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: Spandan Training Facilitation Center, Mymensingh

Date: 20-21 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 batch of the training program in Barishal for the Barishal DPHE circles, the second batch of the training program for Mymensingh circle was organized at Spandan Training Facilitation Center, Mymensingh from 20-21 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 33 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, 7 Assistant Engineers, 11 Sub-assistant engineers, 2 Estimators from DPHE, 1 Draftsman from DPHE. 2 officials from other departments of government, and 7 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, Maharam Dakua, Consultant, DPHE, and Md. Yasin Arafat, Executive Engineer, DPHE, Store Division, Dhaka.

Figure 1: Opening Session of the training

5. Opening Session

The training started with an opening session on 20th November 2023 at the Spandan Training Facilitation Center, Mymensingh. Md, Abdul Awal, Superintending Engineer, DPHE, Mymensingh Circle, Md. Omar Farooq, CFO, UNICEF, Md. Sarwar Hossan, District Relief and Rehabilitation Officer, Mymensingh DC office, and Muhammad Jamal Hossain, Executive Engineer, DPHE, Mymensingh were present during the inaugural session of the training. A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE, Dhaka was also present through a Zoom conference call. The session was hosted by Md. Firoj Alom, WASH officer,

UNICEF Mymensingh. 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, Md. Omar Farooq, CFO, UNICEF, Md. Sarwar Hossan, District Relief and Rehabilitation Officer, Mymensingh DC office gave short speeches on the importance of the training, and then the Chief Guest of the session, Md, Abdul Awal, Superintending Engineer, DPHE, Mymensingh Circle announced the opening of the training program.

6. Training Sessions

There were seven sessions in the 2-day training program. Five sessions were conducted on day 1 and the remaining two sessions were conducted on day 2. The schedule of the training is provided in Annex 1, The Facilitators of the sessions were

- Session 1: Maharam Dakua, Consultant, DPHE
- Session 2: Md. Yasin Arafat, Executive Engineer, DPHE, Store Division, Dhaka
- Session 3: Maharam Dakua, Consultant, DPHE
- Session 4: Maharam Dakua, Consultant, DPHE
- Session 5: Md. Yasin Arafat, Executive Engineer, DPHE, Store Division, Dhaka
- Session 6: Maharam Dakua, Consultant, DPHE
- 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

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 2: 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 3: Facilitator addressing the steps and activities of disaster management in WASH during session 2

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.

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

Figure 4: Participants understanding of the role of stakeholders and the coordinating mechanisms among them

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.

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.

Figure 5: Participants learning about the best practices for climate-resilient WASH technologies

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: Presentation from groups on contingency plan & emergency response plan

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 to conduct research on developing an emergency response plan considering some major factors such as the availability of standby vehicles and boats as resources for use at the time of disaster response.
- The participants also address allocating a disaster relief and rehabilitation fund for only the WASH sector so that they don't have to search for funds or donations during the stage of implementation.
- It was suggested to conduct these training courses every year for the WASH sector officials working in different districts in the Barishal division.

8. Closing

At the end of the training, a brief closing session was arranged on 21st November 2023. Md, Abdul Awal, Superintending Engineer, DPHE, Mymensingh Circle, Md. Omar Farooq, CFO, UNICEF, Md. Sarwar Hossan, District Relief and Rehabilitation Officer, and Muhammad Jamal Hossain, Executive Engineer, DPHE, Mymensingh were present as guests in the closing session.

ANNEXURE

Annex-1: Schedule of the training

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

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Venue: Spandan Training Facilitation Center, Mymensingh

Date: 20-21 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-02: List of Participants

Sl. No.	Name	Designation & Organization
1	Md. Shakil Sarwar	Sub-Assistant Engineer, DPHE, Khaliajuri Netrokona
2	Subrata Pal	Field Team Leader, IDE-Bangladesh, Sherpur
3	Ziaur Rahman	Upazilla Coordinator (SUS) Kalmakanda ECM project, Netrokona
4	Haradhan Dey	Assistant Engr. DPHE, Sadar, Mymensingh
5	Liton Chandra Sarker	District Manager Unnayan Sangha (US), Jamalpur
6	Md. Firoj Alom	WASH officer, UNICEF
7	Badhon Chiron	Caritas Mymensingh Region Focal person to DM
8	Chonda Hawce	JPO-DM, Caritas Mymensingh
9	Md. Ashrafuzzaman	AE, DPHE, Durgapur, Netrokona
10	Md, Mahmudul Alam Bhuiya	SAE, DPHE, Mohongonj, Netrokona
11	Md. Alamgir	Training Officer, Sabalamby Unnayan Samity, Netrokona
12	Md. Mahbubur Rahman Sumon	SAE, DPHE, Madan, Netrokona
13	Johirul Islam	SAE, DPPHE, Atpara, Netrokona
14	Md. Shofiqul Islam	SAE, DPHE, Madarganj, Jamalpur
15	Md. Sumon Miah	Draftsman, DPHE, Jamalpur
16	Md. Moniruzzaman	AE, DPHE, Sreeebordi, Sherpur
17	Md. Johirul Islam	Estimator, DPHE Sherpur
18	Md. Elias Shah Sarwar	SAE, Jhenaigati, Sherpur
19	Muhammad Samiul Hoque	EE, DPHE, Sherpur
20	Muhammad Mashiur Rahman	EE, DPHE, Netrokona
21	Md. Kabil Hossain	AE, DPHE, Netrokona
22	Helal Uddin	Project officer, Jamalpur, (US)

23	Md. Zakir Hossan	SAE, DPHE, Melandah, Jamalpur
24	Mohammad Rakibur Rahman	SAE, DPHE, Bakshiganj, Jamalpur
25	Nupur Akter	SAE, DPHE, Nalitabari
26	Md. Nazmul Islam	SAE, DPHE, Kalmakanda, Netrokona
27	Md. Mazedur Rahman	AE, DPHE, Jamalpur Sadar, Jamalpur
28	Md, Rakibul Hasan	AE, DPHE, Dewanganj, Jamalpur
29	Muhammad Kamruzzaman	AE, DPHE, Islampur, Jamalpur
30	Md. Shohel Rana	Estimatpr, DPHE, Jamalpur
31	Mehedi Hasan	SAE, DPHE, Sarishabari, Jamalpur
32	Md. Sarwar Hossan	DRRO
33	Muhammad Jamal Hossain	XEN, DPHE Mymensingh

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 ≤ 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: ≥ 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