

## **Safe Water Plant for Coastal Area**

### **i. Project Concept:**

The residents in the southern coastal areas do not have access to drinkable and safe water. In the last decade, the residents of the coastal belt like Satkhira, Khulna have been using pond water which is deposited from rainwater and it is not safe for drinking. Other than water-borne diseases, the underground water is salty and contaminated from excess Iron, Arsenic, Magnesium, Calcium among other minerals. The underground water has excess salinity and over the limit Total Dissolved Solids (TDS 16000 ppm, - 3500 is drinkable) and has not improved over the years. About 50 thousand children die every year in the coastal belt due to waterborne diseases. Rotary Club of Dhaka will be installing 7 Pre-Filter with Nanotech/RO-based “Cluster Mini Water Treatment Plants ( CMWTP )” along with a low head Sub-Deep tube well in 7 different locations of Shatkhira, Khulna.

Each of the 7 Plants has the following highlights:

- Uses Reverse osmosis
- Submersible pump collectes salty water
- 24 hours water available
- 1500 ltr per hour
- 3000 people per day
- Appx cost \$13,000

***SpaandanB Austin will raise funds and sponsor 1 of the 7 locations. Location will be selected later.***

Please visit: <https://youtu.be/2X8ujTD8Ytw>



### **ii. Project Location:**

The proposed project areas are 7 villages in 3 different unions of Shamnagar Upazila (sub-district) under Satkhira, Khulna. It is on the bank of the Arpangachhia River and Kholpetua River. All of these villages have the common issue of salinity in drinking water.

**iii. Organization:** Rotary Club of Dhaka, Rotary Club of Shatkhira Royal

### **iv. Project Details:**

The seven villages have a total population of 34455. The source of safe drinking water is either harvested rainwater or bought water from the other side of the river. Rainwater is collected during monsoon season and serves 6 to 7 months of rationed drinking. Buying water is not only unaffordable, but it is difficult to carry from the boat station to the individual homes.

Rotary Club of Dhaka has done a pilot project in one of the villages in the coastal area. The initial survey was conducted in late 2020. Rotary Club of Dhaka installed a Pre-Filter with Nanotech/RO-based “Cluster Mini Water Treatment Plant ( CMWTP )” along with a low head Sub-Deep tube well. This project was especially

designed for energy-efficient Nano & RO filtration systems, which is a smart solution for removal of High TDS and Salinity or Mineral contamination like Arsenic, Iron, and others.

The project was a great success and had a big impact on the livelihood of the residents.

The water test level measured Before-treatment: TDS 16000 ppm, Iron 5 ppm, salinity 5.

The water test level measured After-treatment: TDS-400ppm, Iron- less than 0.5ppm, Salinity-0.3

With this experience, the Rotary Club of Dhaka is planning to establish similar plants in 7 different villages where people still suffer from daily drinking water.

Following are the location of project sites.

Rotary Club of Satkhira Royal has conducted a need assessment and spoke to the people who have committed themselves to be the local contact amongst the beneficiaries in the villages.

1. Village **Chuna** is under Buri Goalini Union of Shamnagar Upazila. Contact person: Md. Abdul Mannan, Contact 01917550808. There are **255 families with a population of approximately 1500**.
2. Village **Datin Gani** is in the same Buri Goalini. Contact person: Mohammad Ali Contact 1748517252. The total number of families is **700 with a population of 4300**.
3. Village **Vet Khali**, under the union Ramzan Nagar is with a population of **3589**. Contact person: Zillur Rahman 01711168168 & Aminur Rahman 01717583520.
4. Village **Kanthal Baria** has **207 households with 888** inhabitants. Contact person: Majed Gazi Contact 01943165516.
5. Village **Sankarkhati** has **529 households with 2155** inhabitants. Contact person: Bimol Sarkar 01725570061
6. Village **Gobindapur** has **796 households with a population of 3269** inhabitants. Contact person: Reselat Hossain. Contact 01720596123
7. Village **Khutikata** has **176 households with 775** inhabitants. Contact person: Mansur Morol Contact 01927550051.

**v. Budget Details:** (Proposed initial expenses, recurring expenses, maintenance expenses)

Total Cost \$13,000 (includes everything like Pump, osmosis, Shed etc) BDT 1140000/-

01. Sub-Deep Tube-well Max 90 Meter :BDT.150000/-
02. CMWTP Filtration System :BDT.600000/-
03. Water reserve Tank :BDT.30000/-
04. CMWTP Plant Shed Construction :BDT.150000/-
05. Electrification meter, Cable, Connection :BDT.30000/-
06. Two years maintenance cost :BDT.150000/-
07. Goods Carrying, Installation, Transportation :BDT.30000/-

**vi. Funding the project:** (What are the proposed sources, Whether matching needed, How a donor can contribute..)

Fundraising online and at local events.

**vii. Reports:** (Author, frequency and format)

Rotary will provide reports generated from local representatives and share with SpaandanB Austin.

**viii. SpaandanB Austin involvement:** (Management details)

A liaison between Rotary, local representatives and SpaandanB will be maintained by Galib.

**ix. Contact person:** (chapter contact, location contact)

Chapter: Galib Hassan

Location: Rafiqul Islam Rowly