



**Drinking Water crisis in Bangladesh
and BEDS initiatives**

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The Sundarbans Coastal region of Bangladesh is disaster prone area and frontline 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.

Major social and environmental problems of the Sundarbans Coastal Region of Bangladesh

- ⊙ **Poverty**
- ⊙ **Climate change**
- ⊙ **Migration**
- ⊙ **Land use Change**
- ⊙ **Shortage of safe drinking water**
- ⊙ **Lack of electricity**
- ⊙ **Housing**
- ⊙ **Cooking fuel**
- ⊙ **Education**
- ⊙ **Health & sanitation**
- ⊙ **Loss of biodiversity**
- ⊙ **Loss of traditional knowledge**
- ⊙ **Loss of cultural heritage**
- ⊙ **Wildlife hunting and poison fishing**
- ⊙ **Security**
- ⊙ **Lack of coordination between GOs, NGOs and CBOs**

Drinking Water Scarcity

in the Sundarbans coastal region of Bangladesh

Drinking water scarcity is an alarming problem worldwide. Around **2.1 billion people** lack safe drinking water in the world (WHO). It is a mega crisis in the coastal region of Bangladesh due to increasing of salinity both ground and surface water. Climate Change exacerbates this situation due to sea level rise, erratic rainfall, drought, high rate of evaporation, cyclone, flood etc. Increased down-stream saline water flow and shrimp farming are also contributing to increase drinking water crisis. 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**. But after natural disaster, drinking water crisis becomes acute due to salinity intrusion. Waterborne diseases also breakout at after natural disaster.

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.

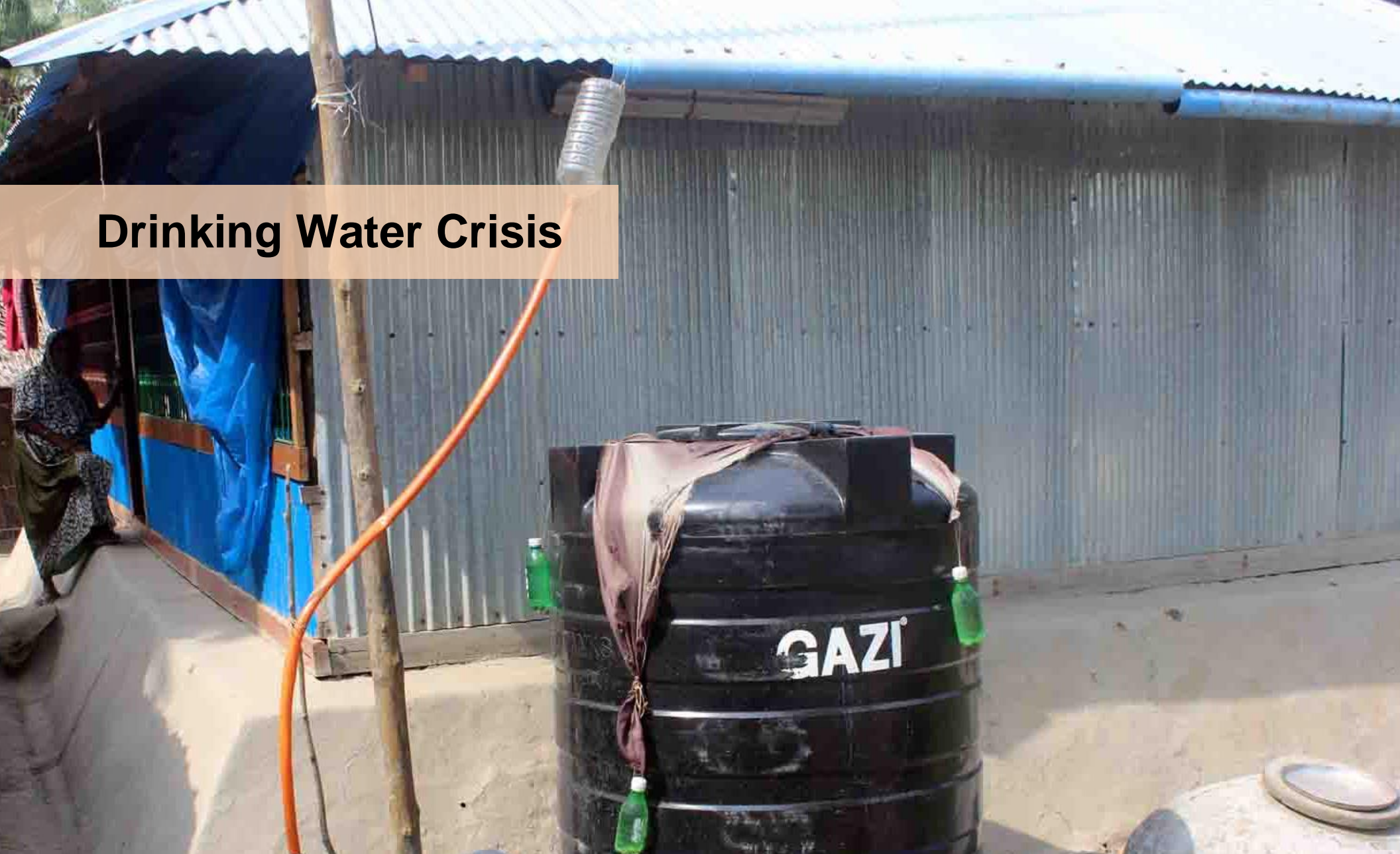
In and around there is enough sources of water;
but there is no drop of drinking water



Drinking Water Crisis

Most of the Sundarbans coastal women engage with drinking water collection far away from their home





Drinking Water Crisis

Rainwater harvesting system



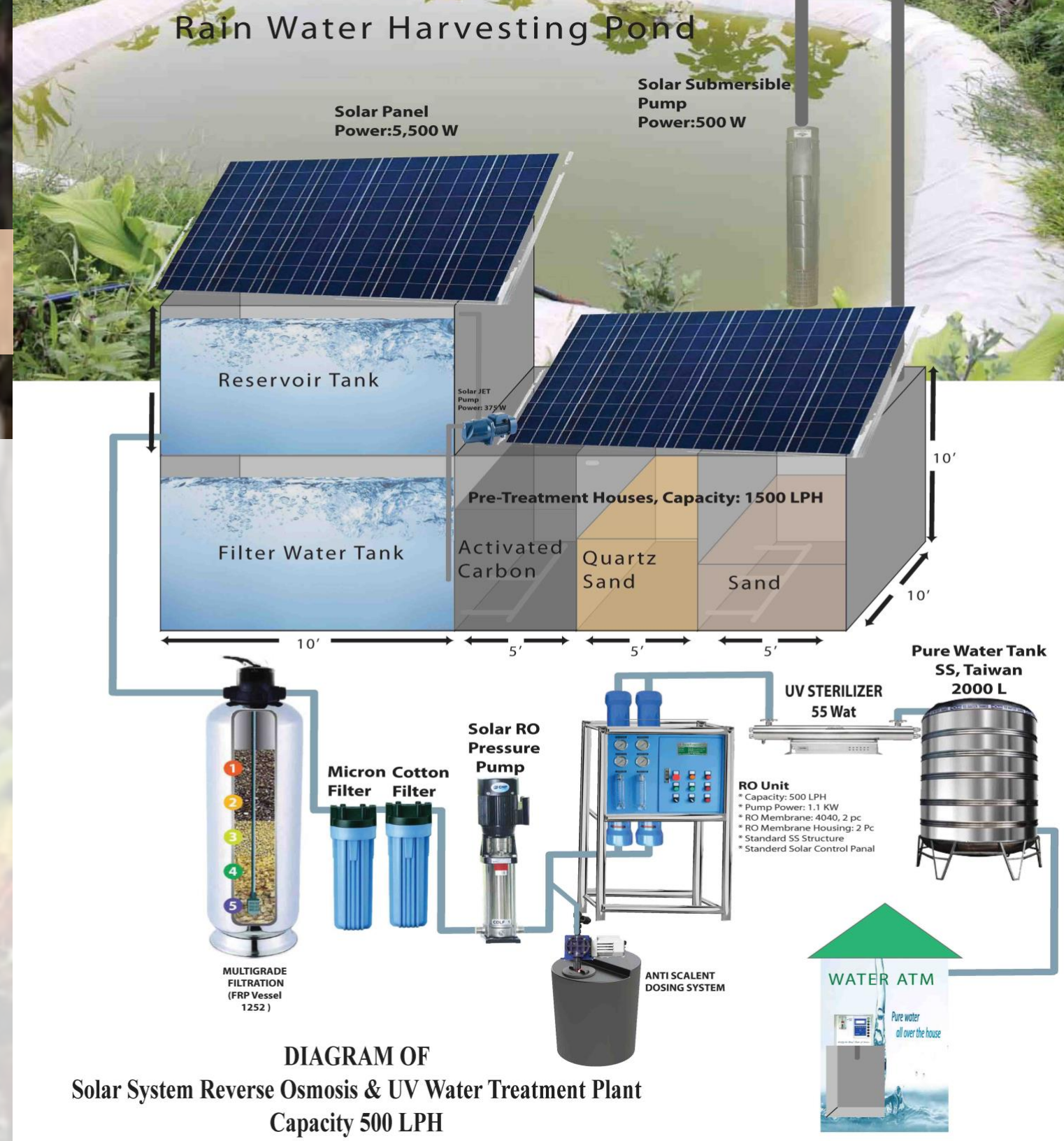
Local technique of water purification called PSF (Pond Sand and Filter)



SAFE DRINKING WATER | 5,500 PEOPLE

Around 5,500 people from five villages of Banishanta Union are getting safe drinking water from our installed Solar Powered Pond Sand and Filter with Reverse Osmosis and Water ATM. Water crisis of these villagers have been reduced, villagers access to safe drinking water becomes easier, water borne diseases are alleviated, women's water collection time is also reduced. **Happy Villagers!**

BEDS small initiatives have been changing the coastal lives





Our Safe Drinking Water Supply System

Realizing this drinking water crisis of the coastal people; BEDS and Korea Green Foundation (KGF) took an initiative to solve this problem through Eco Village Project in Bangladesh. Through this project three ponds have been re-excavated as rainwater reservoirs and three Solar Ponds Sand Filter (SPSF) systems have been installed for water purification. Two Reverse Osmosis (RO) systems are also installed for ensuring the quality of water. Pond water is pulled in the chambers of PSF with the help of solar energy. Then water crosses first chamber after being treated by grade sand and quartz sand. In the second chamber is treated with grade sand, manganese and quartz sand. In the third chamber it is being filtered with activated carbon. Then water flows through four filters and finally water is purified by UV Sterilizer. At the time of water purify process some saline/waste water is produced which goes to the reserve pond through a pipe and it is recycled. Management committees have been formed and Water ATM systems have been installed for the proper management of the installed systems.





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.



We are getting quality of safe drinking water beyond our expectation

Educating Villagers on Water and Sanitation





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

Join with us Today



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