

Preventing germs with sand and gravel

Bio-sand water filters provide clean drinking water in Sri Lanka

Suzanna Lipscombe's second report for the Malteser International Lent Campaign 2008: "40 Euros for Sri Lanka"

Today, I visit a pilot project that has been recently completed with the Deputy Provincial Director of Health Services (DPDHS), a government office responsible for public health. The project involved the construction of 30 bio-sand filters in a small coastal community in Koggala, about 20 minutes drive from our office in Galle. Bio-sand filters offer a simple and effective method for household water treatment to improve the quality of water collected from open-dug wells in the village. They have proven to be highly effective in reducing turbidity and removing harmful disease-causing organisms found in surface or groundwater supplies through their organic layer.

I want to revisit this site to monitor its progress and carry out some water quality testing. To get to the project area, we turn off the main road, cross the railway tracks and head about two kilometres inland towards the village where we park the van opposite an ancient Buddhist temple. Ten households here were selected for using Malteser International's new water testing kit. A sample from the main water source in the village, an open-dug well, was also taken. In the first house, the daughter, Jayamali, just returns from school and happily lets us in to take a look at their filter. She pours some well water through the filter. We wait as it filters through the sand and gravel media to collect a sample from the tap. The young girl is keen to help us and accompanies myself and Fernando, our technical officer, to the other households. It is nice to walk through the trees along narrow dirt tracks and I am really glad that Jayamali is accompanying us. If not, I think I would never have found the house with the address: "nr Temple, Magaltota Mawatha, Koggala." From my experience, it is easier in this part of Sri Lanka, to find a house if you know the name of the person living there rather than the address!

As we walk to visit all the families, I remember when these filters were constructed. One of the great things that happened was that the monk from the temple said the villagers could use his small shed as a space for training and construction. And it was always encouraging to see that all members of the community, men, women and children, young and old, were taking part in daily activities to complete the filters under the supervision of the local Public Health Inspector. The women would sift the sand and pass it onto the teenage boys who would mix the cement. Finally the older men from the village would add this to the cast-iron mould and leave it to set. All the while, the children would sit quietly and watch as the work progressed. It was a community effort, and appeared an occasion they all enjoyed to come together.

After our visit of all the pilot households, we return to our office with our water samples and conduct physical, chemical and micro-biological tests. The results of the water testing demonstrate that all the filters tested were successful in removing bacteria from the well water, and are thus providing safe drinking water for all the families. I hope that through the successful implementation of this project we can continue to introduce such an effective technology to more areas in Sri Lanka so that more and more people can benefit from this simple method of household water treatment.