

Activity Report

ON

**INSTALLATION OF SOLAR SYSTEM IN WATER NETWORKS
(COMMUNITY PIPED WATER SUPPLY) INSTALLED UNDER REMAL
RESPONSE PROGRAM IN BARISHAL DIVISION (REIMBURSE / PRIOR
APPROVAL)**

Store Circle

Department of Public Health Engineering

Introduction

The implementation of solar-powered powered pumping system in community-based piped water supply systems in rural Bangladesh has been successfully completed. This project, led by the Department of Public Health Engineering (DPHE) with support from UNICEF, aimed to provide a sustainable, cost-effective, and climate-resilient water supply to rural communities. The initiative addressed critical issues such as electricity dependency, financial burdens, water accessibility, and social conflicts related to water sharing. Two systems were installed, benefiting multiple households in flood-prone areas under Remal Response.

Importance of Solar-Powered Community-Based Piped Water Supply System

Access to safe and equitable water is a major challenge in rural Bangladesh, especially in areas reliant on grid-powered tube wells. This project addresses that by utilizing solar power, reducing energy costs, and ensuring reliable water access. It also strengthens climate resilience with flood-resistant infrastructure and elevated water points. The initiative promotes gender inclusivity by easing the burden of water collection on women and improving public health by reducing waterborne diseases. A cost-benefit analysis shows that solar-powered systems serving multiple families are more economical than individual tube wells, offering a sustainable and affordable solution for rural communities.

Working Activities

The program has been executed in a structured manner through several key activities:

- **System Installation:** Two solar-powered submersible pumps were successfully set up, each filling a 3,000-liter elevated storage tank during daylight hours. The integration of sensor-based systems prevented water wastage by stopping the pump when the tank reached full capacity, while a backup manual switch for grid electricity was included to ensure an uninterrupted supply in case of insufficient sunlight. The installation was executed successfully, ensuring that rural communities now have access to a sustainable water supply with minimal operational costs. The system has enhanced efficiency, reduced electricity expenses, and eliminated disputes over cost-sharing, making it a model for future projects.
- **Monitoring & Evaluation:** Comprehensive evaluations and field surveys were conducted to assess the successful implementation of the intervention. Findings indicate that the setup has successfully met its completion ensuring climate resilience. Travel and monitoring efforts played a crucial role in successful implementation. Performance evaluation, survey, reporting of climate resilience WASH intervention of Remal Response were done by Expert for data Evaluator, data entry/sorting, analysis and others.

Site Details

Sl.No.	Name, Address	Parents/Spouse Name	Mobile No	NID
1	Mst Haowa Begum Kalibari, Kakchira, Pathorghata, Borguna.	Abdul Mojid	01738711048	7334085714
2	Md. Sagir Hossain Majherchar, Kakchira, Pathorghata, Borguna	Abdul Jobbar	01718817846	5051334703



Site#1



Site#2

Conclusions:

The successful implementation of solar-powered, community-based piped water supply systems in rural Bangladesh marks a significant achievement in addressing water access challenges. This project has not only improved the availability of clean water but also promoted sustainability and resilience, benefiting both the environment and local communities.