

Rwanda.. What I have learned so far

There is a small Rotary Club in Rwanda. Their name is Kigali-Virunga. There is one more club in the area. The area of concern hosts about 200,000 persons. So far they make their own bricks, they have a hospital (very nice looking hospital). There is one Doctor, American, Dr. Mark Ranzinger.

One of the main concerns is water purification. The water comes off of the heights of the nearby mountain (Virunga which means mountain). The water falls some 1000 feet equivalent and is then elevated to the living area by differential pressure (free fall). The mountain is approximately 14Km from the area of concern. The water is transported by head pressure through old metallic pipes, which have, after 70 years, have lost integrity. Cow manure and other animal feces have contaminated the water with e-Choli and other bacterium causing severe sickness and possibly death in some instances.

The old pipe can be replaced by PVC pipe, thus eliminating the potential of bacterial contamination. HOWEVER, there is a grave concern about sabotage e.g. poisoning the water. There was no obvious solution for this possibility.

The town is on the grid with other electrical services. When the grin is dropped off of the line, the hospital is without power. Serious complications can occur during an operation. We discussed the use of LED lighting powered by battery and solar electricity. Also, solar cells can be used to store electrical power for other services.

I mentioned that the hospital probably needs one or more autoclave and a source for distilling water. Distilled, and bacterial clear water is essential. Solar heated water can be a cheap way to obtain bathing water, power the autoclave, and if recirculated back through the heat pipes could be used for cooking and baking.

I mentioned that, water falling 1000 feet, one could use hydraulic force to power small generators. Also, wind turbans could be mounted on the mountain to provide additional power.

The gardens are dug flat with the surrounding area. The seeds etc. are planted in simple rows. Apparently they don't prepare the soil. I mentioned that there is a very good process entitled, "Square Foot Gardening." I will prepare information on this that will greatly improve the yield.

They are using the roofs to place gutters to collect rainwater. This water is discharged to the ground for the first few minutes, because of contamination on the roof. Then the water is allowed to enter several 6000 liter collection tanks. A metal storage tank costs about \$1000.00. However, a brick tank costs only \$500.00 and serves as well as the metal tank.

At one time, there was a sand filtration system, but the person who knew how to maintain the integrity has left. The filtration systems then fell unused. The people that live there are very simple people, absolutely not technically inclined. Whatever is done to improve their living standard has to be fail proof and extremely simple to operate.

There is one youth who works as a handyman and general translator for the hospital etc. EWB is thinking of giving him a scholarship. I mentioned that the Kigali Rotary Club could possibly get this done.

So far, the only Rotary Club to be involved in this project is a Club in Bolder Colorado. They gave EWB \$4500 to allow members of EWB to travel to Rwanda. This money was not grant money.

I asked how much money EWB was thinking about to do some of the things they want to do. They responded that \$20,000 would be a ball park estimate. Just what the

\$20,000 entailed was not outlined. I told them that the goal of the project had to be specific. They will send me e-mail delineating the goals more clearly with estimated costs. They will also send me the Bolder Rotary Club e-mail address as well as that of the Kigali Rotary Club.

Since time is of the essence, my plan is to contact Seabrook and Baytown clubs. They both have approached me about doing a project together. This will be done after I get more definitive information concerning the overall needs and a dollar figure of the proposed project.

JB