
ACTIVITY REPORT

***UNICEF supported DPHE WASH Emergency Response
Program for Cyclone Remal'24 affected areas of
Barisal and Khulna Division***

(2nd Phase)

FEBRUARY 13, 2025
DEPARTMENT OF PUBLIC HEALTH ENGINEERING

1. Introduction

In the aftermath of Cyclone Remal's landfall on May 26, 2024, which affected approximately 4.6 million people across eight coastal districts in Bangladesh, the Department of Public Health Engineering (DPHE), in collaboration with UNICEF, initiated the "UNICEF-supported DPHE WASH Response Program for Cyclone Remal." This program focused on repairing and installing water and sanitation components in seven severely impacted districts: Bagerhat, Pirojpur, Barguna, Patuakhali, Bhola, Khulna, and Satkhira. The comprehensive activity report details the successful completion of these interventions, highlighting overall progress, encountered challenges, and future strategies.

2. Impact of Cyclone Remal

A total of **eight districts** bore the brunt of the cyclone, with **more than 276 unions** affected across **various upazilas**. The worst-hit districts include **Satkhira, Patuakhali, Borguna, Bagerhat, Bhola, Pirojpur, Barishal, and Khulna**.

Damage to Water and Sanitation Facilities

- **Total damaged water sources: 13,801** (including tube wells, rainwater harvesting systems, reverse osmosis plants, and pond sand filters).
- **Damaged latrines: 9,328**
- **Water sources repaired: 962**
- **Water sources disinfected: 990**

Emergency Response and Relief Measures

- **165,500 liters of water** distributed through mobile water treatment plants and carriers.
- **89 new water sources** installed.
- **26 latrines** constructed in affected areas.
- **473,390 water purification tablets** distributed.
- **324 kg of bleaching powder** supplied for disinfection.
- **2,586 jerry cans** distributed.
- **2,274 hygiene kits** provided to affected families.

District-Wise Impact

- **Satkhira:** 4,569 water sources affected, 276 latrines damaged, 7,000 liters of water distributed.
- **Patuakhali:** Most affected district with 28,037 water sources damaged, 6,641 latrines affected, 168,800 water purification tablets provided.
- **Borguna:** 11,912 water sources impacted, 5,020 latrines damaged.
- **Bagerhat:** 15,224 water sources affected, 7,446 latrines damaged, 115,500 liters of water distributed.
- **Bhola:** 26,976 water sources impacted, 27,889 latrines affected.
- **Pirojpur:** 23,750 water sources damaged, response efforts ongoing.
- **Barishal:** 10,384 water sources affected, 539 latrines damaged.
- **Khulna:** 2,176 water sources impacted, 308 latrines affected, 63,500 liters of water distributed.

3. Activities Taken Under Cyclone Remal Response Program (DPHE-UNICEF)

The list below outlines the initial allocation of water and sanitation components for the seven districts most affected by Cyclone Remal.

District	Bagerhat	Pirojpur	Barguna	Patuakhali	Bhola	Khulna	Satkhira	Total
Repair platform of Shallow /Deep tube wells with Hand Pump	0	40	35	0	40	20	15	150
Repair of Rain Water Harvesting	250	300	250	250	0	100	50	
Repair & Rehabilitation of Solar-powered PSF	20	5	25	0	0	0	5	1200
Repair & Rehabilitation of Manual/Force Pump PSF.	45	0	35	0	0	0	0	55
Cleaning, Disinfection and other rehabilitation work of Pond	0	0	80	0	0	0	0	80
Installation of Deep Tubewell	0	50	0	50	80	0	0	80
Installation of shallow Tubewell)	0	25	0	0	0	25	0	180
Installation Rain Water Harvesting system	60	70	70	0	0	40	10	50
Installation of Water networks	0	4	4	3	0	3	1	250
Installation of Reverse Osmosis (RO) type Arsenic, Iron and Salinity Removal Plant (AISRU) with existing Tubewells	35	25	15	0	0	15	20	15
Repair and rehabilitation of Community based Reverse Osmosis Plants	1	3	1	0	0	2	0	110
Construct of new safely managed twin pit paka to replace destroyed sanitation facilities)	50	0	40	60	50	50	0	7
Total	461	522	555	363	170	255	101	

Implementation of Proposed Allocation from Districts:

Bagerhat District:

Intervention Type	District Allocation	District Implementation	Upazila-wise Implementation
Rain Water Harvesting System – Installation	60	50	Sharankhola: 20
			Morrelganj: 30; Mongla: 250
Rain Water Harvesting System – Repair	250	250	Sharankhola: 80
			Morrelganj: 120; Mongla: 50;
Reverse Osmosis (AISRU) System – Installation	35	35	Sharankhola: 10
			Morrelganj: 15; Mongla: 10
Reverse Osmosis (AISRU) System – Repair/Reconstruction	1	1	Morrelganj: 1
Solar-powered Pumping System – Repair/Reconstruction	20	20	Sharankhola: 7
			Morrelganj: 10 Mongla: 3;
Manual/Force Pumping System – Repair/Reconstruction	45	45	Sharankhola: 23
			Morrelganj: 20 Mongla: 2
Twin Pit Latrines Construction	50	50	Sharankhola: 15
			Morrelganj: 25 Mongla: 3

Pirojpur District:

Intervention Type	District Allocation	District Implementation	Upazila-wise Implementation
Repair Platform of Shallow/Deep Tube Wells with Hand Pump	40	65	Indurkani: 30 Bhandaria: 20, Nazirpur: 15, Mathbaria: 0
Rain Water Harvesting System – Repair	300	300	Indurkani: 100, Mathbaria: 100, Bhandaria: 50, Nazirpur: 50
Repair & Rehabilitation of Solar-powered PSF	5	5	Mathbaria: 5
Installation of Deep Tubewell	50	50	Bhandaria: 30, Nazirpur: 20
Installation of Shallow Tubewell	25	25	Indurkani: 25
Rain Water Harvesting System – Installation	70	70	Indurkani: 35, Mathbaria: 35

Installation of Water Networks	4	4	Indurkani: 1, Mathbaria: 1, Bhandaria: 1, Nazirpur: 1
Installation of Reverse Osmosis (RO) Type AISRU with Existing Tubewells	25	25	Indurkani: 25
Repair and Rehabilitation of Community-based Reverse Osmosis Plants	3	3	Bhandaria: 3

Barguna District:

Intervention	District Allocation	District Implementation	Upazila-wise Implementation
Repair Platform of Shallow/Deep Tube Wells with Hand Pump	35	35	Barguna Sadar: 10
			Amtali: 10
			Pathorghata: 15
Repair of Rain Water Harvesting	250	250	Barguna Sadar: 50
			Pathorghata: 200
			Amtali: 0
Repair & Rehabilitation of Solar-powered PSF	25	25	Barguna Sadar: 5
			Pathorghata: 20
			Amtali: 0
Repair & Rehabilitation of Manual/Force Pump PSF	35	35	Barguna Sadar: 5
			Pathorghata: 30
			Amtali: 0
Cleaning, Disinfection, and Other Rehabilitation Work of Pond	80	80	Barguna Sadar: 5
			Amtali: 5
			Pathorghata: 70
Installation of Rain Water Harvesting System	70	70	Barguna Sadar: 10
			Pathorghata: 60
			Amtali: 0
Installation of Water Networks	4	4	Barguna Sadar: 1
			Amtali: 1
			Pathorghata: 2
Installation of Reverse Osmosis (RO) Type Arsenic, Iron, and Salinity Removal Plant (AISRU) with Existing Tubewells	15	15	Pathorghata: 15
			Barguna Sadar: 0
			Amtali: 0
Repair and Rehabilitation of Community-based Reverse Osmosis Plants	1	1	Pathorghata: 1
			Barguna Sadar: 0
			Amtali: 0
Construction of New Safely Managed Twin Pit Paka Latrines	40	40	Barguna Sadar: 10
			Amtali: 10
			Pathorghata: 20

Patuakhali District

Intervention	District Allocation	District Implementation	Upazila-wise Implementation
Repair of Rain Water Harvesting Systems	250	450	Kalapara: 450
Installation of Deep Tubewells	50	50	Kalapara: 18
			Galachipa: 22
			Rangabali: 10
Construction of New Safely Managed Twin Pit Latrines	60	60	Kalapara: 17
			Galachipa: 20
			Rangabali: 23
Installation of Water Networks	3	3	Kalapara: 1
			Galachipa: 1
			Rangabali: 1

Bhola District

Intervention	District Allocation	District Implementation	Upazila-wise Implementation
Repair and Reconstruction of platform of Shallow/Deep tube wells with Hand Pump	40	40	Bhola Sadar: 15, Charfasson: 25
Installation of Deep Tubewell	80	80	Bhola Sadar: 55, Charfasson: 25
Construction of New Safely Managed Twin Pit Paka Latrines	50	50	Bhola Sadar: 20 Charfasson: 30

Khulna District

Intervention	Khulna Allocation	Khulna Implementation
Repair platform of Shallow/Deep tube wells with Hand Pump	20	20
Repair of Rain Water Harvesting	100	100
Installation of Shallow Tubewell	25	16
Installation of Rain Water Harvesting system	40	40
Installation of Water networks	3	3
Installation of Reverse Osmosis (RO) type Arsenic, Iron, and Salinity Removal Plant (AISRU) with existing Tubewells	15	25
Repair and rehabilitation of Community-based Reverse Osmosis Plants	2	2
Construct of new safely managed twin pit paka to replace destroyed sanitation facilities	50	50

Satkhira District

Schemes	District Allocation	District Implementation	Upazila-wise Implementation
Repair platform of Shallow/Deep tube wells with Hand Pump	15	15	Shyamnagar: 7, Ashashuni: 8
Repair of Rain Water Harvesting	50	50	Shyamnagar: 25, Ashashuni: 25
Repair & Rehabilitation of Solar-powered PSF	5	5	Shyamnagar: 2, Ashashuni: 3
Installation of Rain Water Harvesting system	10	10	Shyamnagar: 5, Ashashuni: 5
Installation of Water networks	1	1	Shyamnagar: 0, Ashashuni: 1
Installation of Reverse Osmosis (RO) type Arsenic, Iron, and Salinity Removal Plant (AISRU) with existing Tubewells	20	20	Shyamnagar: 5, Ashashuni: 15

Summary of Zilla-wise Implementation

Zilla	Bagerhat		Pirojpur		Barguna		Patuakhali		Bhola		Khulna		Satkhira		Total Allocation	Total Implementation
	Allocation	Implementation														
Repair platform of Shallow/Deep tube wells with Hand Pump	0	0	40	65	35	35	0	0	40	40	20	20	15	15	150	175
Repair of Rain Water Harvesting	250	250	300	300	250	250	250	450	0	0	100	100	50	50	1200	1400
Repair & Rehabilitation of Solar-powered PSF	20	20	5	5	25	25	0	0	0	0	0	0	5	5	55	55
Repair & Rehabilitation of Manual/Force Pump PSF	45	45	0	0	35	35	0	0	0	0	0	0	0	0	80	80
Cleaning, Disinfection, and other rehabilitation work of Pond	0	0	0	0	80	80	0	0	0	0	0	0	0	0	80	80
Installation of Deep Tubewell	0	0	50	50	0	0	50	50	80	80	0	0	0	0	180	180
Installation of Shallow Tubewell	0	0	25	25	0	0	0	0	0	0	25	16	0	0	50	41
Installation of Rain Water Harvesting System	60	60	70	70	70	70	0	0	0	0	40	40	10	10	250	250
Installation of Water Networks	0	0	4	4	4	4	3	3	0	0	3	3	1	1	15	15
Installation of Reverse Osmosis (RO) type Arsenic, Iron and Salinity Removal Plant	35	35	25	25	15	15	0	0	0	0	15	25	20	20	110	120

Repair and rehabilitation of Community-based Reverse Osmosis Plants	1	1	3	3	1	1	0	0	0	0	2	2	0	0	7	7
Construction of new safely managed twin pit paka latrines	50	50	0	0	40	40	60	60	50	50	50	50	0	0	250	250
Total	461	461	522	547	555	555	363	563	170	170	255	256	101	101	2427	2653

Challenges and Way Forward

During the implementation of post-Cyclone Remel recovery efforts in Sharankhola, Bagerhat, and Morrelganj, several challenges arose that impacted the restoration of water supply, sanitation infrastructure, and overall community health systems. Below are the key challenges encountered during project execution, followed by the strategies to address these issues and ensure sustainable recovery:

Challenges Faced During Implementation

1. Contaminated Water Sources

- **Challenge:** Floodwaters mixed with saline water and waste severely polluted local freshwater sources such as tube wells and ponds. This contamination led to an increased dependence on emergency water provisions, making it difficult to access clean drinking water for the community.
- **Implementation Issue:** Installing water filtration systems faced delays due to the widespread contamination and high demand for materials. Additionally, the difficulty in reaching affected areas due to infrastructure damage slowed down the restoration of safe water sources.

2. Damaged Sanitation Facilities

- **Challenge:** Many latrines were destroyed by the cyclone, and flooding spread waste across the area, leading to significant health risks.
- **Implementation Issue:** Rebuilding sanitation infrastructure was hindered by damaged roads, lack of construction materials, and limited availability of skilled labor. Cyclone-resistant latrines and flood-resistant sanitation facilities required careful design and additional resources, which caused further delays in their installation.

3. Logistical and Accessibility Challenges

- **Challenge:** Roads and bridges were heavily damaged by the cyclone, making access to remote and flooded areas difficult. This created significant barriers to the distribution of materials and the installation of new water points and sanitation facilities.
- **Implementation Issue:** The lack of accessibility delayed the arrival of necessary materials and hindered the ability of response teams to quickly restore critical infrastructure, such as water distribution networks and sanitation systems.

4. Shortage of Hygiene Supplies

- **Challenge:** The cyclone disrupted supply chains, resulting in shortages of hygiene products like soap, water purification tablets, and sanitation materials. This further complicated efforts to maintain proper hygiene and prevent waterborne diseases.
- **Implementation Issue:** Distribution efforts were delayed due to logistical issues and road access challenges. The high demand for hygiene supplies also outpaced the available stock, limiting the effectiveness of public health campaigns in preventing disease outbreaks.

5. Salinity Intrusion

- **Challenge:** Salinity intrusion worsened during and after the cyclone, rendering many freshwater sources unusable and further limiting access to safe drinking water.

- **Implementation Issue:** The installation of Arsenic Iron Salinity Removal Units (RO) to address salinity issues was delayed due to the scarcity of materials and the complex installation process, especially in areas that were still difficult to access.

Way Forward

To overcome these challenges and ensure the continued success of recovery efforts, the following strategies should be prioritized:

1. **Enhanced Water Filtration and Treatment Systems**
 - **Solution:** To address the contamination of water sources, further investment should be made in the installation of advanced water filtration systems, such as Arsenic Iron Salinity Removal Units (RO). Additionally, expanding community-based water treatment solutions, including rainwater harvesting, will provide a sustainable source of clean water.
2. **Rebuilding Resilient Sanitation Infrastructure**
 - **Solution:** Sanitation infrastructure should be rebuilt using cyclone-resistant materials and elevated above flood levels to minimize damage in future storms. Partnerships with local builders and the use of modular, easy-to-assemble sanitation systems could help expedite this process.
3. **Improved Logistics and Accessibility Solutions**
 - **Solution:** Rapid-response teams and temporary access routes should be established in flood-prone areas to ensure timely delivery of materials and personnel during future disasters. Investing in more resilient infrastructure, such as elevated roads or mobile bridges, will improve accessibility during emergencies.
4. **Supply Chain Strengthening and Hygiene Education**
 - **Solution:** Strengthening local supply chains for hygiene materials will ensure faster procurement and distribution in the future. In addition, hygiene education campaigns should be expanded, using local networks and digital platforms to reach remote areas, ensuring communities are informed about proper sanitation and disease prevention practices.
5. **Salinity Management and Coastal Protection**
 - **Solution:** Salinity-resistant water systems, such as desalination plants and RO units, should be expanded to treat contaminated water. Investment in coastal embankments and saline barriers will also help reduce the impact of saltwater intrusion in vulnerable areas.
6. **Multi-Stakeholder Coordination Platform**
 - **Solution:** Establish a centralized platform for coordination between local government agencies, NGOs, and community groups to streamline recovery efforts. This will ensure that resources are allocated efficiently, avoid duplication, and improve communication and decision-making in times of crisis.
7. **Data Collection and Monitoring Systems**
 - **Solution:** A robust data collection system should be implemented to track water quality, sanitation facility status, and public health. GIS mapping and digital monitoring tools can provide real-time updates and help identify areas in urgent need of intervention.
8. **Community Capacity Building**
 - **Solution:** Continuous training for local communities and water management committees on infrastructure maintenance and disaster preparedness will ensure long-term sustainability. Community ownership of water and sanitation systems should be encouraged to foster resilience.

By addressing these challenges and implementing the proposed solutions, the project can successfully restore and enhance water supply and sanitation systems in the affected areas.

The focus on resilience, sustainability, and community engagement will ensure that future challenges are met with greater preparedness and efficiency.

Multimedia Documentation of Project Implementation



Twin Pit Pucca Latrine Construction, Sharankhola Upazila, Bagerhat



Installation of Deep Tubewell at Amtali Upazila, Barguna



Repairing Deep Tubewell with Platform Raised at Bhola Sadar



Installation of Deep Tubewell at Bhola Sadar (Visit of SE Barishal Circle)



Installation of RO based AISRU Unit for at Morrelganj Upazila, Bagerhat



Repair and Reconstruction of Manual/ Pump PSF at Morrelganj Upazila, Bagerhat



Repair and Reconstruction of Solar-Powered PSF at Morrelganj Upazila, Bagerhat



Repair Reconstruction of Manual PSF at Barguna Sadar



Repair of Rainwater Harvesting System at Charfashion Upazilla, Bhola



Community Piped Water Scheme at Pirojpur

Conclusion

The UNICEF-supported DPHE WASH Emergency Cyclone Remal Response Program has made significant strides in addressing the urgent water, sanitation, and hygiene needs of the cyclone-affected populations in Bangladesh. With the implementation of a wide range of interventions, including the repair of damaged water sources, construction of latrines, and distribution of essential supplies, the program has greatly alleviated the immediate suffering of those in the hardest-hit districts.

Despite the challenges faced, such as contamination of water sources, damaged infrastructure, and logistical disruptions, the coordinated efforts of UNICEF and DPHE have resulted in measurable progress in providing safe drinking water and sanitation facilities to vulnerable communities. Through the installation of new water sources, disinfection of existing ones, and distribution of hygiene kits, significant strides have been made in improving public health outcomes and reducing the risks of waterborne diseases.

Looking ahead, it is critical to focus on enhancing resilience against future cyclones and similar disasters. Investing in cyclone-resistant infrastructure, expanding salinity-resistant water systems, and improving community engagement and maintenance practices will be vital to ensure long-term sustainability. Additionally, addressing issues like population growth, environmental pollution, and financial constraints will require continued collaboration between local communities, government authorities, and development partners.

The way forward outlined in the report provides a comprehensive framework for building resilient water supply and sanitation systems, ensuring that the affected populations in cyclone-prone regions are better equipped to face future challenges. By strengthening local capacity, improving infrastructure, and raising awareness, the program will contribute to a more sustainable and equitable future for all those affected by Cyclone Remal.