

COMMUNITY PARTICIPATION IN "RURBAN" WATER SUPPLY AND SANITATION SYSTEMS¹

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The success of new village water or sanitation systems often depends upon how well they are adapted to their users' needs. This places a premium on involving the villagers from the outset in identifying their needs, choosing the improvements to be realized, and deciding how those improvements will be made.

Introduction

In our desire to help people of the developing world, we often forget that the purpose of building water supply and sanitation systems is not to construct and install a set of physical devices (i.e., pumps, pipes, latrines, etc.), but rather to have things done in such a manner that those served will use, operate, and maintain the systems over a long period of time. For clearly, a water system that fails six months after it is built not only wastes precious resources but makes the next improvement attempt that much more difficult.

Experience has shown that a key element in ensuring the long-term success we all seek is involvement of the user in every aspect of the effort. Engineers, designers, and others cannot afford to work in isolation; for, as Wanford and Saunders point out in their excellent book on village water supplies,

No matter how badly (in the opinion of an external appraiser) a village 'needs' a better water supply system, if the population itself does not perceive the value of the system, the usage rate will be low, system maintenance and local administration will be inadequate, and vandalism ... a problem. (1).

In this vein, when any visit to the countryside in most nations shows that at least 30 per cent of the water supply systems of "rurban" (transitional rural) areas are not working normally (2), one must conclude that the current strategy lacks an essential element!

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User Participation

While engineers are generally well-versed in the technical planning and logistics of constructing water and sanitation systems, they usually lack the "social science" skills needed to integrate the user into the planning, design, construction, operation, and maintenance process. Too often, they see the reasons for program success and failure as being primarily managerial, organizational, or institutional, rather than being related to "...the willingness to find out the values and beliefs with which the target population begins..." (1).

In other words, many times a program constructs the type of system that its designers know how to design, rather than one which the user understands and feels a part of. Nevertheless, user participation is and always has been basic to long-term success. For, as Mary Elmendorf points out in her paper on public participation and acceptance, "the Ancient Roman aqueducts could carry water to vital urban centers (for hundreds of years) only because their channels were designed and built to standards that Roman maintenance crews could deal with".

Recently, it has become increasingly clear that in order to have a successful "rurban" water and sanitation system (i.e., one that will be used and maintained for a long time) the designer must start with the users' perceptions of their own felt needs and resources. To be genuinely successful the program manager and his technical designers must start with what the users feel is possible under ordinary conditions. In accordance with this principle,

the program should only move from one phase to another after the villagers have perceived that the advantages of the change conform with local possibilities and wish to enjoy the benefits of the new phase.

Also, it is important that the community plan the development of basic services in an integrated and sequential manner. This means beginning with one priority need that has been established locally through discussion with the community at large, completing that task, and then establishing a new priority. Doing one project at a time in this manner reduces the possibility that the community's limited resources will be overtaxed. Perhaps the most difficult part of this process is making the government services realize that their function is to guide and support the local effort. Otherwise, "community participation" is reduced to meaning merely that the villagers are "allowed" to donate their labor to the cause.

Dynamics of Village Systems

Villages and semiconcentrated population areas in the developing world have sometimes been referred to as "rurban" areas because they represent a transitional state between the rural zones with truly dispersed populations and the large urban centers. Those seeking to develop water and sanitation systems in such "rurban" areas need to be keenly aware that these basic health systems have a highly dynamic nature. For example, a woman going to a spring, carrying water home five kilometers in a bucket, boiling it, storing it, using it, and properly disposing of it performs the same functions (water capture, transmission, treatment, storage, use, and proper disposal) as the water and sanitation system of a large city. The difference is one of scale and methods, and in rurban areas the methods chosen (i.e., buckets or pipes) will depend largely upon the resources of the users and the amount of water they feel they need.

For this reason, a water system's actual status (whether it terminates in public foun-

tains or house connections, for example) represents a balance between perceived needs (say 30 liters per person per day) and available resources. Hence, one thinks in terms of moving groups of people from one stage to the next, taking the woman with her bucket as the current starting point for most rurban water system improvement schemes. Using this approach, a typical village water supply improvement program might proceed as follows:

- Year 1: Improve the spring to reduce surface pollution;
- Year 2: Construct a pipeline to transport water from the spring to a public fountain in the central plaza;
- Year 4: Expand the system to include public fountains throughout the village;
- Year 6: Start installing patio connections and constructing a storage reservoir;
- Year 8: Gradually phase out the public fountains.

Such improvements should be keyed to the local population's perception of felt needs. That is, the system should be upgraded as people's understanding of the expected benefit grows. This makes the community the driving force behind its own development process, while the national program and its multidisciplinary teams of professionals serve as a guiding and educational force. It also encourages the bulk of the expansion and improvement capital to come from the community itself after a small initial outside input. Hence, within this scheme of things, the national program serves as the educational element promoting change—by explaining the various alternative solutions and the increased benefits to be expected from each.

Viewing things from the "bottom up" is often a difficult and uncomfortable experience for professionals, because it forces them into unfamiliar territory. Nevertheless, a multidisciplinary-multiphased approach effectively involving the villager in the decision-making process can have a real impact on the immediate cost to the country; and it can guide the choice of technical solutions in a manner ap-

propriate for local resources, construction capabilities, and operation and maintenance skills.

Community Participation

As one reads the growing literature on the need for "community participation," one cannot help but be impressed by the fact that the term is commonly misused. That is, the term is often applied only to rural and "rurban" areas. But for anyone who stops to think of it, there is "community participation" in all water systems, even though the form of participation is different in rurban and urban zones.

Participation in an urban water system is usually limited to paying a monthly or bi-monthly bill. This act "purchases" the right to a certain level of services and pays for work that will ensure the continuation or improvement of that service. Very little *personal* participation is required. In contrast, the users of a "rurban" system must participate personally in many cases for lack of (1) community financial resources sufficient to pay others for providing the services and (2) an institution able to take charge of long-term operation and maintenance of the system.

It should be noted that "community participation" is not a process whereby teams of experts from the national program explain a project to villagers with the aim of obtaining their consent. To begin with, true "participation" means that effective opposition to the project by the villagers should be taken as a signal that the community perceives other higher priorities; and this in turn means avoiding an expensive investment in what would probably have been an underutilized system.

What the community is saying by its rejection, in essence, is that further work will have to be done by the national program to redesign and rephrase the project or to further educate the community in order that a revised project will be found to satisfy the community's perceived needs. This process offers rea-

sonable expectations of making users interested in supporting, constructing, and operating whatever system is finally approved. Within this context, it is important for the national program to ensure (1) that the general solution devised is flexible enough to permit upgrading at minimum cost whenever the users decide they are ready to advance to the next stage, and (2) that it is possible for the national program to assist the community throughout the system's useful life.

From the foregoing it follows that there must be a clearly defined relationship between two components of community participation: (1) activities to be carried out by the government and (2) activities to be carried out by the people. Obviously, the relative contribution of each of these two partners will be determined by the *political and socioeconomic conditions* prevailing in each country or geographic area involved.

In most cases an affirmative community decision will involve a change in living habits; and so the process by which the community involves itself in making the decision, carrying out the change, and participating in the operation and maintenance of the system is critical to the long-term effectiveness of the decision.

This is especially true because a new situation is best understood in terms of past experiences. That is, when examining a successful change, one often finds that the "new" situation is little more than an outgrowth of past situations that came about through a normal evolutionary process. Failure often occurs when a new situation bypasses the evolutionary process, creating a gap. At this point, those promoting the change must respond with whatever additional information is needed to bridge the gap, or they must retreat to more familiar ground.

A Rationale for Action

Many simple measures that can improve conditions in "rurban" areas are well-known. Merely providing information about how to improve dwellings and why good sanitation is

important can lead to such improvement. What is lacking, then, is a way of getting the information to those who need it in a form that they can use.

There is no single model for developing community participation. Nevertheless, there is a common thread to all models: the idea that the process is one whereby the community—through experience or the exchange of experiences with other communities—will assume responsibility for its own essential services with the support of a national or state program.

In seeking places to start, one should try to make the maximum use of existing facilities, since that offers the best answer to the problem of obtaining essential resources. To achieve such maximum utilization, experience has shown that the best operating procedure is to establish a focal point of activity in each community or village. That often means reorienting existing national programs so as to emphasize appropriate guidance, training, and contact with the community. This concept of a focal point for community participation should be based on the realization that local workers are the key element and that the various national services need to provide them with support.

For this approach to work, the community should participate from the outset, through its focal point of activity, in identifying needs, choosing the sequence of improvements, and deciding how those improvements will be implemented. This will cause the improvement process to reflect local traditions, customs, and seasonal cycles of agrarian activity. In this vein, government workers should be responsive to local initiatives, and development policies and related support activities should be flexible enough to allow for local and regional variations.

Personnel Selection

Community participation in water supply and sanitation should start by selecting a person from among the villagers to be in charge

of these services. This same person can also exercise a *very limited* number of other functions—for example, the person could also serve as an agricultural adviser, a midwife, etc., while being the liaison between the community and the national program.

In this vein, UNICEF reports (3) that villagers in the Thié's region of Senegal have been selecting one of their members to take a three-month course enabling him to become a volunteer pharmacist and health worker for the community. Similarly, in the Puno region of Peru communities elect the person who will run their "initial education" center, and "barefoot doctors" in China who serve as the health workers for their shops are factory workers chosen for this task by their fellows.

Training

In all cases the person chosen needs a period of training. The closer the worker's place of training is to his own community and the less time he spends away from home the better.

The length of training may vary, depending upon the subject, the resources available, and the community activities involved. Since most of those living in rural areas have ties to agriculture, it is generally best for the training courses to be short, frequent, and modular in nature. This permits the liaison for each community to receive training during slack farming periods. For example, the initial course might be given annually over a ten-day period at a central village, and the community liaison worker might attend another five-day course every six months at which new subjects are gradually introduced.

Besides regular retraining of this sort, other ways of upgrading the capabilities of local workers can be found. For example, local leaders involved in the nutrition program of the Philippines receive new information daily through radio broadcasts (3).

To integrate the services at the village level, each local contact should undergo a period of basic training before going on to receive more specialized training in specific tasks. Despite

the fact that this two-stage approach may be too elaborate for some countries to undertake immediately, this integration phase is essential. Later, the training received can be upgraded through annual courses and through on-the-job supervision guided by the national program.

Coordination and Supervision

Community workers need a good link to the national infrastructure, so that they can pass along problems they cannot manage and can obtain technical information, logistical support and guidance (4). Many systems provide for frequent (e.g., monthly) periodic visits by auxiliary workers and less frequent (e.g., quarterly) visits by semiprofessional staff members.

The intermediate-level office of the national program may be located at a regional development center in a large village or at the provincial offices of one of the ministries involved. This office should be staffed by trained professionals responsible for adapting the materials developed by the central office to local conditions. It should also serve as a headquarters for the travelling community promoters who make regular visits to the community workers. It is important to note that in many cases insufficient attention is given to the orientation and training of staff members—including the senior administrators—at this intermediate level in order to ensure that they understand the *guidance* role of the national program. For this reason, it is frequently said that reorientation of these national officials is the “crucial element” in the development of true community participation.

SUMMARY

It is becoming more and more evident that the success of village water and sanitation systems in developing areas depends heavily upon how well the systems are adapted to their users' perceived needs and resources. Among other things, this implies that programs perceived by the villagers as exceeding local capabilities should be delayed or avoided. It also places a premium on proceeding sequentially—discussing alternatives with the community at large, establishing a priority task, completing that task, and then establishing a new priority. Such participation by the villagers in the decision-making process can have a real impact on the program's immediate cost to the country; and it can guide the choice of technical solutions in a manner appropriate for local resources, construction capabilities, and operation and maintenance skills.

There is no single model for developing this and

other forms of community participation. Nevertheless, the process invariably revolves around the idea that the community will ultimately assume responsibility for its own essential services. This means that community development is achieved by working from the bottom up rather than from the top down, and that the proper function of government services is to guide and support the local effort rather than direct. It also means that community residents should be involved from the outset in identifying their needs, choosing the sequence of improvements to be made, and deciding how these improvements will be implemented. For it is mainly in this way that the project will come to effectively incorporate local traditions, customs, and beliefs that often play a key role in the success of the undertaking.

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