



**Drinking water crisis  
in the Sundarbans  
coastal region of  
Bangladesh  
and  
initiatives to solve  
this problem**

## Major Problem of the Sundarbans Coastal Region of Bangladesh

- Poverty
- Cyclone
- Sea level rise and Salinity intrusion
- River Bank Erosion
- Drinking Water
- Electricity
- Change of Land use Pattern



**Sundarbans** Coastal region of Bangladesh is disaster prone area and front line of global climate change due to its geographic location. The Sundarbans is the single largest mangrove forest in the world which is a UNESCO declared Natural World Heritage site and RAMSAR wetland site. Almost 3.5 million coastal people depend on its natural resources. Majority of the population of this region are poor and their education level is not satisfactory. There are so many social and environmental problems existed in this region.

## Facts of Drinking Water Scarcity

Drinking water scarcity is an increasing problem in the coastal region of Bangladesh. Now it is turning into brackish to saline gradually. Climate Change exacerbates the situation due to sea level rise, erratic rainfall, high rate of evaporation and various disastrous events like cyclone and flood, increased down-stream saline water flow instead of up-stream freshwater water flow, shrimp farming etc. So, before monsoon starts, people in coastal area travel up to 3-4 km to fetch water, which is not always sufficiently safe enough to drink due to saline and sediment contamination in shallow and deep aquifers. Pond (surface water) and **rainwater is the main source of drinking water for the coastal people of Bangladesh.**

### Challenges regarding drinking water

1. Number of freshwater ponds is not enough for the community to meet up their drinking water demand.
2. Women have to walk for 3-4 kilometers for collecting drinking water and spend most of their time to collect drinking water.
3. In the dry season water level of the ponds goes down and sometimes gets dried.
4. Coastal communities frequently suffer from waterborne diseases because of drinking pond water without purification.
5. Poor coastal communities have not enough facilities to reserve the rain water
6. Communities are not well aware about their health and sanitation and frequently they suffer from waterborne diseases.
7. Communities are not financially capable enough to install water purification system by themselves.



**In around there is enough sources of water but there is no drinking water**



# Scenario of the Drinking Water Crisis in Bangladesh



*Women are engaging with collecting drinking water from 3-4 km distance*



*Drinking water collection from the pond and preserve at home*

# Scenario of the Drinking Water Crisis in Bangladesh



*Local technique of rainwater harvesting*



*Local technique of water purification (Pond Sand and Filter\_PSF\_ system)*

# **BEDS initiatives to solve drinking water crisis in the Sundarbans coastal region of Bangladesh**



**Small initiative  
is contributing  
for a big change**



## Our Model



Realizing this suffering of the coastal people; BEDS and Korea Green Foundation have taken an initiative to solve the drinking water crisis under **Eco Village Project in Bangladesh** with the help of Samsung, Community Chest of Korea, Green People and Global Greengrants Fund. Through this project three ponds have been re-excavated for preserving rainwater and three Solar Ponds Sand Filter (SPSF) systems have been installed. Two Reverse Osmosis Systems are also installed for ensuring the quality of water and villagers better access to safe drinking water. Pond water is pulled in the chamber with the help of solar energy. Then water crosses one chamber to another after being filtered with sand, quartz sand and activated carbon. Then the water goes to the final reservoir tank from where it goes to Reverse Osmosis through purifying in micron and cotton filter.

A total of four management committees have been formed to ensure the management of the installed system. Installed two Water ATM systems are also installed for the proper management of the installed system.

## Our Intervention/Facilities



*Pond re-excavation, fencing and installation of Solar Pond Sand and Filter system*



*Process of Reverse Osmosis system installation and installed water ATM*



## Drinking water services



### Success Case

I am Rebeka Roy a woman of 38 years live in North Banishanta village, Banishanta, Dacope, Khulna. I am a house wife. I have two kids. For cooking and drinking purpose I need 20 liters fresh water per day. In the past, I had to walk nearly 4 kilometers to collect drinking water; but that water was not purified. We used to drink the pond water directly. So, diarrhea and dysentery were regular parts of our family. Due to our poverty we could not afford good treatment. Now a day I collect fresh and desalinated water from the installed desalination system in our village. So, access to safe water is much easier for me now than previous time. We usually take water from the desalination system in day time, but if there is urgency of water we can collect it at night time also. As this water is purified, my kids and my husband don't get sick from water born diseases. Apart from that, I can spend maximum of my time for my household activities which I had to spend for water collection in the past. I am so happy now and I would like to thank Bangladesh Environment and development Society (BEDS) for this excellent support in our village.



## Education and Awareness Program

BEDS has been conducting regular education programs among local villagers and students on rainwater harvesting techniques, low cost water purification methods, importance of safe drinking water, health and sanitation issues since 2015.



*Education on Importance of safe drinking water among the coastal villagers*



*Education on health, sanitation and safe drinking water among the school students*



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