum dwellers, low-income communities and climate-vulnerable areas. Although existing policies considered wealth and geographic disparities, they fell short of ensuring equitable sanitation for the most impoverished and marginalized populations.

In response, UNICEF, along with the Policy Support Branch (PSB) of the Ministry of Local Government, Rural Development and Co-operatives (MoLGRDC), initiated revisions to the Millennium Development Goal (MDG) era 1998 National Water and Sanitation policy. The objective was to realign this policy with the ambitious targets of Sustainable Development Goal (SDG) 6.2 and integrate CWIS principles, fostering inclusive and equitable sanitation. The revision process involved comprehensive consultation workshops with diverse stakeholders, including youth, urban slum residents, poor and ultra-poor, persons with disabilities, and minority and Indigenous communities (*see Figure 1*). These consultations were instrumental in understanding the specific sanitation needs of these often-neglected groups.

The first draft of the revised policy, which now incorporates CWIS principles, has been developed and submitted for Government approval, marking a significant step towards meeting the SDG 6.2 targets and enhancing sanitation services.

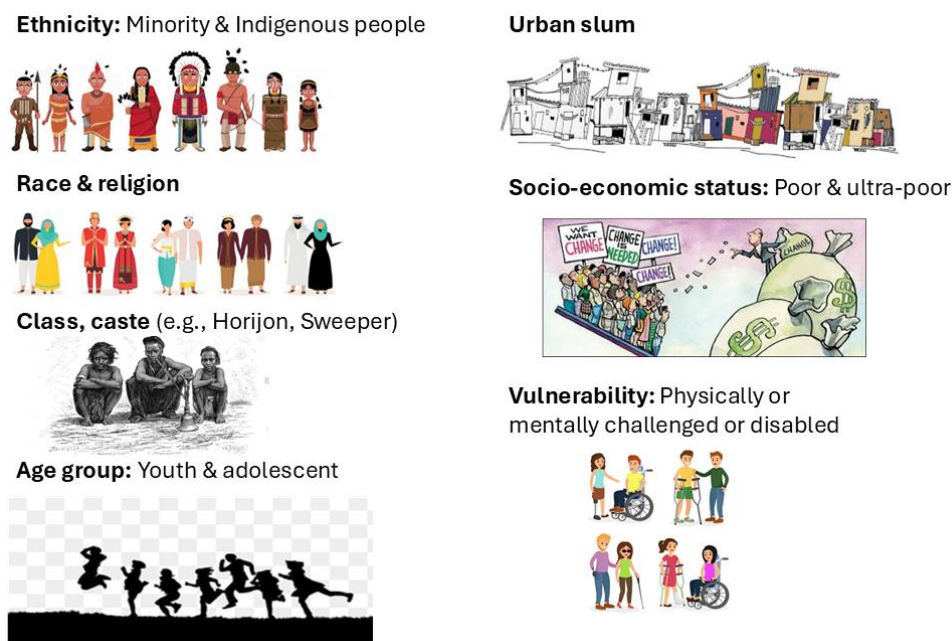


Figure 1. Identified groups for inclusive policy formulation and urban sanitation services

Source: UNICEF Bangladesh (2023).⁶

Establishing/strengthening CWIS coordination platforms

There are several other government institutions and development partners implementing CWIS in the country, hence the need for strengthening the coordination mechanisms for promoting alignment of approaches and advocating for mainstreaming of CWIS principles in sector policies, strategies and plans.

At national level, UNICEF is providing strategic support and technical assistance to the Department of Public Health (DPHE) CWIS/ Faecal Sludge Management (FSM) Cell and the Local Consultative Group (LCG) Sector Development Plan (SDP) thematic subgroup to provide effective platforms for coordinating CWIS activities in the country. The CWIS/FSM Cell functions as the central hub for coordinating CWIS activities pertaining to resource

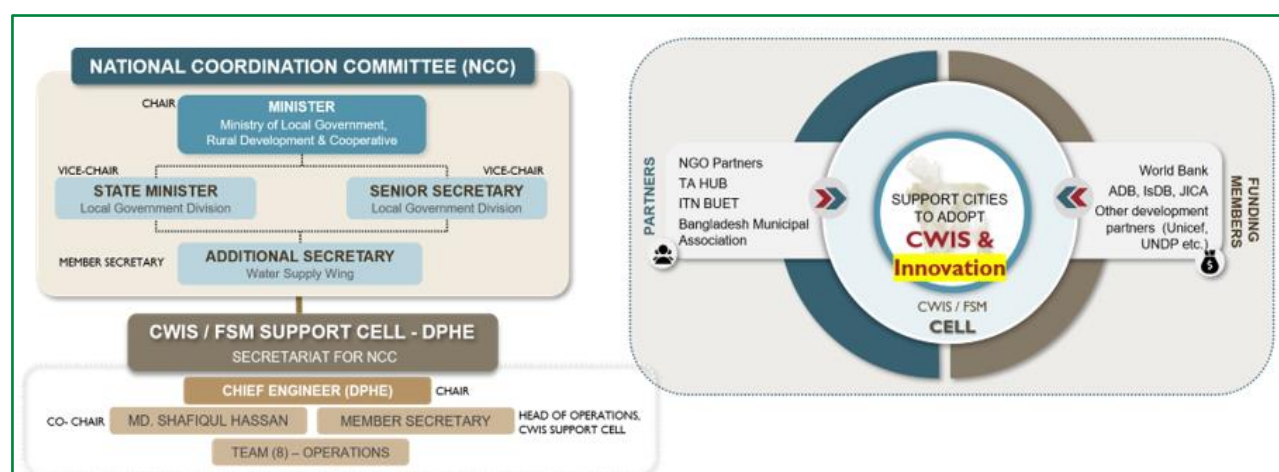


Figure 2. CWIS National Coordination Committee

Source: UNICEF (2022).⁷

mobilization, while the MoLGRDC-PSB instituted the LCG Thematic Group on CWIS that focuses on coordination activities in large cities (see *Figure 2*). Both the CWIS/FSM Cell and the Sector LCGs are active with bilateral donors, development partners, government agencies, civil society organizations, academia, and development banks supporting the CWIS agenda.

Strengthening partnership for CWIS

UNICEF facilitates collaboration and partnerships among relevant stakeholders for effective delivery of CWIS in the country. As part of promoting an enabling regulatory environment for effective and sustainable delivery of WASH services, UNICEF – in collaboration with Asian Development Bank – is providing technical support to the MoLGRDC-PSB to establish an independent Water and Sanitation Regulatory Commission. The process of establishing the commission has been highly consultative, with UNICEF facilitating dialogue among relevant government ministries and agencies (DPHE, Water Supply and Sewerage Authority [WASA], City Corporation, local government institutions) and other partners to create awareness and build consensus on the need for establishment of Water Supply and Sanitation Regulatory Commission.

Building capacity for CWIS

A major component of this project is to enhance UNICEF's internal capacity to position itself as a thought leader in urban sanitation. UNICEF Bangladesh benefited from series of customized CWIS training and webinars organized by UNICEF Headquarters and Regional Office for South Asia in collaboration with UN-Habitat, the Institute of Training Network at Bangladesh University of Engineering & Technology (ITN-BUET) and the World Bank. These initiatives have enhanced the capacity of UNICEF Bangladesh to provide strategic support in strengthening systems and advocating for scaling up CWIS approach in the country. UNICEF Bangladesh is also working closely with ITN-BUET and other

partners to develop and disseminate context-specific training packages to enhance sector capacity in the CWIS approach.

At subnational level, UNICEF initiated the development of draft gender-responsive capacity-building plans for Chattogram and Rajshahi city corporations as lack of capacity was seen as a critical bottleneck for implementation of the CWIS approach. These plans were developed through consultative processes and public meetings gathering inputs from stakeholders and marginalized groups. The plans are aimed at building awareness and capacity among city authorities and residents to promote sustainable and equitable urban sanitation services.

Development of costed CWIS action plans

UNICEF facilitated the process and provided technical support for the development of comprehensive and costed action plans for implementation of the CWIS approach in Chattogram, Dhaka North and Rajshahi city corporations. The process involved:

- Baseline assessment of the existing sanitation situation in Chattogram and Rajshahi
- On-site sanitation compliance assessment in Dhaka North City Corporation (DNCC)
- Stakeholder workshops and public meetings for validation of baseline and assessment reports
- Development of costed CWIS action plans.

Baseline assessment of the sanitation situation in Chattogram and Rajshahi city corporations

As part of the process of developing the CWIS action plans, UNICEF engaged ITN-BUET to conduct a comprehensive assessment of the sanitation situation in Chattogram and Rajshahi city corporations using the City Service Delivery Assessment (CSDA) tool. The exercise was aimed at assessing the enabling environment

related to sanitation policy, planning and inclusion; service delivery in terms of funding, capacity and inclusion; and sustainability (regulation, institutions and inclusion) for CWIS in the two city corporations.

The assessment process involved several steps: document review, customizing CSDA questions for CWIS assessment, identifying key stakeholders for online interviews, and compiling their responses to calculate CSDA scores for both city corporations. In addition, a stakeholder-orientation workshop was organized for participants from both cities on CWIS assessment and CSDA tools – the feedback provided at this workshop was used to finalize the tools and logistics for the exercise. A validation workshop was also organized to share the draft report for further inputs from all relevant stakeholders. The final step comprised preparing the detailed CSDA reports, incorporating validation workshop feedback. The CSDA scorecard (see Figure 3) highlights the current state of play and identifies barriers for sanitation improvement in the two cities. Full reports of the CSDA are available here:

[CSDA Report for Rajshahi City](#)

[CSDA Report for Chattogram City](#)

On-site sanitation compliance assessment in Dhaka North City Corporation

UNICEF supported a sanitation compliance assessment in four wards of DNCC, covering 3,830 buildings/plots. The assessment involved the following.

- Desk review of policy documents, guidelines and other relevant reports of various government agencies and development partners.
- Establishment of the Household Onsite Assessment Compliance Guidelines Committee to provide the required guidance and ensure quality assurance of the exercise. Members of the committee were from DNCC, Dhaka WASA, ITN-BUET, UNICEF and the presidents of residents associations. The committee was chaired by the chief waste management officer of DNCC.
- Development and testing of survey questionnaires.
- Data collection and analysis.
- Final report preparation and dissemination.

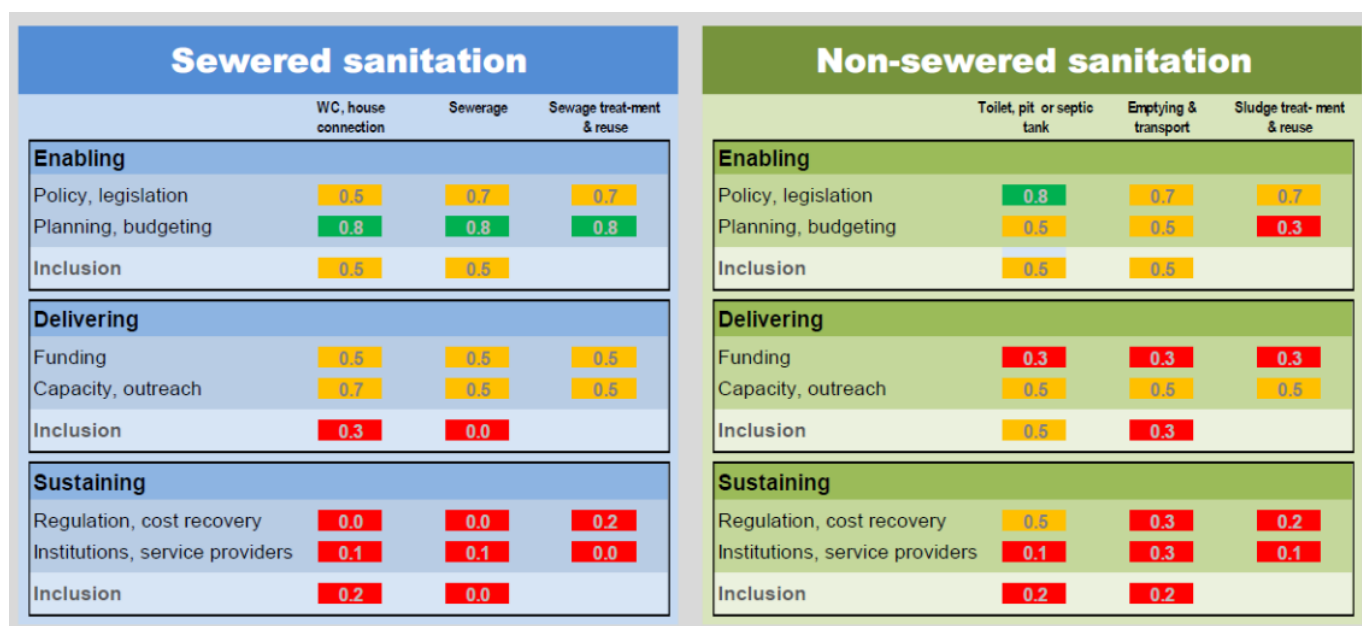


Figure 3. CSDA full assessment – sewered and non-sewered – Chattogram

Source: UNICEF Bangladesh (2023).⁸

BOX 3: COMPLIANCE CHECK CRITERIA

- Presence of septic tanks
- Single-chamber (pit) / two-chamber septic tank
- The volume of septic tank in relation to existing number of users
- Length to width ratio of 3:1
- Presence of soak pit
- Condition of the septic tank (overflowing or not)
- Connection of septic tank outlet with surface drain
- Septic tank and soak pit condition (visible cracks or damage, etc.).

The results revealed that only 1 per cent of the plots surveyed fully complied with regulations, 12 per cent partially complied but required modifications, and 87 per cent did not meet the required standards. This was a major revelation to all the authorities on the state of non-compliance at the household level in the four wards of Dhaka North, and highlighted a significant gap in on-site sanitation at the household level. The findings underscored the need for constructing proper septic tanks, proper operation and maintenance of facilities (including regular desludging), addressing illegal effluent discharge points, raising awareness on containment standards, and strengthening compliance monitoring.

Generic recommendations included developing decentralized faecal sludge treatment plants, developing financing strategies for improving containment, implementing effluent quality monitoring and enforcement, and using smart technology for database management. The final report of the on-site assessment is available.⁹



Figure 4. DNCC staff carrying out compliance assessment of a containment system in a DNCC ward

Development of costed CWIS action plan for DNCC

Using the findings of the on-site sanitation compliance assessment, UNICEF worked closely with DNCC to develop a costed action plan for CWIS. This plan has the vision of protecting freshwater bodies and promoting a healthy living environment in Dhaka city by 2025 through reduction of pollution caused by unregulated sewage disposal and use of safe sanitation practices.

The plan, with a budget of US\$4.5 million, includes establishing a bi-directional communication channel, creating a septic tank database, GIS mapping of drainage and sewerage lines, setting up monitoring systems, promoting institutional reform, revising public-private partnership (PPP) policy, and enhancing safely managed sanitation services. This investment is expected to generate significant returns for DNCC, up to US\$221 million, supporting decentralized faecal sludge

management treatment plants, dislodging illegal septic connections, and systematic water body monitoring. Furthermore, the Government's US\$221 million investment could create a US\$500 million per year sanitation service market for the private sector in the DNCC area.

A comprehensive public consultation was conducted to discuss and validate the draft plans. This step was crucial to ensure that the plan incorporates the needs of all city segments including marginalized and vulnerable populations. More information on the costed plan is available.⁴

Similar plans are being developed for the cities of Chattogram and Rajshahi. The plans will outline interventions and actions aimed at addressing the sanitation challenges in these two cities.

Implementation of scheduled desludging scheme in DNCC

A scheduled desludging scheme is seen as a key intervention to improve faecal sludge management in Dhaka city and is one of the short-term recommendations of the Onsite Sanitation Compliance Assessment. It was consequently developed to align with Bangladesh National Building Code (BNBC) guidelines, and is structured around a multifaceted approach with four main components.

The first component, the scheduling method, employs the inter municipal information system (IMIS) for the automated scheduling of household septic tank desludging. This system categorizes buildings into three priorities based on their last desludging and proximity to the Dasher Kandi Sewage Treatment Plant. The schedule initially sets desludging at every three years, transitioning towards an annual routine. This phased approach starts with urgent cases – specifically, those that have never undergone desludging or have not been emptied in over three years. It then extends to include areas that have been recently emptied, starting with locations near the treatment facility

and gradually expanding to cover all of Zone 3 in DNCC.

Fleet management forms the second component, focusing on optimizing vehicle and personnel coordination. This involves strategically placing Vacutugs for desludging, along with supporting transportation and disposal equipment. The allocation of these resources across various locations is to maximize operational efficiency.

The third aspect, the tariff system, establishes a fair and sustainable financial model. It calculates tariffs based on total operational costs and the desludging rate, balancing consumer affordability with the scheme's revenue requirements.

A monitoring plan, the fourth component, brings together a committee with members from both DNCC and the Dhaka Water Supply and Sewerage Authority (DWASA). This committee is responsible for overseeing implementation, compliance with standards, and addressing challenges.

An essential part of the plan is the treatment and disposal of collected septage at the Dasher Kandi Sewage Treatment Plant, managed by DWASA, ensuring environmental sustainability of the operations.

UNICEF is providing strategic support in the development and implementation of the proposed desludging plan, including sustained advocacy and provision of technical assistance to the DNCC team working on this.

Guidelines for sanitation technology selection in DNCC

Following the Onsite Sanitation Compliance Assessment in DNCC, which highlighted that most on-site systems did not meet the desired standards, UNICEF Bangladesh supported the development of technical guidelines to guide citizens and city authorities in adopting appropriate on-site sanitation solutions. The

guidelines were developed through a collaborative effort involving various organizations and institutions. UNICEF Bangladesh commissioned the Asian Institute of Technology (AIT) in Thailand to lead the project. AIT partnered with Umwelt-Projekt-Management GmbH (UPM) for this study. The overall objective of the guidelines is to provide solutions and guidance to improve on-site sanitation practices, thereby mitigating the risks associated with inadequate wastewater management and ensuring the well-being of the city's residents as its population continues to grow.

The target audience for these guidelines includes all citizens of Dhaka, particularly property owners and individuals seeking to select an on-site containment system. The guidelines also serve as a basis for authorities granting building permits for on-site sanitation systems. Their content provides an objective overview of 12 on-site containment options, categorized into "partial solutions" and "single integrated systems" for sustainable sanitation practices. They also include rapid assessment tables and containment factsheets for each option.

To promote the guidelines effectively, recommendations were put forward, such as implementing a certification process for on-site sanitation systems, making certification a requirement for building permissions, setting deadlines for improving existing systems, and providing training for building/permitting authorities. Additionally, updating the Bangladesh National Building Code to focus on more sustainable on-site sanitation practices is emphasized to create a more sustainable sanitation sector in Dhaka. More information on the technical guidelines is available.¹⁰

City Sanitation Challenges and Opportunities International Conference

The findings from the Onsite Sanitation Compliance Assessment in DNCC revealed the poor sanitation environment situation in the city

which required urgent actions. As part of the short-term plan to address this issue, UNICEF partnered with DNCC to organize an international conference, which was held in November 2022. The main objectives of the conference were to:

- Create awareness of the urban sanitation challenges on safe handling and disposal along the sanitation service chain
- Seek experts' opinions on appropriate solutions for addressing the city's sanitation challenges
- Find a way forward on promotion of safe sanitation systems in DNCC by relevant government ministries, departments and agencies.



Figure 5. The Honourable Mayor of DNCC, Mr Atiqul Islam, inaugurating the Technology Trade Fair in Dhaka North

The two-day conference attracted participants from all the major stakeholders in the country, including representatives of residents' associations, and had a technology exhibition (Technology Trade Fair) which provided opportunities for the private sector to showcase innovative technologies for addressing city sanitation challenges. The main outcome of the conference aligns with the proposed vision of the DNCC CWIS Action Plan of enhancing a healthy and productive living environment and reducing pollution of freshwater bodies by improving safe sanitation practices in the city. The conference provided the opportunity to mobilize private sector participation in addressing the urban sanitation

challenges in Bangladesh. The report of the conference is available.¹¹

CWIS advocacy plans

To ensure that CWIS goals were integrated into town development plans in Bangladesh, UNICEF supported the development of multi-year advocacy plans for Chattogram, Dhaka North and Rajshahi. The plans are the result of a collaborative effort involving city authorities (city corporation, WASA, city development authority), and the MoLGRDC.

The advocacy plans encompass three key pillars integral to the CWIS plans' success. The first pillar focuses on awareness creation and citizen engagement. It aims to educate and engage citizens on the prevention of water pollution and the health hazards associated with unsafe sanitation practices. The second pillar emphasizes institutional reforms and the promotion of technical solutions and systems to ensure the delivery of safely managed sanitation services for all. This involves streamlining and improving existing institutions and adopting innovative solutions. The third and final pillar is dedicated to involving the private sector through PPPs. This model is seen as an essential component of the project for promoting and efficiently managing safely managed sanitation services, leveraging the expertise and resources of private entities.

CWIS Communication Strategy

In line with the first pillar of the CWIS advocacy plans regarding awareness creation and citizen engagement, UNICEF assisted DNCC, Rajshahi City Corporation and Chattogram City Corporation in developing a Social and Behaviour Change Communication (SBCC) Strategy on FSM. First, a rapid assessment of existing behavioural patterns, challenges, bottlenecks and preferences was conducted; second, 92 public meetings to develop solutions in collaboration with key stakeholders were organized and facilitated.

The public meetings/stakeholder engagement was a critical component of developing the SBCC Strategy, aimed at gathering knowledge, attitudes and practices regarding safe FSM among city dwellers. The participants included ethnic communities, youth, religious representatives, business communities, building/homeowners, urban slum dwellers, poor class/caste representatives, and the general population. Qualitative approaches were used to facilitate the discussions around FSM, sanitation and hygiene.



Figure 6: Participants at the public meeting in DNCC

Both the public meetings and the rapid assessment revealed that city dwellers have a minimal understanding of FSM. The knowledge gap in FSM adoption is primarily due to the lack of awareness among city dwellers about FSM mechanisms and its crucial role in handling sewage waste. Many residents still rely on outdated and unsanitary practices, such as connecting septic tanks to drains or disposing of waste directly into the environment. Additionally, mechanical emptying using advanced machines such as VACU-TUG is underutilized due to misconceptions about cost and effectiveness. To bridge this knowledge gap, the SBCC Strategy proposes awareness campaigns targeting specific groups, including influential individuals, youth, homeowners, and sanitation workers. Use of various media channels, such as television adverts and social media, is proposed to educate city residents about FSM and encourage its adoption, with a particular focus on engaging women who can play a pivotal role in influencing family decisions and promoting safe and sustainable FSM practices.

More information on the SBCC Strategy is available.¹² The reports on public meetings and stakeholder engagement on CWIS Communication Strategy are available here:

[Report of Public meetings in Chattogram City Corporation](#)

[Report on DNCC Public meetings](#)

[Report on Rajshahi City Corporation CWIS Public meetings](#)

Social media campaign

As part of the implementation of the SBCC Strategy, UNICEF supported several media campaigns (via social media platforms, e.g., Twitter/X, Instagram, Facebook and YouTube) to raise awareness of sanitation challenges and opportunities in Dhaka. Advocacy video documentaries were developed on '[DNCC City Sanitation Challenges and Opportunities](#)' and '[City Public Enlightenment Campaign](#)', which were widely distributed via social media channels. The channels effectively reached 2.5 million viewers in Dhaka.

Low-income community solution for safely managed sanitation and reuse of wastewater

Innovative and affordable solutions are required to effectively address the sanitation challenges in low-income communities and slums of urban areas. UNICEF is piloting three transformative technologies as proof of concept to increase awareness of low-cost, at-source wastewater treatment systems among local actors.

In Rajshahi, UNICEF has installed a unique wastewater treatment and reuse facility at Ashrayan, a government-owned, low-income, community housing scheme. The system is designed to collect, treat and reuse wastewater (toilet flushing and other non-potable uses). The system serves a total of 40–80 households and has a capacity of 4,000 m³/day. It uses sequential batch reactor (SBR) treatment technology and is

currently undergoing trials for effluent standards. A critical challenge here was to get community acceptance for reusing the treated wastewater, which needed significant awareness-raising to gain confidence of the beneficiaries.



Figure 7. Testing of the SBR wastewater treatment system at a low-income settlement of Rajshahi City

In DNCC, a similar wastewater treatment (SBR) and reuse system is planned to be installed at an upmarket mosque (Gulshan Society Mosque), where treated wastewater is planned to be used for toilet flushing. Furthermore, a decentralized wastewater treatment system (DEWATS) is planned to be installed in Korail slum. Both the pilots in DNCC are aimed at improving the water quality of nearby water bodies. Feasibility studies for both the pilots are currently ongoing.

Challenges

Limited financial resources: High population density in cities such as Dhaka (49,000 inhabitants per km²) poses unique challenges as to which solutions are appropriate in such high densities. On-site sanitation systems, which are predominant, have limitations when the population densities are high, while centralized conventional sewer networks are resource intensive, so developing a mix of centralized and decentralized options could prove to be the best solution. But the limited financial resources available within government authorities to provide the necessary

infrastructure interventions pose significant challenges for implementation of viable solutions.

Lack of clear policy guidance and clarity in mandates: The lack of clarity and specific policy direction creates duplications and grey areas for mandates among actors. To forge a way forward, intensive stakeholder consultation and engagement was required, which proved to be a time-intensive process.

Quick succession of project phases and interventions: The low awareness of key sanitation challenges in the cities across actors, especially the inhabitants and the political leadership, poses a substantial threat to sanitation improvements and compounds the unwillingness to pay for intervention. To increase the understanding of the ill-effects of poor sanitation, intensive engagement with political leadership and rigorous media campaigns were required, which are both time and resource intensive. Such communication activities need continual support and should be followed by implementation of the intervention immediately or at least in the very short term, which if not done leads to raised expectation and disappointment among actors.

Lack of clarity on the CWIS approach: As CWIS is a set of guiding principles, a framework to operationalize the approach is required. Thus, to implement CWIS, it is necessary that all actors involved in sanitation service delivery improvement have a common vision of the approach and its planned interventions. It is necessary to develop a common framework of understanding, via a participatory process that culminates in a Sanitation Improvement Strategy that provides a road map for implementation of the various components of CWIS. Where such a road map was developed within the project, it was with limited involvement of wider sector actors and not widely circulated among actors, which led to a lack of ownership among actors.

Lessons learned from the CWIS Initiative

Mainstreaming CWIS principles into national WASH policy enhances equitable and safe sanitation services: This alignment is essential for fostering the policy environment needed to accelerate progress towards SDG 6.2 targets. UNICEF's facilitation of public participation events and intensive stakeholder engagements during the cities' sanitation assessments and planning phases was key in promoting the inclusion of marginalized groups in policy dialogues, ensuring equitable and inclusive sanitation services in underserved urban areas. Incorporating the concerns of the marginalized populations in the policy review process has enriched understanding of their sanitation needs, thereby improving the current urban sanitation policy framework.

Strengthening partnerships and collaboration are critical for achieving CWIS outcomes: Effective collaboration with government institutions and development partners is crucial for delivering equitable and inclusive sanitation services in urban areas under the CWIS framework. UNICEF's strong relationships with government agencies enable it to facilitate enhanced coordination among various government bodies, development agencies and NGOs in the urban sanitation subsector. These strengthened partnerships, including with entities such as UN-Habitat, the World Bank, Asian Development Bank and ITN-BUET, have bolstered UNICEF's internal capacity in implementing CWIS, harmonized approaches for urban sanitation development, and improved the execution of project activities.

Strong leadership and political will are key to CWIS success: Strong political will, manifesting as actionable commitments, is crucial for sustained improvements in safe urban sanitation services. UNICEF's effective engagement with prominent political and government figures, including ministers, mayors and technocrats, has led to significant initiatives that raise awareness of inadequate sanitation in project cities. Organizing high-profile events, media campaigns, and developing informative materials have been instrumental in increasing awareness and involving key stakeholders to achieve a common goal. These efforts are essential for mobilizing the necessary political leadership in accomplishing the city's urban sanitation priorities.

Skilled and experienced personnel are essential for CWIS implementation: The right skills and expertise are essential for UNICEF staff and sector partners to effectively implement the CWIS approach. In collaboration with ITN-BUET, a knowledge hub for CWIS, UNICEF has developed localized capacity-building plans and training resources. These initiatives support sector partners in Bangladesh in acquiring the necessary knowledge and skills. Moreover, enhancing the skills and knowledge of UNICEF Bangladesh WASH staff through webinars and bespoke training packages has improved the facilitation of national and subnational dialogues on inclusive urban sanitation services.

Leveraging private sector expertise is critical for addressing urban sanitation challenges: The private sector is crucial in driving innovative solutions across the sanitation chain to tackle significant urban sanitation challenges. They are a key stakeholder in the urban sanitation sector and their involvement complements government efforts to provide efficient, affordable and safe sanitation services in the city. UNICEF has facilitated the engagement of the private sector in Bangladesh by promoting transformative sanitation technologies and services focused on the urban poor as part of the DNCC CWIS master plan implementation.

A strategic CWIS plan is an essential step for achieving inclusive urban sanitation improvements: The CWIS plan offers a strategic framework and road map for enhancing urban sanitation by addressing the needs and interests of all key stakeholders, especially the marginalized. It includes targeted interventions specifically designed to tackle the complex challenges of urban sanitation effectively. UNICEF has been instrumental in developing the DNCC costed CWIS Action Plan through a consultative process with key stakeholders, achieving broad consensus and support for the proposed measures. This collaborative approach ensures that the interventions are tailored to the local context, fostering ownership and commitment among all parties involved, which is vital for the successful implementation of the plan.

SUMMARY OF CWIS EXPERIENCE IN BANGLADESH

Based on the ongoing project implementation, UNICEF Bangladesh has demonstrated its experience and skills in implementing various components of the CWIS approach and is now better positioned to support the following activities within the CWIS approach: strengthening the enabling environment and capacity for CWIS; implementing at-scale advocacy for CWIS and bolstering the political will for improved sanitation; undertaking information, education and communication (IEC) and behaviour change campaigns for gender and social equity; developing strategic CWIS plans for addressing urban sanitation challenges; mobilizing the required resources; and testing innovative sanitation technology solutions and services for the urban poor.

Next steps

The UNICEF CWIS initiative in Bangladesh is ongoing and there is an implementation plan guiding this process. The following are some of the other ongoing interventions being supported by UNICEF Bangladesh.

Development of Rajshahi City Corporation comprehensive CWIS investment case

Building on the success of pilot projects involving transformative, nature-based technologies, UNICEF plans to develop an investment case for scaling up these technologies, both locally and nationally. This investment case, to be prepared in collaboration with key stakeholders, will outline the benefits, costs and potential impact of adopting nature-based solutions in the broader context of the CWIS initiative.

Product standardization and enhanced private sector engagement

Recognizing the pivotal role of the private sector in advancing the sanitation subsector, UNICEF aims to strengthen this collaboration further. The sanitation technology trade fair held in November 2022 showcased the immense potential and positive impact of private sector involvement in this field. Building on this success, UNICEF plans to develop a framework for product standardization. This initiative will focus on establishing clear and consistent standards for sanitation technology products. By doing so, it will not only enhance the quality and reliability of

these products but also facilitate easier market entry and scalability for private sector players. Additionally, this standardization process is expected to foster innovation, as companies will be encouraged to meet and exceed these benchmarks. Through these efforts, UNICEF seeks to create a more robust and dynamic environment for private sector participation, ultimately leading to significant improvements in the sanitation situation. This approach will also involve continuous engagement with industry stakeholders, fostering a collaborative ecosystem that supports sustainable and efficient sanitation solutions.

Revision of DWASA Sanitation Master Plan to mainstream CWIS principles

UNICEF intends to advocate for the revision of the DWASA Sanitation Master Plan to align it with CWIS principles. This collaborative effort, involving DNCC and Dhaka South City Corporation, aims to create a more inclusive, sustainable and resilient sanitation system. The revised plan will address diverse urban needs, integrating advanced technologies, nature-based solutions and community-led approaches to ensure access to safe sanitation for all, including vulnerable populations. Concurrently, a detailed investment plan will be developed to outline the necessary financial strategies and sources, identifying potential funding from government, international grants and private investments. This plan will prioritize cost-effective and sustainable solutions for long-term viability.

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