

City Wide Inclusive Sanitation (CWIS) Project

Report on Dhaka North City Sanitation Trade Fair, 2023



Report by

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Abbreviations

DNCC	Dhaka North City Corporation
CWIS	City Wide Inclusive Sanitation
ITN	International Training Network
BUET	Bangladesh University of Engineering and Technology
CSDA	City Service Delivery Assessment
FSM	Faecal Sludge Management
BMGF	Bill and Melinda Gates Foundation
ETP	Effluent Treatment Plant
STP	Sewage Treatment Plant
FSTP	Faecal Sludge Treatment Plant
SSTP	Sludge Sewage Treatment Plant
WT	Water Treatment
WD	Water Disinfection
WTS	Wastewater Treatment System
Vacutug	Vacuum Tug
MBR	Membrane Bio Reactor
MBBR	Moving Bed Biofilm Reactor
ECOSTP	Ecological Sewage Treatment Plant
STP	Biological Sewage Treatment Plant
WBR	Water Bio Remediation
SWM	Solid Waste Management
WSP	Water Softening Plant
ROP	Reverse Osmosis Plant
RWH	Rain Water Harvesting

Report on

Dhaka North City Sanitation Trade Fair, 2023

1.0 Introduction

Dhaka North City Corporation (DNCC) organized a two-day long trade fair on sanitation titled 'Dhaka North City Sanitation Trade Fair, 2023'. The fair took place in the premises of President Justice Sahabuddin Ahmad Park in Gulshan-2, Dhaka on 09-10 March 2023. DNCC organized the fair with cooperation of UNICEF and Bill and Malinda Gates Foundation (BMGF) to implement modern and developed services of secured and sustainable sanitation system in the areas of the City Corporation. Mr. Md. Tajul Islam MP, honorable Minister of LGRD&C opened the fair as Chief Guest. Mr. Md. Atiqul Islam, honorable Mayor of DNCC chaired the opening session.

25 organizations from home and abroad working with providing different sanitation related technologies such as ETP (Effluent Treatment Plant), STP (Sewage Treatment Plant), FSTP (Faecal Sludge Treatment Plant), SSTP (Sludge Sewage Treatment Plant) etc. participated in the two-day long fair. Residents of DNCC areas, Gulshan, Banani, Baridhara, Niketon were targeted to attend the fair. So many residents and representatives of house building companies, building owners associations attended the opening program and visited stalls where the organizations showcased some prototypes of their technologies. People had the scope to know and buy the technologies from the fair.

The fair had a panel discussion session in its very first day after the opening session. Honorable Minister for LGRD&C and delegates from concerned government sectors, experts and public figures from home and abroad were present as discussants. Editor of leading national Bangla daily newspaper Bhorer Kagaj Mr. Shyamal Dutta moderated the panel discussion. Artists from Sunderban Theatre of Jahangirnagar University performed different cultural events prepared on different issues of safe sanitation during both day of the fair. These sessions were moderated by Dr. Sazzad Bokul, professor of dept. of Mass Communication and Journalism, University of Rajshahi. In these sessions some visitors expressed their thoughts on the issue.

2.0 CWIS Project at a Glance

After successful achievement of the MDGs, the new Low Middle Income country Bangladesh is working on the Sustainable Development Goals (SDGs). Its Goal 6 emphasizes on the establishing of a safe, just, and sustainable sanitation for all by focusing specially on the underprivileged, vulnerable, and marginalized people. Like some other least developed or developing countries, Bangladesh doesn't have proper sanitation, i.e., faecal sludge management system in any city or village, resulted environmental pollution and health hazard for its citizens. There is sewerage system, which is called off-site sanitation, only in Dhaka city though it covers only 20% of the whole population of the city. Rests of the cities of the country don't have any sewerage system though WASA (Water and Sewerage Authority) is in operation in some big cities.

To overcome the problem, though partially, UNICEF, Bangladesh with the support from Bill and Malinda Gates Foundation is implementing the project titled "Citywide Inclusive Sanitation (CWIS)" for Dhaka North, Chottogram and Rajshahi City Corporation.

Local Government Division (LGD), Ministry of LGRD&C, GoB is the authority to implement the project during 2021-2023.¹

As a part of the project, City Sanitation Service Delivery Assessments (CSDA) for each city was conducted by experts from ITN-BUET. To share those reports to city dwellers and collect their opinion and know what problems they are facing regarding safe FSM, some public sharing meetings were organized in each city. After then communication strategy was developed by another team. As a continuation of the efforts, the ‘Dhaka North City Sanitation Fair, 2023’ was organized by DNCC.

3.0 Objectives of the Trade Fair

According to website of Dhaka North City Corporation, it has a huge impact of problems with untreated faecal sludge. To overcome the problems by engaging people, private sectors, institutional reform and technological solutions in place, the CWIS project is ongoing in DNCC along with other two city corporations in the country. There is no doubt suitable technology and services tailored to specific regions and users should be easily accessible, affordable and uncomplicated. Keeping this in mind DNCC organized the trade fair as societies of its area like Gulshan, Banani, Baridhara and Niketon has shown their keen interest to get organized a technology fair on safely managed on-site sanitation so that the residents can get scope at their doorsteps to easily understand the available options, price, operation and maintenance, required space and choice of right/appropriate option. This will ultimately help DNCC to move further on achieving their target which is households to be equipped with safely managed on-site sanitation.²

The specific objectives of the trade fair were as follows:

- To educate and raise awareness among DNCC residents on faecal sludge management;
- Create scope for the people to choose the right/appropriate option for the safely managed on-site sanitation.³

4.0 Opening Session of the Trade Fair

The Chief Guest of the opening session Mr. Md. Tajul Islam MP, honorable minister for the ministry of LGRD&C and Chair of the session Mr. Md. Atiqul Islam, honorable mayor of Dhaka North City Corporation opened the trade fair by cutting ribbon along with some other guests at around 10.30 AM on 9 March 2023.

Country Representative of UNICEF, Bangladesh Mr. Sheldon Yett was the Special Guest in opening session. Other important personalities were present in the opening session.

After formal inauguration of the trade fair, performers from Sunderban Theatre staged a short drama written on issues of sanitation in front of guests. Then all of the invited guests were requested to visit stalls before returning on the stage to participate in a panel discussion. In the interim period, singers from Sunderban Theatre performed folk songs before the

¹ ITN-BUET, “City Service Delivery Assessment (CSDA) for Citywide Inclusive Sanitation in Rajshahi City Corporation” A report Prepared for United Nations Children’s Fund (UNICEF) Bangladesh Office, November 2021, p.3.

² DNCC.

https://dncc.portal.gov.bd/sites/default/files/files/dncc.portal.gov.bd/tenders/abf0be48_95b9_45a8_88da_e77ef3f733fb/2023-02-20-08-30-181da50821998e8578b4931386563349.pdf , Accessed on 16 March 2023.

³ Ibid.

audience who were mostly the residents of Gulshan, Banani, Baridhara and Niketn and some were officials and staffs of DNCC.

4.1 Panel Discussion

The main theme of the panel discussion was how we all can build Dhaka city green and healthy for next generation by solving the sanitation problems. Besides the Chief Guest and Chair of the opening session, Chairman of RAJUK Mr. Md. Anisur Rahman Miah, Managing Director and CEO of Dhaka WASA Mr. Taqsem A Khan, Director General, Directorate of Environment Dr. Abdul Hamid, sanitation expert and former professor of BUET Dr. Md. Mujibur Rahman, Secretary of ministry of LGRD&C Mr. Muhammad Ibrahim, Secretary of ministry of Housing and Public Works Mr. Kazi Wasi Uddin, retired Secretary of Bangladesh Government Hedayetullah Mamun, Ambassador of Embassy of the Kingdom of the Netherlands Mr. Anne Gerard Van Leeuwen, Country Representative of UNICEF, Bangladesh Mr. Sheldon Yett, renowned town planner and architect Mr. Iqbal Habib, Chairman of National River Conservation Commission Dr. Monjur Ahmed Chowdhury were present in the panel discussion session. Editor of leading national daily Bhorer Kagaj, Mr. Shyamal Dutta moderated the session.

Before the panel discussion started, **Dr. Luis** was requested to present basic information on environmental health, safe sanitation and the sources of pollution. He compared Dhaka with Mexico City as stated that twenty years ago the situation in Mexico City was something like current Dhaka. But if citizens became aware enough we can make progress.

In the panel discussion, DNCC Mayor Md. Atiqul Islam expressed his disappointment over the illegal sewage connections in the elite neighbourhoods of the capital, describing the situation as deplorable. Mayor said, “Gulshan, Banani and Baridhara areas are as elite and expensive as Manhattan. But it is very sad that despite spending crores of taka to build houses in these areas, most of the sewage connections are linked with the surface or storm drains. It is very unfortunate.”

After moderator Shyamal Dutta’s comment linking on DNCC Mayor’s ‘Banana Tree Therapy’⁴ to stop this malpractice by his city’s residents, mayor argued that simply closing off illegal sewage connections is not a sustainable solution. Citizens, building owners, and community leaders have to take responsibility and ensure proper sewage systems are in place, he added.

Shyamal Dutta mentioned that there are some incidents of blasts in residence buildings of different areas of Dhaka city. In this point Chairman of RAJUK (capital city development authority) Md. Anisur Rahman Miah said that Sewage Treatment Plant (STP) is now mandatory to approve building plan. DNCC Mayor has established his own STP in his house which worth BDT 8 Lac, now it takes only BDT 5 Lac. He said, “what initiatives Mayor are taking, we are with all of them.”

Taqsem A Khan, Managing Director and CEO of Dhaka WASA said, “we have failed to reach our master plan. On-site sanitation is solution for this time only. It is not the permanent or sustainable solution. Off-site treatment plant can be the permanent solution. Dasherbandi is among the five treatment plants to be made. Where it will not be reachable, on-site sanitation is needed there.”

⁴ “Banana Tree Therapy’ actually is a metaphorical term. Honorable Mayor of DNCC has taken a punitive initiative to make aware of those peoples who connect their septic tank pipeline or toilet pipe direct to roadside surface/storm drain. People of Mayor have entered banana tree into those pipelines so that they contact with DNCC office and explain why they have conneced their piplines direct to strom drain.

Chairman of National River Conservation Commission Dr. Monjur Ahmed Chowdhury described the situation of rivers (Buriganga, Balu, Shitalakhya, Turag) around the Dhaka city. He said, “these rivers are almost dead as sanitary solid waste is also going directly to these rivers. There are no commendable initiatives to save the rivers.”

Shyamal Dutta reminds again about the banana tree therapy and asked Dr. Mujibur Rahman, expert on sanitation and former BUET professor, about this initiative of DNCC Mayor. Dr. Mujibur said, it is not to create pain for residents but for to push them step forward. He argued that, “we have to introduce mixed technology. I want to help you. If we can open Dasherakandi plant it will secure 5 million people.” “What on-site technologies Mayor is introducing, will be helpful to make scenario better if we can use it properly”, he added.

Country Representative of UNICEF Bangladesh Mr. Sheldon Yett expressed his best wishes to Mayor saying, ‘I think we need strong leadership and of course proper technology. Government is powerful. If we need our children not to get sick, we need to solve the problem.’

Ambassador of Embassy of the Kingdom of the Netherlands Mr. Anne Gerard Van Leeuwen said, “we are working closely with Bangladesh government. It is about collaboration. The technology here is good. Citizen, other people, municipality, WASA all have to work collaboratively.”

At the end of panel discussion, LGRD&C Minister Md. Tajul Islam was asked to say about his plan on safe sanitation. Minister said that with the increase in our per capita income, there has been a corresponding rise in our consumption patterns, leading to a significant surge in daily waste and garbage generation. He said, “to keep environment safe honorable Prime Minister has divided Dhaka city into 12 sections in 2012 as a move to a comprehensive sewerage treatment plan. Now some sewerage treatment plant is under construction including Dasherakandi plant.” “But there are so many obstacles to build such kind of infrastructures”, he added, “but government is still working on these issues.”

Highlighting that Dhaka city generates 6,000 tonnes of waste each day, he emphasized that without proper waste management, the goal of a sustainable and livable Dhaka will remain out of reach. He assured that his ministry will take initiative to arrange round table meeting and other steps to make situation better.

5.0 Participants of the Trade Fair

The fair featured around 25 domestic and international institutions specialising in modern sewage management. Among them 17 institutions were from native Bangladesh. Seven organizations were from neighbour state India. Rest was from Thailand. Please see Annexure-I for detail list of participants.

These organizations showcased their technologies as written documents format and also by some prototypes in the stalls they had been allotted by fair authority in the venue. The stalls remained open from 10 am to 4.30 pm in the first day. In the second and last day of the fair stalls and cultural events prolonged till 7 pm by the decision of fair management team.

6.0 Overview of the Sanitation Technologies Presented in Trade Fair

The specific objective of the trade fair was to introduce different sanitation technologies, i.e. machineries to residents of DNCC so that they can know about those and can buy and/or install those technologies into their households. To address the objective the institutions participated with their stalls in the ‘Dhaka North City Sanitation Trade Fair, 2023’ showcased

various technical solutions and products to visitors. Building owners were encouraged to prioritise the installation of efficient soak wells and septic tank systems in their buildings at the sanitation fair. The fair also offered the opportunity to purchase the appropriate safe sanitation technology for safe on-site sanitation.

The sanitation technologies that were showcased in the stalls were mostly of ETP (Effluent Treatment Plant), STP (Sewage Treatment Plant), FSTP (Faecal Sludge Treatment Plant), SSTP (Sludge Sewage Treatment Plant), WT (Water Treatment), WD (Water Disinfection), WTS (Wastewater Treatment System), Vacutug, MBR (Membrane Bio Reactor), MBBR (Moving Bed Biofilm Reactor), ECOSTP, BSTP (Biological STP), Electro Coagulation and NanoTech ETP, Water Bio Remediation, SWM (Solid Waste Management), WSP (Water Softening Plant), ROP (Reverse Osmosis Plant), RWH (Rain Water Harvesting) etc.

Among the organizations participated in the trade fair, Dhaka based M H Water Solution provides WTP, RO, RWH, ETP, STP and some other services.⁵

MAWTS⁶, a Bangladeshi NGO Caritas Trust introduced some low cost VacuTug which can be used by household owners. This Tug can be operated by one person. MAWTS developed and manufactured this general purpose micro-exhauster for unplanned settlements, refugee camps and other emergency applications, areas where access is difficult, cleaning drainage which is ideally suited for micro-enterprise use. There are four models: MK-II and MK-IV (700 litre capacity), MK-III (2000 litre), MK-V (1000 litre). The cost for the VacuTugs starts from BDT 50,000. It is comparatively low cost and accessible in areas with narrow roads in Dhaka, Rajshahi and other city corporations.

A Gulshan-1 based company Biotech Innovations Limited introduced Biopipe STP System which they describe as world's first sludge free smart biological sewage treatment plant. This technology can be operated by Apps.

Charm Ltd.⁷ is a Mirpur, Dhaka based institution who imports Jhokasou technology from Japan. They claim that this technology for STP is energy saving up to 50%, no noise/sound, minimal operational cost, no daily sludge, no regular maintenance, 1 day installation, no operator needed. This technology can be installed under green area of household, basement floor or under car parking. Some government and private sectors of Bangladesh have installed their technologies.

New Delhi based Bio Waste & Water Clean Solutions LLP provides Bio Remediation, Sequencing Batch Reactor, FSTP technological products.⁸

Some other organizations from India, Thailand and Bangladesh showcased technologies relatively high cost. But if housing company authorities want to install those in their under-construction projects alongside high cost lift, generator and other equipments, people will be benefited regarding safe sanitation.

7.0 Cultural Communication in the Trade Fair

DNCC Sanitation Trade Fair 2023 was organized mainly for introducing sanitation related different technologies to the residents of the city areas. To fulfill this goal there were 25 stalls from home and abroad. Moreover there were some cultural events in both the days which were performed as powerful communication tools. There were folk songs like Baul, Vatali, Palligeeti, songs of Hasan Raza etc. Singers from Sunderban Theatre of Jahangirnagar

⁵ <https://mhwatersolutions.net/>

⁶ <https://www.mawts.org/>

⁷ <https://charmbd.com/>

⁸ <http://biowasteandwater.com/>

University, Savar, Dhaka sung these songs. Hriday Saikat and Nushin Adiba were the lead singers. They were accompanied with flute player Md. Babul, Dholok player Prashanta Prasad Swarnokar, Mandira Player Neel Sarkar. Another singer Selim Ahmed sung songs written and tuned on sanitation issues.

There was a sanitation issue based drama during the cultural events. Why we need proper sanitation and how DNCC can help us in this regard- this was the theme of the short drama presentation. Three performers performed in this event. They are Rabi Ghosh, Swati Saha and Merajul Islam Hridoy. In the first day they performed this drama before Chief Guest, Chair and other guests in the opening session. They performed it more than three times in the fair.

There was an interactive game show where performers played role as some characters like sanitation waste, human being, dustbin and Dhaka North City Corporation. By these characters and the story behind this depicted artistically the deteriorating situation of sanitation in DNCC areas and how we can improve it. Neel Sarkar, Farjana Urmi, Pragya Pratiti and Suma Ghosh Tithi performed in this game show.

All scripts were written and/or directed by Rahul Prasad Das, President of Sunderban Theatre. These events were repeated twice or thrice in a day.

8.0 Feedback from visitors

Both days of the trade fair, there were two sessions where there were cultural events and sharing of experiences. People attended in the fair were expected to share their sanitation experiences, their expectations to overcome the situation and comments.

People who came to the fair mostly were engaged with visiting stalls. There were some audiences in front of the stage. Among them only a few spoke and shared their thoughts. Abu Taher, a middle aged man, was one of them. He introduced himself as Manager of a residential building in Gulshan. He expressed his anger over the WASA, saying the organization takes huge amount of money as their fees, but what they do? Banana tree therapy is worthless, in his words. After these comments he recited a poem written by him on DNCC sanitation situation.

Tanvirul Islam, introduced himself as a Civil Engineer of a real estate company emphasized on public awareness. He said, “we all condemn others, but all of us have own responsibilities also.” He suggested taking these technologies door to door of residents.

A STP supplier company representative, Nazmul Hossain, claimed that government has imposed 70% to 80% VAT and Tax on sanitation technology machineries. As a result the price became high of these technologies. He urged to reduce VAT and Tax to import those items.

9.0 Conclusion

Dhaka North City Sanitation Trade Fair, 2023 was a primary initiative to take proper sanitation technologies door to door. It started with DNCC. It is quite successful as residents and different community leaders visited the stalls, they were introduced with these technologies, they gathered necessary information from the fair. This fair should be replicated in other city corporation areas of the CWIS project, i.e. Rajshahi City Corporation and Chottogram City Corporation.

Annexure-I
Dhaka North City Sanitation Trade Fair 2023
List of Participant Organizations

Stall No	Participants Name	Stall Name	Country
1	Clean Water Engineering Services	Clean Water Engineering Services	Bangladesh
2	Magnatree Ventures Pvt. Ltd.	M/s. Magnatree Ventures Pvt. Ltd	India
3	NewVision Solutions Limited	NewVision Solutions Limited	Bangladesh
4	ECOSTP Technologies (P) Ltd.	ECOSTP Technologies (P) Ltd.	India
5	ACUMEN ENGINEERING LIMITED	ACUMEN ENGINEERING LIMITED	Bangladesh
6	Biowaste & Cleanwater LLP	Bio Waste & Water Clean Solutions LLP	India
7	RR Fluid & Energy	RR Fluid & Energy	Bangladesh
8	Green Genesis Engineering Ltd	Green Genesis Engineering Ltd	Bangladesh
9	SCG	SCG	Thailand
10	Biofilcom, Bangladesh	Biofilcom, Bangladesh	Bangladesh
11	Priora Water Solutions Pvt. Ltd.	Priora Water Solutions Pvt. Ltd.	India
12	Gulshan Clean & Care	Gulshan Clean & Care	Bangladesh
13	WASH Innovation Hub	WASH Innovation Hub	India
14	Green Dot Limited	Green Dot Limited	Bangladesh
15	Smart Fluid Tech	Smart Fluid Tech	Bangladesh
16	Adroit Environment Consultants Limited (AECL)	Adroit Environment Consultants Limited (AECL)	Bangladesh
17	Hydro Agro	Hydro Agro	Bangladesh
18	Green Tech Water Solution Limited	Green Tech Water Solution Limited	Bangladesh
19	Ekam Eco Solutions	Ekam Eco Solutions	India
20	Healty Tank BD	Healty Tank BD	Bangladesh
21	BioPipe Global Corp.	BioPipe Global Corp.	India
22	RAN Corporation	RAN Corporation	Bangladesh
23	Osmo corporation	Osmo corporation	Bangladesh
24	Charm Ltd	Charm Ltd	Bangladesh
25	MAWTS (CARITAS)	MAWTS	Bangladesh

Annexure 2

Photos from the Dhaka North City Sanitation Trade Fair

















































