



# Isla Popa II: Sanitation

## INSIDE THIS PAMPHLET

- 1** Preventing Diarrheal Diseases
- 1** Taking care of your rain water catchment system
- 2** Rationing & System Demand
- 2** Biosand Filter Maintenance

## Conserving Your Clean Water

To ensure access to sufficient drinking water, it is important to know how to conserve, protect, store and purify water.

### *Preventing Diarrheal Diseases*

Because diarrheal diseases are related to poor hygiene and sanitation, and contaminated food and water, the best way to prevent them is to protect water sources and improved sanitation.

- Do not use water from unprotected sources.
- Filter or purify water for drinking
- Wash hands after using the toilet
- Wash your hands with soap before preparing food.
- Cook food thoroughly and protect from germs.
- Wash bottles and utensils with boiling water to kill microbes.

Because surface water is often contaminated, it should not be used for drinking if not purified before using a biosand filter. To attain the highest quality water and to avoid dependence on sources of contaminated water, use a biosand filter in conjunction with a rooftop rainwater catchment system.

### *Taking care of your rain water catchment system*

To ensure that the catchment tanks do not act as a detriment to the quality and quantity of the captured rainwater, tanks should be checked regularly. To ensure that rainwater is caught safely:

- Clean the tank and the inlet tube every 3 months.
- Ensure that the tank is properly covered and sealed at each cleaning.
- Clean the biosand filters once every month or when it takes too long to filter water according to the flow rate guidelines listed in the operations and maintenance manual.



- Clean the roof frequently; while the first few millimeters of rain are flushed, debris can cause contamination.
- Make sure the water is removed only by means of dispensing from a spigot, not by submerging buckets into a rainwater catchment tank.

## When there is no rain

### *Rationing*

Rationing may be necessary during dry periods if rain water is unavailable due to system repairs. The system constructed on the pavilion was designed for approximately 100 students drinking about 2.5 liters of water per day. If the demand exceeds this, the system is not guaranteed to provide an adequate amount of water. Well water may be used during dry periods however, it is strongly recommended that it is used in conjunction with a biosand filter. The biosand filter is capable of removing effectively most sediment and bacteria.

### *Biosand Filter Maintenance*

The biosand filter should be used at least once every two days to ensure the healthy development, growth, and sustainment of the biolayer. The “biolayer” is a layer of bacteria that builds up over time. This layer (not visible to the naked eye) should form within 30 days of regular use which will incrementally increase the level of water treatment. Over the course of its use, the rate at which it filters water will decrease which is normal when used regularly. Please avoid mixing or spilling chlorine or chlorinated water in the filter as this will permanently damage the biolayer. If the filter is too slow to be convenient the following “swirl and dump” procedure should be followed:

1. Wash hands with soap and water.
2. Remove the filter lid.
3. If there is no water above the diffuser, add about 4 liters (1 gallon) of water.
4. Remove the diffuser.
5. Using the palm of your hand, lightly touch the very top of the sand and move your hand in the circular motion; **be careful to not mix the top of the sand deeper into the filter.**
6. Scoop out the dirty water with a small container. Dump the dirty water outside the house in soak pit or garden.
7. Make certain that the sand is smooth and level.
8. Replace the diffuser.
9. Wash your hands with soap and water.
10. Refill the filter.

Repeat the swirl & dump steps until the flow rate has been restored to desired flow rate.