SafePani – Public finance to support safe drinking water in Bangladesh

Story of change: Key findings & emerging impacts

Summary

- The SafePani model guarantees reliable drinking water services, free from faecal contamination, to rural schools (primary and secondary) and community clinics in rural Bangladesh.

- The Government of Bangladesh has co-designed the SafePani model with a results-based contract for 1,174 schools and health clinics in Khulna District from 2025 to 2030.

- The Government of Bangladesh has made a budget allocation of 50% of the project costs until 2030. The Uptime Catalyst Facility will match the government's results-based contracting payments on an annual basis.

- At a cost of less than USD 1 per person per year, this will benefit around 215,000 pupils and 2,400 monthly outpatients in Khulna District (excluding Khulna City Corporation).

- The Ministry of Primary and Mass Education is exploring how the SafePani model can be applied nationally to 65,566 primary schools attended by 20 million children.
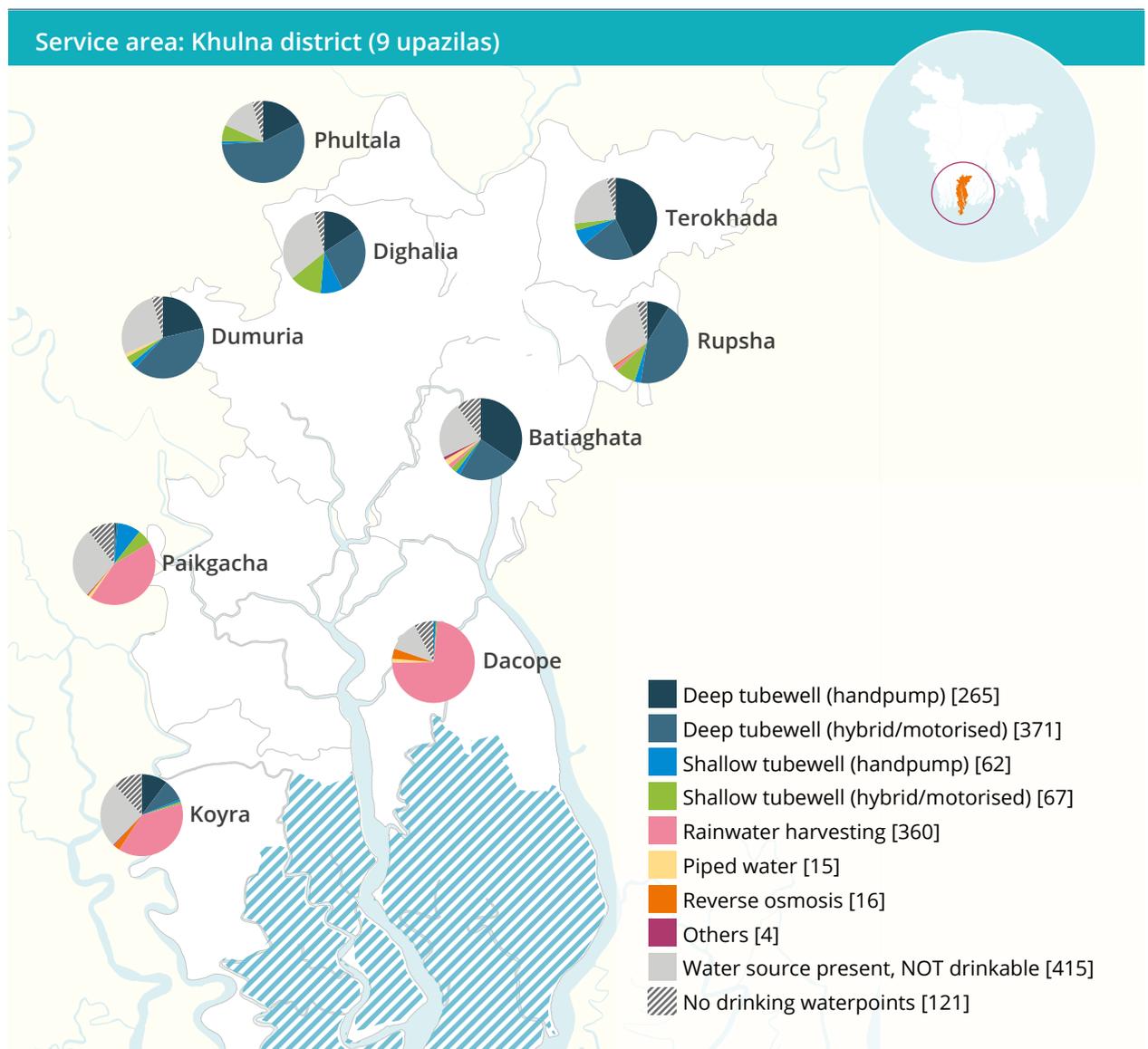
Introduction

SafePani represents a change in National WASH Policy and national planning in Bangladesh. For the first time, safe drinking water services will be ensured in public schools and community clinics with a sustainable funding model to ensure accountable service delivery to 2030.

The government has agreed long-term action with public funding to recognise gaps in current policy delivery. There are opportunities to progressively scale up SafePani nationally to achieve SDG 6.1, achieving significant education, health, development, and economic benefits for tens of millions of children and vulnerable people in rural areas.

Figure 1: Map of Khulna district showing the state of drinking water infrastructure across 1433 primary and secondary schools and 263 healthcare facilities (Total 1696) as of February 2024. Through a results-based contract (2025 – 2030), SafePani will provide professional drinking water services in 1,174 of these institutions benefitting 215,000 students and an average of 2400 monthly outpatients. Institutions currently without working water supply infrastructure will be progressively included.

Service area: Khulna district (9 upazilas)

Phultala
Dighalia
Terokhada
Dumuria
Rupsha
Batiaghata
Paikgacha
Dacope
Koyra

Deep tubewell (handpump) [265]
Deep tubewell (hybrid/motorised) [371]
Shallow tubewell (handpump) [62]
Shallow tubewell (hybrid/motorised) [67]
Rainwater harvesting [360]
Piped water [15]
Reverse osmosis [16]
Others [4]
Water source present, NOT drinkable [415]
No drinking waterpoints [121]

In 2024, the Planning Commission in collaboration with the Local Government Division of the Government of Bangladesh confirmed national budget commitments from 2025 to 2030 to co-fund a results-based contract for safe drinking water services for public schools and community clinics in Khulna District in the coastal zone.

At a cost of less than USD 1 per person per year, this will benefit around 215,000 pupils and 2,400 daily outpatients in Khulna District (excluding Khulna City Corporation).

The SafePani model is based on a professional service delivery model ensuring water safety actions and reliability metrics, which may be of value for other governments and development agencies attempting to both fund and verify delivery of safer drinking water services to rural facilities (Hope et al., 2021).

What is SafePani?

The SafePani model ensures reliable drinking water services, free from faecal contamination, to rural schools (primary and secondary) and community clinics in rural Bangladesh. The model has provided evidence to support the revised National WASH Policy (2025) to include professional service delivery using results-based contracts. This updates the 1998 policy which required clinic and school managers to deliver reliable and safe drinking water services.

SafePani introduces a professional service delivery provider, which is paid after verified results of a) monitoring, reporting, and managing water safety, and b) repairing faults in waterpoints within 48 hours. It allows school and clinic leaders to focus on providing high quality education and health services, and not managing waterpoints.

Photo by Lutfor Rahman

Led by the Local Government Division and supported by the Directorate of Primary Education, Department of Secondary and Higher Education, Department of Public Health Engineering, Directorate General of Health Services, Department of Disaster Management and the Deputy Commissioner (Khulna District), a national steering committee has monitored the performance of the SafePani pilot project over a three year period as part of the FCDO REACH programme led by the University of Oxford with UNICEF (Bangladesh) and the Bangladesh University of Engineering and Technology (BUET).

Why was SafePani needed?

Drinking water quality is a key challenge in Bangladesh due to known issues of arsenic, manganese, salinity (particularly the coastal belt), and other chemicals. While 99% of national households have access to a waterpoint, 40% have bacteriological contamination (*E.coli*) (BBS/UNICEF, 2021). In contrast, data for schools and community clinics are not accurately known nationally.

Photo by Lutfor Rahman

REACH's research in 150 schools in Chandpur District from 2017–19 indicated that the majority of waterpoints exceeded arsenic and chloride detection limits, with issues of turbidity and manganese. In addition, repair times for minor repairs (buckets, washers) had a median range of 4 to 5 days (average: > 24 days) with major repairs (handle, pipe, rod) having a median range of 10 to 60 days (average: 10 to 83 days). In summary, most schools had contaminated supplies which took weeks or months to repair when broken (Fischer et al., 2021).

In response to the challenges, the government agreed to pilot a professional service delivery in Khulna District in the coastal belt from 2021. Baseline data indicated similar service delivery challenges to Chandpur District with 40% of schools with *E.coli* and 30% having a medium or high risk based on sanitary inspections.

How does it work?

There are institutional, operational, and financial dimensions to the SafePani model, including: a) national steering committee, b) professional service delivery model, and c) government co-funding.

National Steering Committee

Chaired by the Additional Secretary (LGD, Water Supply Wing) and supported by the Joint Secretary (LGD, Policy Support Branch), relevant national government departments from education, health, disaster management and local government (Deputy Commissioner) convened a National Steering Committee.

Technical updates and reporting are provided by the University of Oxford, BUET and HYSAWA (service provider) at each meeting.

In November 2021, the committee met for the first time for a three-day inception workshop to agree roles, responsibilities and outcomes of the SafePani pilot. After that, two in-person meetings were held each year either in Dhaka or Khulna.

Based on positive progress of improved service outcomes, additional funding from REACH increased the initial work in 97 schools and community clinics in four unions to 204 institutions in eight unions since July 2022.

The National Steering Committee is supported by a District Working Group with members from the same government departments chaired by the Deputy Commissioner of Khulna District with technical support from HYSAWA. The group meets 2-3 times per year and ensures local concerns from civil society are tabled and addressed. Various public events have increased awareness of the work supported by HYSAWA's Community Liaison Officers to provide regular engagement at the local level.

Professional Service Delivery Model

The University of Oxford has conducted research in the design and delivery of results-based funding for drinking water services for a decade. This includes a long-term collaboration in Kenya incubating FundiFix as a local professional service provider. Wider collaboration includes a partnership with Uptime which has results-based contracts in 16 countries guaranteeing reliable drinking water for 5 million people in 2024. A gap in Uptime's work has been inclusion of water quality. SafePani has provided an opportunity to design and test water safety and water quality monitoring, reporting and management (Charles et al., 2023). Critical to this work has been institutional accountability to take prompt action where reported challenges need to be resolved. This closes the gap in standard monitoring or testing water quality without any action being taken by an accountable agency.

Based on lessons learned from the 2019-2020 diagnostic phase, co-funded by the UNICEF-REACH project and implemented by Ministry of Local Government, Rural Development and Cooperatives, HYSAWA (national NGO) won a competitive call in 2021 to execute the pilot phase of the professional service delivery model. HYSAWA has an established record of constructing high quality drinking waterpoints nationally. SafePani provided an opportunity for HYSAWA to take on the additional responsibility for maintenance and monitoring services against agreed performance metrics. In addition, data management systems on operational and financial performance need to be designed to monitor and evaluate results.

Government co-funding

The financial architecture of SafePani is based on results-based contracts. The logic is that public investments require ongoing performance metrics of water quality and reliability, not the only construction of a tap or a tubewell. The results-based contract specifies quarterly reporting on agreed and verifiable metrics that then releases a quarterly payment to the professional service provider.

The pilot phase demonstrated that results could be dramatically improved at a reasonable cost. A detailed costed model based on observed data from the operations included a) capital expenditure, b) operational expenditure, and c) data management costs (REACH, 2023). Overall, the district level costed model estimated a cost of less than USD 1 per person per year to include all public schools and community clinics. This was considered affordable and good value for money by the National Steering Committee.

Based on agreement by the National Steering Committee, the Policy Support Branch developed a Technical Assistance Project Proposal (TAPP) to co-fund all public schools and community clinics in Khulna District from 2025 to 2030. The TAPP was submitted by the Local Government Division to the Planning Commission for consideration in the national budget. The Uptime Catalyst Facility (UCF, UK registered charity) agreed to co-fund the contract with the Government of Bangladesh.

The UCF has issued results-based contracts for rural drinking water services in 16 countries since 2020 disbursing pooled funds granted from a portfolio of global foundations.

The UCF partners with Uptime Global which is a social enterprise, which designs results-based contracts, verifies results, and provides advisory services. Uptime Global will provide independent verification of SafePani performance metrics based on an established protocol of a) data validation, b) data audit, and c) site visits (Armstrong et al., 2024). Verification results will provide the basis for quarterly payments to be authorised by the Government of Bangladesh (PSB) and the UCF. It will offer a standardised and scalable model that could be applied to all public primary and secondary schools, and community clinics in Bangladesh.

What next?

The Directorate of Primary Education has an established five-year funding model under the Primary Education Development Programme (PEDP) with multi-donor support. The fifth cycle of the programme (PEDP5) will commence in 2026. The SafePani model will be considered in the design of this programme to potentially serve 65,566 government primary schools in the country.

Secondary education is more decentralised with a mixture of public and private schools. Conversations with DSHE will explore what opportunities may exist to scale up the model.

Heath services are governed by Ministry of Health and Family Welfare, Ministry of Works and Housing and Ministry of Local Government, Rural Development and Cooperatives, which are responsible to determine appropriate ways to provide effective for health facilities, including hospitals. A recent initiative supported by DGHS and UNICEF with the University of Oxford has identified how results-based contracts may be one response to improve drinking water, sanitation and hygiene services in district hospitals.

Collaborators in SafePani

Government of Bangladesh:

- Mr. Md. Rezaul Maksud Jahedi, Secretary, Local Government Division (LGD)
- Md. Fazlur Rahman, Addition Secretary, Water Supply Wing, LGD
- Mr. Saiful Islam, Joint Secretary, Policy Support Branch (LGD) and Project Director, SafePani

- **University of Oxford** | Professor Rob Hope, Professor Katrina Charles, Dr Sonia Hoque
- **HYSAWA** | Nurul Osman and Md. Refatul Islam
- **UNICEF** | Md. Monirul Alam
- **BUET** | Professor Mashfiqus Salehin
- **Uptime Global** | Dr Andrew Armstrong
- **Uptime Catalyst Facility** | Dr Alex Money

Acknowledgements

Outputs

Armstrong, A., Nilsson, K. and Tretheway, F. March 2024. Data Audit | 2022–2023. Uptime summary report. www.uptimewater.org/publications

BBS/UNICEF (2021). Bangladesh MICS 2019: Water quality thematic report. Bangladesh Bureau of Statistics, Government of Bangladesh and UNICEF.

Charles, K., Nowicki, S., Armstrong, A., Hope, R., McNicholl, D. and Nilsson, K. (2023). Results-based funding for safe drinking water services: How a standard contract design with payment for results can accelerate safe drinking water services at scale. REACH working paper 13. Oxford, UK: University of Oxford and Uptime Global.

Hope, R., Fischer, A., Hoque, S.F., Alam, M.M., Charles, K., Ibrahim, M., Chowdhury, E.H., Salehin, M., Mahmud, Z.H., Akhter, T., Thomson, P., Johnston, D., Hakim, S.A., Islam, M.S., Hall, J.W., Roman, O., El Achi, N. and D. Bradley, D. (2021). Policy reform for safe drinking water service delivery in rural Bangladesh. REACH Working Paper 9, University of Oxford, UK.

Fischer, A., Hope, R., Thomson, P.,Hoque, S.F., Alam, M.M., Charles, K., El Achi, N., Nowicki, S., Hakim, S.A.I., Islam, M.S., Salehin, M., Bradley, D., Ibrahim, M. and Chowdhury, M.E.H. (2021). Policy reform to deliver safely managed drinking water services for schools in rural Bangladesh. REACH Working Paper 11. Oxford, UK: University of Oxford.

REACH (2023). Cost estimates for safe drinking water in schools and healthcare centres in Khulna District, Bangladesh. Oxford, UK: University of Oxford.

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Story of change themes

Groundwater

Land

Coasts

Gender

Schools

Services

Health

Climate

Cities

Basins

REACH is a global research programme to improve water security for the poor by delivering world-class science that transforms policy and practice. The REACH programme ran from 2015–2025 and is led by Oxford University with international consortium of partners and funded with UK Aid from the UK Government's Foreign, Commonwealth & Development Office. Project code 201880.