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**THE ROLE OF COMMUNICATIONS, COMMUNITY PARTICIPATION, AND  
HYGIENE EDUCATION IN WATER SUPPLY AND SANITATION PROGRAMS**

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## THE ROLE OF COMMUNICATIONS, COMMUNITY PARTICIPATION, AND HYGIENE EDUCATION IN WATER SUPPLY AND SANITATION PROGRAMS

### INTRODUCTION

Water supply and sanitation development tends to be viewed as a technological problem requiring technological solutions. These solutions often involve the technical design and selection of pumping equipment, pipelines, and other physical facilities. As a result, institutions responsible for water supply and sanitation development usually are staffed with engineers and technologists trained to view their task in physical, rather than human, terms.

Fortunately, there is a growing awareness that the success of water supply and sanitation development, especially in rural areas and small urban communities, is far more dependent upon the behavioral changes that result from project interventions than upon the type or sophistication of the technology adopted. In terms of evaluating project outcomes, behavioral aspects provide the only reasonable indicators of long-term health impacts and other ultimate benefits. Numerous field studies have shown that the measurement of long-term health, economic, and social consequences of water and sanitation improvements is extremely difficult (and costly) because of the many intervening factors between a project intervention and the resulting ultimate benefits. The tracing of causal linkages from water and sanitation inputs to changes in morbidity and mortality, for example, is still a research activity and beyond the means of most development agencies.

Behavioral changes, however, can be linked directly to water and sanitation interventions and are relatively easy to observe and measure. Behavioral changes play a key role in linking project inputs to project outputs, as can be seen in Figure 1. Project implementation, the initial operational level in Figure 1, is represented by direct project activities. Such actions include project inputs of money, labor, and materials; project operations involving technical design, institutional development, training, and information management; and finally direct project outputs represented by physical systems. The final outcome of this level is the establishment and functioning of the water and sanitation facilities provided by the project. It is important to realize that the existence of new facilities does not signify project success or the creation of project benefits. Until people use the facilities, which usually requires behavioral changes, they will derive no benefits from them. To an agency dominated by a narrow technological view of development, the establishment of well-designed facilities often is the measure of project success. Even today, there are numerous current examples of development organizations that are more interested in drilling boreholes, for example, than in ensuring that people actually use the water from the boreholes.



The second level in Figure 1 deals with project performance, which is another way of saying project utilization, or behavioral change. The key elements in this level are household water uses, household sanitation practices, and community support activities. All involve changes in behavior, such as, the use of greater quantities of water, the acceptance of new water uses, the use of sanitary latrines, and participation in system maintenance. These changes can be observed and quantified. If the behavioral changes become permanent, it can be reasonably assumed that the ultimate benefits in the health, economic, and social spheres will also occur. Thus, project performance involves behavioral changes resulting from the utilization of the project facilities.

The final level, that of ultimate project impacts, consists of long-term, ultimate project consequences, such as morbidity and mortality impacts, which are difficult to trace and measure. Although these consequences are usually stated as overall project goals, they are rarely practical concepts for operational purposes. Hence, behavioral changes play a role as surrogate benefits and indicators of eventual project outcomes.

By assessing behavioral changes and linking them to water and sanitation interventions, a development agency can make strong inferences about the types of health-related benefits that are likely to occur. For example, the widespread use of sanitary latrines and the use of soap and water for personal hygiene cannot help but reduce the faecal-oral routes of disease transmission and thereby reduce the incidence of diarrheal diseases caused by poor sanitation. In another example, the increased availability and accessibility of larger quantities of water, when channeled into increased bathing and clothes washing practices, should lead to a dramatic reduction in skin diseases that flourish because of poor personal hygiene. These examples show that health benefits occur not just because of better water and sanitation facilities but, more importantly, because people's personal hygiene practices have also changed.

How can individuals be influenced to accept and properly use the outputs and services provided by water supply and sanitation projects? This clearly is a task of incorporating into project implementation those elements which will involve the community in project development and thereby convince them that full use of project facilities is in their interest. The means by which people's involvement, and hence their subsequent behavior, is influenced is through the non-technical elements of effective communication, the marketing of ideas, the full participation of communities, and the reinforcement of health-related practices. The key issues here are communications, community participation, and hygiene education.

In the early days of rural water and sanitation development (the pre-independence era in many cases), communications, community participation, and hygiene education were generally viewed in a top-down, hierarchical manner that had little lasting effect on changing people's health-related behaviors. Communication was seen as a means by which instructions were passed from the authorities down to the local communities. Little attempt was made to solicit ideas or opinions of community members regarding the nature of the development activities planned for them.

In a similar manner, community participation was seen as a means of mobilizing self-help labor in the community in order to reduce project costs. There was rarely any concern with involving the community in overall decision-making during the planning, design, or implementation phases. Lastly, hygiene (or health) education, where it did occur, was almost always limited to simple demonstrations at a distant clinic or health post. Health agencies rarely had the staff or resources to venture into communities to provide effective hygiene education services closely tied to water projects.

Over the years, a considerable body of experience has been accumulated on methods of ensuring water and sanitation project success through influencing health-related behaviors and encouraging project sustainability. The following issues illustrate some of the key lessons learned to date:

### COMMUNICATIONS

Project developers must be able to communicate with the intended beneficiaries in order to promote (or market) the project concept, to obtain community acceptance, and to develop appropriate hygiene education programs. In general, good communications include the following characteristics:

- o A two-way movement of information occurs from the agency to the community and from the community to the agency.
- o There is continuity throughout project life and afterwards.
- o Encouragement is given to individuals to participate in the project.
- o The project is non-hierarchical, non-authoritative, but respectful of all parties.
- o Technical (engineering) information is presented simply and with alternative solutions for community review.

### COMMUNITY PARTICIPATION

Community participation is the heart of effective implementation in rural water and sanitation projects. It is a sharing process whereby the development agency and the community enter into a collaborative agreement for the benefit of the community. The key elements of community participation are as follows:

- o The community is involved in all aspects of project development.
- o The development agency accepts the decisions and

recommendations of the community whenever possible.

- o A sense of ownership of the project is instilled in the community.
- o The development agency actively encourages full community support of the project.
- o Community leaders gain increased status from the project.

### HYGIENE EDUCATION

Hygiene education is intended to directly influence health-related behaviors with respect to water use, sanitation practices, and personal hygiene. To be successful, it must address problems that are of concern to the people. The main characteristics here are:

- o Problems are clearly perceived by the people.
- o Solutions are within the understanding of the community.
- o Interactions and guidance are simple and straight-forward.
- o Hygiene education efforts aim at direct changes of behaviors.
- o Hygiene education efforts are conducted within the community and directed toward the household.

### CONCLUSIONS

The integration of the above elements is essential if a water and sanitation project is to achieve its full potential. Just as a technical element cannot stand alone in a development project, so also must behavioral elements be supported by all other aspects, both technical and non-technical, in implementing interventions intended to improve people's lives. This discussion is not intended to diminish the importance of technology in water and sanitation projects. Indeed, there always will be a need for an understanding of the complex physical factors requiring considerations of materials, energy, and costs which occur in the location and transport of water, the improvements of water quality, and the disposal of human wastes. Nevertheless, this paper does try to show that without consideration of the human factors, especially those that directly encourage behavioral change, there is little prospect of developing projects which significantly benefit their intended audience.

In conclusion, Figure 2 lists "ten commandments" for influencing positive behavioral changes in water supply and sanitation projects. These commandments are based upon the experience of the USAID-supported Water and Sanitation for Health (WASH) Project over the period 1980 to 1987.

1. Learn from the community what they do, why they do it, and what they need.
2. Find out what is currently working and build on existing institutions.
3. Identify community leaders.
4. Require initial community contribution.
5. Address health problems perceived by the community.
6. Start small and expand with success.
7. Involve communities fully, especially the women.
8. Develop effective in-service training.
9. Establish effective technical support.
10. Work toward long-term project sustainability.

**Figure 2. Ten Commandments of Influencing Health-Related Behaviors in Water Supply and Sanitation Projects.**

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