

Veolia Water Initiatives: Grameen Veolia Water Ltd. development in Bangladesh

Dominique Gatel, Veolia

Short summary

34 to 77 millions of Bangladeshis¹ are drinking arsenic-contaminated water on a regular basis. According to the WHO, this is the “largest poisoning of a population in the history”². Veolia Water and Grameen Health Care Services joined forces in 2008 to create Grameen Veolia Water Ltd., a social business that aims at providing safe drinking water to rural Bangladesh, at an affordable tariff.

Grameen Veolia Water operates and maintains a water treatment plant that provides safe drinking water to 6,000 people in the village of Goalhari, 60 km far from Dhaka. Grameen Veolia Water’s water treatment plant purifies surface water through rigorous and various stages of treatment using world class technology implemented by Veolia Water. Drinking water complying with Bangladeshi and WHO standards is distributed through a dedicated network of standpipes throughout the village with almost 100 water points (public tap points, household and schools connections being set up in different locations in these villages.)

Sales in Goalhari villages were not growing fast enough to ensure self sustainability in a short term. In order to achieve quicker financial balance, Grameen Veolia Water Ltd launched a 5US Gallon “Jar Business” in 2011. The water sold is also treated and bottled in Goalhari plant. The jars are then transported to Dhaka and delivered to offices, schools and other locations. Following the “social business” model, Grameen Veolia Water is a “no-loss, no-dividend” venture. Consequently, profits from this new branch of the social business are reinvested in rural water infrastructure development.

Key words:

Social business, water, arsenic, cross-subsidizing, Mohammad Yunus, Grameen, water treatment plant, pipe network, jar business, rural, Bangladesh

¹ 2010, the HEALS study: <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2810%2960481-3/abstract>

² <http://www.who.int/bulletin/archives/78%289%291093.pdf>

Issues addressed:

WASH (inequalities, schools, health centers, refugee camps, women and girls)

The village of Goalhari holds a population of 40.000 inhabitants who lack access to safe drinking water. Their main sources are surface water, usually contaminated with bacteria, and tube well water presenting arsenic contamination.

Water resources management (water-use efficiency, integrated water resources management, transboundary cooperation, sustainable extraction and supply of freshwater)

- Treatment of surface water and distribution through a pipe network
- Extraction of surface water from the nearby river, treatment in a 10 m³/hour plant and distribution in the village through public tap points and private house connections

Water quality (pollution, dumping of toxic materials, wastewater management, recycling, reuse, restore ecosystems and aquifers)

- Aquifer contamination with naturally generated arsenic that can exceed over ten times the WHO standards
- Surface water contamination with bacteria

Risks (mortality, economic losses caused by natural and human-induced disasters)

- Health risks: skin diseases, all-cause and chronic disease mortality
- Arsenic linked diseases: *arsenicosis*, black spots on the skin, cancers...

Tools for implementation:

Financing / economic instruments: Cross subsidizing: selling of 20 L water jars in Dhaka for rich people and organizations at 70 BDT (0,70 €), while the cost of a 10 L jar in the village is 2,5 BDT (0,025 €).

Governance: Institutions / legal framework:

- Joint venture between Veolia Water and Grameen Healthcare services: at the beginning, shares repartition was 50/50; now it's 83/17 for Veolia.
- Social business means "no loss, no dividend": the business has to find a quick way to be self sustainable and all profit should be reinvested in the structure.

Technology:

- Dual media filter/ activated carbon filter
- Micron filtration
- UV treatment
- Reverse osmosis
- Ozonation
- Fully automatic jar filling capping and sealing machine (for the jars)

Capacity development:

- Increase of distribution scheme in Goalmari
- Development of social business in other areas

Who is involved?

- Veolia
- Grameen healthcare Services

What were the objectives of the intervention?: Find a self financed way to bring safe drinking water to poor people in rural area in Bangladesh.

Implementation challenges:

- Technical: very remote area with very access. Complicated to build a plant
- Sales: Awareness campaign in the village: villagers are not used to pay for water
- Jar business implementation (transportation to Dhaka, logistic, marketing)

Main task/activities undertaken / Tools used:

- Rural part:
 - Run of the plant
 - Water test analysis
 - Awareness meetings and door-to-door on water, health and hygiene
- Jar part:
 - Customer hunting
 - Customer relationship
 - Bottling, transportation, distribution of jars

Main outcomes / impacts (what has changed?): It is difficult to measure the direct impact on health (it would mean analysis on urine or blood samples, on the long term and on a wide number of people...).

We count the number of people who are from now on drinking enough pure water to be safe from arsenic contamination.

- 6500 people have access to the service
- 4000 people are using it regularly
- 3000 people are drinking enough water to be safe from any arsenic contamination

Lessons Learned:

Triggers:

- Meeting between two persons (Professor Yunus and Eric Lesueur) to join forces on the arsenic issue
- Scale of the poisoning and the need to react

Drivers:

- Strong will to prove that social business model can work for water access
- A real, long term and massive awareness on arsenic issue among team and directors
- Communication and trust from the villagers
- Lessons and knowledge learned

Barriers:

- Cultural and sociological incomprehension of local habits, tradition...
- National strikes
- Competition with small jar businesses which do not comply with the Bangladeshi law.

What has worked well?

- Separation of sales and awareness in the villages (hiring of a specific full time team for rising awareness in the village)
- Anthropological study
- Change in logistic for jar business: full management of distribution is from now on our side directly (no intermediation with final customer)

What can be improved?

- Transportation costs
- Coverage in the village (extension of the water network)
- Penetration rate and average consumption by the customers

The way forward:

- More intensive work in awareness in the village
- Partnership with a Dhaka water treatment plant to bottle our jars
- Building a new project to increase the impact

Links:

<http://www.grameenveoliawaterltd.com/>

<http://factsreports.revues.org/1574>