Repair and Reactivation of PSF through a Coordinated Community Initiative

Background

Kashimnagar village, Ward No. 2, Kapilmuni Union, Paikgachha, Khulna District home to approximately 250 households, has long faced challenges in accessing safe drinking water. Groundwater sources in the area are contaminated with arsenic & saline, and the absence of rainwater harvesting systems or alternative safe water options left communities dependent on distant sources. As a result, residents were compelled to travel nearly 3 kilometers to collect safe water, often paying for water and losing valuable time each day.

In 2020, a Pond Sand Filter (PSF) was installed by DORP Ngo to address this challenge and provide a reliable source of safe water. However, by November 2023, the PSF became nonfunctional due to mechanical faults, blocked filter beds, and inadequate training of the designated caretaker. Disputes within the community regarding responsibility for repair and maintenance further delayed corrective action, leaving the facility inactive for an extended period and reinstating the community's vulnerability to unsafe water sources.

Intervention

Under the GoB–UNICEF Arsenic Risk Mitigation initiative, EPRC project staff facilitated a coordinated and community-centered intervention to restore the PSF and ensure its long-term functionality.

1. ***Community Engagement and Awareness***: Project staff conducted multiple courtyard meetings to raise awareness about arsenic contamination, the health risks of consuming unsafe water, and the economic and social costs associated with the PSF's prolonged inactivity. Through these discussions, community members reflected on their collective role in the facility's deterioration and reached a consensus on shared responsibility for its repair and future maintenance.

2. Joint Funding and Community Contribution: Project covered a part of the repair costs, while the community contributed an amount of financial share to strengthen ownership. In addition, local residents volunteered labor during repair works, reinforcing community commitment and reducing implementation delays.

3. Capacity Building and Sustainability Measures: A local PSF management committee was formed to oversee daily operation and long-term maintenance. Project provided hands-on training to committee members and the caretaker on basic operation, routine maintenance, and minor troubleshooting to prevent future system failures with O & M tools.


Impacts

- The PSF was successfully repaired and reactivated, restoring access to safe drinking and cooking water for approximately 250 households.
- Households no longer need to travel long distances or incur costs to collect safe water.
- Reliable access to arsenic-safe water has reduced health risks and contributed to improved well-being, particularly for women and children.
- A functional community management structure is now in place, with active participation in operation and maintenance.
- Community members expressed appreciation to project staff, EPRC and UNICEF for enabling a sustainable and locally driven solution.


Lessons Learned

- Community ownership is critical for the sustainability of water supply interventions.
- Joint financing and voluntary labor enhance accountability and accelerate restoration of nonfunctional facilities.
- Training and local management committees are essential to ensure long-term operation and prevent future system breakdowns.

Conclusion

The repair and reactivation of the PSF in Kashimnagar village demonstrate that coordinated initiatives combining technical expertise, financial support, and strong community engagement can sustainably restore access to safe water. This experience offers a replicable model for addressing water insecurity and improving public health outcomes in other arsenic-affected and resource- constrained communities across Bangladesh