



REPORT

Divisional Training on

CAPACITY DEVELOPMENT IN WASH SECTOR IN BANGLADESH: CLIMATE CHANGE ADAPTATION, DISASTER RISK REDUCTION, AND WASH IN EMERGENCY PREPAREDNESS AND RESPONSE.



Venue: Parjatan Motel, Rangpur

Date: 26-27 November 2023



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1. Introduction

Bangladesh is among the countries that experience frequent natural disasters due to climate change where the country's vast population is extremely vulnerable to cyclones, floods, droughts, and the danger of saline water intrusion into sweet water zones and the agricultural areas due to sea level rise. Over the past three decades, Bangladesh has experienced around 200 natural disasters as the nation gets exposed to several natural hazards every year because of its low-lying topography, proximity to the Bay of Bengal, and monsoon season.

The frequency of hazards and disasters has been increasing due to climate change, which has had a serious impact on the WASH sector in Bangladesh. As a result, climate-resilient WASH infrastructures are required to deal with the effects of climate change. Furthermore, it is critical to raise awareness among government policymakers and WASH program implementers to deal with climatic realities to turn WASH infrastructures into climate-resilient facilities that can also withstand the effects of disasters.

Under the joint initiatives of the Department of Public Health Engineering (DPHE) and UNICEF, the WASH Cluster has been functioning in Bangladesh since 2008, following Cyclone Sidr, to bring together the active partners working in the WASH sector. The WASH Cluster is a component of the international cluster strategy and the broader national Humanitarian Coordination Task Team (HCTT) to facilitate strategic collaboration in disaster planning and response within the WASH sector. The WASH Cluster seeks to guarantee a better coordinated and successful response by enlisting the help of the Ministries of the Government and their line agencies, UN organizations, INGO, and civil society organizations.

The WASH Cluster is specifically focused on: (i) using the Humanitarian Development Nexus to promote comprehensive WASH services and mainstream disaster risk reduction (DRR) in the WASH sector; (ii) bolstering national and local coordination mechanisms that involve all relevant stakeholders to improve the effectiveness of emergency and humanitarian response; (iii) enhancing local capacity in terms of WASH in emergency preparedness and response; and (iv) ensuring cooperation for collective action by its members. To meet these targets, along with other programs, the experts of the WASH sector are committed to continuing education and training initiatives for promoting climate-resilient approaches to deal with the changing climate and its impacts on the environment, especially in Bangladesh's many affected geographical areas.

Therefore, DPHE and UNICEF have planned to jointly organize divisional training events, titled "Capacity Development in WASH Sector in Bangladesh: Climate Change Adaptation, Disaster Risk Reduction, and WASH in Emergency Preparedness and Response", for capacity building of DPHE officials, NGO representatives, and Government officials who play important roles in

WASH service delivery during disasters and in emergency preparedness and response in the affected areas of Bangladesh. To accomplish the objectives of the capacity building program, DPHE and UNICEF worked jointly where UNICEF Bangladesh provided guidance and DPHE implemented the activities that included the development of a training module, organizing meetings and consultations with stakeholders, organizing WASH Cluster meetings, and facilitation of the training events at the divisional level.

Following the development of the training module for a 2-day training program and a Training of Trainers (ToT) event in Dhaka, the trainings at the divisional level started in November 2023. After the first three batches of the training program in Barishal, Mymensingh, and Khulna for the respective DPHE circles, the fourth batch of the training program for Rangpur circle was organized at Parjatan Motel, Rangpur from 26-27 November 2023.

2. Objectives of the training

The main objective of the capacity development training program is to improve and strengthen the technical capacity of WASH professionals as well as to raise awareness among the stakeholders at the district level, focusing on Climate Change Adaptation (CCA), Disaster Risk Reduction (DRR), and Emergency Preparedness and Response in WASH, in different climate affected regions of Bangladesh. The specific objectives of the training are:

- Strengthening the capacity of WASH sector professionals on disaster and emergency preparedness and response, and planning and delivering climate resilient WASH services focusing on both government partners and non-governmental organizations for efficient and effective implementation of emergency preparedness and response programs in vulnerable districts.
- Promoting awareness of Disaster Risk Reduction (DRR) in WASH and developing sector capacity on the integration of DRR and climate-resilient approaches into WASH programs across the country.
- Addressing disaster and climate change impacts in the WASH sector and mainstreaming DRR mechanisms into WASH programming.
- Identifying gaps between current activities (capacity) and opportunities to make the WASH service climate resilient in different geographical contexts and developing a set of recommendations, based on gap assessment, to better align ongoing activities with the disaster resilient WASH approaches.
- Improving the local level WASH cluster coordination to capacitate the WASH service providers in emergencies.

3. Participants

A total of 37 participants attended the training program including DPHE engineers, officials from different departments of the government, and NGO representatives who are major stakeholders in WASH sectors, especially during disasters and emergencies. Among the participants, there were 3 Executive Engineers, 2 Assistant Engineers, 8 Sub-assistant engineers, 4 Estimators from DPHE, 5 officials from other departments of government, and 15 NGO representatives.

4. Training Facilitators

The 2-day training program with several engaging sessions was conducted by A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE, Dhaka, DPHE, AKM Ibrahim, DPHE Additional Chief Engineer (Rtd), Maharam Dakua, Consultant, DPHE, Rebeka Ahsan, Executive Engineer, DPHE, Chittagong Store Division, and Pankaj Kumar Saha, Executive Engineer, DPHE, Rangpur.



Figure 1: Opening Session of the training

5. Inaugural Session

The training started with an opening session on 26th November 2023 at Parjatan Motel, Rangpur. Md. Abul Kalam Azad, Superintending Engineer, DPHE, Khulna Circle, A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE, Dhaka, DPHE, AKM Ibrahim, DPHE Additional Chief Engineer (Retd), A.H. Towfique Ahmed, CFO, UNICEF, Rangpur and Rajshahi, and Md. Ruhul Amin, WASH officer, UNICEF, Rangpur was present during the inaugural session of the training. The Inauguration session was hosted by Pankaj Kumar Saha, Executive Engineer, DPHE, Rangpur. At the beginning of the opening session, A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE presented the objectives of this training and provided an overview of the contents of the sessions. Later, A.H. Towfique Ahmed, CFO, UNICEF, Rangpur, and Rajshahi gave a short speech on the importance of the training, and

then the Chief Guest of the session, A.H. Towfique Ahmed, CFO, UNICEF, Rangpur and Rajshahi announced the opening of the training program.

6. Training Sessions

There were seven sessions in the 2-day training program. Four sessions were conducted on day 1 and the remaining three sessions were conducted on day 2. The schedule of the training is provided in [Annex-1](#). The facilitators of the sessions were:

- Session 1: AKM Ibrahim, DPHE Additional Chief Engineer (Retd)
- Session 2: Maharam Dakua, Consultant, DPHE
- Session 3: A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE, Dhaka
- Session 4: Pankaj Kumar Saha, Executive Engineer, DPHE, Rangpur
- Session 5: A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE, Dhaka.
- Session 6: Rebeka Ahsan, Executive Engineer, DPHE, Chittagong Store Division
- Session 7: Maharam Dakua, Consultant, DPHE

6.1. Sessions of Day 1

Session 1: Climate Change and Its Impacts on Water, Sanitation and Hygiene (WASH)

Outline of the session:

- Introduction to Climate Change and its Causes
- Elements of climate, how they interact, and consequences of Climate Change
- Identifying Impacts of Climate Change on WASH in Bangladesh

Outcome of the session:

- Understanding of the basics of climate change
- Understanding of the consequences of climate change
- Understanding of the impacts of climate change on WASH in Bangladesh



Figure 2: Facilitator discussing the basics of climate change

This session provided a brief overview of weather, climate, and climate change. It covers a wide range of topics, including the differences between weather and climate, the causes and effects of climate change, and the impact of climate change on various sectors such as agriculture, water, and health. The session also highlights the impact of climate change in different areas and on vulnerable populations such as low-income communities. A video on the effect of the greenhouse on the earth was shown to the participants. There was a quiz for the trainees which was conducted through Mentimeter. The participants were also given a groupwork for identifying indicators of climate change and finding its outcomes, consequences, and impacts.



Figure 3: Group work of session 1 on identifying indicators, outcomes, consequences, and impacts of climate change

Session 2: Disasters and Impacts on WASH Infrastructures in Bangladesh

The session focuses on disasters and their impacts on WASH infrastructures in Bangladesh.

Outline of the session:

- Disasters in the WASH sector in Bangladesh
- Impacts of disasters on WASH infrastructures in Bangladesh
- Disaster management cycle and activities

Outcome of the session:

- Understanding of the main disasters in the WASH sector in Bangladesh
- Understanding of the main impacts of disasters on WASH infrastructures in Bangladesh
- Understanding of the steps and activities of disaster management in WASH



Figure 4: Group work of session 2 on disaster management activities

The session discussed the steps involved in disaster management for WASH infrastructures in Bangladesh. Participants learned about the different phases of the disaster management cycle, including preparedness, response, recovery, and rehabilitation, and the specific activities that are involved in each phase of the cycle. Participants also learned about the terminologies related to disaster risk reduction. During the session, different types of disasters and their impacts on WASH infrastructures were also discussed. Participants were also given a task in the form of group work about disaster management activities where they had to relate what kind of activities are necessary at what phase of a disaster.

Session 3: Stakeholders' Roles in DRR and Emergency Preparedness and Response in WASH

The session focused on Stakeholders' Roles in DRR and Emergency Preparedness and Response in WASH.

Outline of the session:

- Identification of the stakeholders in DRR, and emergency preparedness and response in WASH
- Roles of stakeholders and their working areas
- DPHE's role in DRR, and emergency preparedness and response
- Coordination mechanisms among the stakeholders

Outcome of the session:

- Identified the stakeholders involved in WASH in DRR and emergency response and their respective roles
- Understanding of the DPHE's role in disaster risk reduction, and emergency preparedness and response
- Understanding of the coordinating mechanisms among the stakeholders

The session mostly discussed the organizations involved in disaster management, including the government, non-governmental organizations, and community-based organizations. The session also covered the Standing Orders on Disaster (SOD), which is a set of guidelines for disaster management in Bangladesh. The SOD aims to ensure a coordinated and effective response to disasters by all stakeholders. The session also discusses the formulation of the WASH Cluster, its aims and objectives, and how to operationalize the WASH Cluster through meetings. The session also discussed about WASH cluster and the participants were informed about the WASH cluster meeting that happened on the 2nd day of the training program.

Session 4: Standards and Guidelines for WASH during Disasters and Emergency Response

Outline of the session:

- Overview of the regulatory framework and code of conduct for disaster management in Bangladesh in the WASH sector.
- Guidance on preparedness for WASH in emergency response, and early recovery interventions in disaster situations.
- Standards for WASH services during emergency response.

Outcome of the session:

- Understanding of the regulatory framework and code of conduct for disaster management in WASH.
- Understanding of the standards and guidelines for WASH services in an emergency.



Figure 5: Participants understanding the standards and guidelines for WASH services in an emergency.

This session gave an overview of the regulatory framework and code of conduct for disaster management in Bangladesh in the WASH sector, guidance on preparedness for WASH in emergency response, and early recovery interventions in disaster situations, standards for WASH services during emergency response. The participants were given a small task to answer some questions and to identify some statements whether they were true or false ([annex 3](#)). A quiz was also taken through Mentimeter.

Session 5: Climate Resilient WASH Technologies

Outline of the session:

- Importance of adaptation and mitigation in building climate resilience into the WASH system
- Climate change adaptation in water and sanitation technologies

Outcome of the session:

- Understanding of the importance of adaptation and mitigation in building climate resilience into the WASH system
- Learning of the best practices for climate-resilient WASH technologies

In this session, the participants were provided with real examples to get an understanding of the importance of adaptation and mitigation in building climate resilience in the WASH system. The session covered examples of climate-resilient WASH technologies and the participants learned about the climate-resilient features of the technologies. They also learned about the different strategies that can be used to address these challenges and improve the resilience of WASH systems. The participants were encouraged to share their experiences at the field level as well. There was a quiz that was conducted through Mentimeter.

6.2. Sessions of Day 2

At the start of Day 2, there was a review session where a brief review of the previous day was given by Maharam Dakua, Consultant, DPHE. The participants were asked some questions about what they learned on the previous day. After the review session, the remaining three sessions of the training started.

Session 6: WASH Services in Disasters and Emergency Response

In this session, the participants learned about the technologies used for water supply sanitation, and hygiene during disasters and the operation & maintenance of water, sanitation, and hygiene facilities during and after disasters.

Outline of the session:

- Technologies used for water supply, sanitation, and hygiene during disasters
- Operation and maintenance of water, sanitation, and hygiene facilities during and after disasters

Outcome of the session:

- Learning effective water supply, sanitation, and hygiene technologies for disaster risk reduction
- Understanding the operation and maintenance of water supply, sanitation, and hygiene systems during and after disasters

Some real-life problems were also discussed during this session and some suggestions came up to take steps to fix those problems.

Session 7: Emergency Response Planning and Implementation in WASH

The last session of the training discussed the importance and steps of emergency preparedness and response plans in the context of WASH, and the key principles that should guide emergency response efforts.

The SOS and D-Forms were discussed, and later a demo of a digital data collection tool was introduced to the participants which was developed using Kobo Toolbox by which one can quickly share information about the current status of the WASH technologies of an area. After using the tool, the participants were requested to provide feedback about the tool for further improvement of the tool.

The steps for developing an inclusive emergency response plan and a contingency plan were discussed. Later, the groups were provided with a task to write down the steps for developing an emergency response plan and contingency plan. In the end, the participants were asked to make a presentation of their group work on a contingency plan or emergency response plan



Figure 6: The last session of the training on emergency response planning and implementation in WASH

7. Feedback from the Participants

Participants addressed many topics related to the training implementation and offered some helpful recommendations for the training activities. They expressed their satisfaction over the 2-day long training program and appreciated the contents of the training module. While they were asked to share the scope for further improvement in the training, some feedback from the participants at the end of the training sessions were:

- Participants requested the activation of WASH Clusters in all districts and regular monitoring of their activities at the national level to improve disaster response.

- Participants advocated the necessity of researching disaster-resilient WASH technologies to be designed with a focus on equity and inclusivity.
- The participants expressed concern about the latency with which orders are sent across the hierarchy of the organization and the time it takes to get approval. This slowing causes increased suffering and delays in receiving support for providing disaster help to the impacted communities. They also requested to revise the SOD to facilitate quick response from the higher authority.

8. Closing Session

At the end of the training, a brief closing session was arranged on 27th November 2023. Md. Abul Kalam Azad, Superintending Engineer, DPHE, Khulna Circle, A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE, Dhaka, DPHE, AKM Ibrahim, DPHE Additional Chief Engineer (Rtd), A.H. Towfique Ahmed, Chief, UNICEF, Rangpur and Rajshahi, Pankaj Kumar Saha, Executive Engineer, DPHE, Rangpur, and Md. Ruhul Amin, WASH officer, UNICEF, Rangpur was present as a guests in the closing session.

ANNEX

Annex-1: Training Schedule

Capacity Development in WASH Sector in Bangladesh: Climate Change Adaptation, Disaster Risk Reduction, and Emergency Preparedness and Response

Venue: Parjatan Motel, Rangpur

Date: 26-27 November 2023

Training Schedule

Topics	Time	Session Contents
Day 1		
Opening Session	9.00 – 9.30	Registration, tea and snacks, and network building
	9:30 – 10:15	Opening Session
Section 1	10.15 – 11.00	Session 1 – Climate Change and Its Impact on Water, Sanitation and Hygiene (WASH)
	11.00 – 11.15	Tea break
	11.15 – 12.00	Session 2 – Disasters and Impacts on WASH Infrastructures in Bangladesh
Section 2	12.00 – 13.00	Session 3 – Stakeholders’ Roles in Disaster Risk Reduction and Emergency Preparedness and Response in WASH
	13.00 – 14.00	Lunch and prayer break
Section 3	14.00 – 15.00	Session 4 – Standards and Guidelines for WASH during Disasters and Emergency Response
	15.00 – 15.15	Tea break
	15.15 – 16.30	Session 5 – Climate Resilient WASH Technologies
Day 2		
Review Session	9.30 – 10.00	Review of Day-1 Session’s Contents
Section 4	10.00 – 11.00	Session 6 – WASH Services for Disaster and Emergency Response
	11.00 – 11.15	Tea break
	11.15 – 13.00	Session 7 – Emergency Response Planning (ERP) in WASH and Implementation
	13.00 – 14.00	Lunch and prayer break
Meeting	14.00 – 15.30	WASH Cluster Meeting
	15.30 – 15.45	Tea Break
Closing Session	15.45 – 16.30	Closing Remarks and Certificate Distribution

Annex-2: List of Participants

Sl. No.	Name	Designation & Organization
1	Md. Shakil Amammed	Manager CA Friendship, Gaibandha-Sadar
2	Sk. Mamum	Project Coordinator & Focal Person SKS Foundation Gaibandha
3	A.B.M. Masudunnabi Lipo	Assistant Director (AD) Sinnomul Mohila Samity (SMS) Gaibandha
4	Md. Rezaul Karim	Project Coordinator MJSKS, Ulipur Kurigram
5	Aleya Begum	Deputy Director (DD) Solidarity, Kurigram
6	Amir Hossain	Project Coordinator, Esdo, Rangpur
7	Md. Arifur Rahman	DRR officer, Handicap International, Kurigram
8	Subrata Kumer Sarker	Project Manager, CARE-BD, Kurigram
9	Md. Mizanur Rahaman	Audit Officer Nazir-Lalmonirhat
10	Md. Saifur Rahman	Executive Director, RSDA, Rowmani, Kurigram
11	Md. Mamunor Rashid	SAE, DPHE, Saghata, Gaibandha
12	Md. Tarikul Islam	SAE, Roumari, DPHE, Kurigram
13	S.M. Mutakabirul Hoque	WASH advisor, Cordaid, SONGO project
14	Tapan Kumar Saha	Coordinator RDRS Bangladesh, Kurigram
15	Kishor Kumar Sarker	Assistant Coordinator, Gana Uunayan Kendra (GUK), Gaibandha
16	Md. Rasel Mia	SAE, DPHE, Hatibandha, Lalmonirhat
17	Md. Azizul Hakim Aziz	Estimator, DPHE, Lalmonirhat
18	Chandakishar Roy	AE, DPHE, Char Rajibpur Kurigram
19	Uttam Kumar Singh	SAE, Chilmari DPHE, Kurigram
20	Arifur Rahman	SAE, Kurigram Sadar, DPHE, Kurigram
21	Md. Younus Ali	SAE, Fulchari Gaibandha
22	Md. Khukon Rana	SAE, Sundorganj, Gaibandha

23	Most. Saraban Tahura	SAE, Gangachara, Rangpur
24	Md. Afjal Hossain	Estimator, DPHE, Rangpur
25	Rakibul Islam	Estimator, DPHE, Gaibandha
26	Md. Nezamul Haque	AE, DPHE, Rangpur circle, Rangpur
27	Md. Shahidul Islam	District Primary Education Officer, Rangpur
28	Engr, Md. Abdul Alim Gazi	EXEN, DPHE, Lalmonirhat
29	Engr. Md. Shayhan Ali	Executive Engineer, DPHE, Gaibandha
30	Md. Ruhul Amin	WASH officer, UNICEF
31	Tultuli Rani	District Training Coordinator, DEO office, Rangpur
32	Dr. Snigdha Debnath	Medical Officer, Civil Surgeon office, Rangpur
33	Shah Md. Ahsan Habib	Regional manager, NGO Forum for Public Health, Rangpur
34	Harunur Rashid	EXEN, DPHE, Kurigram
35	Md Motahar Hossain	DRRO, Rangpur
36	Md. Moniruzzaman	Estimator, DPHE, Kurigram
37	Zannat	Assistant Commissioner, DC, Office, Rangpur

Annex-3: Task of Session 4

Sphere Standards

(Group work based on [Standard 1.1, 1.2, and 1.3](#))

Time: 15 minutes

Suppose there are **5000 disaster-affected households (HHs)** in a community in which 6000 people are women, 3500 are men, and the rest are children. To evaluate the awareness of the key public health risks related to hygiene, the following information is collected through a social survey.

- **1500 HHs** correctly describe the three measures to prevent WASH-related diseases.
- **3000 HHs** store drinking water in clean and covered containers.
- **4500 HHs** have soap and water for handwashing.
- The local environment is free from animal feces but nearly **25% area** is covered with human feces.
- Each HH has **only one** water container varying from **10-20L**.
- **None of the women** is satisfied with menstrual hygiene management.

Based on the above survey findings, answer/comment on the following queries

1. Find the percentage of HHs who correctly describe the three measures to prevent WASH-related diseases.

(Answer: _____ % of HHs)

2. Find the percentage of HHs who store drinking water in clean and covered containers.

(Answer: _____ % of HHs)

3. Find the percentage of HHs who have soap and water for handwashing.

(Answer: _____ % of HHs)

4. The affected area meets all the standards based on hygiene promotion. YES NO

5. Do you think that this affected community meets Standard 1? YES NO.

If NO, suggest any three potential measures to meet Standard 1.

(i) _____

(ii) _____

(iii) _____

Sphere Standards (Based on Standard Indicators)

Time: 15 minutes

Hints:

- Go through the Sphere Standard 2 to 6, and answer the following queries.
- Mention that based on which Standard you have selected your answer.

1. Queuing time at water source \leq 30 minutes TRUE FALSE Standard: _____
2. At least 100 people per laundry facility TRUE FALSE Standard: _____
3. Mean water usage = 15 L/HH/day TRUE FALSE Standard: _____
4. Minimum water quality standard: <10 CFU/100mL at delivery point (chlorinated water) TRUE FALSE
Standard: _____
5. Least water quality standard: \geq 0.2-0.5 mg/L Free Residual Chlorine at delivery point TRUE FALSE
Standard: _____
6. Maximum water quality standard: <5 NTU Turbidity TRUE FALSE Standard: _____
7. All excreta containment facilities are an adequate distance from the groundwater source. TRUE FALSE
Standard: _____
8. Maximum 50m distance between shared toilets and dwelling TRUE FALSE Standard: _____
9. Ratio of shared toilets: minimum 1 per 20 people TRUE FALSE Standard: _____
10. All excreta are disposed of in an unsafe manner to the public health and environment. TRUE FALSE
Standard: _____
11. Percentage of HHs who have taken adequate action to protect themselves from relevant vector-borne diseases. TRUE FALSE Standard: _____
12. There is solid waste accumulating around designated neighborhoods. TRUE FALSE Standard: _____
13. Percentage of schools and public markets with appropriate and adequate waste storage. TRUE FALSE
Standard: _____

Annex-4: Pictures of the Event



