

Tales of the Mzungu
By: The Water Boy

We were busy prepping the samples, having just finished breakfast on the balcony, when I heard a rustling sound behind me. The bananas were gone! Suddenly, the compound exploded into noise, the dogs going crazy. The monkey had returned...

When you think of the diseases you are likely to deal with in Africa, seasickness isn't commonly on the list. Yet, here we were, holding our stomachs looking hopefully at the horizon, just halfway through the 1.5-hour trip across Lake Victoria to Zinga Island.



The sound of sloshing water in the bottom of the boat only increased the desire of some for a quick end to the journey. "Not to worry," said the captain, smiling, "if it gets too full, I'll just speed up and all the water will go to the back!"



We were serving a school for abused children of about 150 total in an enclosed compound about the size of a football field. Conditions were primitive. There was a toilet for staff at the clinic, but no running water, just a bucket to pour in the toilet when you were done. Power was usually available for a short time at days end, when the solar panels had re-charged the batteries. Surprisingly, there was often 3G wireless.

The water supply on Zinga Island was one of the more complicated ones we've had to deal with. Mostly, it's simply coliform bacteria, treatable with sand filtration (for turbidity) and chlorine. On Zinga, we had schistosomiasis, cryptosporidium and clostridium, complicated by the fact that they'd just built a new well, against our advice, right next to the latrine.

Because of the complexity, my team and I had traveled to Israel earlier in the year to investigate gravity membrane filtration (GMF). GMF grew out of the kidney dialysis industry, requiring similar pore size in the filters to remove pathogens. The great advantage of GMF is that no pumps are required. A simple tank elevated 1 meter above the filter supplies sufficient pressure to push the water through the filter.

Even in its simplicity, however, Uganda and the lake provide challenges. Yes, you only need 1 meter elevation, but what do you build to achieve the meter? And where do you get the supplies to do so? The resources on the island are extremely limited. And can you build it in a week?

In the end, we decided on a 2nd floor balcony. It was pre-existing and it had the advantage of being on the path children crossed every day, so their access to clean

water was improved. Piping and fittings, on the other hand, was more of a problem. Local economics required the use of a supplier who'd bring the piping to the harbor, sight unseen. Since each trip costs a whole day, you'd mostly take what you were brought and improvise.

Unfortunately, improvisation only goes so far when the fittings aren't the same diameter as the pipe. Close, but not enough to be watertight. Another trip to the mainland...

But, as is often the case, on the very last day we successfully hooked up the filter and, as we had hoped, the water was clean.

A return trip is planned for February to check on the status.



And what became of the monkey, you ask? Well, dogs can't fly, although the dog's leader sure looked like she'd want to give it a try. Several runs up the balcony, accompanied by furious barking had the desired, if not preferred effect. "No monkey dinner, but at least that beastly monkey left my charges in peace," thought the dog.

WeDev Water for AECOM

A special thanks to:

AECOM for their Blueprint Travel Grant and their cooperation in our joint Masters student program

Easy Water for their support in installing the GMF

University of Kaiserslautern for their new bacteria detection techniques