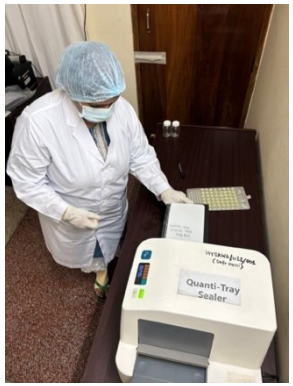
Supplementary Information (SI) for Environmental Science: Water Research & Technology.

Supplementary information

Photos of laboratories and surrounds

Country	Laboratory	Context (in early implementation period)
Bangladesh	 	  

Country	Laboratory	Context (in early implementation period)
Kenya	 	  

Country	Laboratory	Context (in early implementation period)
Nepal	 	 

Table S1. Summary of early implementation approach (* physical assessment; p.a. per annum; [#]examples include an operator's office and a local health clinic; [+] in later implementation phases when water treatment introduced)

	Bangladesh case	Kenya case	Nepal case
Infrastructure and design			
Location	1 lab in NGO field office, maximum 4-hr drive from sites	1 lab in NGO field office, maximum 4-hr drive from sites	3 labs (expanding to 8) in secondary school (1); healthcare facility (1); municipal government offices (3); and NGO field offices (3)
Sampling design	Sampling at decontaminated PoC 3 p.a. microbiology, with sanitary inspections 2 p.a. As, Mn, Cl, Fe	Sampling at decontaminated PoC 12 p.a. microbiology, F, general physico-chemistry including conductivity (as a proxy for salinity) Baseline: sanitary inspections, major ions and trace elements	Sampling at reservoir tank, decontaminated PoC (tap stands), and households Weekly and as needed residual chlorine[+] 3 p.a. microbiology with sanitary inspections 2 p.a. for priority chemical contaminants (As, F, Pb)
Determinands and analysis localities	Field: temperature, pH, electrical conductivity, odour*, colour* Internal: total coliforms, *E. coli* (IDEXX Quantitray) External: As, Mn, Cl, Fe	Field: temperature, pH, electrical conductivity, odour*, colour*, Internal: total coliforms, *E. coli* (IDEXX Quantitray), fluoride (ion selective electrode) External: major ions and trace elements	Field: temperature, pH, electrical conductivity, odour*, colour*, free chlorine[+] Internal: total coliforms, *E. coli* (membrane filtration with compact dry plates) External: As, F

	Bangladesh case	Kenya case	Nepal case
Reporting	Community within 48hr for *E. coli* District and local government quarterly. National government at meetings (2 – 3x a year).	Community before the end of the week for *E. coli* Government sub-county and county reporting following completion of baseline campaign and opportunistically thereafter at meetings	Community within 48 hours for *E. coli* District and local government quarterly, national government annually
Staffing and management			
Recruitment	Water quality manager & (1) lab technician: diploma in water quality monitoring Samplers (8): secondary school certificate	Water quality manager (1): diploma in water resources management and water quality internship at the Water Resources Management Authority Water quality technician (1): Diploma in water resources management, water supply maintenance field experience, and driving license	Lab technicians (8): diploma in water quality monitoring Samplers (8): secondary school certificate Water user's committee members (6 per system): secondary school certificate
Training	IDEXX training by supplier. Water samplers were trained on the proper collection and handling of samples from different schemes while adhering to quality standards. Sanitary inspections. Data management using Excel. Explaining water quality results, associated health implications, and water management strategies to	Field and laboratory water quality testing methods. Sample collection, transport, processing, and disposal. Sanitary inspections. Data collection and management using field notebooks and Excel. Explaining water quality results, associated health implications, and water management strategies to	Field and laboratory water quality testing methods. Sample collection, transport, processing, and disposal. Online/offline data collection and transfer tools (KOBO/Akvo). Water user's committee members were trained on the (a) mapping of the status of the water quality throughout the different seasons to enable them to

	Bangladesh case	Kenya case	Nepal case
	improve water safety.	improve water safety.	plan for treatment works[+] (b) the managerial aspects of maintaining of the water sampling and delivery to the nearest lab (c) collection of the results and dissemination of the findings with the user's during regular meetings and (d) development of water safety plans.
Protocols and quality assurance	Protocols for daily care of equipment and the lab; field and lab analytical methods (including IDEXX); sample collection, transport and disposal; reporting of results to communities and government; and for shock chlorination. QA: 10% duplicates and 10% blanks, calibration	Protocols for daily care of equipment and the lab; field and lab analytical methods; sample collection, transport and disposal; inventory and resupply of consumable items; reporting of results to communities and government; and reporting of concerns to the service provider maintenance team QA: 10% duplicate sampling and 10% field blanks, weekly equipment calibration checks and recalibration as required	Protocols for sampling and delivery of the water samples, efficient and effective following of the testing protocol, counting of the results and those for proper inventory of the testing materials. Duplicate samples from any one of the sampling points (1 in 3 samples) Negative at the end of the day of testing.