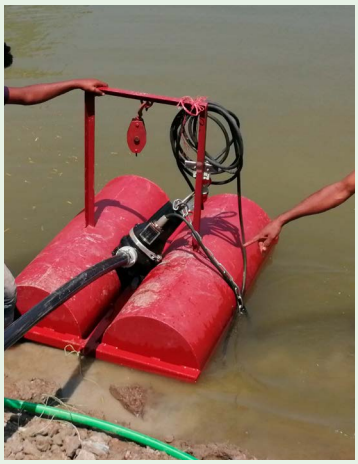
The pond where the submersible pump is installed

Full-scale demonstration project signals safe water hope for Bangladesh

Grundfos is providing key equipment for an initiative to ease the Asian country's contaminated water crisis. Grundfos is playing an important role in a pioneering initiative in Bangladesh aimed at addressing the dire problem of water quality in one of the world's most densely populated countries.

The initiative, led by Suez in Denmark in collaboration with Vand & Teknik, a Danish water supply company, is designed to demonstrate how Suez's compact, solar-powered treatment units can provide communities with safe water economically — leading to replication of the model throughout the country.

The Grundfos AQTap



The floating device carrying the submersible pump in the pond

Grundfos pumps and AQTaps

At the heart of the full-scale demonstration project is a 15m³/hour UCD (Degrémont Compact Unit), a self-contained, solar-powered unit that has been installed in the village of Pachim Khada in Sharankhola, on Bangladesh's South-West costal region.

This unit, using a Grundfos submersible pump will take polluted water from the large rain-water catchment pond on which the village relies and pass it through a four-stage process of coagulation, clarification, filtration and disinfection.

A local water entrepreneur will sell the now safe, potable water from a tap at the UCD itself and also from a Grundfos AQtap at a second location several hundred metres away.

"Grundfos is very pleased to be part of this important project," says Anise Sacranie, Senior Partnership Development Manager at Grundfos SafeWater, a business unit that focuses on transforming underserved communities through commercially viable and sustainable smart water solutions.

"The contaminated ground water in rural Bangladesh creates the urgency to identify de-centralised solutions for surface water sources that are commercially viable and affordable. This project demonstrates the application of our pumps and the AQTap in this context. We look forward to scaling throughout Bangladesh this initiative with Suez and fundamentally increasing access to safe water to those most in need."

Grundfos has a long history of collaboration with Suez, a company that has its roots in the construction of the Suez Canal in the 1860s and has since become a leading global supplier of environmental services in water and other areas.

Per Krøyer Kristensen, MD of Suez in Denmark, notes that the Sharankhola region is known for water-scarcity issues.

"It suffers particularly from intrusion of saline water and is in one of the areas of Bangla-desh that are worst affected by arsenic contamination of groundwater. One of our main objectives is to prove that we can install an easily deployed facility in even the most remote areas and provide local communities with a reliable source of drinking water. It's going to improve living conditions and public health, and just make everyone's life so much better."

"The fact that Grundfos is already operating in Bangladesh made it a logical choice to supply the pumping and water distribution equipment"

Per Krøyer Kristensen
MD of Suez in Denmark

Widespread water contamination

According to a World Bank assessment in 2018, 41% of all improved water sources in Bangladesh are contaminated with E. coli bacteria, usually a sign of faecal pollution. The same study said the country's persistent problem with naturally occurring arsenic in groundwater means about 13% of water sources contain levels of the toxic compound that exceed what Bangladesh regards as acceptable.

Pond water – before and after treatment

The surface water processed by the UCD is unlikely to have significant levels of pollution. The unit being demonstrated in Sharankhola truly is compact — it measures 5.4m (l) x 2.3m (w) x 2.5m (h), can be delivered by a truck, and needs only a simple concrete slab to stand on. Photovoltaic panels on the roof provide power.

The main plant

"The fact that Grundfos is already operating in Bangladesh made it a logical choice to supply the pumping and water distribution equipment," says Per Krøyer Kristensen.

The bulk of funding for this project — including an exhaustive feasibility study — was provided under the 'Green Accelerator Programme" of the Danish export credit agency EKF, with Suez and Vand & Teknik covering their own costs.

Once the installation has proved itself and the local water entrepreneur is familiar with its operation, the plan is to sell it at an affordable price to the entrepreneur, who will be supported by the Dhaka-based non-governmental organisation BRAC. Suez will provide after-sales support to keep the plant functioning.

Bangladesh, with a population of about 165 million, has per capita GDP of $1,960, according to the World Bank (Denmark's GDP per capita is $61,063).

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