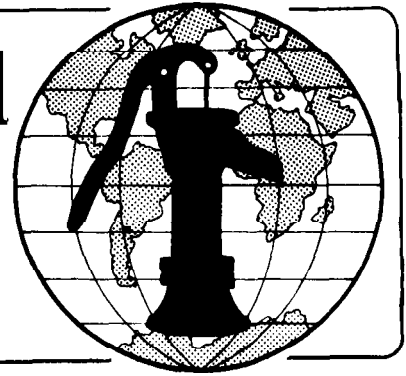


Water for the World



Overview of Water and Sanitation System Development Technical Note No. HR. 1

A large percentage of people in rural areas of the developing world do not have access to safe and convenient water supplies for drinking, personal hygiene and domestic purposes. Even fewer people have adequate waste disposal facilities. The high incidence of **water-** and **excreta-related** diseases in rural areas results from unsatisfactory water supplies and poor waste disposal systems. Infections are contracted when people drink or use water contaminated with **excreta** or when they come in contact with **disease-causing** agents in soil. The disease cycle continues when people recontaminate water supplies by improperly disposing of their own wastes in or near a water source or the area in which they live. Proper use of water and sanitation systems can eliminate such disease cycles. Water supply and sanitation facilities are complementary in promoting communal and personal hygiene and are essential to improved health conditions.

Water and sanitation system development in rural areas can further the economic, social and educational development of a community. From a villager's point of view, the advantages of improved water and sanitation usually are convenience and prestige rather than health. A water supply project offers immediate and demonstrable results. Those who carry water long distances, especially women and children, have more time for other activities when a water supply is convenient to their houses. Village agriculture, livestock production and small industry will frequently expand with better access to greater quantities of water. Both individual and community productivity can rise because of the better health people enjoy as a result of access to and use of effective water and sanitation facilities.

Useful Definitions

ACTION AGENCY - A group of technical and economic advisors and educators responsible for guiding and training a rural community in water supply and sanitation system development. This may be a regional office of a governmental agency or an independent development group. The action agency is the liaison between the local water and sanitation committee and the national government. The project planner or project designer works out of the regional office of the action agency.

VILLAGE WATER AND SANITATION COMMITTEE - A local community organization which represents the village to the action agency and through which the action agency can reach the community.

Community Participation

The economic, social, environmental and technical aspects of water and sanitation projects must be well coordinated if the projects are to succeed. A very important contribution to balancing these factors is the participation of the community involved in the project. Without the interest and support of the people using the system, no project will succeed, however well planned it is technically. The success of a project depends on people understanding, accepting and using systems they have chosen themselves. See Figure 1.

An educational campaign to develop community awareness of water and sanitation problems will increase local participation in developing a project to satisfy the needs of the community. Continuing health education **is** required to help villagers understand

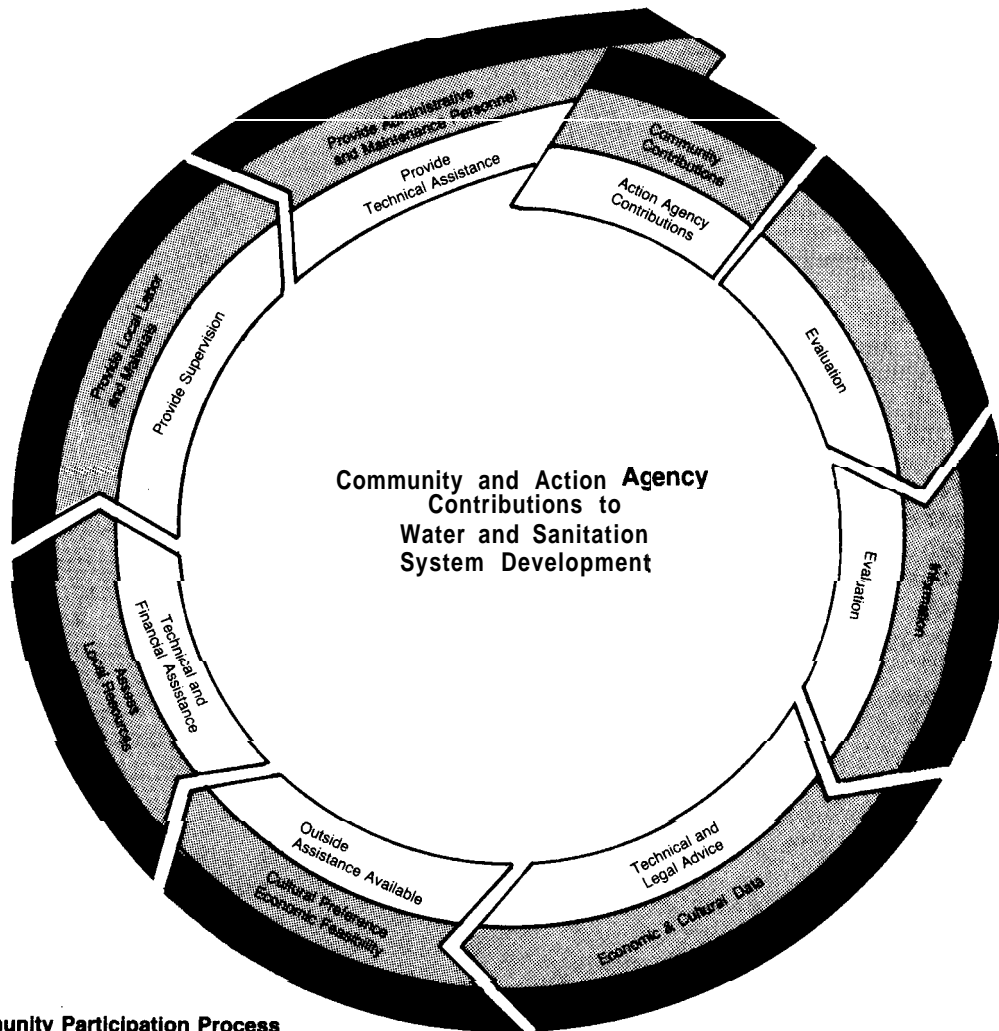


Figure 1. Community Participation Process

Developing Water and Sanitation Systems

The development of water and sanitation systems and community involvement in projects will vary according to local circumstances. Several principles apply to most project situations, however. This series of technical notes is written with the following policies and planning guidelines in mind:

"action" with technical expertise, economic advice and assistance in developing water and sanitation systems. The action agency should assist the village water and sanitation committee to gain legal powers. Governmental support is necessary for legal clearances but the action agency need not be a government agency, though in most situations it is.

3. The community must be willing to accept, to the extent it is able, the

responsibilities for funding, developing, operating and maintaining local systems. With the assistance of technical advisors, the community must set its own goals for improvement and select its own system. When community members play a major role in developing a project, they view it as their own instead of one that has been imposed on them.

4. The action agency should be decentralized so that the responsibility for activity is as close as possible to the community where the activity takes place. The agency should supply one or two representatives to work directly with each community, although one representative may be responsible for several communities. The representative will coordinate project planning and implementation and is referred to in these technical notes as the project planner or project designer. The project planner and designer should be well acquainted with the problems and needs of the local people, the community's political order, its decision-making process, its sanitation practices, and its attitudes toward excreta disposal, established water sources and water use.

5. If no appropriate local organization exists already, the village should form a water and sanitation committee to represent local interests and work directly with the action agency's project planner and designer. The project planner should provide any organizational assistance requested. The village committee should include members who represent the various family or geographic groups in the village as well as the existing leaders, health workers, extension agents, teachers and agriculturalists. The committee should receive some basic training in water and sanitation from the project planner so it can help educate the rest of the community. It is very important that committee members be both men and women so that water use and sanitation information is distributed through existing cultural channels. The village committee will be responsible for promoting the water and sanitation projects in the community so that local educational needs and economic capabilities can be determined and specific goals can be set.

6. The action agency must understand and respect the economic and cultural setting of the community so that an appropriate technical system can be developed. The agency should be able to provide materials and funding assistance to communities when necessary.

7. The agency should teach the village committee the benefits of water supply and sanitation improvements and explain the technical alternatives available. It must provide supervision during all phases of the project and train community members in construction.

8. The action agency must provide back-up support for water and sanitation systems in the form of continuing education and operation and maintenance training.

9. The community and the agency must collaborate on all decisions and activities throughout the project.

Summary

Water and sanitation systems installed by a community under the expert advice of the action agency have many advantages. The improvement of the local economy and of health conditions are the most obvious. These benefits may also help a community realize the potential it has to develop in other areas.

For example, some villages can learn new technical trades while constructing, operating and maintaining water and sanitation systems. The introduction of bookkeeping procedures required by the project may be extended to other businesses. Improvement in living conditions may keep villagers from migrating to the city where living conditions may not be as attractive as they appear. The primary goal of water and sanitation projects is to provide an adequate and safe supply of water and effective sanitation systems for the entire community at the least cost and with the most suitable technology.

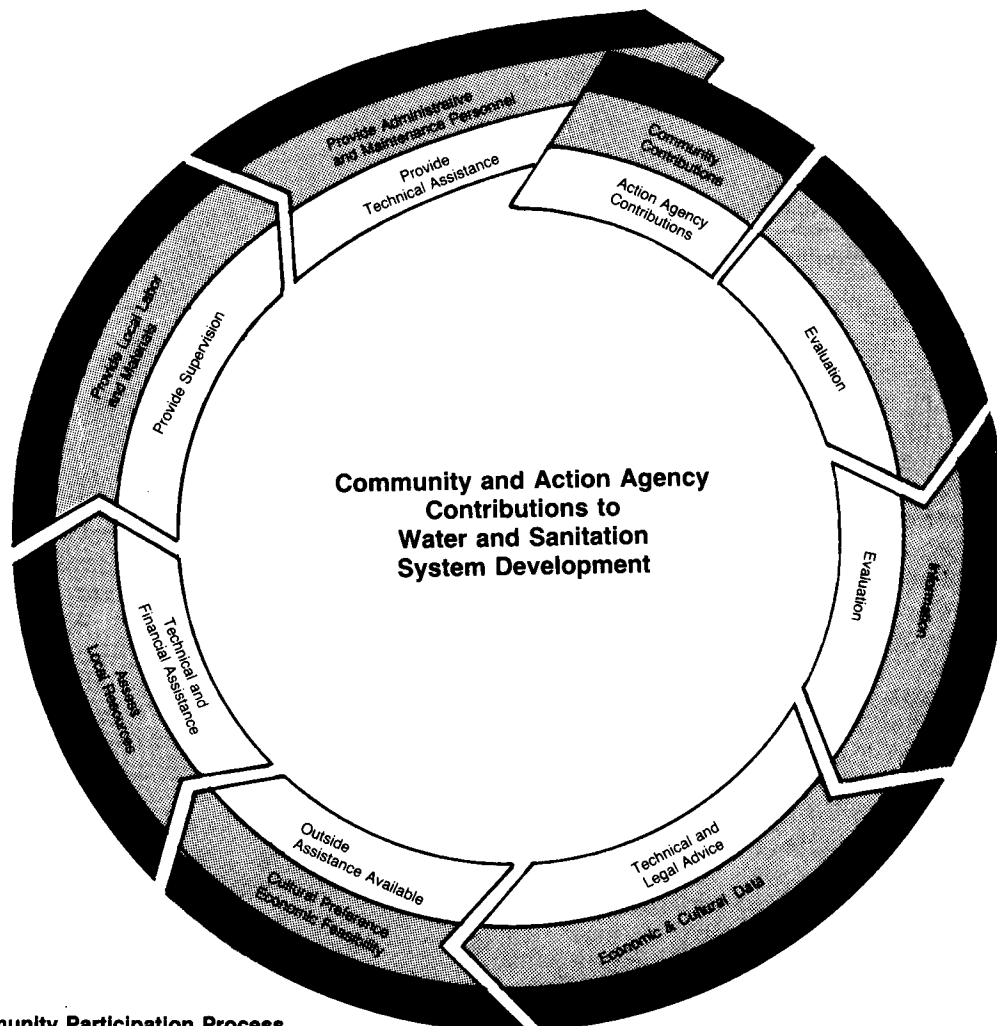


Figure 1. Community Participation Process

the behavioral changes they must make to receive health benefits from improved water and sanitation systems. Technical training in construction, operation and maintenance will teach selected individuals practical skills and may create an understanding of and respect for the facilities among the rest of the villagers.

Developing Water and Sanitation Systems

The development of water and sanitation systems and community involvement in projects will vary according to local circumstances. Several principles apply to most project situations, however. This series of technical notes is written with the following policies and planning guidelines in mind:

1. The community must identify its own water and sanitation problems. A strong interest in improving existing water supply and sanitation systems must be present in the village.

2. An "action" agency should provide the community with technical expertise, economic advice and assistance in developing water and sanitation systems. The action agency should assist the village water and sanitation committee to gain legal powers. Governmental support is necessary for legal clearances but the action agency need not be a government agency, though in most situations it is.

3. The community must be willing to accept, to the extent it is able, the