



Bio-sand filter in Southwestern Coastal Bangladesh.

Project Duration: February 2016 to January 2018

Supported By: OHorizons, USA

Project Location:

Name of district	Name of upazila
Satkhira	Shyamnagar, Kaligonj, Debhata and Asasuni Upazila



Goal: To ensure pure drinking water of water poverty area of SW coastal region of Bangladesh.

Project objectives:

- To install Biosand Filter in 200,000 households who are drinking dirty pond water in saline area.
- To make awareness of community people about safe drinking water and sanitation.

Background of the project: The southwest coastal area of Bangladesh is highly vulnerable due to Climate Change. Livelihoods of this community people is seriously threaten. The underground water is saline in this area. For the reason of sea level rise, floods caused by river erosion, salinity increase and so on, source of drinking water ponds are becoming unusable day by day. There remain a few drinking water ponds that consists dirty water and it is unusable. For drink excessive dirty



water of the pond, people are becoming sick. People are suffering food scarcity, unemployment problem and increase frequent natural disaster due to climate change. Drinking water crisis adding more vulnerabilities to the community people of coastal region, which forcing people to migrate from the area. The women and adolescent girl in the area usually collect drinking water from far away for the family. Sometimes it causes the physical problems for the women, as they have to carry heavy water vessel long time and long distance. Working women were not able to work regularly and many adolescent girls miss school for collect water from far distance. Sometimes women and girls face physical and sexual harassment while collecting water. Many people are forced to buy water from the market. LEDARS (Local Environment Development and Agricultural Research Society) is a non-political and non-government development organization working in the coastal area since 1996. LEDARS has been working on Climate Change adaptation and mitigation, environmental conservation, human rights and good governance, water and sanitation and education for dignity. LEDARS is very much focus on removing drinking water crisis from coastal region. As the recognition of water initiatives, **LEDARS** has been awarded Zayed Sustainability Prize 2023 in Water and excellent Third Prize of world Water Showcase from World Water Forum 2015.

Since 2007, LEDARS has been installing bio sand filter to purify the locally available dirty pond water for drink, so that women and adolescent do not need to go far away and face

harassment. This filter can treat turbidity and bacteria and can produce sufficient drinkable water. In 2014 donor organization OHorizons started to support LEDARS to install bio sand filter to the households who are suffering acute drinking water scarcity but have sweet pond water even heavy dirty. With the support of OHorizons, LEDARS has made a filter production center and training facilities in Munshigonj union of Shyamnagar upazila of Satkhira district. Till date, LEDARS installed 5250 bio sand filters in



the coastal community. People are able to use locally available pond water in their filters and filter easily. It is saving their time, money, and mental harassment. In the meantime, this good looking and user friendly filters are very popular among the community. The pure water from the filter has reduced water borne diseases and brought smile on the faces of women and girls. The local administration appreciated this initiative.





Major activities of the projects:

1. Beneficiary selection: The beneficiary selection of the Bio-sand filter is based on the questionnaire format developed by the OHorizon. LEDARS representative visits to the beneficiaries' house and fills out the format and then selects beneficiaries on the basis of questionnaire.

2. Baseline survey: LEDARS is conducting baseline survey to the community who are using bio sand filters using mWater Apps. Anyone can check and track each of every filter.

3. Construction of BSF Production Center and Training Facility: With the support of OHorizons, LEDARS has made a filter production center and training facilities in Munshigonj union of Shyamnagar upazila of Satkhira district.

4. Wood Mold Preparation: LEDARS trained up and formed a team of expert member to make wood mold for BSF construction.

5. Construction of Bio-sand Filter: LEDARS formed a technical team to construct the bio-sand filter. The team constructed BSF in the production center.

6. Bio-sand filter distribution and installation: LEDARS distributes Bio-sand filter to the selected beneficiaries. Then the Filter Technician install the bio sand filter to the each beneficiary's households.

7. Water quality test of BSF: LEDARS technical staff randomly test the water quality of the filter. Ecoli, bacteria, nitrate and turbidity has been tasting. The test result is very good based on the direction of WHO.

8. Filter maintenance orientation: LEDARS provide orientation to each beneficiaries on how to maintenance the BSF regularly. LEDARS also hand over the indication card to each filter recipients. The card shows how to maintain the filter.

9. Monitoring: LEDARS is monitoring regularly how the filter is working. If they found any difficulties the filter technician give the training how they troubleshoot the problem.



For more information, please contact to

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