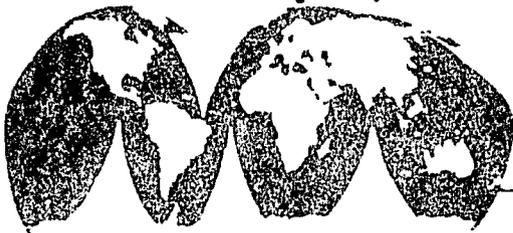
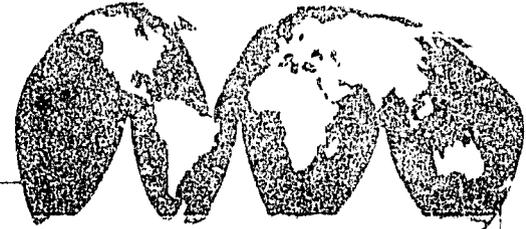


15.11 92564

PN-ABT-762



# Lessons Learned



Evaluation Report Abstract

**KENYA RURAL WATER SUPPLY:**  
**PROGRAMS, PROGRESS, PROSPECTS**

Report of a Project Impact Evaluation

by

Daniel Dworkin

Office of Evaluation  
Bureau for Program and Policy Coordination

U.S. Agency for International Development

November 1980

Agency for International Development  
Washington, D.C. 20523

## Kenya Rural Water Supply: Programs, Progress, Prospects

The Office of Evaluation selected Kenya as one of the countries in which it would assess the impact of rural water development. Projects were examined covering a range of technologies and representing a wide variety of local and international support (including A.I.D.-supported CARE Self-Help programs). The evaluation team undertook the field work in August of 1979.<sup>1</sup> Although the interpretations are those of the team and pertain to the rural water activities in Kenya, the findings will contribute to a forthcoming report on the rural water supply sector as a whole.

Since 1970, the Government of Kenya has been involved in a program to bring water to all its population. During this period the investment has been very high, but the results have been disappointing. The government is still committed to the long-term objectives for water development. The lessons from the past efforts in water supply are not only important for Kenya but for A.I.D., as it assists water supply projects, and for any country undertaking a large national program in water supply.

The national rural water program in Kenya differs from that in most other countries in two ways: size of the project and method of supplying water. The typical Kenyan water system is large and over the past decade has been getting larger. The aim of most systems is to supply water to individual families through metered private connections. Since most families live in dispersed communities, this means long distribution lines.

These large, complex systems are not working well. There are problems of design, construction, and maintenance that make the systems unreliable. The problems of maintenance are primarily the result of the low funding levels provided by the government. In addition to the problems of reliability, which limits the number of people served, the government discourages the use of communal facilities by locating them inconveniently and sometimes closing them completely. This means that often rural systems deliver water to a small number of elite users who have their own private connections.

A.I.D. has provided funding to self-help systems through CARE-Kenya. Systems built by communities under self-help programs also have problems of reliability but usually serve the entire community. Some of the lessons that can be learned from the Kenya rural water program include:

- (1) Kenya has not matched the level of technology with the ability of the institutions to keep it functioning. Rural water projects require varying amounts of institutional support based on the technology used. At one extreme is the use of open shallow wells or protected spring. At the other extreme are the piped water systems with individual connections. Such methods of improved supply can

---

<sup>1</sup>The team consisted of Daniel Dworkin, Bureau for Program and Policy Coordination, Office of Evaluation; and Ross Hagan, Development Alternatives, Inc.

be installed and be reliable with little or no input from outside agencies. As the technology level becomes more sophisticated, the support required becomes more extensive. Where diesel pumps are used to distribute treated disinfected water, a continual supply of spare parts, chemicals, fuel and trained people is required. Such re-supply must be carried out throughout the year regardless of seasonal weather conditions. Also, imported items such as parts and chemicals, often from hard currency areas, must be available.

An assessment should be made of what systems are currently being supported reliably by the existing agencies and projects should be designed at the appropriate technological level. Where other technologies are proposed which have not been used, specific provisions should be made to improve the ability of the institution to support the systems and take into account the complete range of services that must be provided to support the advanced technology.

- (2) The Government of Kenya produces only a quarter of the funds necessary to support the systems installed. This is a reality and it should be assumed that the amounts of funding historically provided in any country are the amounts that will be available in the future. If systems cannot function at the level of support provided, other sources of funding must be provided or systems that can function at the historic level of support furnished should be designed.
- (3) System reliability should be the primary concern of the Agency. If a reliable source of supply cannot be assured, then the system will be of little value. The reliability of supply can often be increased by installing more than one single well and handpump to serve a community or by providing standby pumping units for a pumped supply.
- (4) Health and sanitation programs, often considered essential components of improved rural water projects, may not be necessary in some instances and should always be designed on the basis of what the community already knows and practices.
- (5) The Harambee Self-Help Program in Kenya mobilizes the resources and energy of the rural community. The schemes often are poorly designed and installed. Villagers literally spend years in the construction. Pipes and fittings are contributed by CARE and others on a piecemeal basis. Since these are generally small schemes, they could be a proving-ground for small, well-designed projects using groundwater and handpumps--both neglected approaches in rural Kenya.

\* \* \* \* \*

Copies of the completed report can be obtained from the Editor, ARDA, DS/DIU/DI, Room 813 SA-18, Agency for International Development, Washington, DC 20523. The Office of Evaluation welcomes comments on the report.