

Arsenic Remediation Capacity Assessment in **Bangladesh**

By

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Berkeley **CNR**

The Subir & Malini
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Overview of the **Summer**

- **Locations:** Kolkata, India; Dhaka, Kushtia, Shatkhira, Bangladesh
- **Duration:** May 22, 2016 – August 12, 2016
- **Grants:** a. Chowdhury Center Summer Internship Program
b. College of Natural Resources Summer Practicum Grant

Bangladesh Arsenic Contamination Overview

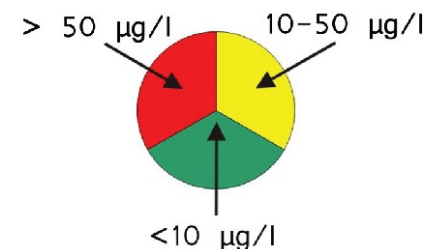
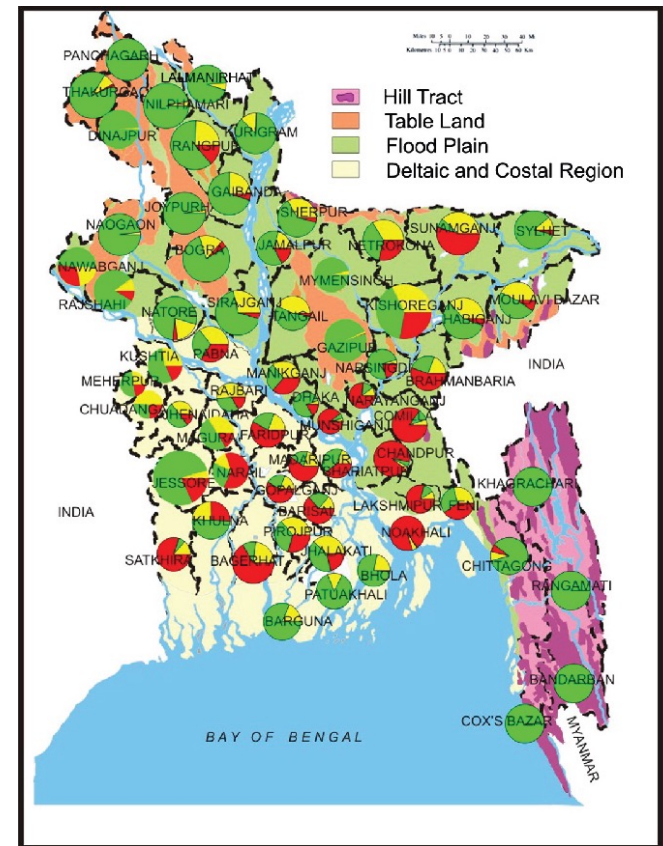
Improved drinking water source

98%

Safe water coverage

86%¹

¹ Multiple Indicator Cluster Survey, Bangladesh Bureau of Statistics/UNICEF, 2009



History and Efforts of Arsenic Mitigation

- Active mitigation program: **1996 -2008**
- Major Governmental Project: **Shallow tubewell Arsenic Level Identification**
- 30+ NGOs providing arsenic free water (no business model) and creating awareness (**fear!!**)
- Safe water access and distribution data last updated **8 years** ago.
- Projects ran as long as there were **funds available.**

My Scope

- Identifying **stakeholders**.
- **Gather** information for next steps.
- **Feasibility & Capacity Assessment** of available global solutions which can be transferred in **Bangladesh**.

Stakeholders

- **Engineering sector** consultants and academic experts
- **Government** authorities (DPHE, LGED, BCSIR)
- **Society** (CDD, NGO, Public-Private Partnership)

Capacity Assessment Results

- **Engineering**



- The engineering capacities are not abundant but enough to make technological advancement in water treatment sector. Especially for arsenic remediation.
- The academic consultants and the engineering firms are well synced with each other. Their connection with the governmental authorities are also notable.

Capacity Assessment Results

- **Government**



- The governmental structure for adopting new technologies for arsenic remediation is still present but poorly maintained. The process can be accelerated with proper influence.

Capacity Assessment Results

- **Social Sector**

- Lack of **Trust in general**
- **NGOs** operating projects according to available funds
- **Local donors** are interested if the business venture is profitable.

Current Solutions



SONO
filter



Water Politics

- Introduction of **Filters/Bottled water** during arsenic campaign
- International pressure to take loan to build **distributed water system** in semi-urban/rural areas

Actions needed **right now**

- Starting the **government certification process** for new technologies.
- Detailed **social sector survey** to understand possible business model.

Recommendations

- Updating the current data on arsenic contaminated water sources and its consumption in households.
- Start focused awareness campaign on effects of arsenic consumption in areas where an alternative safe water source is available.
- Invest on safe water distribution projects in rural areas.
- Incentivize private companies to invest in water treatment project. (Through tax cuts or providing subsidies)
- Government should appoint dedicated team for arsenic mitigation and remediation. Currently due to lack of funding, the pre-existing team was dissolved 8 years ago.
- Foreign technologies should use the benefits from local engineering consulting and construction companies to test home-grown prototypes for arsenic remediation.

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Questions?

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