FINAL REPORT

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

06 June 2024

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TABLE OF CONTENT

LIST OF FIGURES

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 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, of the first phase, at the divisional level started in November 2023. The first five batches of the training program in Barishal, Mymensingh, Khulna, Rangpur, and Dhaka for the respective DPHE circles were organized.

With the successful completion of the first phase, DPHE and UNICEF organized four more divisional training at Chattogram, Sylhet, Faridpur, and Rajshahi for the respective DPHE circles. DPHE and UNICEF also arranged three consultative workshops at Dhaka in this phase. Furthermore, the feedback from the trainings and the workshops were used to update the training module. After the development of the updated training module, a residential training of trainers (ToT) was arranged at Sarah Resort, Gazipur.

2. Objectives of the Program

The main objective of this capacity development initiative was to improve and strengthen the technical capacity of the WASH professionals as well as to raise awareness among different stakeholders at the national level and sub-national levels in different climate-affected regions of Bangladesh. The specific objectives of the assignment were:

- Strengthening the capacity of the WASH sector on emergency preparedness, and planning and delivering WASH services with a focus on Government partners including Local Government Institutions (LGIs) and other non-governmental organizations (NGOs) for efficient and effective lifesaving emergency responses related to disaster resilience and water safety.
- Promoting awareness of Disaster Risk Reduction (DRR) and WASH Cluster Coordination mechanism and developing capacities on the integration of DRR and climate (and/or disaster) resilient approaches into WASH programs across the country.
- 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.
- Addressing disaster and climate change impacts in the WASH sector and mainstreaming Disaster Risk Reduction (DRR) mechanisms into WASH programming (risk-informed) at the local and national levels.
- Improving the WASH cluster coordination at the local level to capacitate the WASH service providers in emergencies through effective coordination.

3. Participants

The 4 training programs, 3 workshops along a residential ToT session were conducted for participants of 46 districts. The list of the districts from which DPHE officials participated in the training is provided in Figure 1

Figure 1: List of participating districts in the training

Sl. No.	Programs	Participating Districts
1	Training at Chattogram	Chattogram, Rangamati, Bandarban, Khagrachori, Cox's Bazar, Noakhali, Chandpur
2	Workshop on module outline development for AE/SAE	Dhaka, Chattogram, Gaibandha, Norshindi, Tangail, Rangpur, Kishorganj, Bagerhat, Sunamganj, Satkhira, Manikganj, Patuakhali, Natore, Cox's Bazar, Khulna, Chapainawbganj, Bandarban, Rangamati, Netrokona,
3	Workshop on Hazard Specific tool	Dhaka, Cox's Bazar, Rajshahi, Sylhet, Chapainawbganj, Netrokona, Khulna, Kurigram, Gaibandha, Rangpur, Barishal, Sunamganj, Bandarban, Rangamati, Satkhira, Sirajganj,
4	Training at Sylhet	Sylhet, Habiganj, Moulvibazar, Sunamganj
5	Training at Faridpur	Faridpur, Gopalganj, Shariatpur, Madaripur, Rajbari
6	Training at Rajshahi	Rajshahi, Bogura, Pabna, Chapainawabganj, Sirajganj, Natore
7	Workshop on Urban Disaster	Bhola. Kushtia, Lalmonirhat, Satkhira, Khulna, Rajshahi, Jhenaidah, Lakshmipur, Nilphamari, Khagrachari, Sherpur, Bandarban, Meherpur, Sirajganj, Chapainawabganj, Sylhet, Dhaka
8	Training of Trainers (ToT)	Dhaka, Netrokona, Kushtia, Nilphamari, Khulna, Natore, Sirajganj, Gaibandha, Chattogram, Chapainawabganj, Rangpur, Sherpur

A total of 255 participants attended the programs 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.

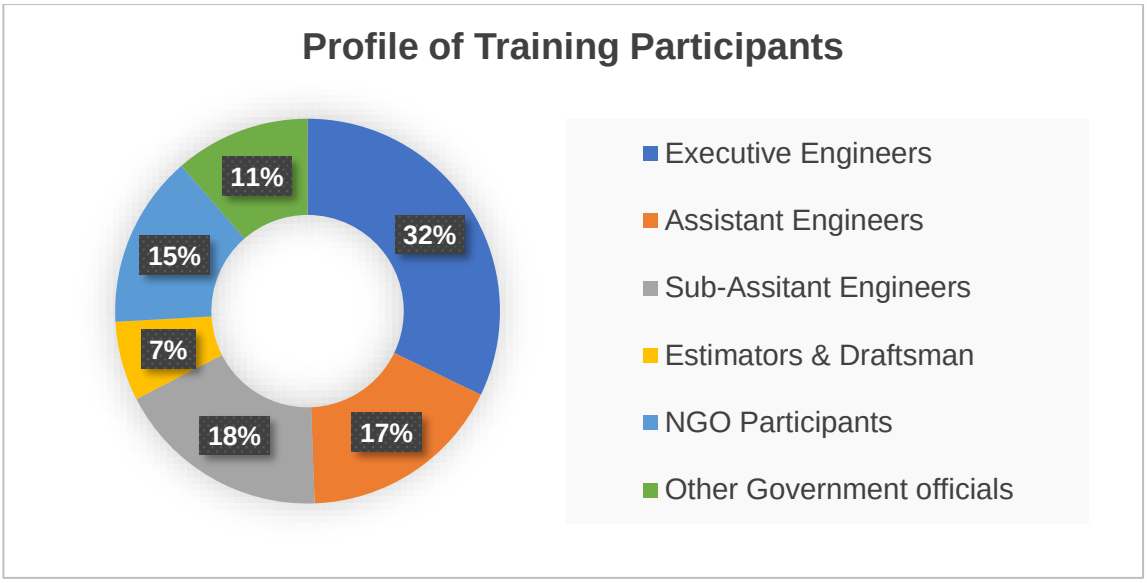


Figure 2: Profile of the training participants

Among the participants, there were 82 Executive Engineers, 44 Assistant Engineers, 46 Sub-Assistant Engineers, and 17 Estimators and Draftsmen of DPHE as trainees. In addition, 37 NGO representatives and 29 officials from other departments of government participated in the program. The profile of the participants is presented in Annex-4.

4. Activity Overview:

Following the successful conclusion of the initial divisional trainings, additional activities were organized to further develop the capacity of the WASH professional and address water supply, sanitation, and hygiene challenges during disasters. The activities are:

- Four additional divisional training sessions were arranged in Chattogram, Sylhet, Faridpur, and Rajshahi for the respective DPHE circles.
- WASH Cluster meetings were held for each district in Chattogram, Sylhet, Faridpur, and Rajshahi.
- A consultation workshop in Dhaka for developing an outline of the Emergency WASH training module for AE/SAE
- A consultation workshop in Dhaka for developing hazard-specific tools for WASH in an emergency.
- A consultation workshop in Dhaka on emergency preparedness and response in WASH for urban areas
- A three-day residential Training of Trainers (ToT) at the Sarah Resort, Gazipur.

5. Divisional Training

Training at the divisional level of this phase began in March 2024. The training program was arranged in four districts at Chattogram, Sylhet, Faridpur, and Rajshahi, representing their respective DPHE circles. A brief overview of the training program is provided in this section.

5.1. Divisional Training Facilitators

The 2-day training program with several engaging sessions was facilitated by experts working in the WASH sector of Bangladesh with a specialty in climate change adaptation, disaster risk reduction, and WASH in an emergency. The facilitators of the 2-day training program were:

- A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE, Dhaka
- Maharam Dakua, Consultant, DPHE
- Saleha Khatun, Cluster Coordinator (WASH), UNICEF
- Md. Yasin Arafat, Executive Engineer, Store Division, Dhaka
- Rebeka Ahsan, Executive Engineer, DPHE, Chattogram (Store Division)
- Dilruba Farzana, Executive Engineer, DPHE, Dhaka

5.2. Training Sessions

The 2-day training program was comprised of seven sessions in addition to an opening and a closing session. There were several group works in the training program. The training schedule is attached as Annex-1. A brief description of each of the sessions in the training program is presented in this section.

Figure 3: Opening Session of the training program in Chattogram (left) and Rajshahi (right)

5.2.1. Opening Session

The training started with the opening session where the Executive Engineer of the host district acted and provided the welcome speech where he addressed the guests, the resource persons of the program, and the participants. After the welcome speech, Maharam Dakua, Consultant, DPHE presented the objectives of this training, provided an overview of the contents of the sessions, and highlighted the importance of capacity development in the WASH sector for emergency preparedness and response. The Chief Field Officer of UNICEF and the

Superintendent Engineer of the DPHE Circle also gave their speeches. Finally, the Superintending Engineer of the DPHE Circle announced the opening of the program.

5.2.2. Sessions of Day 1

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. A brief overview of the contents covered in each session is provided below.

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

At first, the facilitator discussed the outline and the outcomes of the session

The outcome of the session:

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

Figure 4: Facilitator discussing the basic elements of climate during session 1 in Rajshahi

This session provides 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.

(a)

(b)

(c)

(d)

Figure 5: Group work of session 1 on identifying indicators, outcomes, consequences, and impacts of climate change in Sylhet(a), Faridpur(b), Chattogram(c), and Rajshahi(d)

Session 2: Disasters and Impacts on WASH Infrastructures in Bangladesh

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

The outcome of the session:

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

Figure 6: Participants learning the terminologies used in disaster risk reduction in WASH in session 2 in Faridpur (left) and Chattogram (right)

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, the 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.

The outcome of the session:

- Identification of 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 discusses 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 took place at the end of the training session.

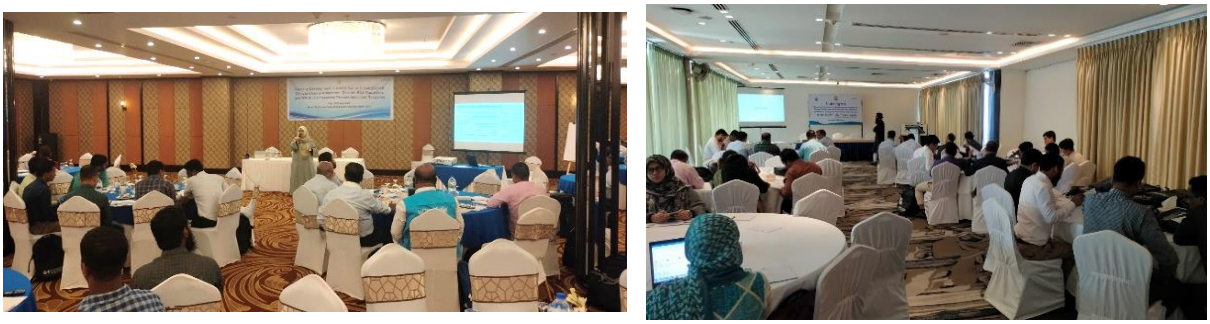


Figure 7: Participants understanding of the role of stakeholders and the coordinating mechanisms among them in session 3 at Sylhet (left) and Chattogram (right)

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

The outcome of the session:

- Learning the recommendations in the operational guidelines in Bangladesh for WASH services in an emergency.
- Learning the recommendations for WASH services in an emergency from the SPHERE standard.

Figure 8: Facilitator discussing the standards and guidelines for WASH services in an emergency in Rajshahi (left) and Faridpur (right)

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. A quiz was also taken through Mentimeter.

Figure 9: Participants engaging in group work on Sphere Standards in session 4 (Dhaka)

Session 5: Climate Resilient WASH Technologies

The outcome of the session:

- Understanding of the importance of adaptation and mitigation in building climate resilience in the WASH system
- Learning the current practices in terms of promoting 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.

(a) (b) (c)

Figure 10: Facilitator discussing the climate-resilient WASH technologies in Sylhet (a), Faridpur (b) and Rajshahi (c)

5.2.3. 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 the facilitator. The participants were asked some questions about what they learned on the previous day. After the review session, the remaining 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. The outcome of the session:

- Learning effective water supply, sanitation, and hygiene practices for disaster risk reduction
- Understanding the operation and maintenance of WASH systems and services 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.

Figure 11: Facilitator discussing the operation and maintenance of water supply, sanitation, and hygiene systems during and after disasters (Chattogram)

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 outcome of the session:

- Different steps in emergency preparedness and response with activity timeline
- Key considerations in emergency preparedness and response in WASH.

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 on the development of a hazard-specific emergency response plan. In the end, the participants were asked to make a presentation of their group work on the development of a hazard-specific emergency response plan n.

Figure 12: The last session of the training on emergency response planning and implementation in WASH (Sylhet)

(a) (b)

Figure 13: Participants preparing their group work for presentation at Faridpur (a) and Chattogram (b)

(a) (b)

(c) (d)

Figure 14: Group presentation on the steps for developing an inclusive contingency plan and emergency response plan at Chattogram(a), Sylhet(b), Faridpur (c), and Rajshahi(d)

6. WASH Cluster Meeting:

A WASH cluster meeting was arranged at the end of the sessions of each of the four divisional training. The meeting was organized for Chattogram, Sylhet, Faridpur, and Rajshahi districts where the participants from these districts, who attended the training, took part. The members of the meeting were the DPHE Executive Engineer, Assistant Engineers, Sub-Assistant Engineers of DPHE, Estimators and draftsmen, UNICEF representatives, and NGO representatives who are members of the WASH Cluster. The profile of the participants is presented in Annex-5. At the beginning of the meeting, a brief overview of the objectives of the WASH Cluster and its scope of work as outlined by the Standing Orders on Disaster (SOD) and other guidelines was provided by Maharam Dakua. The WASH Cluster meetings were chaired by the Executive Engineer of DPHE. The agenda of the meetings were:

- Identifying members of the WASH Cluster at the district level
- Discussion on the structure of the WASH Cluster at the district level (what will be the committee structure, member/member secretary, etc.)
- Frequency of WASH Cluster meetings and mechanisms for arranging the meetings
- Identify the scope of work for the WASH Cluster (what activities we should aim for at this stage, how can we start the coordination through the Cluster approach, etc.)

(a) (b)

(c) (d)

Figure 15: WASH Cluster meeting conducted for the districts Chattogram (a), Sylhet (b), Faridpur (b), and Rajshahi(e)

After the end of the meeting, the following decisions were taken:

- Submission of the 5W matrix: The members of the meeting decided that they will submit the 5W matrix to specify WHO is working, WHERE are they working, WHEN are they working, WHAT are they doing, and for WHOM are they working.
- Schedule for the next meeting: The members decided that there will be a WASH Cluster meeting every 3 months.

7. Consultation Workshop for Developing Outline of the Emergency WASH Training Module for AE/SAE

The workshop started on 30th March 2024 at DPHE Auditorium, DPHE, Dhaka with an opening session. Md. Saifur Rahman, Additional Chief Engineer, DPHE, and S.M. Shamim Ahmed, Project Director, 10 Town Project were present during the opening session of the workshop. 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.

Figure 16: Opening session of the workshop for Developing Outline of the Emergency WASH Training Module for AE/SAE

After the opening session, Maharam Dakua, Consultant, DPHE presented the background of the workshop and provided an overview of the content of the workshop. The participants were asked to suggest the outline of the training module for the field-level officers of DPHE.

Figure 17: Facilitator presenting the outline and outcomes of the workshop

A total of 30 participants attended the workshop program. Among the participants, there were Executive Engineers, Assistant Engineers, and Sub Assistant Engineers. The list of participants is attached as Annex-2. Participants were divided into groups and each group was allocated a different section of the existing training module for the group work.

Figure 18: Participants engaged in the group work of the workshop

At the end of the training, a brief closing session was arranged. A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE was present in the closing session.

8. Consultation Workshop for Developing Hazard-specific Tools for WASH in Emergency

The workshop started on 31st March 2024 at ITN Seminar Room, BUET, Dhaka with an opening session. A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE presented the objectives of this training during the opening session of the workshop and announced the opening of the program.

Figure 19: A.H.M. Khalequr Rahman presenting the objectives of the workshop

After the opening session, Maharam Dakua, Consultant, DPHE the background of the and provided an overview of the contents of the workshop.

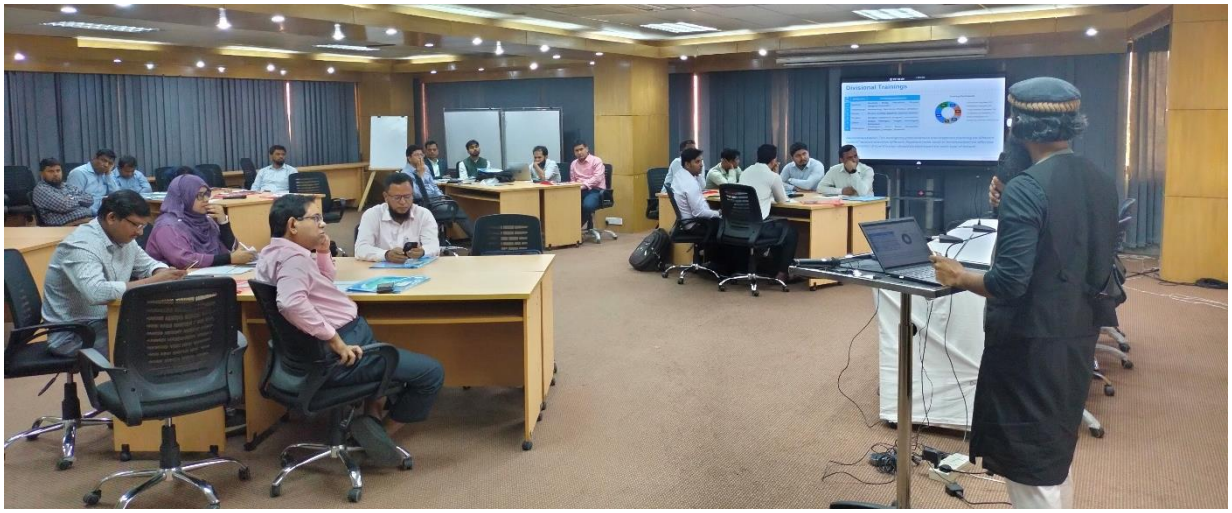


Figure 20: Maharam Dakua providing an overview of the content of the workshop

A total of 30 participants attended the workshop program. Among the participants, there were Executive Engineers, Assistant Engineers, and Sub Assistant Engineers. The list of participants is attached as Annex-2. The participants were split up into groups, and each group was given a distinct hypothetical scenario related to a particular hazard that they had either experienced firsthand or that was a frequent scenario where they resided. The participants developed an

emergency response plan upon the group work and the hypothetical scenario. After that, the participants presented their emergency response plan.

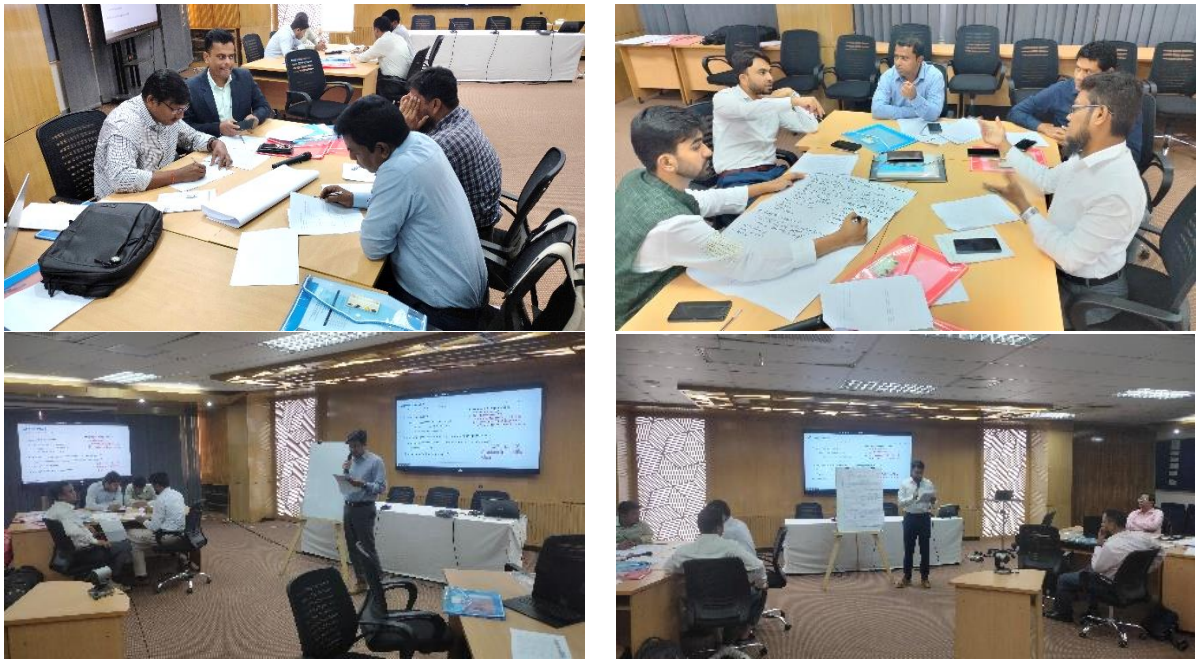


Figure 21: Participants Developing Emergency Response Plan and Presenting Their Group Works

At the end of the training, a brief closing session was arranged. Raushan Alam, SE, DPHE, Dhaka Circle DPHE, Md. Areef Anwar Khan, PD, DPHE, FREAP, Dhaka, and Saleha Khatun, Cluster Coordinator – WASH in Emergencies Specialist, UNICEF were present in the closing session

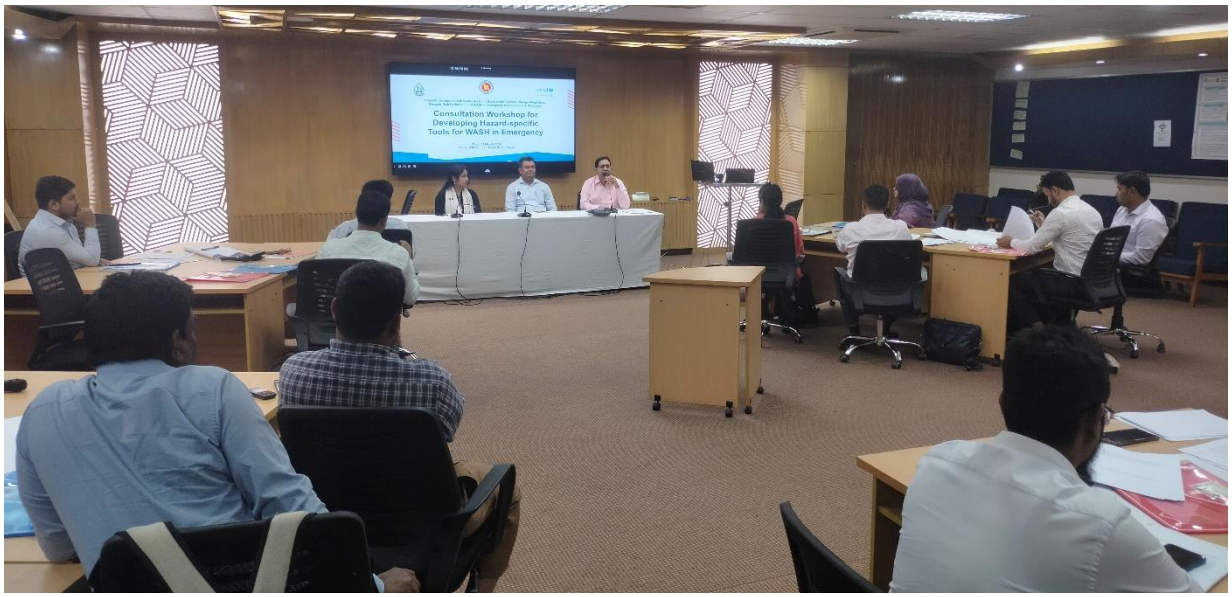


Figure 22: Guests of the workshop in the closing session

9. Consultation Workshop on Emergency Preparedness and Response in WASH for Urban Areas

The workshop started on 20th May 2024 at ITN Seminar Room, BUET, Dhaka with an opening session. Eheteshamul Russel Khan, Addl. Chief Engineer (Planning) Addl.C., A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE, Dhaka, and Maharam Dakua, Consultant, DPHE were present during the opening session of the workshop.

Figure 23: Opening session of the workshop

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 the Chief Guest of the workshop Eheteshamul Russel Khan, Addl. Chief Engineer (Planning) Addl. C gave a short speech on the importance of the workshop and announced the opening of the workshop.

Figure 24: Facilitator presenting the outline and outcomes of the workshop.

After the opening session, Maharam Dakua, Consultant, DPHE presented the background of the workshop and provided an overview of the content of the workshop. A total of 25 participants attended the workshop program. Among the participants, were Representatives of Municipality and Paurashava, Representatives of City corporations, DPHE Executive Engineers, Assistant Engineers, and Sub Assistant Engineers. The list of participants is attached as Annex-2.

The participants were asked to answer some questions as part of their group work. The questions were:

- What are the challenging issues in water supply/sanitation during/after disasters in urban areas of Bangladesh?
- What would be the mitigation measures?
- What adaptation measures do you practice/recommend to overcome the challenges?
- What are the institutional gaps and how the gaps could be addressed?

Participants were divided into groups keeping a mix of both DPHE professionals and other government organization representatives.

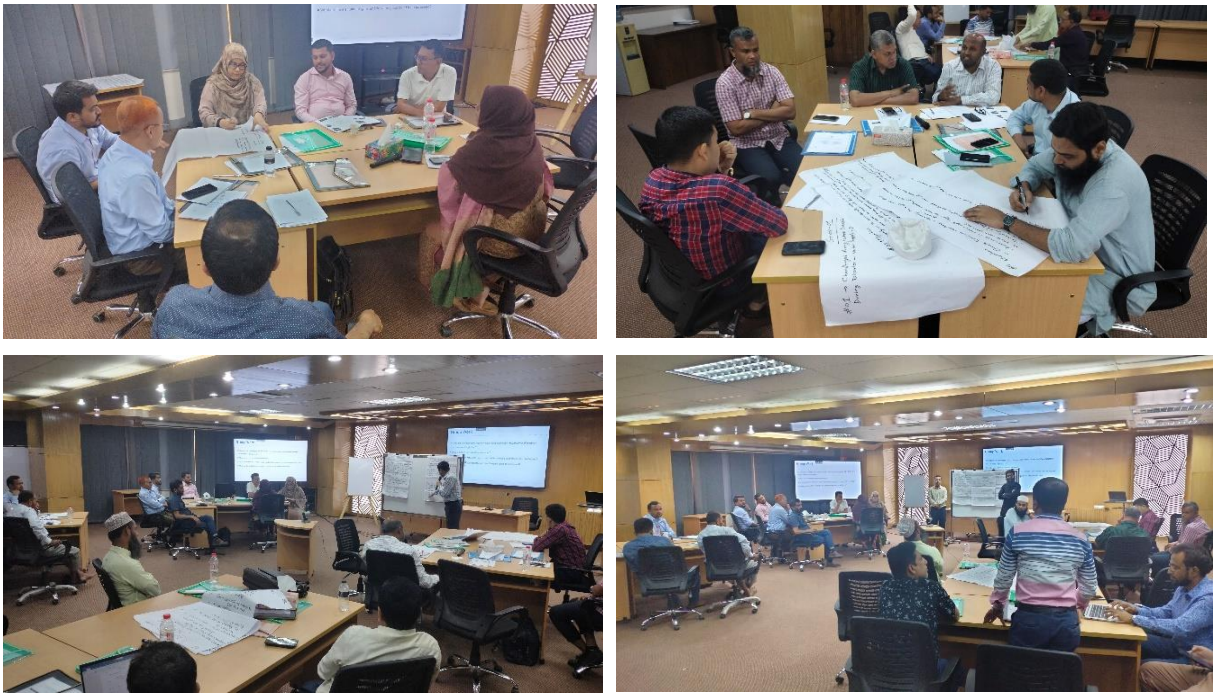


Figure 25: Participants engaged in discussion during the group work and presenting their group work

At the end of the training, a brief closing session was arranged. Dilruba Farzana, DPD, 10 towns Project, DPHE, Dhaka, and Maharam Dakua, Consultant, DPHE was present in the closing session

10. Training of Trainers (ToT):

After the update of the training module from the feedback of the trainings and workshop, final a Training of Trainers (ToT) for three days from May 24-26, 2024 was arranged at Sarah Resort, Gazipur. The particular objectives of the ToT program were (a) to capacitate the DPHE professionals to lead training at the divisional level, and (b) to find any gaps in the training module and address them as appropriate. The ToT program was a residential program that allowed extended participant interaction, fostering deeper connections and richer discussions. This ensured the sessions were engaging, refreshing, and not rushed. The serene surroundings offered an ideal environment for reflection and collaboration, enhancing the learning experience A total of 19 participants attended the ToT program, including DPHE officials and NGO representatives. Among them, there were there were 15 Executive Engineers and 4 NGO representatives. The list of Participants is attached in Annex 2. The ToT program was facilitated by A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE, and Maharam Dakua, Consultant, DPHE. Engr.Tushar Mohon Shadhu Khan, Chief Engineer, DPHE, Eheteshamul Russel Khan, Addl. Chief Engineer (Planning) Addl.C., Md. Saifur Rahman, Superintending Engineer, Ground water Circle, DPHE, and Rafael, UNICEF Representative were present as the guests of the program.

10.1. Opening session

The training started with an opening session on 24th May 2026 at the Adar Conference Room, Sarah Resort, Gazipur. Engr.Tushar Mohon Shadhu Khan, Chief Engineer, DPHE, Eheteshamul Russel Khan, Addl. Chief Engineer (Planning) Addl.C., A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE, and Rafael, UNICEF Representative were present during the inaugural session of the training. 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 Eheteshamul Russel Khan, Addl. Chief Engineer (Planning) Addl.C., and Rafael, UNICEF Representative gave a short speech on the importance of the training, and then the Chief Guest of the session, Engr. Tushar Mohon Shadhu Khan, Chief Engineer, DPHE announced the opening of the training program.

10.2. Training Sessions

There were seven sessions in the 3-day training program. Three sessions were conducted on day 1, the remaining four sessions were conducted on day 2, and a final group work was done on the last day of the training. The schedule of the training is provided in Annex-1. The facilitators of the sessions were:

- Session 1: Maharam Dakua, Consultant, DPHE
- Session 2: Maharam Dakua, Consultant, DPHE

- Session 3: Maharam Dakua, Consultant, DPHE
- Session 4: Maharam Dakua, Consultant, DPHE
- Session 5: A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE
- Session 6: A.H.M. Khalequr Rahman, Superintending Engineer, Store Circle, DPHE
- Session 7: Maharam Dakua, Consultant, DPHE

10.2.1. Sessions of Day 1

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

The outcome of the session:

- Understanding of the basics of climate change
- Understanding of the outcome and 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 after the video. The participants were also given group work to identify indicators of climate change and find its outcomes, consequences, and impacts.

Figure 26: Participants engaging in a quiz on session 1

Figure 27: 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 focused on disasters and their impacts on WASH infrastructures in Bangladesh. The outcome of the session:

- Identification of the main disasters in the WASH sector in Bangladesh
- Identification of the main impacts of disasters on WASH infrastructures in Bangladesh

Understanding the disaster management steps and activities in WASH.

Figure 28: Facilitator addressing the difference between disaster and hazard 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. The participants were also two group

works. At one of the tasks, they had to show the timeline for each disaster management phase by drawing lines. In another group work, they had to link the disaster management activities during different phases.

Figure 29: Participants engaged in the group work of disaster management activities during different phases during session 2

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. The outcome of the session:

- Identification of 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 30: 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 took place after this session. A small quiz was taken followed by group work where the participants answered some questions on the difference between the WATSAN committee and the WASH Cluster and gave a presentation on their answers.

Figure 31: Participants comparing the WATSAN committee and WASH Cluster and presenting their answers

10.2.2. 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 four sessions of the training started

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

The outcome of the session:

- Learning the recommendations in the operational guidelines in Bangladesh for WASH services in an emergency.
- Learning the recommendations for WASH services in an emergency from the SPHERE standard.

Figure 32: Facilitator addressing 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. A quiz was also taken through Mentimeter.

Session 5: Climate Resilient WASH Technologies

The outcome of the session:

- Understanding of the importance of adaptation and mitigation in building climate resilience in the WASH system
- Learning the current practices in terms of promoting 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. Group work was done where the participants were given some names of WASH technologies and asked to select the disasters for which the WASH technologies are used or can be used. A short quiz was also conducted.

Figure 33: Participants learning about the best practices for climate-resilient WASH technologies

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 and maintenance of water, sanitation, and hygiene facilities during and after disasters. The outcome of the session:

- Learning effective water supply, sanitation, and hygiene practices for disaster risk reduction
- Understanding the operation and maintenance of WASH systems and services 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.

Figure 34: The facilitator discussing the operation and maintenance of water supply, sanitation, and hygiene systems during and after disasters

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 outcome of the session:

- Different steps in emergency preparedness and response with activity timeline
- Key considerations in emergency preparedness and response in WASH

The steps for developing an inclusive emergency response plan and a contingency plan were discussed. SOS form and D form were also presented. The roles of and emergency response team were presented along with the requirements of the training of ERT, and a guideline on the mock drill which will be part of the training of the ERT was shown. Furthermore, the WASH Cluster coordination mechanism was also discussed. A demo WASH cluster meeting was done at the end of the session, where every participant was given a role to play other than their work designation. An imaginary disaster situation was given to them on which they had to act their

part in the WASH cluster meeting. The objective of this role-play WASH cluster meeting was to make the participants understand the different roles of the members of the WASH cluster and how to effectively conduct a WASH cluster meeting during an emergency.

Figure 35: Participants attending the demo WASH cluster meeting.

10.2.3. Sessions of Day 3

Group Work on Emergency Response Plan:

At the start of Day 3, there was a review session where a brief review of the previous days was given by Maharam Dakua, Consultant, DPHE. Then the participants were given the final group work on developing a hazard-specific emergency response plan. The participants were asked to give a presentation on their emergency response plans.

Figure 36: Participants presenting their group work on an emergency response plan

Orientation on Data Collection App

At the end of the session of day 3, a rapid assessment data collection app was introduced to the participants. The main purpose of this app was to collect authentic data on WASH rapidly from remote areas before disaster, during disaster, and after disaster. A team of app developers was hired for the development of this app and its database. The participants were given a brief overview of the purpose of the app. The features of the app were also shown along with the process of data entry, data authentication, and dashboard formation from those data.

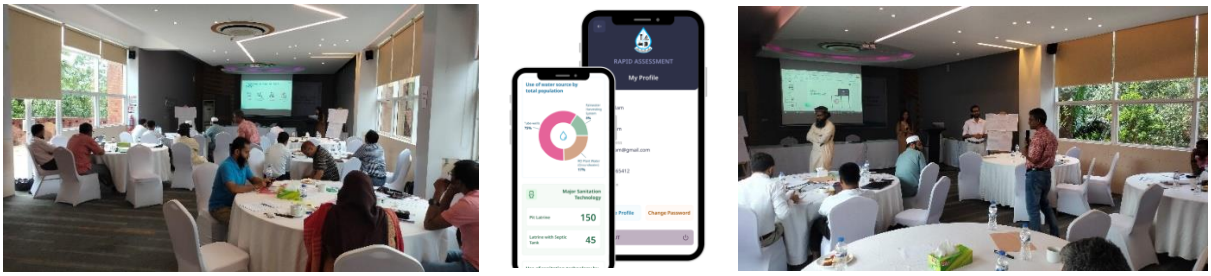


Figure 37: Demonstration of the app (left) and participants giving feedback on the app

Later participants were asked to give feedback on the app and give their inputs in the development of a more refined version of this app

10.3. Closing Session

At the end of the training, a brief closing session was arranged on 26th May 2023. Dilruba Farzana, DPD, 10 Towns Project, and Maharam Dakua, Consultant, DPHE were present as guests in the closing session.

11. Evaluation of Divisional Training

The participants were instructed to participate in a number of tasks including quizzes and group work which was used to evaluate their understanding of the training contents. The facilitators monitored the trainees' performance in those tasks, quizzes, and group works using the following metrics:

- Highly satisfactory: >90% of participants provided the correct answer.
- Satisfactory: 80-90% of participants provided the correct answer.
- Moderately satisfactory: 70-80% of participants provided the correct answer.
- Unsatisfactory: <70% of participants provided the correct answer.

The first task that was given was group work in session 1 to identify the indicators, outcomes, consequences, and impacts of climate change. Participants were given some piece of paper and they were told to identify the indicators, outcomes, consequences, and impacts of climate change. According to the facilitators, the performance was "moderately satisfactory" as 70-80% of the participants provided correct answers.

The second task was group work in session 2 on disaster management activities. Participants had to relate what kind of activities are necessary at what phase of a disaster. As per the evaluation of the facilitator, the performance was "highly satisfactory" as more than 90% of the participants provided correct answers.

The third task was group work in session 4 based on the sphere standards 1.1, 1.2, and 1.3. Participants were asked to answer some questions regarding the standards. The facilitator of the session evaluated the performance of the participants as "satisfactory" as 80-90% of the participants provided correct answers.

The fourth task was an assignment for each participant in session 4 on the indicators of sphere standards. Participants were told to go through the sphere standards 2 to 6 and answer the queries whether they were true or false According to the facilitator, the performance was "satisfactory" as 80-90% of the participants provided correct answers.

The fifth and final task was a group presentation where the participants were divided into groups and were provided with a task on the development of a hazard-specific emergency response plan. In the end, the participants were asked to make a presentation of their group work on the development of a hazard-specific emergency response plan. As per the evaluation of the facilitator, the performance was "satisfactory".

Apart from these tasks, participants also took part in quizzes in sessions 1, 4, 5, and 7. The quizzes were taken through Mentimeter. The facilitators of these sessions evaluated the performance of the participants as "highly satisfactory" as more than 90% of the participants provided correct answers.

12. Participant Feedback

In addition to providing some insights on the contents of the capacity-building program, participants were asked to share the scope for further improvement in the program by providing specific feedback at the end of the events. Here are some comments presented on different aspects of the program:

12.1. Relevance of training

After completion of the training program, the participants largely expressed their satisfaction over the 2-day long training program and appreciated the contents of the training module. A few feedback from the participants are presented here:

- "This training presented us with new information. The training helped us better understand the role of adaptation and mitigation in incorporating climate resilience into the WASH system. We knew the guidelines and procedures for WASH services in case of emergency. We heard explanations of the roles of the stakeholders and the

mechanisms that allow them to coordinate with one another. We want to use what we've learned in our programs." - Sanzida Akter, Program Manager, YPSA, Chattogram.

- "We learned steps to creating an inclusive emergency response plan. After the group work of session seven, we understood the necessity of creating an inclusive emergency response plan" - Mohammad Azad Kazi, Assistant Engineer, DPHE, Zakiganj, Sylhet.

12.2. Training Organization and Facilitation

- "The group works were very engaging and specific to to focusing point of this program. All the sessions should have a group work."- Samir Kumar Kundu, Regional Officer, BRAC, Shariatpur.
- "The way the sessions were facilitated was fulfilling. Both the resource people and the facilitation team showed professionalism. We had a great time at the training. " - Dr. Tarun K. Banerjee, Social Development Officer, DPHE, Rajshahi Circle.
- "The training needs to be organized at the Upazila. The training module for the Upazila level should be in Bangla." - Md. Jayanta Sarkar, EE, DPHE, Pirojpur.

12.3. Challenges

- "Coordination among the stakeholders of an area is very necessary for equitable and effective emergency response. Both DPHE and other organizations should have coordination in the WASH sector while working at the field level at times of disaster." - Md. Azharul Islam, Adviser, FDA, Faridpur.
- "Proper data collection of the affected area is necessary for emergency response otherwise it will be hard to do an effective emergency response." - Anupam Dey EE, DPHE, Bandarban
- "It is necessary to perform research and development on WASH technologies so that they can be more disaster-specific and climate-resilient. Technologies should be inclusive and easy to use" - Md. Saidul Islam, EE, DPHE, Bogura.

12.4. Specific Feedback from the programs:

The feedbacks from the participants of all the programs are presented here:

12.4.1. Training at Chattogram

- Participants suggested that there should be more description of the WASH technologies in the Hills. They addressed the issue of the need for research and development of disaster-resilient WASH technologies of the Hill tracks, especially for the disaster of landslide.
- Participants suggested the development of a rapid assessment tool for the management of authentic data and need assessment during and after a disaster.

12.4.2. Training at Sylhet

- The participants requested the development of a guideline for the process of decommissioning WASH technologies used during disasters.
- Participants addressed the need to change the roles and responsivities of DPHE in the SOD.

12.4.3. Training at Faridpur

- The participants requested the development of a training module in a simple version in the Bangla language.
- Participants addressed the need to add WASH technologies to the manual which are used in low water table areas and areas where river erosion takes place.
- Participants suggested adding a part for mock drill training so that the field-level officials could be given proper training.

12.4.4. Training at Rajshahi

- The participants suggested the development of a rapid assessment tool can be very useful in resource assessment of DPHE and can simplify the process of disaster recovery.
- Participants addressed the need to add WASH technologies to the manual which are used in situations of drought. They also addressed to need to update the manual where WASH technologies used or can be used in drought, are also focused along with other disasters.

12.4.5. Workshop for Developing Outline of the Emergency Wash Training Module for Ae/Sae

- Participants address that there should be a guideline for how to handle local administration. Sometimes in situations, local admins come to the DPHE officials and force them to change something to fix something. At that time there should be some guidelines so that they can handle the situation.
- Participants suggested that area-specific technologies can be introduced so that if someone from Chittagong is transferred to Gaibandha he/she will have an idea of what technologies are used in Gaibandha.
- Participants requested that there should be proper guidelines for the safety measures of the workers during disasters and while handling the WASH technologies. Training for field-level officers is necessary for the safety of the officers. Because during a disaster someone might not know how to swim, someone might not know how to handle the equipment.

12.4.6. Workshop for Developing Hazard-Specific Tools for Wash in Emergency

- Participants requested that there should be a guideline on who will be in the emergency response team and how to form the team.
- Participants suggested that there is a need for a software mechanism for resource mapping. If there is software that will give us the number, location, and condition of the resources of DPHE, then the risk assessment will be easier and more accurate.
- Participants addressed that a framework agreement can be developed by which contractors can be hired and given a specific area to work on. During disasters and after the disaster the contractors can do the response work and handle all the logistics and equipment. After the rehabilitation process is over they can showcase the bill to DPHE and DPHE will support them. In this way, the liability of DPHE equipment will be reduced and the work pressure will also be reduced. This will also increase the efficiency of emergency response.

12.4.7. Workshop Emergency Preparedness And Response in Wash for Urban Areas

- Participants suggested that the initial planning of developing WASH services in city corporations, Paurashavas, and municipalities should be disaster resilient otherwise during a disaster damage to WASH services is seen.
- Participants requested that research and development be necessary to develop innovative technologies for the reduction of misuse of water. They also addressed that during the reconstruction of pipelines of the water supply and sewage network, it should be kept in mind that the WASH services are not disrupted. Otherwise, it can cause a shortage of water supply in the households and can cause water logging due to heavy rain. This can eventually lead to many diseases.
- Participants suggested that Renewable energy i.e. solar power, can be used to mitigate the problem of electricity shortage during a disaster. They also addressed that town planning should be more climate resilient so that during disasters WASH services are not hampered.

12.4.8. Final Training of Trainings (ToT)

- Participants requested that a guideline or training manual for mock drills of DPHE field-level officials should be made so that they can be trained as emergency response team members.
- Participants suggested that the rapid assessment data collection app should be development in a more refined away. The app should also be in Bangla so that it is easy for the field-level officer

During the last session of the ToT participants were asked to suggest a 3-month development plan (short term) and a 3 to 12-month development plant (long term). The suggestions of the participants are attached as Annex-6.

13. Conclusion and Way Forward:

The effective execution of a two-day training program in four divisional cities, the three consultation workshops at Dhaka, and the residential Training of Trainers (ToT) at Sarah Resort, Gazipur for DPHE engineers, Government officials, and NGO professionals across 46 districts stand as a commendable achievement. The responses observed in the performances and feedback from participants underscore the success of this initiative. These findings highlight the crucial importance of continuing capacity development in the WASH sector in Bangladesh, especially in the areas of emergency planning and response.

Considering the feedback from participants and recognizing the challenges in capacity development in the WASH sector for emergency preparedness and response in Bangladesh, here are some general recommendations for the next steps:

- Development of a training module for the field level officer for capacity building in emergency preparedness and response in WASH.
- Development of the rapid assessment data collection app from the affected areas before/during/after disasters that will be used by DPHE's store circle for assessment and developing response plans. A dashboard could be designed to facilitate data-driven decision-making for effective disaster management.
- Issuing a letter from the Chief Engineer on the formation of the WASH cluster at district and Upazila level. And an order to conduct WASH cluster meetings on a regular basis and send the meeting minutes and meeting report from the local level to the headquarters as soon as possible.
- Developing a guideline for WASH Cluster meeting.
- Development of an emergency response team of DPHE for emergency response during and after disaster.
- Development of a training module for the emergency response team and guidelines for mock drills.
- Identifying the gaps in DPHE's roles in disaster preparedness and response in the SOD and providing recommendations to address the gaps in the SOD.
- Initiating a project on mapping the WASH situation all over Bangladesh. (census)
- Initiate assessment of WASH situation in cyclone/flood shelter.

ANNEX

Annex-1: Schedule of the Trainings

Table 1: Schedule of divisional training

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

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

Table 2: Schedule of final Training of Trainers (ToT)

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

Date: 24-26 May 2024 | **Venue: Sarah Resort, Gazipur**

Program Schedule

Topics	Time	Session Contents
Day 1 (24 May 2024, Friday)		
Travel	8.00 – 11.00	Participants travel from DPHE to the venue
Opening Session	11.00 – 11.30	Opening Session
	11:30 – 12:00	Presentation of the background and overview of the capacity-building program
	12.00 – 14.30	Hotel check-in, lunch, and prayer
Section 1	14.30 – 15.30	Session 1 – Climate Change and Its Impact on Water, Sanitation and Hygiene (WASH)
	15.30 – 16.00	Tea break
	16.00 – 17.00	Session 2 – Disasters and Its Impacts on WASH Infrastructures in Bangladesh
	17.00 – 19.00	Refreshment break
Section 2	19.00 – 20.30	Session 3 – Stakeholders' Roles in Disaster Risk Reduction and Emergency Preparedness and Response in WASH
Day 2 (25 May 2024, Saturday)		
Review Session	9.00 – 9.30	Review of Day-1 Sessions
Section 2	9.30 – 11.00	Session 4 – Standards and Guidelines for WASH during Disasters and Emergency Response
	11.00 – 11.30	Tea break
Section 3	11.30 – 13.00	Session 5 – Climate Resilient WASH Technologies
	13.00 – 14.00	Lunch break
Section 4	14.00 – 15.15	Session 6 – WASH Services in Disasters and Emergency Response
	15.15 – 15.30	Tea break
	15.30 – 17.00	Session7 – Emergency Response Planning (ERP) in WASH and Implementation
	17.00 – 19.00	Refreshment break
	19.00 – 20.30	Demo WASH Cluster Meeting through role play and Activating WASH Clusters at the Local Level
Day 3 (26 May 2024, Sunday)		
Review Session	9.00 – 9.30	Review of Day-2 Sessions
Miscellaneous	9.30 – 11.30	Group Work on Emergency Preparedness and Response Planning in WASH and presentation of group work
	11.30 – 11.45	Tea break
	11.45 – 12.30	Orientation on Data Collection App
	12.30 – 13.00	Way Forward for WASH in Emergency Preparedness and Response
Closing Session	13.00 – 13.30	Closing Session
	13.30 – 14.30	Lunch
Travel	14.30 – 17.00	Participants travel back to Dhaka

Annex-2: List of Participants

Table A 1: Participants list for the divisional training of Chattogram circle held at Radisson Blu Hotel, Chattogram

Sl. No.	Name	Designation & Organization
1.	Md. Jahir Uddin Dewan	SE, DPHE, Chattogram Circle
2.	Md. Mizanur Rahaman	SAE, DPHE, Chattogram
3.	Md. Forhad Uddin	SAE , DPHE, Chattogram
4.	Eng. Md. Golam Morshed	SDO, , DPHE, Chattogram
5.	Abu Hanifa	Project Officer, DSK, Chattogram
6.	Sanzida Akter	Program Manager, YPSA, Chattogram
7.	Md. Ali Sheekder	Executive Director, SOPNIL, Chattogram
8.	Jony Rozario	Technical Coordinator-WASH, World Vision, Chattogram
9.	Md. Enamul Hasan	District Manager, BRAC, Chattogram
10.	Daniel Sipu Gomes	Program Officer, Caritas Bangladesh, Chattogram
11.	Panna Akter	Senior Assist. Commissioner, DC office, Chattogram
12.	Md. Sifullah Majumder	DRRO, DC Office, Chattogram
13.	Nirendra Nath Roy	Supervision Engineer WASH, WSUP, Chattogram
14.	Md. Ahasan Habib	EE, DPHE, Noakhali
15.	Md. Abdur Razzak	AE, DPHE, Noakhali
16.	Anawar Hossen	AE, DPHE, Noakhali
17.	Abu Musa Mohammad Foysal	EE, DPHE, Chandpur
18.	Md. Sohrab Hossen	Estimator, DPHE, Chandpur
19.	Md. Jahidul Islam	SAE, DPHE, Chandpur
20.	Porag Borua	EE, DPHE, Rangamati
21.	Md. Rubel Rana	SAE, DPHE, Rangamati

22.	Purnendu Chakma	Estimator, DPHE, Rangamati
23.	Rajib Chandra Das	Estimator, DPHE, Noakhali
24.	Abdur Razzak	AE, DPHE, Bandarban
25.	Kamanashis Khisa	WASH Officer BSAP, GRAUS, Bandarban
26.	Palash Chandra Das	EE, DPHE, Khagrachori
27.	Md. Mustafizur Rahman	EE, DPHE, Cox's Bazar
28.	Abul Monjur	AE, DPHE, Cox's Bazar
29.	Md. Rajib Hossan Raju	Estimator, DPHE, Cox's Bazar
30.	Mr, Bitu Dutta	Trng. & Doc. Officer, Green Hill, Bandarban
31.	Dr. MD. Naoshad Khan	Medical Officer, Civil Surgent Office, Chattogram
32.	Saidul Islam	SAE, DPHE, Bandarban Sadar
33.	Anupam Dey	EE, DPHE, Bandarban

Table A 2: Participants list for the divisional training for Sylhet circle held at Grand Sylhet Hotel and Resort, Sylhet

Sl. No.	Name	Designation & Organization
1.	Md. Alamgir Mia	Project Coordinator, Shushilan, Amberkhana, Sylhet
2.	Ahamed Hossain Chowdhury	Area Manager, Asia Arsenic Network, Balaganj, Sylhet
3.	Pallab Kanti Roy	Field Technical Program Specialist-Health Nutrition & Sylhet ACO, World Vision Bangladesh
4.	Md. Delowar Hossain	Focal, Emergency Response & DRR, FNDB, Khadinagar, Sylhet
5.	Dencil Podueng	Junior Program Officer, Caritas Bangladesh, Sylhet Region
6.	Mohammad Layes Miah Talukder	Assistant Engineer, DPHE, Sylhet Sadar
7.	Mohammad Azad Kazi	Assistant Engineer, DPHE, Zakiganj, Sylhet
8.	Shah Mamunul Ahad	Field Team Leader, iDE, Sylhet
9.	Md, Yunus Ali	SAE, DPHE, Gowainghat
10.	Anick Ahammad Opu	District Coordinator, BRAC, Sylhet
11.	Sakhawat Ershad	District Primary Education Officer, Sylhet
12.	Tahmina Tanvin	EE, DPHE, Habiganj
13.	Md, Ruhul Amin	SAE, DPHE, Jaintapur, Sylhet
14.	Abdullah	SAE, Fenchuganj, Sylhet
15.	Rafiqul Islam	AE, DPHE, Sylhet
16.	Paniruzzaman	AE, DPHE, Kanaighat, Sylhet
17.	Kazi Riyal	AE, DPHE, South Surma, Sylhet
18.	Md. Amdadul Haque	Estimator, DPHE, Sylhet
19.	Mohammad Shaheen	ED, Habiganj Unnayan Sangstha, Habiganj
20.	Md. Jahangir Alam	Estimator, DPHE, Moulvibazar
21.	Md. Saiful Islam	SAE, DPHE, Sremangal, Moulvibazar
22.	Moin Uddin	SAE, DPHE, Barlekha, Moulvibazar

23.	Sujan Ahammed	Sub-Assistant Engineer, DPHE, Kamolganj, Moulvibazar
24.	Faysal Ahmed	Project Coordinator, ERA, Sunamganj
25.	Md. Robiul Alam	SAE, DPHE, Ajmirganj, Habiganj
26.	Ali Ajur	SAE, DPHE, Baniachong, Habiganj
27.	Md. Jakari	SAE, DPHE, Nabiganj, Habiganj
28.	Md. Abdur Ranak	AE, Lakai, Habiganj
29.	Md. Mohiuddin	AE, DPHE, Chunarughat, Habiganj
30.	Md, Muhosin	SAE, DPHE, Kulaura, Moulvibazar
31.	Md. Mizanur	SAE, DPHE, Chhatak, Sunamganj
32.	Bipresh Talukdar	SAE, DPHE, Dowarabazar, Sunamganj
33.	Mridul Kanti Sarker	SAE, DPHE Biswamvorpur, Sunamganj
34.	Al-Amin	SAE, DPHE Tahirpur, Sunamganj
35.	Ram Kumar Shaha	SAE, DPHE, Jamalganj, Sunamganj
36.	Md. Khaleduzzam	EE, DPHE, Moulvibazar
37.	Md. Abul Kashem	EE, DPHE, Sylhet & Sunamganj

Table A 3: Participants list for the divisional training for Faridpur circle held at Buro Bangladesh, HRD Center, Faridpur

Sl. No.	Name	Designation & Organization
1.	Sumon Roy	EE, DPHE, Faridpur
2.	MD. Foyez Ahmed	EE, DPHE, Gopalganj
3.	Md. Fazlul Haque	EE, DPHE, Shariatpur
4.	Md. Samsul Islam	EE, DPHE, Madaripur
5.	Md. Zakaria Ahmed	EE, DPHE, Rajbari
6.	Md. Somesh Ali	AE, DPHE, Shariatpur
7.	Mohammad Nasir Uddin Mollah	AE, DPHE, Pungsha Rajbari
8.	Md. Nurnabi Islam	Store Officer-Estimator, DPHE, Rajbari
9.	Md. Tariqul Islam	AE, DPHE, Madaripur Sadar
10.	Sufa Begum	AE, DPHE, Circle Office
11.	Md. Lutfor Rahman	AE, DPHE, Modhukhali, Faridpur
12.	Md. Amzad Hossain	AE, DPHE, Bhanga, Faridpur
13.	Md. Jamal Sheikh	AE, DPHE, Sadarpur, Faridpur
14.	Md. Akir Khan	AE, DPHE, Kotalipara, Gopalganj
15.	A.F.M. Hasibul Chowdhury	Estimator, DPHE, Gopalganj
16.	Md. Ataul Gony	Store Officer-Estimator, DPHE, Shariatpur
17.	Md. Hasan Mia	SAE, DPHE, Noria, Shariatpur
18.	Md. Golam Morshed	SAE, DPHE, Madaripur
19.	Md. Naimuzzaman Biswas	AE, DPHE, Faridpur Sadar
20.	Md. Asiamuzzaman Sheikh	Store Keeper, DPHE, Faridpur
21.	Md. Jayanta Sarkar	EE, DPHE, Pirojpur
22.	Md. Ershaduzzaman Mridul	EE, DPHE, Jhalokathi

23.	Md. Mahmudur Rahman	EE, DPHE, Bhola
24.	Dr. Siddiqur Rahman	DCS, Faridpur
25.	Md. Mohi Uddin	DPEO, DPE, Faridpur
26.	Abu Naser Mohammad Babar	DRRO, Faridpur
27.	Bishnu Pada Ghosal	DEO, DSHE, Faridpur
28.	Ali Islam Mredha	Project Co-ordinator, SDS, Shariatpur
29.	Md. Nurul Islam	Field Team Leader, iDE, Faridpur
30.	Samir Kumar Kundu	Regional Officer, BRAC, Shariatpur
31.	Md. Ayub Ali Talukder	Executive Director, Aungukur Palli Unnayan Kendra, Madaripur
32.	Md. Nur Miyad	Manager, Jagorani Chakra Foudation, Madaripur
33.	Molla Aslam Hossain	Area Manager, AMP Project, EPRC, Gopalganj
34.	Md. Khandaker ahsan Rakib	District Co-ordinator, Practical Action, Faridpur
35.	Md. Asadullah	District Co-ordinator, Faridpur
36.	Md. Azharul Islam	Adviser, FDA, Faridpur
37.	Sheikh Mohammad Masud Rana	Executive Director, GJUS, Rajbari
38.	Lutfar Rahman Labu	Executive Director, RUS, Rajbari

Table A 4: Participants list for the divisional training for Rajshahi circle held at Hotel X, Rajshahi

Sl. No.	Name	Designation & Organization
1.	Md. Harun-or-Rashid	EE, DPHE, Rajshahi
2.	Md. Saidul Islam	EE, DPHE, Bogura
3.	Md. Monjel Hossin	AE, DPHE, Godagari, Rajshahi
4.	Umme Salma	Estimator, DPHE, Rajshahi Division, Rajshahi
5.	Md. Masum Ali Sarker	Project Engineer, Eco-Social Development Organization, ESDO, Rajshahi
6.	Mithun Kumar Rabidas	SAE, DPHE, Bagha, Rajshahi
7.	Israt Jahan	Manager Capacity Building, DASCOH-Foundation, Rajshahi
8.	Md. Nasir Uddin	District Education Officer, Rajshahi
9.	Selim Reza Ronzu	Deputy Chief Conservancy Officer, Rajshahi City Corporation, Rajshahi
10.	Dr. Tarun K. Banerjee	Social Development Officer, DPHE, Rajshahi Circle
11.	Mst. Mousumi Khatun	Head Estimator, DPHE, Rajshahi Circle, Rajshahi
12.	Md. Ariful Haque	SAE, DPHE, Godagari, Rajshahi
13.	Md. Abu Bashir	PIO, DDM, Paba, Rajshahi
14.	Md. Golum Kibria	EE, DPHE, Bogura
15.	Md. Manirul Islam	SAE, DPHE, Sujanagar, Pabna
16.	Md. Abdus Salam	Upazila Coordinator, GOB-UNICEF Project, Chapainawabganj
17.	Shamima Akter	Training Manager, Manab Mukti Sangstha (MMS), Saydabad, Sirajganj
18.	Md. Ashraful Islam	SAE, DPHE, Noldanga, Natore
19.	Md. Sirajum Munir	SAE, DPHE, Sirajganj Sadar, Sirajganj
20.	Amit Kumar Sarkar	EE, DPHE, Chapainawabganj
21.	Reaj Hossain	SAE, DPHE, Chouhali, Sirajganj
22.	Md. Sazzadul Islam Sabuj	SAE, DPHE, Kazipur Sirajganj
23.	Md. Kamrul Hasan	Estimator, DPHE, Sirajganj

24.	Shariful Islam	SAE, DPHE, Belkuchi, Sirajganj
25.	Md. Mehedul Islam	SAE, DPHE, Sonatola, Bogura
26.	Md. Moyazzam Hossain	SAE, DPHE, Dupchanchia, Bogura
27.	Md. Siepon Ali	SAE, DPHE, Sariakandi, Bogura
28.	Mst. Rozina Akter Sumi	SAE, DPHE, Dhunat, Bogura
29.	Md. Shakiul Islam	AE, DPHE, Bogura Sadar
30.	Md. Rokonujjaman	EE, DPHE, Sirajganj
31.	Md. Monower Hossain	AE, DPHE, Bera, Pabna
32.	Md, Siraj Hossain	Estimator, DPHE, Natore
33.	Md. Mustafizur Rahman	Estimator, DPHE, Chapainawabganj
34.	John Polash Harda	Draftsman, DPHE, Chapainawabganj
35.	Sujor Karmokar	AE, DPHE, Shibganj, Chapainawabganj
36.	Kazi Masuduzzaman	Deputy Director, DPHE, Sirajganj
37.	Md. Abdur Rahim	AE, DPHE, Singra, Natore
38.	Md. Nurul Kabir Bhuiya	EE, DPHE, Natore
39.	Md. Abdullah Al Mamun	SAE, DPHE, Natore Sadar, Natore

Table A 5: Participants list for the Consultation Workshop for Developing Outline of the Emergency WASH Training Module for AE/SAE held at DPHE Auditorium, DPHE, Dhaka

SL.No.	Name of Participants	Designation
1.	Mohammad Anwar Eusuf	SE, DPHE, Planning Circle, Dhaka
2.	Ehete Shamul Russel Khan	SE, DPHE, Fusibility & Study Circle, Dhaka
3.	SM Shamim Ahmed	PD, DPHE, 10 Town Project, Dhaka
4.	Nazia Tasnim	DPD, DPHE, FREAP, Dhaka
5.	Farhana Hossain	EE, P & C Division, Dhaka
6.	Ruksana Parviin	EE, DPHE, Training Division, Dhaka
7.	Dilruba Farzana	DPD, DPHE, 10 Town Project, Dhaka
8.	Rebeka Ahsan	EE, DPHE, Store Division, Chattogram
9.	Md. Yasin Arafat	EE, DPHE, Store Division, Dhaka
10.	Md. Saihan Ali	EE, DPHE, Gaibandha
11.	Md. Rezwan Hossain	EE, DPHE, Norshindi
12.	Md. Ibne Mayaz Pramanik	EE, DPHE, Tangail
13.	Gazi Fatema Ferdous	EE, DPHE, Manikganj
14.	Md. Abul Kashem	EE, DPHE, Sunamganj
15.	Md. Mahbubur Rahman	EE, DPHE, Kishorganj
16.	Md. Moshiur Rahman	EE, DPHE, Netrokona
17.	Md. Ashrafuzzaman	EE, DPHE, Patuakhali
18.	Jaynta Mallik	EE, DPHE, Bagerhat
19.	Md. Shohidul Islam	EE, DPHE, Satkhira
20.	Md. Muztafizur Rahman	AE, DPHE, Asasuni, Satkhira
21.	Md. Akmol Hossain	EE, DPHE, Khulna
22.	Amit Kumar Sarkar	EE, DPHE, Chapainawbganj
23.	Mohammad Nurul Kabir Bhuiyan	EE, DPHE, Natore
24.	Pankaj Kumar Saha	EE, DPHE, Rangpur
25.	Abul Manjur	AE, DPHE, Cox's Bazar
26.	Subrato Borua	AE, DPHE, Rangamati Sadar
27.	Md. Abdullah-al Mahmud	AE, DPHE, Dhakop, Khulna
28.	Md. Yousuf Ali	SAE, DPHE, Nachol, Chapainawbganj
29.	Abdur Razzak	AE, DPHE, Lama, Bandarban
30.	Md. Robin Hossain	SAE, DPHE, Store Circle, Dhaka

Table A 6: Participants list for the Consultation Workshop for Developing Hazard-specific Tools for WASH in Emergency held at ITN Seminar Room, BUET, Dhaka

SL.No.	Name of Participants	Designation
1.	Mohammad Kabir Chowdhury	PD, DPHE, 25 Town Project, Dhaka
2.	Raushan Alam	SE, DPHE, Dhaka Circle
3.	Md. Areef Anwar Khan	PD, DPHE, FREAP, Dhaka
4.	Dilruba Farzana	DPD, DPHE, 10 Town Project, Dhaka
5.	Dalila Afroze	EE, Arsenic Management, Dhaka
6.	Md. Yasin Arafat	EE, DPHE, Store Division, Dhaka
7.	Md. Robin Hossain	SAE, DPHE, Store Circle, Dhaka
8.	Md. Imran Tarafder	EE, DPHE, Barisal
9.	Md. Saihan Ali	EE, DPHE, Gaibandha
10.	Mohammad Azad Kazi	AE, DPHE, Zakigonj, Sylhet
11.	Md. Younus Ali	SAE, DPHE, Gowainghat, Sylhet
12.	Sujoy Karmokar	AE, DPHE, Sibganj, Chapainawbganj
13.	Md. Abul Kashem	EE, DPHE, Sunamganj
14.	Md. Yousuf Ali	SAE, DPHE, Nachol, Chapainawbganj
15.	Md. Moshiur Rahman	EE, DPHE, Netrokona
16.	Ahsan Habib	AE, DPHE, Kazipur, Serajganj
17.	Monjil Hossain	AE, DPHE, Godagari, Rajshahi
18.	Md. Shohidul Islam	EE, DPHE, Satkhira
19.	Md. Muztafizur Rahman	AE, DPHE, Asasuni, Satkhira
20.	Robiul Islam	SAE, DPHE, Mohonpur, Rajshahi
21.	Amit Kumar Sarkar	EE, DPHE, Chapainawbganj
22.	Muhammad Moshiur Rahman	EE, Netrokona
23.	Pankaj Kumar Saha	EE, DPHE, Rangpur
24.	Abul Manjur	AE, DPHE, Cox's Bazar
25.	Subrato Borua	AE, DPHE, Rangamati Sadar
26.	Md. Abdullah-al Mahmud	AE, DPHE, Dhakop, Khulna
27.	Harunur Rashid	EE, DPHE, Kurigram
28.	Abdur Razzak	AE, DPHE, Lama, Bandarban
29.	Chandrakishar Roy	AE, DPHE, Char Rajibpur, Kurigram
30.	Md. Khokon Rana	SAE, Sundarganj, Gaibandha

Table A 7: Participants list for the Consultation Workshop on Emergency Preparedness and Response in WASH for Urban Areas held at ITN Seminar Room, BUET, Dhaka

SL.No.	Name of Participants	Designation
1.	Roman Kabir	Deputy Project Director, 23 Paurashava Project, DPHE, Dhaka
2.	Dilruba Farzana	DPD, 10 towns Project, DPHE, Dhaka
3.	Mohammad Sheik Farid	DPD, 32 Pourashava Project, DPHE, Dhaka
4.	Ritthick Chowdhury	EE & DPD, BCISP-25 Town, DPHE, Dhaka
5.	Nazir Ahmed Tarik	AE, Bhola Paurashava
6.	Ranver Ahmed	Town Planner, Kushtia Municipality
7.	A.S.M. Ashrafujjaman Talukder	Town Planner, Lalmonirhat Municipality
8.	Md. Salim Sarower	AE (Water), Satkhira Paurashava
9.	Md. Anisur Rahman	Chief Waster Management Officer, Khulna City Corporation, Khulna
10.	Bony Ahsan	Town Planner, Rajshahi City Corporation
11.	Md. Badar Uddin	Social Development Officer, Jhenaidah Paurashava
12.	Alauddin	P.N.O., Lakshmipur, Paurashava
13.	Md. Ariful Islam	SAE, Saidpur Paurashava, Saidpur, Nilphamari
14.	Md. Jamal Hossain	AE, Khagrachari, Paurashava
15.	Nazmul Karim	EE, Satkhira Paurashava
16.	Ibrahim Md. Taimur	EE, DPHE, Kushtia
17.	Muhammad Samiul Hoque	EE, DPHE, Sherpur
18.	Anupam Dey	EE, DPHE, Bandarban
19.	Mohammed Mosleh Uddin	EE, DPHE, Meherpur
20.	Md. Kabil Hossain	AE, DPHE, Sirajganj District
21.	Md. Ashrafuzzaman	EE, DPHE, Patuakhali
22.	Dewan Rejaul Karim	EE, Sherpur Paurashava, Sherpur District
23.	Md. Yousuf Ali	SAE, DPHE, Nachole, Chapainawabganj
24.	Bilkis Akhet	EE, DPHE, Lakshmipur
25.	Md. Tanveer Rahman Mollah	Urban Planner, Sylhet City Corporation

Table A 8: Participants list for the final Training of Trainers (ToT) held at Sarah Resort, Gazipur

Sl. No.	Name	Designation & Organization
1.	Muhammad Moshiur Rahman	EE, DPHE, Netrokona
2.	Mohammad Ali	WASH Officer, UNICEF
3.	Md. Toriqul Islam	Head of PO, NGO Forum for Public Health
4.	Ibrahim Md. Taimur	EE, DPHE, Kushtia
5.	Md. Azizur Rahman	Research Officer, ITN-BUET
6.	Md. Murad Hossen	EE, DPHE, Nilphamari
7.	Dilruba Farzana	DPD, 10 towns Project
8.	Md. Khairul Hasan	EE, DPHE, Store division, Khulna
9.	Mohammed Nurul Kabir Bhuiyan	EE, DPHE, Natore Sadar
10.	Farhana Hossain	EE, DPHE, P&C Division
11.	Md. Rokonujjaman	EE, DPHE, Sirajganj
12.	Dalila Afroze	EE, AMD, DPHE
13.	Md. Shayhan Ali	EE, DPHE, Gaibandha
14.	Furqan Ahmed	WASH Officer, UNICEF
15.	Md. Yasin Arafat	EE, Store Division, Dhaka
16.	Rebeka Ahsan	EE, Store Division, Chattagram
17.	Amit Kumar Sarkar	EE, DPHE, Chapainawabganj
18.	Pankaj Kumar Saha	EE, DPHE, Rangpur
19.	Muhammad Samiul Hoque	EE, DPHE, Sherpur

Annex-3: Photos of the training

Figure A 1: Pictures of training at Chattogram






















WASH CLUSTER MEETING
CHATTOGRAM DISTRICT

Figure A 2: Picture of training at Sylhet











WASH CLUSTER MEETING
SYLHET DISTRICT

Figure A 3: Picture of training at Faridpur


WASH CLUSTER MEETING
FARIDPUR DISTRICT

Figure A 4: Picture of training at Rajshahi

















WASH CLUSTER MEETING


Figure A 5: Pictures of the workshop for developing an outline of the emergency wash training module for ae/sae



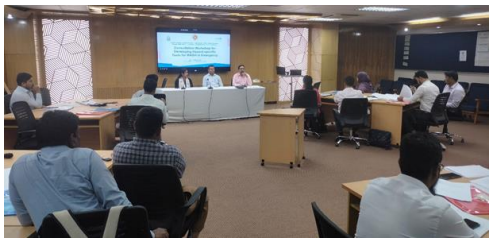






Figure A 6: Pictures of the workshop for developing hazard-specific tools for WASH in an emergency








Page **63** of **74**

Figure A 7: Pictures of the workshop on emergency preparedness and response in WASH for urban areas







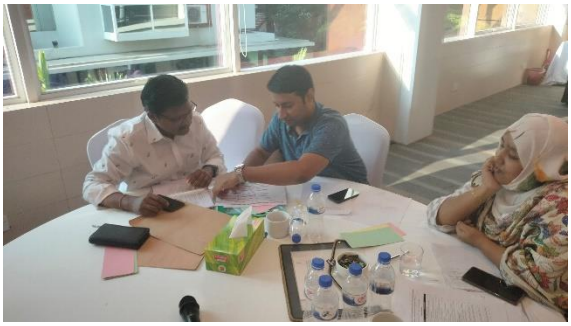

Figure A 8: Pictures of the final Training of Trainers (ToT)

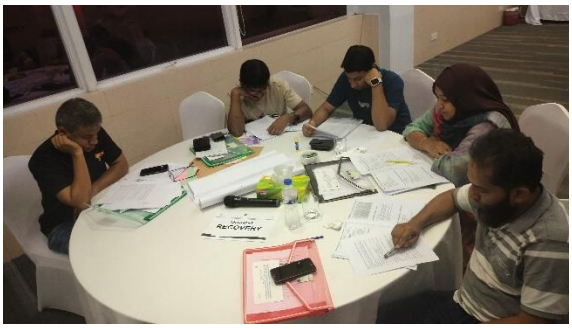


















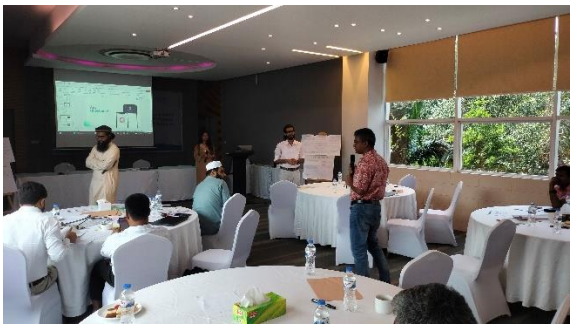












Annex-4: Summary Table of Training Programs

Sl. No.	Program	Districts	DPHE Participants				NGO Representatives	Other Government Representatives	Program Data	Venue
			Executive Engineer	Assistant Engineer	Sub-Assistant Engineer	Estimators & Draftsman				
1.	Training at Chattogram	Chattogram, Noakhali, Chandpur, Rangamati, Bandarban, Cox's Bazar	6	4	5	4	9	4	27-28 March 2024	Radisson Blu Hotel, Chattogram
2.	Workshop on Module outline development for AE/SAE	Dhaka, Chattogram, Gaibandha, Norshindi, Tangail, Rangpur, Kishorganj, Bagerhat, Sunamganj, Satkhira, Manikganj, Patuakhali, Natore, Cox's Bazar, Khulna, Chapainawabganj, Bandarban, Rangamati, Netrokona	20	5	2	×	×	3	30 March 2024	DPHE Bhaban, DPHE, Dhaka
3.	Workshop on Hazard Specifc tool	Dhaka, Cox's Bazar, Rajshahi, Sylhet, Chapainawabganj, Netrokona, Khulna, Kurigram, Gaibandha, Rangpur, Barishal, Sunamganj, Bandarban, Rangamati, Satkhira, Sirajganj	13	10	5	×	×	2	31 March 2024	ITN Seminar Room, BUET, Dhaka
4.	Training at Sylhet	Sylhet, Habiganj, Moulvibazar, Sunamganj	3	7	15	2	9	1	21-22 April 2024	Grand Sylhet Hotel and Resort, Sylhet
5.	Training at Faridpur	Faridpur, Gopalganj, Shariatpur, Madaripur, Rajbari	8	9	2	4	11	4	29-30 April 2024	BURO Bangladesh, HRD Center, Faridpur
6.	Training at Rajshahi	Rajshahi, Bogura, Pabna, Chapainawabganj, Sirajganj, Natore	7	6	15	7	4	5	15-16 May 2024	Hotel X, Rajshahi
7.	Workshop on Urban Disaster	Bhola, Kushtia, Lalmonirhat, Satkhira, Khulna, Rajshahi, Jhenaidah, Lakshmipur, Nilphamari, Khagrachari, Sherpur, Bandarban, Meherpur, Sirajganj, Chapainawabganj, Sylhet, Dhaka	10	3	2	×	×	10	20 March 2024	ITN Seminar Room, BUET, Dhaka
8.	Training of Trainers (ToT)	Dhaka, Netrokona, Kushtia, Nilphamari, Khulna, Natore, Sirajganj, Gaibandha, Chattogram, Chapainawabganj, Rangpur, Sherpur	15	×	×	×	4	×	24-26 May 2024	Sarah Resort, Gazipur

Annex-5: Summary Table of WASH cluster meeting

Training Batch	Division (DPHE Circle)	Districts of WASH Cluster meeting	DPHE Participants				NGO Representatives	Other Government officials	Training Date	Venue
			Executive Engineers	Assistant Engineers	Sub-Assistant Engineers	Estimators and Draftsmen				
1	Chattogram	Chattogram	1	×	3	×	8	4	28 March 2024	Radisson Blu Hotel, Chattogram
2	Sylhet	Sylhet	1	1	×	×	8	×	22 April 2024	Grand Sylhet Hotel and Resort, Sylhet
3	Faridpur	Faridpur	1	4	×	2	×	4	30 April 2024	Buro Bangladesh, HRD Center, Faridpur
4	Rajshahi	Rajshahi	1	×	2	2	1	5	16 May Rajshahi	Hotel X, Rajshahi

Annex-6: Feedback for the development plans from the participants

Sl No.	Name of Participant	Short Term Activities	Long Term Activities
1.	Dalila Afroze (EE, AMD, DPHE, Dhaka)	• Office order for the formation of the WASH Cluster • Dissemination of Regulatory Framework • Development of Rapid Assessment Data Collection Tool • Resource Mobilization • Capacity Building • Regular Coordination meeting • Public Campaigns • Community feedback • Developing Contingency Plan	• Behavioral Change • Policy advocacy and Coordination • Capacity Building and Training • Continuous Dissemination of Regulatory Framework • Real-time monitoring system
2.	Md. Shayhan Ali (EE, DPHE, Gaibandha)	• Office order to form WASH Cluster meeting as early as possible • Office order to form “Contingency Plan” • Dissemination of regulatory Framework, Sphere standard • Capacity building (especially based on geographical mapping and disaster) • Dissemination of operational guidelines and disaster recovery activities	• Formation of a response pool • Capacity Building • Formation of some guidelines for the safeguarding of DPHE personnel • Knowledge sharing activities
3.	Md. Rokonujjaman (EE, DPHE, Sirajganj)	• Issuing an office order for forming a WASH Cluster in every district • follow-up regularly and collect meeting minutes from districts • Instruct UNICEF to help, executive engineers regarding organizing the WASH cluster meeting	• Organizing capacity-building training for DPHE personnel about WASH emergency response during disaster • Providing safety equipment for field staff and giving them training by fire service or any INGO • Purchase and Store necessary equipment and materials for different types of disaster
4.	Farhana Hossain (EE, P&C Division, DPHE, Dhaka)	• Office order for regular WASH Cluster meeting • Collection of meeting minutes and handing it over to the headquarters • Give logistics support while creating a database • Give logistics support in times of emergency for the need assessment • Storing fuel and keeping the driver ready for the proper use of the Mobile water treatment plant • Dissemination of the number of mechanics at the Upazila level and their experience	• Regular WASH Cluster meeting • Creation of an Emergency Response team • Capacity building for field level officer • Buy more mobile WTP • Mock drills • PMO and DPHE coordination •

Sl No.	Name of Participant	Short Term Activities	Long Term Activities
		• Distributing Brochures with instructions on what to do instantly during a disaster • Developing a plan for distributing WASH facilities as fast as possible from the store to the affected areas during • Coordination with UNICEF and NGOs with the work of DPHE • Coordination between the DPHE district and Upazila level with the Headquarters	
5.	Ibrahim Md Taimur (EE, DPHE, Kushtia)	• Based on disaster intensity with place will do WASH Cluster meeting first will be decided • Experience sharing with the Executive engineers through Zoom meetings after a disaster • All EE will contact with WASH Cluster members	• Regular WASH Cluster meeting • Development of a district-level disaster contingency plan
6.	Md. Azizur Rahman (Research Officer, ITN-BUET)	• Office order for WASH Cluster meeting • Development of a Training Module to train DPHE mechanics on Emergency Response • Initiate orientation of DPHE officials on SOD for DPHE	• WASH situation mapping/ census • Identify the correction/modification required in SOD • Initiate assessment of WASH situation in cyclone/flood shelter • Follow-up WASH Cluster meeting status
7.	Amit Kumar Sarkar (EE, DPHE, Chapainawabganj)	• WASH Resource Mapping • Risk and Vulnerability Assessment (Primary level) • Emergency response training • Purchase of logistic support (torchlight, candle, etc) • Road Network map according to previous data • Action plan development	• Analysis of previous data to reevaluate the action plan • Purchase and stock update • App development of stock • Relocation of storage (safer place) • Training and Mock drill for field-level
8.	Md. Murad Hossen (EE, DPHE, Nilphamari)	• Initiate WASH Cluster meeting • Follow up on meeting • Planning emergency response based on the meeting	• Project formulation • Data collection • List of preparations regarding what to do in the future
9.	Pankaj Kumar Saha (EE, DPHE, Rangpur)	• Activate WASH Cluster • Resource Mapping Digitize Version • Training Module for Upazila level • Create a DPHE ERP Team	• Conduct Upazila-level training • Annual Report of WASH Cluster Meeting • Publish good practices initiated by the WASH Cluster team • Update and upgrade the current module with the previous experiences
10.	Nurul Kabir Bhuiyan (EE, DPHE, Natore)	• The Bangla version of the Module • Regular WASH Cluster meeting	• Organizing Training for AE/SAE • Digitization of emergency stock data from the store, so that all EE can see the stocks of the country

Sl No.	Name of Participant	Short Term Activities	Long Term Activities
			• Contingency Plan creation
11.	Muhammad Samiul Hoque (EE, DPHE, Sherpur)	• Arrange WASH Cluster meetings in each district • Instruct DRR and WASH preparedness • Contingency Stock update: DPHE and others	• Capacity Building Development for all staff through training • Frequently arrange the WASH Cluster meeting • Increase the stock position
12.	Md. Yasin Arafat (EE, Store Division, DPHE, Dhaka)	• Office order of WASH Cluster Activation in all district • Resource Data collection • Developing Contingency Plan	• WASH Cluster on disaster-prone districts • Data collection app development • Standard contingency plan activation • Coordination of WASH Cluster with administration
13.	Rebeka Ahsan (EE, Store Division, DPHE, Chattogram)	• Regular Monitoring of WASH Cluster Meeting • Officers should follow emergency mapping with DRRO • Publicity of DPHE's works in emergencies and advocates new opportunities • Introduce a digital supply management system effectively	• Prepare structural module for conducting cluster meetings successfully • Prepare an independent cell for emergency preparedness in DPHE • Activity-based emergency response training for local staff like mechanic • Re-strengthen stores of DPHE • Design for climate resilience technology advocating all local-level problems • Invent new possibilities to cope with future and ever-changing disasters
14.	Dilruba Farzana (DPD, 10 town project)	• Prepare Contingency plan (draft) of DPHE • Instruction letter from CE to conduct WASH cluster meetings quarterly with fund allocation (instruction to submit WASH cluster meeting minutes in WASH emergency service box of DPHE) • Update the WASH emergency service box of DPHE	• Finalize contextualized contingency plan of DPHE • Prepare SAE and Mechanic level training module • Supply safety instruments to mechanics at the time of trainings • Provide risk allowance and leave after emergency response for mechanics • Arrange appreciation methods (awarding/ appreciation letter) • Planning a project to strengthen the total disaster management system of DPHE • Enhancing the data management system
15.	Md. Khairul Hasan (EE, Store division, DPHE, Khulna)	• Arrange a WASH Cluster meeting every month • To store WASH Emergency supplies from the central store to the district store • To decide which NGO will work on which area in the WASH Cluster meeting so that there is no overlapping	• Proper maintenance and use of Mobile Water Treatment Plant

Sl No.	Name of Participant	Short Term Activities	Long Term Activities
16.	Md. Tariqul Islam (Head of PO, NGO Forum for Public Health)	• WASH Cluster Member list update with details contact (at National level) • Issue letter for organizing meetings and meeting regulations by DPHE • Meeting Plan and Frequency shared with relevant partners • Action plan and follow-up	• Collection of basic information at the Upazila level • Vulnerability mapping and adaptation • Context-specific wash facilities design and guideline • Update contingency of DPHE and other agencies (online system) • Organize capacity-building training • ERT formation and orientation