

Abstract

Developing a rural infrastructure project in a developing country involves much work beyond the technical aspects of the project. Understanding and knowledge of the community is essential for long-term success of a drinking water system. My experience in a Honduran village provides a case study, illustrating the necessity of collecting social and technical information before embarking on extensive topographic surveys and hydraulic design work.

A development agency also needs to recognize the implicit power relationship implied in giving aid. Once this unequal balance of power is accepted, the agent should use care and discretion to listen to the community members' wants and needs and to guide them in choices and responsibilities for operation and maintenance of a water system. This is assuming a common goal of better health and improved economic status of the community. Many authors advise extensive questioning and training of villagers as the first step in project planning.

When I arrived in the village, previous Peace Corps volunteers had already completed some work on the project. While making technical changes to the existing plans, I never reevaluated the basic assumption that the community needed a drinking water system with a pump and private household connections. While working on the topographic survey and other preparations, I repeatedly encountered difficulties surrounding the organization of the water board. I disregarded these warnings and continued with the study and design.

I quickly learned that many technical features needed to change from their original plan. I changed the location of the water intake to a location that would suffer from less contamination. I also elaborated two different designs based on differing storage tank configurations. One design included a surface tank, and the other had a water tower at a different location. Detailed cost analysis is given to compare these two choices.

After all of this study and design work, I realized that the community did not have the necessary unity or economic resources (even with agency aid) to build and maintain an expensive and complicated pump system. Thus, I recommend further work with the community to evaluate interest in improved drinking water quality. If the interest is present, I suggest two possible technical solutions, but more importantly, that the villagers be surveyed on an individual basis to confirm the usefulness of the plan and widespread support.