

Title: Appropriate Water Purification Technology for Rural Communities in the Dominican Republic

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Abstract:

According to the World Health Organization (WHO), around four billion cases of diarrhea are reported around the world every year. Those four billion cases lead to the death of approximately two millions people, 90% of whom are children under the age of five. It is clear from these numbers that combating waterborne diseases is one of the most important public health problems in the developing world. It follows, that developing ways to provide people with potable water would be greatly beneficial. Clearly it would be desirable if municipal water treatment plants could be developed. That, however, is a long-term prospect and more immediate ways of producing potable water are desperately needed. In recent years, the development of ways to combat waterborne disease at the household level using appropriate technology has received a great deal of attention. Traditionally, it is fair to say, international organizations have been more interested in large-scale projects. The recent creation by WHO, of “The International Network to Promote Household Water Treatment and Safe Storage”, however, shows that international agencies now consider managing water in the home as an effective strategy that can lead to a substantial reduction in waterborne diseases worldwide. There are, at present, a variety of approaches that are being used to produce potable water at the household level, and a large number of churches are currently involved in this work. Those churches that have missions in rural areas in developing countries quickly realize that most of the health problems that people confront are not medical in nature but rather public health problems that can be improved by providing access to clean water and better sanitation. For that reason, churches are always looking for ways to improve the quality of the water consumed by those with whom they work. The fact that the control of water borne diseases requires not only providing people with potable water but also hygiene and sanitation promotion makes this work particularly fitting for Christian mission since it cannot be done without a great deal of engagement with the community.

This paper describes the work that I have been doing, for over ten years, in rural communities in the Dominican Republic (D.R.) using an appropriate technology filter to manage water at the household level. I have done this work in collaboration with a number of different Churches here in the U.S. that are working in the D.R. (Episcopal, Catholic, and Methodist) as well as with civic organizations such as Rotary clubs. I will describe the scope and nature of the water problem. Research shows that water projects must be coupled with improvements in sanitation in order to be effective. In addition, I will describe the filter that I have used as well as the social networks that must be put in place to ensure the success of the projects. I will also talk a bit about the quality of the water produced by the filters and about the reception of the filters in the communities in which they have been distributed. This work is very much in line with the theme of this conference. It is the church that provides the social structure necessary to make the projects work, the use of appropriate technology is necessary because, while complicated technology can be efficient, in time it creates problems if maintenance requires expertise not available in the community. In my experience, the most difficult area deals with the development of

social entrepreneurship and how to make it work. I'm looking forward to learning more about it from the other conference participants.