

## Project Success Story: Ensuring Safe Drinking Water through Solar based Mini Pipe Water Supply System in Coastal Modhuvanga Village

### Background

Modhuvanga village, Ward No. 07, Dewlbari Union, situated in one of the most vulnerable areas of Nazirpur Upazila, has long suffered from an acute safe water crisis. The residents, primarily fishermen, farmers, and day laborers, faced severe hardships in accessing clean drinking water. The area lacked any Deep Tube-well (DTW) or alternative safe water options. Many households were forced to walk long distances to collect water or resort to purchasing jar water, which was unaffordable for most. In times of extreme weather, some residents had no choice but to use arsenic-contaminated water, leading to widespread water-borne diseases, especially among children.

### Community Mobilization & Planning

Under the GoB-UNICEF WASH project, WASH Motivator Lovely Khanom played a critical role in initiating change. She facilitated a Community WASH Situation Analysis (CSA) using a Social Mapping process. The mapping revealed that the majority of households were consuming unsafe water. Recognizing the urgent need, the community came together to form a Community-Based Organization (CBO) to advocate for improved water, sanitation, and hygiene (WASH) services.

The CBO developed a Community Action Plan (CAP) and began engaging local stakeholders, including Union Parishad members, the Chairman, and the Department of Public Health Engineering (DPHE).

Their goal was to secure a sustainable and safe water solution for the entire village.



*Photo: CSA and developed CAP*

### Solution: Mini Pipe Water Supply System (PWSS)

Following Cyclone Remal in July 2024, UNICEF and DPHE prioritized Modhuvanga village for the installation of a Mini Pipe Water Supply System (PWSS). The initiative was led by the DPHE Engineer Md. Robel Shekh, who, upon visiting the site, confirmed its critical vulnerability. The location for the installation was finalized on the land of community member Onil Halder.

With the support of the WASH Motivator and field engineers, a 5-member Operation & Maintenance (O&M) Committee was formed from among the beneficiaries. The community actively participated by contributing cost-sharing funds, which were deposited into the government account to ensure ownership and sustainability.

## Implementation & Impact

After completing all process, installation of the solar based PWSS included: boring to a depth of 780 feet, construction of a water preservation tank, plumbing and infrastructure for 18 tap stands with platforms, water quality testing to ensure safety. The overall installation work monitoring the CBO leaders, O&M committee and Union Parishad member.

By the first week of January 2025, the system was fully operational and officially handed over to the community. The water quality was certified as safe, and residents were trained in climate-resilient water safety planning (CR-WSPs). Two caretakers and all O&M Committee members received technical training on system maintenance and their role and responsibilities.

To ensure sustainability, the CBO introduced a monthly tariff of 100 BDT per family, collected from March 2025 onward. The funds are securely deposited into a joint bank account to support ongoing operation and maintenance.



*Photo: PWSS with O & M Committee*

## Outcome

Today, the people of Modhuvanga village finally have access to safe, reliable, and nearby drinking water. The PWSS directly serves 18 families (123 individuals: 41 men, 42 women, 40 children), and indirectly supports more than 75 additional families who collect water from the point.



*Photo: Collect Water from a Tap stand of the PWSS*

The community now reports significant reductions in water-borne illnesses and improved quality of life. Residents express profound gratitude, saying their "misery has been relieved" and they no longer fear the health risks of contaminated water.

## Conclusion

This initiative stands as a shining example of community-driven development, cross-sector collaboration, and resilience-building. Through strategic planning, local leadership, and institutional support, a life-changing solution has been delivered to one of the most vulnerable areas, setting a replicable model for similar regions across the country.