

## Ensuring Safe Drinking Water for All: Arsenic Mitigation Success in Nolia Purbopara CBO

### Introduction

Bhanga Upazila, located about 30 kilometers from the Faridpur district headquarters, faces persistent development challenges, particularly in Algi Union, one of the most underserved areas with limited access to basic government services. Algi Union is home to 8,055 families, most of whom live below the poverty line. Nolia village, one of the most disadvantaged settlements within the union, has long been deprived of safe water, proper sanitation, healthcare, and basic infrastructure, leaving the community highly vulnerable to water-related health risks.



Under the GoB–UNICEF supported project, Environment and Population Research Centre (EPRC) formed a Community-Based Organization (CBO) named Nolia Purbopara CBO to serve a population of 505 people from 121 households, including 156 children. The intervention began in early 2024 with the goal of ensuring safe drinking water, improving hygiene and sanitation practices, and strengthening community ownership.

### Before the Intervention

At the start of the project, Nolia Purbopara faced a severe public health crisis due to unsafe drinking water. Most households depended on arsenic-contaminated deep and shallow tube wells, unknowingly exposing themselves to long-term health hazards. As a result, waterborne diseases such as diarrhea, dysentery, typhoid, pneumonia, hepatitis, and worm infections were widespread, particularly among children and the elderly.

Awareness of safe water use, sanitation, handwashing, and menstrual hygiene management was extremely limited. Many households used unhygienic latrines and lacked handwashing facilities, which further increased the spread of disease. The absence of Water Safety Planning (WSP) practices meant that even collected water often became contaminated during transport and storage.

## Intervention

To design effective solutions, EPRC conducted a comprehensive baseline assessment using household surveys, community walk-throughs, and participatory tools. Based on the findings, community-led and practical interventions were jointly developed with the CBO and the community.



Over the project period, 15 structured courtyard and group sessions were conducted on arsenic and safe water, Water Safety Planning (WSP), sanitation and hygiene, handwashing, and menstrual hygiene management. Community

members were trained on the five-step safe water collection and handling process to prevent contamination at the household level.

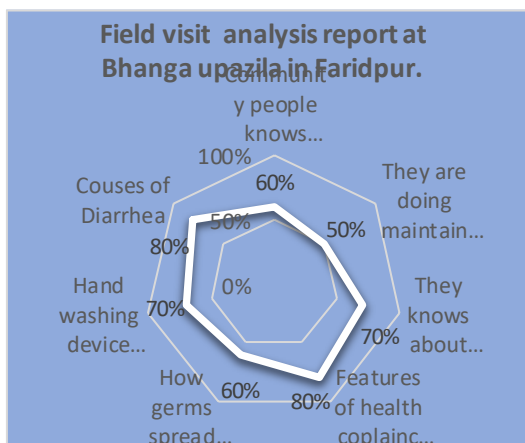
To strengthen safe water access, four new deep tube wells were installed, two through personal initiatives and two with government support. In addition, three existing deep tube wells were renovated with support from EPRC and the community. The CBO received basic institutional management training, and six local caretakers were trained to operate and maintain the water points. The community also actively observed World Water Day, Global Handwashing Day, World Toilet Day, and Menstrual Hygiene Management Day, which helped reinforce behavior change at the community level.



## After the Intervention

Today, the transformation in Nolia Purbopara is remarkable. One hundred percent of households now use safe deep tube well water for drinking. The village has achieved 100 percent Open Defecation Free (ODF) status, while 85 percent of households now maintain hygienic latrines. Proper handwashing practices have increased to 70 percent, knowledge on arsenic contamination to 60 percent, and awareness of the causes of diarrhea to 80 percent. Water Safety Plan practices are now maintained by 87 percent of households.

The health benefits are clearly visible. The consistent use of safe drinking water has led to a significant reduction in diarrhea, dysentery, typhoid, pneumonia, and worm infections. Families now spend less on medical treatment, children miss fewer school days, and adults lose fewer working days due to illness—directly improving household wellbeing and productivity.



Women and adolescent girls have been among the greatest beneficiaries. Easy access to safe water has reduced physical hardship and safety risks. Girls now manage menstruation with dignity using proper menstrual hygiene practices and safe disposal methods. These improvements have strengthened confidence, dignity, and regular school attendance among adolescent girls.

The depth of community ownership is reflected in the words of Farzana Begum, Secretary of the

CBO, who said: *“We needed an alternative safe water source and greater awareness in our community. Now every family understands the value of safe water, and we are protecting our future together.”*

Through regular monitoring, strong CBO leadership, trained caretakers, and close coordination with DPHE and local government institutions, the water systems are now community-managed and sustainable without external dependency.

### Conclusion

The arsenic mitigation initiative in Nolia Purbopara has successfully ensured safe drinking water for all 121 families and established lasting sanitation and hygiene practices. Through the committed partnership of EPRC, UNICEF, DPHE, Local Govt. and the community, a once high-risk village has become a model of community-led safe water and public health improvement.

This success demonstrates that targeted infrastructure development, sustained behavior change, and strong local ownership can sustainably transform vulnerable communities and protect future generations from preventable water-related diseases.